Ergebnisbericht

(gemäß Nr. 14.1 ANBest-IF)

Konsortialführung:	Universitätsklinikum Hamburg-Eppendorf
Förderkennzeichen:	01VSF16012
Akronym:	PIM-STOP
Projekttitel:	Vergleich der prädiktiven Validität von Instrumenten zur Bestimmung potenziell inadäquater Medikation bei Älteren
Autoren:	Dr. Dirk Heider Prof. Dr. Hans-Helmut König
Förderzeitraum:	1. Januar 2017 – 31. Dezember 2019

1. Zusammenfassung

Hintergrund

Durch Medikamente hat die durchschnittliche Lebenserwartung und Lebensqualität in den vergangenen Jahrzehnten beträchtlich zugenommen. Jedoch ereignen sich in der Arzneimitteltherapie auch die häufigsten medizinischen Behandlungsfehler. Hierzu zählt insbesondere bei älteren Patienten die Verordnung potenziell inadäquater Medikamente (PIM). Im deutschen Sprachraum existieren mit der wirkstoffbasierten PRISCUS-Liste und den wirkstoff- und kontextbezogenen Verschreibungskriterien der STOPP- und FORTA-Liste drei Instrumente zur Erfassung von PIMs. Ziel des Projektes war ein Vergleich der prädiktiven Validität dieser drei Instrumente hinsichtlich des Auftretens unerwünschter fataler und nicht-fataler Arzneimittelwirkungen (UAW) sowie der Inanspruchnahme und Kosten von Gesundheitsleistungen.

Methodik

Retrospektive Kohortenstudie basierend auf deutschen Krankenkassendaten der Kalenderjahre 2013-2015 von Versicherten ≥ 65 Lebensjahre. Es wurden exponierte Studiengruppen (EG) nach inzidentem und prävalenten Auftreten gemäß der Kriterien der drei Instrumente gebildet, welche in getrennten Analysen jeweils mit Kontrollgruppen (KG) verglichen wurden. Es wurden logistische und lineare Diff-in-Diff Random-Effects-Regressionsmodelle eingesetzt. Darauf basierende grafische Analysen dienten zur Visualisierung der Unterschiede zwischen den Studiengruppen im Zeitverlauf. Durch Balancierung der Baselinedaten mittels Entropy Balancing wurde der Selektions-Bias in der KG reduziert.

Ergebnisse

Die analysierten Stichproben umfassten 3.235.804 Versicherte im Falle der inzidenten bzw. 5.290.656 Versicherte im Falle der prävalenten PIMs. Die größten Unterschiede zwischen EG und KG bezüglich der Wahrscheinlichkeit des Auftretens von UAWs war bei der Anwendung der STOPP-Liste zu beobachten. Die PRISCUS-Liste verfügte hingegen über die größte Diskriminationsfähigkeit hinsichtlich der Mortalität. Bezüglich der durchschnittlichen gesamten Versorgungskosten liegt der gemessene Unterschied zwischen EG u. KG in der inzidenten Stichprobe im ersten Quartal der Post-Phase bei PRISCUS mit 1398 € um 1 € geringfügig höher als bei STOPP mit 1397 € und fällt im Falle von FORTA mit 1013 € deutlich niedriger aus. Mit Ausnahme der Kosten für Heil- u. Hilfsmittel verfügt die FORTA-Liste durchgängig über die geringste Diskriminationsfähigkeit der drei getesteten Instrumente im Bereich der Kosten für Gesundheitsleistungen. Generell treten die gemessenen Unterschiede zwischen EG und KG deutlicher bei der Betrachtung der inzidenten als der prävalenten PIMs zutage.

Diskussion

Mit leichten Vorteilen für die STOPP-Liste ist die Diskriminationsfähigkeit der PRISCUS- und STOPP-Liste ähnlich. Die FORTA-Liste performte deutlich schlechter. Trotz der etwas besseren Diskriminationsfähigkeit der STOPP-Liste, könnte sich die PRISCUS-Liste aufgrund ihrer ausschließlichen Bezogenheit auf ATC-Codes, die damit verbundene Datensparsamkeit und des geringeren Kodieraufwands gegenüber der wirkstoff- und kontextbezogenen STOPP-Liste als für die Praxis geeigneter erweisen.

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2. Beteiligte Projektpartner

Name	Institution	Telefon, Fax, E-Mail	Verantwortlichkeit/Rolle
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Dr. Dirk Heider	Institut für Gesundheitsökonomie und Versorgungsforschung, Universitätsklinikum Hamburg-Eppendorf	040 7410-53382, 040 7410-40546, d.heider@uke.de	Aufbereitung, Auswertung Routinedaten / Ökonometrie
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3. Einleitung

Ausgangslage des Projekts

Der Arzneimitteltherapie ist eine beträchtliche Zunahme an durchschnittlicher Lebenserwartung und Lebensqualität in den letzten Jahrzehnten zu verdanken [1]. Mit diesen enormen Fortschritten begann auch die Untersuchung von Gefährdungen der Patienten, welche eher auf den medizinischen Behandlungsprozess als auf die Grunderkrankung zurückzuführen sind [2,3]. Insbesondere seit dem vom Institute of Medicine im Jahr 1999 veröffentlichten Bericht „To err is human" [4] nahm das Interesse an der Arzneimitteltherapiesicherheit (AMTS) stetig zu. In der Arzneimitteltherapie ereignen sich die häufigsten medizinischen Behandlungsfehler [5] (Medikationsfehler), wobei etwa drei Viertel davon Verordnungsfehler sind [6–8]. Ältere Menschen als Hauptzielgruppe der Pharmakotherapie sind aufgrund erhöhter Multimorbidität besonders gefährdet für die negativen Auswirkungen, welche sich vorwiegend in Hospitalisierungen manifestieren.

Medikationsfehler werden als Fehler im Behandlungsprozess bezeichnet, die zu einer Schädigung des Patienten führen oder führen können [9]. Während bis zu 20 % aller Verordnungen fehlerbehaftet sein können, führen etwa 1-10 % dieser Fehler auch zu einer unerwünschten Arzneimittelwirkung (UAW) [10–12]. UAWs sind assoziiert mit erhöhten direkten und indirekten Kosten im Gesundheitswesen [13,14], häufigeren und längeren Hospitalisierungen [14–16] und erhöhter Mortalität [17,18]. Während mehr als 40 % aller UAWs als vermeidbar gelten [18–20], basieren wiederum bis zu 81 % der vermeidbaren UAWs auf Verordnungs- bzw. Verschreibungsfehlern [7,8,21,22].
Der Patientengruppe der Menschen über 65 Jahre gebührt nicht allein aufgrund ihres wachsenden Anteils infolge des demographischen Wandels besondere Aufmerksamkeit. Ältere Menschen sind gemessen an Gesundheitsstatus und Gebrauch von Arzneimitteln die Hauptzielgruppe der Pharmakotherapie [23–25]. So hat die überwiegende Mehrheit dieser Altersgruppe drei oder mehr gleichzeitig vorhandene Diagnosen [26,27], worunter viele chronische Erkrankungen fallen [28]. Nicht allein der damit in Verbindung stehende hohe Gebrauch an verschiedenen Arzneimitteln kann problematisch sein, sondern auch ein besonders erhöhtes Risiko für UAW [29–31], steigende Gesundheitskosten [32–34] und Mortalität [35]. Ein naheliegender Ansatz zur Verbesserung der Arzneimitteltherapiesicherheit in dieser Altersgruppe ist die Formulierung von Negativlisten unter Berücksichtigung von Arzneimitteln mit besonderen Risiken in der älteren Bevölkerung, etwa aufgrund einer Assoziation mit unerwünschten Ereignissen [36–38], einem negativen Nutzen-Risiko-Verhältnis, einer fehlenden Indikation oder fehlenden Evidenz zur Anwendung [39]. Listen, die potentiell inadäquate Medikation (PIM) einfach auflisten ohne risikorelevante Kontextfaktoren (z.B. Komorbidität, Komedikation, Dosis) zu berücksichtigen, werden für ihre eingeschränkte Aussagekraft kritisiert, hinreichend sensitiv und spezifisch Risikopatienten zu identifizieren [40]. Vor diesem Hintergrund wurden die START/STOPP-2-Kriterien entwickelt, welche durch höheren Informationsgehalt (u.a. die Berücksichtigung von Drug-Drug- und Drug-Disease-Interaktionen) spezifischere Aussagen zur Angemessenheit der Medikation erlauben sollen [40,41]. Dennoch steht ein Wirksamkeitsbeleg der Anwendung innerhalb einer Intervention hinsichtlich klinischen Endpunkten aus [42,43]. Dagegen liegen positive Endpunktdaten, also klare Evidenz für den Einsatz, für viele alterserprobte Medikamente vor. Die Häufigkeit der Unterversorgung mit diesen Arzneimitteln lässt diesen Aspekt als mindestens gleichwertig erscheinen [44–48]. Strategien zur Verbesserung der Arzneimittelgabe im Alter sollten daher beide Aspekte des Spektrums berücksichtigen, wenn es darum geht, Hospitalisierungen als Ausdruck von UAW, Krankheitskosten und

Mortalität zu senken und schlussendlich die Lebensqualität zu erhöhen oder zumindest zu erhalten.
Vor dem Hintergrund beträchtlicher Folgen von inadäquatem Arzneimittelgebrauch in der älteren Bevölkerung [46] gelten explizite Listen als effiziente Instrumente zu dessen Detektion [47]. Die im Rahmen des Projektes zu erwartenden Resultate ermöglichen eine verbesserte Einschätzung der Validität von PRISCUS-Liste, FORTA- und (START)-STOPP-Kriterien hinsichtlich der Vorhersage des Auftretens von unerwünschten Arzneimittelwirkungen und damit verbundenen gesundheitsökonomischen Folgen. Verglichen mit der rein wirkstoffbezogenen Definition von risikoreicher und fehlender Medikation durch die PRISCUS-Liste beinhalten die kombiniert wirkstoff- und kontextbezogenen FORTA- und (START)-STOPP-Kriterien das Potenzial, Versorgungslücken und -mängel genauer zu erkennen und Risiken besser zu vermeiden. Die Übertragung der gewonnenen Erkenntnisse in die Versorgungspraxis (etwa durch Monitoring von Routinedaten) kann wichtige Ansatzpunkte zur Erhöhung der Patientensicherheit und zur Verbesserung der Versorgungsqualität liefern. Zudem könnten unnötige Versorgungsleistungen und Kosten vermieden werden und so auch die Wirtschaftlichkeit der GKV-Versorgung erhöht werden [43].

Ziele und Fragestellungen/Hypothesen des Projekts

Das Projekt beschäftigt sich mit der Forschungsfrage, ob die PRISCUS-Liste, die FORTA-Kriterien oder die (START)-STOPP-Kriterien besser geeignet sind zur validen Erfassung von potenziell inadäquater Medikation (PIM) bei Älteren.
Ziel der Studie ist daher ein Vergleich der genannten Instrumente im Hinblick auf:

1. deren Vorhersage des Auftretens von **nicht-fatalen und fatalen unerwünschten Arzneimittelwirkungen** (UAW)
2. deren Assoziation mit der **Inanspruchnahme** von Gesundheitsleistungen
3. deren Assoziation mit den **Kosten** von Gesundheitsleistungen
4. Unterschiede zwischen **inzidenten** und **prävalenten** PIM bei der Bearbeitung der Forschungsfragen 1-3.

Die Verschreibungsprävalenz bezieht sich auf den Anteil der Personen, die zu oder innerhalb eines bestimmten Zeitraums eine PIM-Verordnung erhalten haben. Demgegenüber beschreibt die Inzidenz den Anteil oder die Rate der Personen, die während eines bestimmten Zeitraums eine neue, erste PIM-Verordnung erhalten. Diese Unterscheidung kann zusätzlich nützlich für die Bewertung sein, wenn es beispielsweise zu einer so genannten depletion-of-susceptibles kommt. Effektschätzer könnten je nach Betrachtungsweise unterscheiden, wenn UAW-Ereignisse bei wenigen, dafür aber besonders anfälligen Patienten zu einem Stopp der PIM-Verordnung führen, während die weniger fragilen Patienten die PIM-Verordnung längerfristig erhalten und tolerieren können. Darauf aufbauend soll untersucht werden, wie durch diese Kriterien vorhergesagte Risikokonstellationen (auch Einzelkriterien verschiedener Listen) sich für den effizienten Einsatz im klinischen Alltag oder zum Monitoring von Routinedaten eignen. Dazu sind Fragen der Exposition und Expositionsdauer relevant (z.B. Schätzung von Dosierung, Adhärenz/Persistenz). Übergeordnet steht die Hypothese, dass weiterreichende Patienteninformationen wie medizinische Kontextfaktoren die Prädiktivität gemessen an Sensitivität und Spezifität erhöhen.

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Projektstruktur (Projektaufbau, Verantwortlichkeiten, ggf. Besonderheiten in der Projektstruktur).

Verantwortlichkeiten		
Projektleitung	Konsortialpartner	Konsortialpartner
Institut für Gesundheitsökonomie und Versorgungsforschung, Universitätsklinikum Hamburg-Eppendorf	Klinische Pharmakologie und Pharmakoepidemiologie, Universitätsklinikum Heidelberg	Wissenschaftliches Institut der AOK, Berlin
Leiter: Prof. Dr. Hans-Helmut König	Leiter: Prof. Dr. Walter E. Haefeli	Leiter: Dipl.-Math. Christian Günster
Ausführender: Dr. Dirk Heider	Ausführender: Dr. Andreas D. Meid, M.Sc.	Ausführender: Patrik Dröge
Projektaufbau und -ablauf		
	Definition der UAW	
	Adaptierung der Instrumente	Bereitstellung der Testdaten
Aufbereitung der Testdaten		
Auswertung der Testdaten	Biometrie	
		Bereitstellung der Gesamtdaten und Räumlichkeiten
Aufbereitung der Gesamtdaten		
Auswertung der Gesamtdaten		
Evaluationsbericht		

4. Projektdurchführung

Im Januar 2017 wurden die erforderlichen Weiterleitungsvereinbarungen getroffen und ein Konsortialvertrag zwischen den Beteiligten Partnern geschlossen. Unter Beteiligung aller Konsortialpartner wurde ein Datenschutzkonzept erarbeitet. Der Aufforderung des Projektträgers folgend, wurde zusätzlich zum ursprünglichen Meilensteinplan ein Ethikantrag erstellt und bei der Ethikkommission der Ärztekammer Hamburg ein Ethikvotum beantragt. Die Einholung eines Ethikvotums erwies letztlich aber als nicht erforderlich. Zur der Definition der unerwünschten Arzneimittelwirkungen (UAW) wurde anhand von Einweisungsdiagnosen ein Konsensverfahren angewendet, in welchem die Vereinigungsmenge aus publizierten Daten und klinischer Beurteilung bestimmt wurde. Dieses Set an ICD-10-Codes mit potenziellem UAW-Bezug wurde mit einer klinischen Beurteilung von tatsächlich aufgetretenen Einweisungsdiagnosen in der ICD-10-Kodierung im Krankenhaus verglichen, welches von Walter Haefeli und Andreas Meid beurteilt wurde. In einer Zufallsstichprobe historischer Daten wurden Prädiktionsmodelle für Hospitalisierungen (jeglicher Ursache), potenziell UAW-bedingte Hospitalisierungen und Mortalität auf Basis der START-STOPP-Kriterien entwickelt und (intern) validiert. Individuelle

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Reichweiten mit betreffenden Arzneimitteln wurden unter Bildung zeitabhängiger Expositionsfenster abgeleitet und mit gleichzeitig vorliegenden (Grund)Erkrankungen zur Bildung der START-STOPP-Kriterien kombiniert.

Die Adaptierung der drei PIM-Listen für die Nutzung in Routinedaten betrifft konkret die Listen PRISCUS, START-STOPP und FORTA. Die PRISCUS-Liste stellte dabei eine rein arzneimittelbezogene Liste dar und die jeweiligen Arzneistoffe wurden auf Ebene der ATC-Codes (Anatomisch-therapeutisches-Klassifizierungssystem) und teilweise mittels der PZN (Pharmazentralnummer) definiert. Eine Herausforderung stellen die „expliziten“ START-STOPP-Kriterien dar, welche in der Anwendung auf Routinedaten nicht immer eindeutig und präzise („explizit“) sind. Vor dem Hintergrund dieser Schwierigkeiten wurden zunächst die Vorarbeiten genutzt, welche sich auf die erste Version der START-STOPP-Kriterien beziehen. Die FORTA-Liste mit Fokus auf Über- und Fehlversorgung wurde nach gleichem Muster adaptiert.

Die Datenlieferung des verwendeten Testdatensatzes (N=500.000) durch das WIdO erfolgte pünktlich nach einer intensiven Koordinationsphase bzgl. Struktur und Inhalt des zu liefernden Datensatzes. Im Zuge der Datenaufbereitung des Testdatensatzes traten Unstimmigkeiten der zugrundeliegenden Routinedaten zu Tage. Der Abschluss der Vorbereitungsphase verzögerte sich dadurch um ein Quartal und zog einen verzögerten Beginn der Aufbereitung des Gesamtdatensatzes für die Evaluation nach sich.

Die zur Aufbereitung des Gesamtdatensatzes für die Evaluation notwendige Adaptierung und Anpassung der anhand der Testdaten entwickelten Syntax wurde Ende November 2018 abgeschlossen. Ein Arbeitsbesuch zur Aufbereitung des Gesamtdatensatzes erfolgte im Februar 2019 und führte zum erfolgreichen Abschluss der Aufbereitung des Gesamtdatensatzes. Eine erste Anwendung des Auswertungsskripts auf den Gesamtdatensatz erfolgte im Rahmen eines Arbeitsbesuchs vom 14.-19. Juli. Eine sich anschließende Analyse wurde zur Überprüfung der Resultate auf Plausibilität genutzt. Die dadurch identifizierten notwendigen Optimierungen der Auswertungssyntax konnten im Rahmen eines weiteren Arbeitsbesuchs in der Woche vom 23.-27. September berücksichtigt werden und führten zum geplanten Abschluss der Datenauswertungen.

Zwischen der Gesundheitsökonomie des UKE und der Pharmakoepidemiologie aus Heidelberg bestand während der gesamten Projektlaufzeit eine intensive Zusammenarbeit. Diese wurde je nach Notwendigkeit anlassbezogen intensiviert und erfolgte hauptsächlich per Mail oder wahlweise per Telefon. Vor allem am Anfang des Projektes erfolgte ein intensiver teilweise täglicher Austausch um sicherzustellen, dass die durch Heidelberg vorgenommene Adaptierung der Instrumente und Definition der UAW einen adäquaten Eingang in die Aufbereitung der Testdaten durch das UKE nehmen konnte. Für die Bereitstellung der Testdaten erfolgte im Vorfeld eine Definition der Daten in Zusammenarbeit zwischen UKE und WIdO. Hierfür wie auch für die während der Aufbereitung und Auswertung auftretenden Unklarheiten bzgl. der Datenstruktur bzw. Unplausibilitäten erwies sich eine Korrespondenz per Mail als völlig ausreichend. Die Auswertung der Testdaten durch das UKE erfolgte unter Konsultierung Heidelbergs.

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5. Methodik

Ein- und Ausschlusskriterien

Im Rahmen eines quantitativen nicht-interventionellen Ansatzes wurden die oben angeführten Forschungsfragen unter Verwendung eines retrospektiven Kohortendesigns überprüft. Verwendet wurden hierfür die Versichertendaten der kompletten Kalenderjahre 2013-2015. Die ursprüngliche Studienpopulation umfasste mit 6.298.520 Personen alle Versicherten der AOK im Alter ≥ 65 Jahre. Auf Grundlage dieser Datenbasis und unterschiedlich definierten Ein- und Ausschlusskriterien für inzidente und prävalente PIMs erfolgte die Zuweisung der Versicherten zu einer Exponierten- (EG) oder einer Kontrollgruppe (KG). In Tabelle 1 sind die Ein- und Ausschlusskriterien für die inzidenten PIMs aufgelistet. In der KG haben die Versicherten demnach keine PIM in der Prä- und Post-Phase. In der EG haben die Versicherten keine PIM in der Prä-Phase und mindestens eine PIM im ersten Quartal der Post-Phase (Inzidenz).

Tabelle 1 Ein- und Ausschlusskriterien inzidente PIMs

	EG	KG
Einschlusskriterien:		
Alter ≥ 65 Jahre zu Beginn der Post-Phase	X	X
durchgehend versichert in Prä- und Post-Phase	X	X
Verschreibung mindestens einer PIM in Post-Phase	X	
Ausschlusskriterien:		
Verschreibung einer PIM in Post-Phase		X
Verschreibung einer PIM während Prä-Phase	X	X
keine Verschreibung von Medikamenten in Prä-Phase	X	X

Die Kriterien für die prävalenten PIMs unterscheiden sich davon dahingehend, dass hier die Verschreibung einer PIM während der Prä-Phase in der EG kein Ausschlusskriterium darstellt. Die Dauer der Prä- u. Post-Phase belief sich jeweils auf 12 Monate, untergliedert in jeweils 4 Quartale. Die Anwendung der verschiedenen Ein- und Ausschlusskriterien resultierte in unterschiedlichen Fallzahlen für inzidente und prävalente PIMs. Im Analysestrang für die inzidenten PIMs konnten so 700.437 Personen der EG und 2.640.380 Personen der KG zugewiesen werden. 2.957.703 Personen wurden nach Anwendung der Ein- und Ausschlusskriterien von den Analysen ausgeschlossen. Im Analysestrang für die prävalenten PIMs wurden 876.463 Personen ausgeschlossen. Dies resultierte in 2.781.657 der EG und 2.640.400 der KG zugeordneten Personen. In Abbildung 1 sind die Zahlen in einem Flow-Chart zusammengefasst. Die Analysen für die inzidenten und prävalenten PIMs wurden getrennt anhand separater Datensätze durchgeführt.

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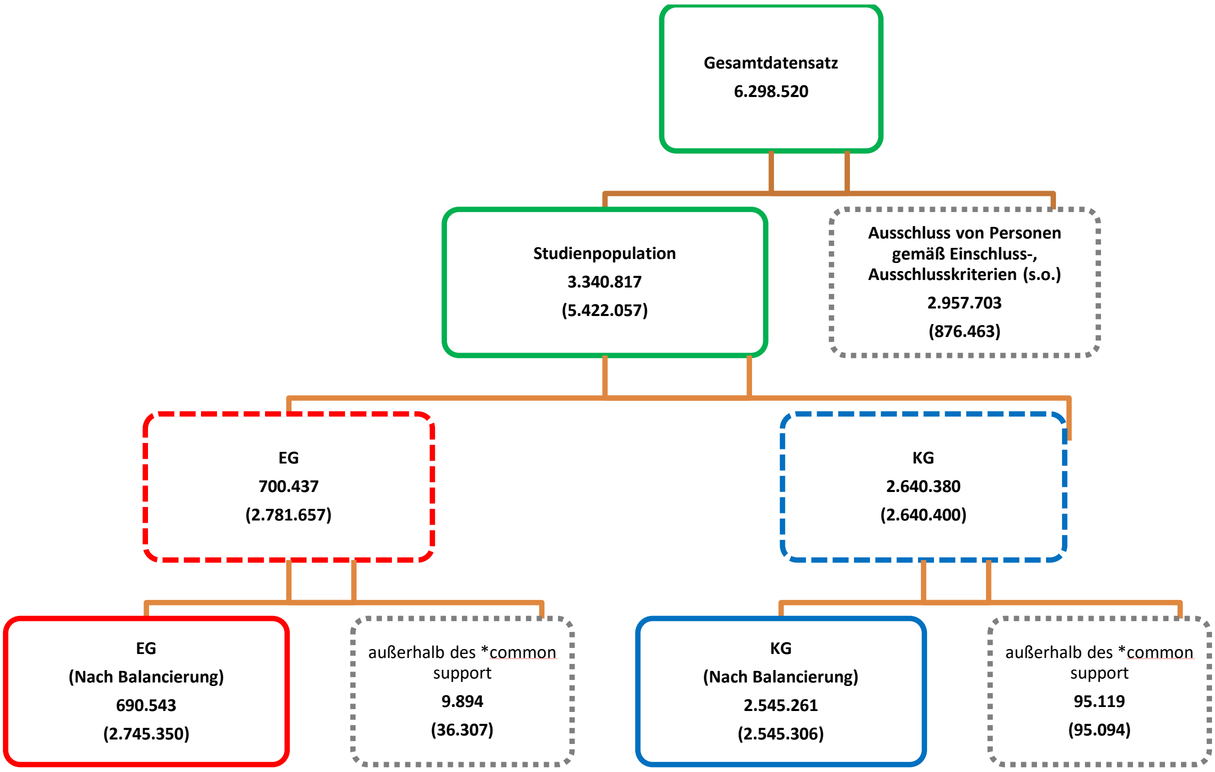
Abbildung 1 Sample Flow-Chart inzidente PIMs (prävalente PIMs in Klammern)



**Für die Balancierung des Datensatzes wurde unter Zuhilfenahme sämtlicher Balancierungsvariablen für jede Person der EG und KG ein Gewichtungsvektor berechnet. Der Bereich für den sich die Werte dieses Vektors zwischen den Personen der EG und KG überschneiden wird als common support bezeichnet. Personen beider Studiengruppen die auf dem Gewichtungsvektor Werte aufweisen, die außerhalb dieses common support liegen, werden im Zuge des Balancierungsverfahrens von der weiteren Analyse ausgeschlossen.*

Operationalisierung der Konstrukte

Die Operationalisierung der PIMs erfolgte zunächst tagesgenau. Hierfür wurde in einem ersten Schritt auf das Abgabedatum der verschriebenen Medikamente aus den Arzneimitteldaten zurückgegriffen. Die relevanten Medikamente und das entsprechende Abgabedatum wurden über die durch die jeweiligen PIM-Listen definierten ATC-Codes identifiziert. Für die PRISCUS-Liste war der Prozess der Operationalisierung damit bereits abgeschlossen. Da die Definition der STOPP- und FORTA-Liste zusätzlich diagnosespezifisch erfolgt, wurde für diese in einem zweiten Schritt das Behandlungsdatum der relevanten ambulanten und stationären ICD-Diagnosen ermittelt. Bei diesem Datum handelt es sich in der Regel um ein Zeitfenster z.B. 15. Januar bis 21. Januar. In einem weiteren sehr rechenintensiven Bearbeitungsschritt wurden zur Definition des zeitlichen Auftretens einer PIM das Abgabedatum des Medikaments und die Zeitspanne ambulanter oder stationärer Behandlungsfälle auf zeitliche Koinzidenz abgeglichen. Im Falle des Vorliegens einer zeitlichen Koinzidenz, wurde zum Datum des Zusammenfallens beider Werte (entsprechend dem Abgabedatum des Medikaments) eine PIM nach STOPP bzw. FORTA kodiert. Abschließend wurden die somit für alle 3 Listen vorliegenden tagesgenau kodierten PIM-Fälle einem zugrundeliegenden Quartal zugeordnet um die Daten im Rahmen der zur Auswertung verwendeten Regressionsmodelle handhabbar zu gestalten.

Die Operationalisierung der UAWs erfolgte basierend auf einer durch die Pharmakoepidemiologie der Universität Heidelberg zusammengestellte klinisch-definierte Liste von ICD-Codes (Anlage_02). Zur Bildung wurden ausschließlich stationäre Einweisungs- und Entlassdiagnosen verwendet. Die Beschränkung auf stationäre ICDs und das Ausklammern ambulanter ICD erfolgte hierbei vorwiegend wegen der höheren Reliabilität der stationären Diagnosen. Darüber hinaus war es dadurch möglich neben der zeitlichen Trennung (Prä- und Post-Phase) eine strengere inhaltliche Trennung von unabhängigen und abhängigen Variablen zu gewährleisten und damit die kausale Interpretierbarkeit der zu berechnenden Modelle robuster zu gestalten.

Die Operationalisierung der PIM-Listenkonstrukte erforderte je nach PIM-Liste ein den Anforderungen angepasstes Vorgehen. So hat die PRISCUS-Liste einen ausschließlichen Arzneimittelbezug, welcher eine klare Definition über ATC-Codes und ggf. PZN-Nummern erlaubt. Hierfür konnten bereits im Vorfeld erstellte und geprüfte Listen verwendet werden. Die START-STOPP- und FORTA-Listen enthalten darüber hinaus noch so genannte Kontextinformation, d.h. weitere Bedingungen zur Beurteilung, ob ein Arzneimittel nun im jeweiligen Kontext aus etwa Begleitmedikation oder Begleiterkrankungen als adäquat gilt. Hierfür wurden in einer mehrstufigen Entwicklung verschiedene klinische Experten einbezogen, welche die Ursprungsinformation, bereits vollzogene Adaptierungen für Routinedaten aus der Literatur und Expertenmeinungen in die Entwicklung einfließen ließen (siehe Punkt 16 mitsamt den Anlagen_03 bis _06). Das Prinzip für die iterativen Anpassungen ist exemplarisch für die START-STOPP-Liste bereits im Rahmen einer Publikation begutachtet worden (Meid AD, Groll A, Heider D, Mächler S, Adler JB, Günster C, König HH, Haefeli WE. Prediction of Drug-Related Risks Using Clinical Context Information in Longitudinal Claims Data. Value Health 2018;21:1390-1398). Darin zeigte sich auch, wie notwendig ein solch akribisch-detailliertes Vorgehen war, wo doch auf Einzelkriteriumsebene mitunter abweichende Effektschätzer je nach Kriteriumsdefinition zu beobachten waren. Dies war nicht so stark vorherzusehen. Umso mehr muss die genaue Definitionsarbeit in der Operationalisierung der Konstrukte als zentraler Projektteil angesehen werden, welche natürlich auch für die Interpretation der Ergebnisse bedacht werden muss.

Berücksichtigung stationärer Diagnosen für die Definition der unerwünschten Arzneimittelwirkungen

Bei den unerwünschten Arzneimittelwirkungen handelt es sich um den Studienendpunkt, bei welchem eine Missklassifikation besonders schwerwiegend wäre. Ambulante Diagnosen können in zu Abrechnungszwecken erstellten Routinedaten gesetzlicher Krankenkassen eine weitaus höhere inhaltliche Unschärfe mit sich bringen. Des Weiteren ist eine genaue Datierung des Ereignisses über den Quartalsbezug (bzw. den ersten ambulanten Kontakt im Quartal) hinaus nicht möglich, womit angewendete Studiendesigns nicht kompatibel gewesen wären. Stationäre Diagnosen dagegen implizieren gleichzeitig einen höheren Schweregrad, was bei der Interpretation berücksichtigt werden muss.

Definition der unerwünschten Arzneimittelwirkungen anhand Einweisungsdiagnosen in der ICD-10-Terminologie

Bei der Definition der unerwünschten Arzneimittelwirkungen (UAW) anhand Einweisungsdiagnosen in der ICD-10-Terminologie wurde ein Konsensverfahren angewendet, in welchem die

Vereinigungsmenge aus publizierten Daten und klinischer Beurteilung bestimmt wurde. Konkret wurde die publizierte Liste potenzieller UAW-Codes nach Stausberg und Hasford berücksichtigt (Stausberg J & Hasford J. BMC Health Serv Res 2011;11:134). Dieses Set an ICD-10-Codes mit potenziellem UAW-Bezug wurde mit einer klinischen Beurteilung von tatsächlich aufgetretenen Einweisungsdiagnosen in der ICD-10-Kodierung im Krankenhaus verglichen, welches von Walter Haefeli und Andreas Meid beurteilt wurde. Die Übereinstimmungsrate zwischen den aus der Literatur übernommenen Codes und den empirisch ermittelten Codes lag bei 73,6 %. Durch die Vereinigungsmenge beider Sets kann davon ausgegangen werden, eine adäquate Sensitivität für UAW-bedingte Hospitalisierungen in der Verwendung darauf begründeter Regressionsmodelle zu erzielen.

Adaptierung der drei PIM-Listen PRISCUS, START/STOPP und FORTA für die Nutzung in Routinedaten

Die Adaptierung der drei PIM-Listen für die Nutzung in Routinedaten betrifft konkret die Listen PRISCUS, START-STOPP und FORTA. Die PRISCUS-Liste stellt dabei eine rein arzneimittelbezogene Liste dar und die jeweiligen Arzneistoffe wurden auf Ebene der ATC-Codes (Anatomisch-therapeutisches-Klassifizierungssystem) und teilweise mittels der PZN (Pharmazentralnummer) definiert. Eine Herausforderung stellen die „expliziten" START-STOPP-Kriterien dar, welche in der Anwendung auf Routinedaten nicht immer eindeutig und präzise („explizit") sind (Anrys P, et al. Age Ageing 2016;45:589-92). Vor dem Hintergrund dieser Schwierigkeiten wurden zunächst die Vorarbeiten genutzt, welche sich auf die erste Version der START-STOPP-Kriterien beziehen (de Groot DA, et al. Age Ageing 2014;43:773-8). Hierbei wurden die konzeptionelle Vorgehensweise definiert und eine tabellarische Zusammenstellung der potenziell umsetzbaren Kriterien entworfen. Im nächsten Schritt wurde die Auswahl möglicher Kriterien hinsichtlich ihrer klinischen Anwendbarkeit durch Andreas Meid und Sarah Mächler im Konsensverfahren weiter eingegrenzt und spezifiziert (siehe auch ausführlichen Bericht in den Anlagen_03 und _04). Analog wurde die FORTA-Liste adaptiert. Konsistent mit anderen Forschungsgruppen wurde (auch nach den Ergebnissen der proof-of-principle-Studie) keine Unterversorgungsaspekte betrachtet, sondern Über- und Fehlversorgung fokussiert (z.B. Brown JD, et al. J Am Geriatr Soc 2016;64:22-30).

Operationalisierungen der verwendeten Variablen

Kategorien	Abhängige Variable	Operationalisierung (basierend auf)
Unerwünschte Arzneimittelwirkungen (UAW)	UAW Einweisung	Aufnahmediagnose (ICD-10)
	UAW Entlassung	Entlassungsdiagnose (ICD-10)
	UAW Einweisung/Entlassung	Aufnahmediagnose und/oder Entlassungsdiagnose (ICD-10)
	Tod	Versterben während Post-Phase, basierend auf Datum des Versterbens
Komorbidität	Elixhauser Index	basierend auf stationären Entlassungsdiagnosen (ICD-10) nach Quan H, Sundararajan V, Halfon P, Fong A, Burnand B, Luthi J-C, Saunders LD, Beck CA, Feasby TE,

		Ghali WA. Coding algorithms for defining comorbidities in ICD-9-CM and ICD-10 administrative data. Med Care. November 2005;43(11):1130–9.
Leistungsinanspruch-nahme	Rehatage	stationär
	Kranken-haustage	stationär
	DDD	Daily Defined Dose
Kosten in €	Ambulante Kosten	Ambulante Arztkosten
	Rehakosten	Stationär
	Kosten für Heilmittel	
	Medika-mentenkos-ten	ambulant
	Kranken-hauskosten	stationär
	Gesamtkos-ten	Summe aus ambulanten Kosten, Rehakosten, Kosten Heilmittel, Medikamentenkosten, Krankenhauskosten

Statistische Methoden

Zur Berechnung der Modelle wurden die 3 zu untersuchenden PIM-Listen zusammen in einem Regressionsmodell analysiert. Hiermit sollte dem Umstand Rechnung getragen werden, dass durch eine separate Berechnung der Effekte in einzelnen Modellen für jede PIM, die bestehenden Abhängigkeiten zwischen den PIM-Listen nicht adäquat berücksichtigt werden können. Da in der Versorgungspraxis die Verschreibung eines Medikaments die Kriterien für mehrere PIM-Listen erfüllen kann, es aber relativ unwahrscheinlich ist, dass die Kriterien für alle 3 PIM-Listen gleichzeitig erhoben werden, könnte eine Analyse der Listen in separaten Modellen zu verzerrten und falschen Annahmen führen.

Für die von uns durchgeführten Analysen bedeutete dies, dass das Auftreten einer PIM im ersten Quartal der Post-Phase mit dem Auftreten einer PIM nach PRISCUS und/oder STOPP und/oder FORTA definiert wurde. Die Inzidenzen und Prävalenzen der nach den einzelnen Listen definierten PIMs während der Post-Phase für die EG in Tabelle 2 verdeutlichen, dass es zwischen den Listen Überschneidungen gibt.

Tabelle 2 Inzidenzen und Prävalenzen der 3 PIM-Listen in den 4 Quartalen der Post-Phase

Quartal		PRISCUS		STOPP		FORTA		GESAMT
		%	(N)	%	(N)	%	(N)	N
Q5	Inzidenz	34,07	(235.274)	41,33	(285.386)	46,41	(320.477)	690.543
	Prävalenz	38,68	(1.061.827)	48,22	(1.323.695)	48,40	(1.328.708)	2.745.350
Q6	Inzidenz	11,31	(76.237)	18,88	(127.244)	18,08	(121.938)	674.017
	Prävalenz	24,41	(650.824)	32,22	(858.968)	31,59	(842.129)	2.665.792

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Q7	**Inzidenz**	10,02	(65.763)	15,87	(104.153)	14,79	(97.077)	656.274
	Prävalenz	24,41	(632.384)	31,11	(806.056)	30,48	(789.760)	2.590.918
Q8	**Inzidenz**	9,68	(62.238)	15,37	(98.855)	14,61	(93.953)	643.192
	Prävalenz	24,03	(608.966)	30,95	(784.367)	30,54	(773.942)	2.534.252

Die Analyse der 3 PIM-Listen erfolgte wegen der genannten Überschneidungen in Form unabhängiger Variablen in jeweils einem logistischen bzw. linearen *Random-Effects*-Regressionsmodell mit *Maximum-Likelihood* Schätzer mit den entsprechenden Variablen für die Leistungsinanspruchnahme, Kosten oder UAWs als abhängigen Variablen unter Berücksichtigung der Gewichte aus dem Verfahren des *Entropy Balancing*. Zur Beantwortung der Forschungsfrage 1 (nicht-fatale und fatale UAWs) wurden dementsprechend logistische Regressionsmodelle und Berechnungen der Area under the curve (AUC) gewählt. Zur Beantwortung der Forschungsfrage 2 und 3 (Inanspruchnahme von Gesundheitsleistungen, Kosten von Gesundheitsleistung) kamen lineare Regressionsmodelle zum Einsatz.

Statistischer Analyseplan

Abhängige Variable *(Variablenname)*	**Skalenniveau der Variablen**	**Analyseschritt**	**Statistische Analysemethode**
Stationäre UAW *(uaw_q)* Mortalität *(tod_q)*	dichotom	1	Logistische *Random-Effects*-Regression mit *Maximum-Likelihood* Schätzer
		2	Berechnung der Marginal effects
		3	Berechnung Diff-in-Diffs mittels linearer Kombinationen
		4	Berechnung der Area under the Curve (AUC),
		5	Decision Curve Analysis
Daily Defined Dose *(ddd_q)* Krankenhaustage *(stat_tage_q)* Rehatage *(reha_tage_q)* Medikamentenkosten *(med_kost_q)* Ambulante Kosten *(amb_kost_q)* Stationäre Kosten *(stat_kost_q)* Rehakosten *(reha_kost_q)* Kosten Heilmittel *(heil_kost_q)* Gesamtkosten *(kosten_ges_q)*	metrisch	1	Lineare *Random-Effects*-Regression mit *Maximum-Likelihood* Schätzer und anschließender Berechnung der Marginal effects und Diff-in-Diffs mittels linearer Kombinationen
		2	Berechnung der Marginal effects
		3	Berechnung Diff-in-Diffs mittels linearer Kombinationen

Das auch im statistischen Analyseplan aufgeführte Verfahren zur Schätzung der Effekte umfasste daher die folgenden 3 Rechenschritte:

1. Logistische/lineare Random-Effects-Regression mit Maximum-Likelihood Schätzer

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2. Berechnung der Marginal effects

3. Berechnung Diff-in-Diffs mittels linearer Kombinationen

Exemplarisch für die Gesamtkosten lautet der hierfür verwendete Stata-Code für ein lineares Regressionsmodell wie folgt:

xtreg kosten_ges i.q##PRISCUS i.q##FORTA i.q##STOPP [iw=eb_vector], mle

Basierend auf obigem Regressionsmodell erfolgte in einem Zwischenschritt die Berechnung von *Marginal effects* mit folgendem Stata-Code:

margins i.q#1.PRISCUS i.q#1.STOPP i.q#1.FORTA i.q#0.PRISCUS#0.STOPP#0.FORTA

Diese *Marginal effects* dienten als Basis zur abschließenden Berechnung PIM-Listen spezifischer *Diff-in-Diffs* mittels linearer Kombinationen der berechneten Schätzer:

lincom (1.q#1.PRISCUS-1.q#0.PRISCUS#0.STOPP#0.FORTA)-(4.q#1.PRISCUS-4.q#0.PRISCUS#0.STOPP#0.FORTA)

Basierend auf dem verwendeten Regressionsmodell sind die Interaktionsterme zwischen den 8 Quartalen und jeder einzelnen der 3 PIM-Listen in den Modellen enthalten. Dies führt im Modelloutput zu einer Anzahl von insgesamt 31 Effektparametern (+ Konstante), von denen die ersten 7 Parameter den zeitlichen Verlauf der KG nachzeichnen, indem die Abweichungen der abhängigen Variablen in den Quartalen 2 bis 8 von der Konstanten (Zeitpunkt t0, entspricht 1. Quartal) modelliert werden. Diese Parameter sind im Output als „num_PSFQ“ bezeichnet und basieren auf einer Zeitvariable mit 8 Ausprägungen (0-7). Drei weitere Parameter modellieren die Abweichungen der einzelnen PIM-Listen von der KG zum Zeitpunkt t0 (Q1). Diese sind bezeichnet mit „1.PRISCUS2, „1.FORTA“, „1.STOPP“. Für jede einzelne der 3 PIM-Listen existieren 7 weitere Interaktionsterme, welche die Abweichung der jeweiligen Liste von ihrem eigenen Ausgangswert zu t0 (Q1) für die Zeitpunkte t1-t7 (Q2-Q8) modellieren. Diese sind bezeichnet mit „num_PSF4Q#PRISCUS“, „num_PSF4Q#FORTA“ und „num_PSF4Q#STOPP“.

Durch dieses Vorgehen ist die statistische Kontrolle der bestehenden Abhängigkeit der 3 PIM-Listen gewährleistet. Die anhand der beschriebenen Methodik berechneten Regressionsmodelle sind wegen der Vielzahl der in ihnen enthaltenen Interaktionstermen auch für geübte Analytiker nur mühsam zu interpretieren. Aus diesem Grund erwies es sich als vorteilhaft graphische Analysen einzusetzen, um die ermittelten Unterschiede zwischen den Studiengruppen und PIM-Listen im Zeitverlauf zu veranschaulichen.

„Zusätzlich erfolgte für abhängige dichotome Kriterien (UAW, Mortalität) zum Vergleich der PIM-Listen eine Analyse der Diskriminationsfähigkeit der 3 Konstrukte mittels der Area under the Curve (AUC). Hierzu wurde für jede der 3 PIM-Listen die Fläche unter einer ROC-Kurve (Receiver Operating Characteristics) berechnet, die der sogenannten C-Statistik entspricht und auf der Berechnung logistischer Regressionsmodelle beruht. Ein Wert von 0,5 ist gleichbedeutend mit keiner Diskriminationsfähigkeit während Werte über 0,9 eine exzellente Diskriminationsfähigkeit anzeigen. Eine Analyse der Kalibrierung der 3 PIM-Listen war im Rahmen des Projektes nicht erforderlich, weil durch die dichotome Ausprägung der 3 PIM-Listen bereits optimale Cut-off Punkte existieren anhand derer sich die Diskriminationsfähigkeit der 3 Konstrukte ermitteln ließ. Die 3 Flächen wurden sowohl grafisch als auch inferenzstatistisch miteinander verglichen. Hierzu wurde das im Statistikprogramm STATA verfügbare Kommando „roccomp“ eingesetzt.“

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Balancierung

Bei der Anwendung des *Entropy Balancing* wurde mit einer Toleranz von 0,001 nach Mittelwert und Varianz der Balancierungsvariablen balanciert. Eine Balancierung nach der Schiefe erwies sich als nicht durchführbar. Bei den verwendeten Balancierungsvariablen handelte es sich um: Geschlecht, Alter, Versicherungsstatus, Bundesland, DMP-Teilnahme, Pflegestufe, Anzahl verschriebener Medikamente (ATC), Elixhauser Index (31 Morbiditäten), UAWs, Inanspruchnahme von Gesundheitsleistungen und Kosten. Die Balancierung erfolgte unter Einbeziehung der 4 Quartale der Prä-Phase. D.h. mit Ausnahme der zeitlich invarianter Variablen wie Geschlecht oder Alter gingen für jede Balancierungsvariable 4 Werte (1 Wert pro Quartal) in die Berechnung des Balancierungsvektors ein. Dies gestattete uns die Anpassung des Kurvenverlaufs der EG an die KG während der Prä-Phase. Zu beachten ist hierbei, dass diese Balancierung nur für den durchschnittlichen Verlauf der Kurven aller 3 PIM-Listen möglich war. Wie aus **Abbildung 3** hervorgeht weichen die einzelnen Kurven der 3 PIM-Listen vom Verlauf der Kurve für die KG ab. Der gemittelte Verlauf der Kurven für die 3 PIM-Listen entspricht aber für alle 4 Quartale der Prä-Phase exakt dem Verlauf der KG. Dies ist den **Tabellen A1** und **A2** in Anlage_01 zu entnehmen, in denen die Charakteristika sämtlicher Balancierungsvariablen vor und nach der Balancierung aufgelistet sind. Dort ist zu erkennen, dass nach der Balancierung zu allen 4 Quartalen der Prä-Phase keine Unterschiede zwischen EG und KG hinsichtlich Mittelwert und Varianz mehr bestehen. D.h. unter Einbeziehung aller verwendeten Balancierungsvariablen ist es gelungen, eine nahezu perfekte Balancierung beider Studiengruppen im Hinblick auf Mittelwert und Varianz herzustellen.

Proof-of-principle-Studie

Die Vor-Analyse zum proof-of-principle-Nachweis basierte auf WIdO-Daten eines Vorprojektes, in welchem Versicherte von mindestens 65 Jahren vom 1. Januar 2010 bis zum Ende von 2012 (oder Tod) nachverfolgt wurden. Die 6.849.622 eligiblen Versicherten wurden in einer zwölfmonatigen Vorperiode in 2010 im Hinblick auf Demographie und Ko-Morbiditäten charakterisiert. Zum Ausschluss kam es bei vorzeitigem Versterben oder wenn keine (ambulanten) Diagnosen oder Informationen zum Arzneimittelgebrauch vorlagen. Prädiktionsmodelle wurden aus einer daraus gebildeten Zufallsstichprobe von 30.000 Versicherten entwickelt.

Als Endpunkt wurden ICD-10-kodierte Einweisungs- und Hauptdiagnosen betrachtet, wobei das Aufnahmedatum als Ereigniszeit die Zielgröße darstellte („time-to-first-event“). Neben UAW-spezifischen wurden auch Hospitalisierungen jeglicher Ursache betrachtet; Tod wurde als Zensierung betrachtet, wenn nicht explizit Mortalität als Endpunkt galt.

Die Exposition mit START-STOPP-Kriterien wurde zeitabhängig berechnet, in dem eine zuvor etablierte Methodik zur Abschätzung von Reichweiten verwendet wurde (Meid AD, Heider D, et al. Pharmacoepidemiol Drug Saf. 2016; 25(12): 1434-1442). Dazu wurden Diagnosen aus dem ambulanten Abrechnungsquartalen extrahiert, wobei als chronische eingestufte Diagnosen fortlaufend, als temporär geltende Diagnosen nur im entsprechenden Quartal galten. Daneben wurden auch demographische Daten (Alter, Geschlecht) und Ko-Morbiditäten nach Elixhauser (Elixhauser A et al. Med Care. 1998; 36(1): 8-27) als Kandidatenprädiktoren berücksichtigt.

Die statistische Analyse basierte auf der Entwicklung von Prädiktionsmodellen in einem Trainingsdatensatz, welche daraufhin in einem separierten Testdatensatz validiert wurden. Als Modell wurde ein zeitabhängiges Cox-Modell verwendet (Meid AD et al Eur J Clin Pharmacol. 2017; 73(3): 373-380), welches eine L1-Penalisierung beinhaltete (d.h. mit dem least absolute

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shrinkage and selection operator, LASSO (Tibshirani R. Journal of the Royal Statistical Society Series B (Methodological). 1996; 58(1): 267-288)). Dazu wurde das R-Paket penalized verwendet (Goeman JJ. Biom J. 2010; 52(1): 70-84). Die Konkordanz-Statistik (c-index) für zeitabhängige Kovariaten war das primäre Performance-Maß.

6. Projektergebnisse und Schlussfolgerungen

Vorarbeiten als Proof-of-Principle anhand von Einzelkriterien

In einer unabhängigen Stichprobe (Wissenschaftliches Institut der AOK [WIdO], Berlin) in einem separat beschriebenen Vorgehen (Meid et al. 2018) wurde zunächst als *proof-of-principle* untersucht, ob sich durch Einzelkriterien vorhergesagte Risikokonstellationen generell zum Monitoring von Routinedaten eignen. Dazu wurden Aspekte der zeitlich variierenden Exposition und Expositionsdauer dezidiert berücksichtigt. Hierfür wurden die START-STOPP-Kriterien exemplarisch betrachtet.

Die Patienten der Zufallsstichprobe waren im Mittel 76,05 Jahre alt (Standardabweichung 7,17 Jahre), worunter 66,7 % Frauen waren. Es gab dabei nur kleine Unterschiede zwischen Patientengruppen, welche mit den jeweiligen START-STOPP-Kriterien exponiert waren. Unadjustierte Inzidenzraten waren sehr ähnlich, wenn Hospitalisierungen jeglicher Ursache betrachtet wurden. Bei spezifischerer Betrachtung der potenziell UAW-bedingten Hospitalisierungen zeigt sich ein differenzierteres Bild (**Tabelle 3**). Dabei hatte ein Patient zum Zeitpunkt der Aufnahme eine mediane Anzahl von 3 STOPP- und 10 START-Kriterien.

Für die Modellentwicklung wurden Ereignisse zeitabhängig in Bezug auf die da vorliegende Exposition mit START-STOPP-Kriterien untersucht. Es wurde ermittelt, welchen prädiktiven Wert die START-STOPP-Kriterien für das Auftreten eines Ereignisses haben. Die LASSO-Methodik wählt inhärent nur diejenigen Variablen, welche die Vorhersagegenauigkeit verbessern. Die finalen Modelle waren allesamt klein und gut interpretierbar; mit dem „sparsamen“ Selektionskriterium BIC (Bayesian information criterion) resultierte ein Modell mit 8 START-STOPP-Prädiktoren (**Abbildung 2**). Generell waren STOPP-Kriterien für UAW prädiktiver (durchweg Mehrzahl an Prädiktoren aus der STOPP-Liste). Klinisch können die Prädiktoren dem kardiovaskulären System (START A-Kriterien), dem Gerinnungssystem (STOPP C- Kriterien), dem zentralen Nervensystem (STOPP D-criteria), dem muskuloskeletalen System (STOPP H- Kriterien, START E- Kriterien) einschließlich der Sturzrisken (STOPP K- Kriterien) zugeordnet werden.

Die Vorhersagegüte bzw. Modellperformance gemessen an der Konkordanzstatistik (c-index) war zwischen größeren und sparsameren Modellen ähnlich, wobei die BIC-Selektion für potenziell UAW-bedingte Hospitalisierungen einen Schätzer von 0.67 (95 % Konfidenzintervall [0.65;0.68]) annahm.

Inzidenzraten unter Einzelkriterien bei zeitabhängiger Exposition

Es wurden zeitabhängige Expositionsfenster für die jeweiligen STOPP-Kriterien gebildet und darin aufgetretene klinische Ereignisse ermittelt, um Inzidenzraten für diese potenziell UAW-bedingten Hospitalisierungen zu ermitteln (Meid et al. 2018). Die zugehörigen Ergebnisse in **Tabelle 3** zeigen, dass die Definition der Kriterien (Operationalisierung des Konstrukts) möglich und plausibel erscheint und sich für Expositions-Ereignis-Analysen eignet.

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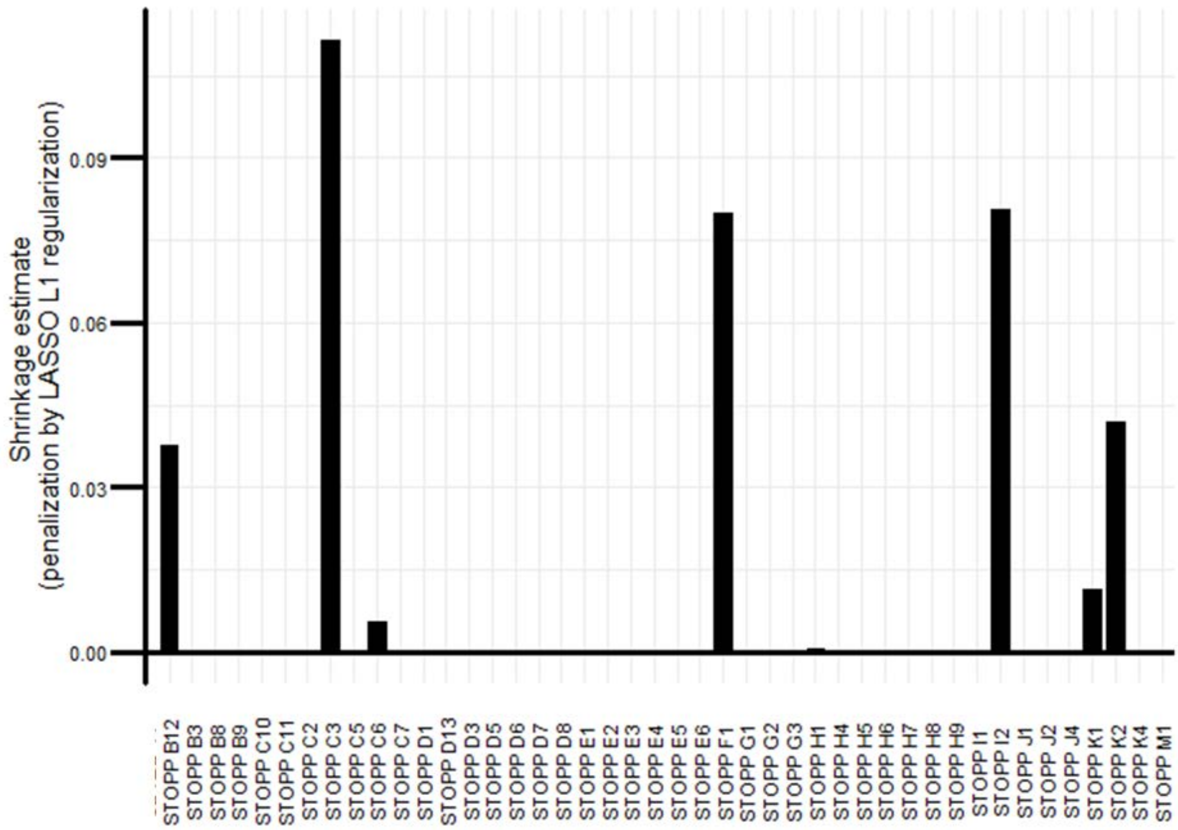
Tabelle 3 Expositionsfenster mit STOPP-Kriterien und Inzidenzraten für potenziell UAW-bedingte Hospitalisierungen.

STOPP-Kriterium	Anteil der Expositionszeit an gesamter Beobachtungszeit [%]	Unadjustierte Inzidenzrate für UAW-bedingte Hospitalisierung [pro Personenjahr]
STOPP K3	73,5	0,35
STOPP E4	47,1	0,28
STOPP H1	45,7	0,28
STOPP C3	24,8	0,43
STOPP B9	21,5	0,46
STOPP B7	21,5	0,46
STOPP E6	14,2	0,31
STOPP H5	13,9	0,34
STOPP C2	13,2	0,36
STOPP G2	12,9	0,34
STOPP H4	11,3	0,33
STOPP B8	10,6	0,33
STOPP D1	9,66	0,36
STOPP F1	9,61	0,34
STOPP B4	9,43	0,26
STOPP I2	8,21	0,35
STOPP K1	7,92	0,37
STOPP J4	7,21	0,28
STOPP K2	6,77	0,43
STOPP J1	6,66	0,35
STOPP D6	6,31	0,42
STOPP D5	5,38	0,33
STOPP H6	4,95	0,19
STOPP C11	4,74	0,32
STOPP H9	4,70	0,36
STOPP I1	4,56	0,38
STOPP H8	3,98	0,28
STOPP G3	3,75	0,48
STOPP F3	3,73	0,38
STOPP D13	3,69	0,41
STOPP B11	3,23	0,24
STOPP H7	3,14	0,30
STOPP K4	3,00	0,41
STOPP C10	2,99	0,35
STOPP B12	2,02	0,47
STOPP G1	1,07	0,42
STOPP B3	0,56	0,29
STOPP M1	0,52	0,43
STOPP D8	0,51	0,33
STOPP C6	0,48	0,54
STOPP E5	0,41	0,22
STOPP C5	0,39	0,53
STOPP D7	0,31	0,30
STOPP J2	0,25	0,37
STOPP E3	0,24	0,12
STOPP D3	0,17	0,51
STOPP E2	0,16	0,08
STOPP C7	0,07	0,35
STOPP E1	0,06	0,40
STOPP J3	0,06	0,44

Prädiktivität von Einzelkriterien als Eignungsnachweis zum Routinemonitoring

Als weitere Vorarbeit im Hinblick auf den Prädiktivitätsvergleich verschiedener Konstrukte wurden die STOPP-Kriterien auf ihre Vorhersagegüte für potenziell UAW-bedingte Hospitalisierungen in so genannten penalisierten (regularisierten) Regressionsmodelle untersucht, wobei auch hierfür der zeitabhängige Charakter der Exposition berücksichtigt wurde (Meid et al. 2018). Das heißt, dass ein Versicherter nur dann unter Risiko steht, wenn er auch tatsächlich mit einem Indikator exponiert ist. Die sogenannte Penalisierung optimiert die Vorhersagekraft des Modells, indem Indikatoren mit geringerem Beitrag zur Vorhersagekraft eine geringe Bedeutung beigemessen bekommen bzw. gänzlich aus dem Modell entfernt werden. Je nach Höhe der Penalisierung resultierten mehr oder weniger sparsame Modelle. Als rückversicherndes Ergebnis dieser Vorarbeit ist zu nennen, dass bereits eine geringe Anzahl möglicher Kandidatenindikatoren den Endpunkt potenziell arzneimittelbedingter Hospitalisierungen gut vorhersagt (**Abbildung 2**). Das dazugehörige Modell erreichte eine Trennschärfe gemessen an der c-Statistik von 0,67 (95 %-Konfidenzintervall: 0,65 bis 0,68).

Abbildung 2 Auswahl und Effektstärke (shrinkage-Schätzer der zentrierten Variable) der START-STOPP-Kriterien für potenziell arzneimittelbedingte Hospitalisierungen



Legende: STOPP B12: Kombination von Aldosteron-Antagonisten und Kalium-sparenden Stoffen; STOPP C3: Thrombozytenaggregationshemmer (TAH) oder Antikoagulanzien bei hohem Blutungsrisiko; STOPP C6: Kombination von TAH plus Antikoagulanzien; STOPP F1: Gabe von Metoclopramid bei Parkinson; STOPP H1: (nicht-selektive) nicht-steroidale Antirheumatika bei früherer gastrointestinaler Blutung; STOPP I2: Alphablocker bei orthostatischer Hypotonie oder Miktionssynkope; STOPP K1: Benzodiazepine bei früherem Sturz; STOPP K2: Neuroleptika bei früherem Sturz; START E2: (fehlende Gabe von) Bisphosphonate und Vitamin D plus Calcium bei Langzeit-Glukocorticoid-Therapie.

Als Zwischenfazit dieser Vorarbeiten ist hervorzuheben, dass die klinisch-definierten STOPP-Kriterien sinnvoll operationalisiert werden können und tatsächlich prädiktiven Einfluss auf Endpunkte in Routinedaten nehmen. Damit besteht eine fundierte Ausgangslage für die folgenden Analysen.

Resultate Inzidente PIMs

Unerwünschte Arzneimittelwirkungen, Mortalität und Komorbidität

Zur Beantwortung der Fragestellung 1 sind **Tabelle 4** die *Diff-in-Diff*-Schätzer der primären Outcomes für das erste Quartal der Post-Phase getrennt nach PIM-Listen aufgeführt. Die

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Schätzer für die UAWs basieren aus logistischen Regressionsmodellen. Deshalb handelt es sich bei den dargestellten Werten um Wahrscheinlichkeiten (*Probabilities*). Die Analyse der unerwünschten Arzneimittelwirkungen (UAW) erfolgte in einer Art Sensitivitätsanalyse mit verschiedenen abhängigen Variablen. Obwohl die stationäre Entlassdiagnose als am verlässlichsten gilt, wurden in getrennten Modellen die Effekte auf die stationäre Einweisungsdiagnose, Entlassdiagnose sowie die Kombination beider Diagnosen ermittelt. Dies geschah mit einer explorativen Intention um zu findende Unterschiede bei einer evtl. späteren praktischen Anwendung der Studienergebnisse optimal nutzen zu können. Die Analyse der 3 UAW-Varianten führte inhaltlich allerdings praktisch zum gleichen Resultat, so dass die Ergebnisse als robust gelten können. Die STOPP-Liste diskriminiert im Hinblick auf UAWs am stärksten. Bezogen auf die Einweisungsdiagnose liegt die Wahrscheinlichkeit für die Prädiktion einer UAW durch die STOPP-Liste in der EG um 6 % höher als in der KG. Für die PRISCUS-Liste betragen die Wahrscheinlichkeiten 4 % und für die FORTA-Liste 3 %. Mit 7 % (STOPP), 5 % (PRISCUS) und 4 % (FORTA) liegen die entsprechenden Wahrscheinlichkeiten für die 3 Listen bei Betrachtung der kombinierten Einweisungs- und Entlassdiagnose etwas höher. Die Wahrscheinlichkeit für die Prädiktion des Todesfalls im 1. Quartal der Post-Phase durch die PRISCUS-Liste, liegt in der EG um 3 % höher als in der KG. Die entsprechenden Werte für STOPP und FORTA-Liste betragen 2 % und 0 % (S. 195 ff. i.Anlage_01). Gemessen durch den Elixhauser-Index zeigt die STOPP-Liste mit einem *Diff-in-Diff*-Schätzer von 0,32 die größte Diskriminationsfähigkeit bezüglich der Komorbidität. Der entsprechende Wert für die PRISCUS-Liste liegt mit 0,30 nur unwesentlich niedriger (S. 129 ff. i.A). Mit 0,22 Punkten am niedrigsten ist der *Diff-in-Diff* bei der FORTA-Liste (S. 184 ff. i. A.). Diese Ergebnisse spiegeln sich auch bei Betrachtung der Area under the curve (AUC) wider. Bezüglich des Versterbens ergibt sich die größte gemessene AUC mit einem Wert von 0,58 (SE=0,001) bei der PRISCUS-Liste gefolgt von STOPP mit 0,57 (SE= 0,001) und FORTA mit 0,49 (SE=0,001) (S. 465 ff i.Anlage_01). Im Hinblick auf das Auftreten einer UAW (Einweisung/Entlassung) ergibt sich die größte gemessene AUC mit einem Wert von 0,61 (SE=0,001) bei der STOPP-Liste gefolgt von PRISCUS mit 0,57 (SE= 0,001) und FORTA mit 0,54 (SE=0,001) (S. 469 ff i. Anlage_01). Die Werte der AUC aller gemessenen abhängigen Variablen bewegen sich damit in einem Bereich, der gemeinhin als ungenügend betrachtet wird.

Die beschriebenen Resultate beziehen sich ausschließlich auf das erste Quartal der Post-Phase. Um einen besseren Überblick über den Zeitverlauf zu ermöglichen, wurde deshalb in **Abbildung 3** exemplarisch der Verlauf der Wachstumskurven der 3 PIM-Listen für die kombinierten Einweisungs-und Entlassdiagnosen als abhängige Variable dargestellt. Die blaue Linie markiert den Verlauf der balancierten KG. Während der Pre-Phase ist hier ein Ansteigen der Wahrscheinlichkeit für eine UAW zu erkennen. Im ersten Quartal der Post-Phase (5. Quartal) erfährt die Kurve einen Knick und die Auftretenswahrscheinlichkeit sinkt leicht ab. Durch die zuvor erfolgte Balancierung zeichnet die Kurve der KG einen kontrafaktischen Verlauf. Das bedeutet es handelt sich um einen idealisierten zeitlichen Verlauf für Personen die basierend auf bestimmten Merkmalen (Balancierungsvariablen) für das Auftreten einer PIM prädestiniert wären (veranschaulicht durch Kurvenverlauf während Pre-Phase), bei denen diese PIM dann aber letztlich doch nicht auftritt (veranschaulicht Kurvenverlauf während Post-Phase). Durch diese, durch das Balancieren künstlich erzeugten Eigenschaften, eignet sich die KG als Referenz ähnlich der Kontrollgruppe in einem RCT. Die Kurven aller 3 PIM-Listen verlaufen während der Pre-Phase praktisch parallel zur KG. Der Verlauf der FORTA-Liste (gelb) ist niedriger, während PRISCUS (braun) und STOPP (grün) etwas darüber liegen. Der gemittelte Verlauf

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für die 3 Listen ist für die 4 Quartale der Pre-Phase aber identisch mit dem Verlauf der KG. Dies lässt sich eindeutig aus den in Anlage_01 befindlichen Tabellen zur Balancierung erkennen (S. 1 ff. i. Anlage_01). Im 1. Quartal der Post-Phase weisen die Verläufe der 3 PIM-Listen ausgeprägte Abweichungen vom Verlauf der KG auf. Dies ist das Quartal in dem laut Studiendesign zum ersten Mal eine PIM auftritt. Der Anstieg erklärt sich aus der Tatsache, dass die Daten so aufbereitet wurden, dass Personen der EG im 5 Quartal eine PIM haben müssen. In den davorliegenden Quartalen 1-4 ist das Vorliegen einer PIM für diese Personen aber anders als etwa bei den inzidenten PIMs möglich. Die Möglichkeit des Auftretens einer PIM in diesen Quartalen bedeutet aber nicht, dass dies auch tatsächlich eintritt. Die Raten der auftretenden PIMs in diesen Quartalen liegen deshalb niedriger als im 5. Quartal. Das Ansteigen der Kurven für die 3 PIM-Listen vor dem eigentlichen 5. Quartal der Exposition, ist vermutlich dem Umstand geschuldet, dass die Verschreibung einer PIM nicht unabhängig von anderen Faktoren ist. Vielmehr dürfte diese in der Regel in Folge einer Verschlechterung des allgemeinen Gesundheitszustandes erfolgen. Es erscheint weiterhin plausibel anzunehmen, dass diese Verschlechterung des Gesundheitszustandes mit den von uns gemessenen abhängigen Variablen der Inanspruchnahme von Gesundheitsleistungen assoziiert ist. Mit zunehmender zeitlicher Nähe zur tatsächlichen Exposition durch eine PIM ist zu erwarten, dass deshalb auch die Leistungsinanspruchnahme immer weiter zunimmt, wenn man annimmt, dass die auslösende Erkrankung bei einem nicht relevanten Teil der Patienten nicht sofort adäquat diagnostiziert und oder behandelt werden kann. Die geschilderten Zusammenhänge bilden sich vermutlich in den Graphiken deshalb in einem Anstieg der Kurven auch schon vor dem 5. Quartal ab.

Die Ergebnisse in **Tabelle 4** beziehen sich auf den gleichen Zeitpunkt, wurden aber durch Anwendung des *Diff-in-Diff*-Schätzers für die in **Abbildung 3** zu erkennenden abweichenden Kurvenverläufe der 3 PIM-Gruppen zur KG korrigiert. Letztlich ergibt auch die graphische Analyse, die Differenz zur KG ist am größten bei der STOPP-Liste, gefolgt von PRISCUS- und FORTA-Liste. In den letzten 3 Quartalen der Post-Phase ist ein relativ rasches Absinken der Auftretenswahrscheinlichkeit für eine UAW für alle 3 PIM-Listen zu erkennen. Die Kurven der 3 PIM-Listen nähern sich wieder den Werten der KG an. Die Kurven der drei Listen näheren sich nach Quartal 5 wieder der Kurve der KG, weil alle Personen der inzidenten EG im 5 Quartal eine PIM aufweisen und die Anzahl der auftretenden PIMs in den darauffolgenden Quartalen deutlich niedriger ist. Die Kurven zeichnen diesen Verlauf nach, weil die Zielgrößen sich im Rahmen der Analysen als mit den PIMs assoziiert erweisen.

Der Fokus auf die Analyse der *Diff-in-Diffs* zum ersten Quartal der Post-Phase erscheint hierdurch hinreichend gerechtfertigt.

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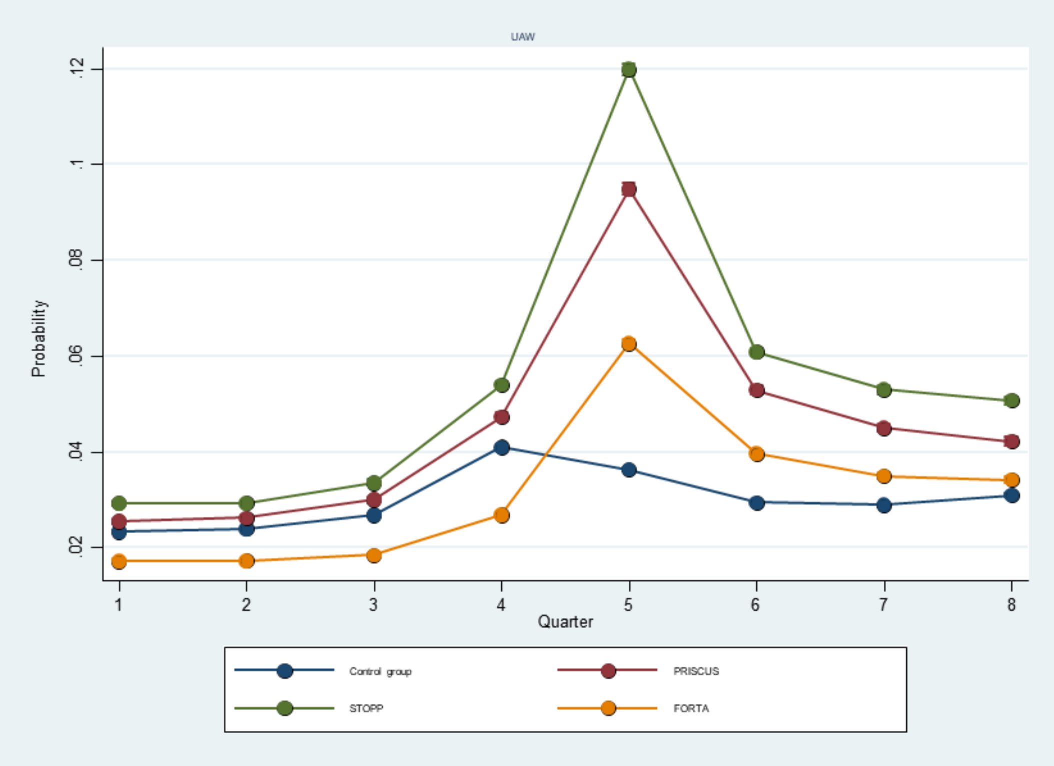
Tabelle 4 Unterschiede zwischen Studiengruppen bei UAWs und Komorbidität für inzidente PIMs

		PRISCUS	p-Wert	STOPP	p-Wert	FORTA	p-Wert
UAW (Probabilities)	UAW Einweisung	0,04	0,000	0,06	0,000	0,03	0,000
	UAW Entlassung	0,04	0,000	0,05	0,000	0,03	0,000
	UAW Einweisung/Entlassung	0,05	0,000	0,07	0,000	0,04	0,000
	Tod	0,03	0,000	0,02	0,000	0,00	0,000
Komorbidität*	Elixhauser stationär	0,30	0,000	0,32	0,000	0,22	0,000

Bei den Koeffizienten handelt es sich um Diff-in-Diff Schätzer für das 1. Quartal der Post-Phase. Diese geben die unterschiedliche Wahrscheinlichkeit für das Vorliegen der jeweiligen Outcomes zwischen EG und KG unter Berücksichtigung unterschiedlicher Ausgangswerte im 4-Quartal der Pre-Phase an. Zur Verringerung von Selektionsbias wurden die Regressionsmodelle unter Anwendung von Entropy Balancing berechnet. Mit Ausnahme der Komorbidität (lineare Regression) entstammen alle Koeffizienten logistischen Regressionsmodellen.

Abbildung 3 Wachstumskurven der 3 inzidenten PIMs für das Outcome UAW



Auf der Y-Achse ist die Wahrscheinlichkeit für das Auftreten einer UAW basierend auf Einweisungs- und Entlassdiagnose abgetragen. Die Zahlen 1-4 auf der X-Achse bezeichnen die 4 Quartale der Pre-Phase. Die Zahlen 5-8 bezeichnen die 4 Quartale der Post-Phase. Das der Grafik zugrundeliegende logistische Regressionsmodell wurde unter Verwendung von Entropy Balancing berechnet.

Leistungsinanspruchnahme und Kosten

Der folgende Abschnitt befasst sich mit der Beantwortung der Fragestellungen 2 und 3. Bezüglich der in **Tabelle 5** dargestellten Unterschiede bei der Leistungsinanspruchnahme existieren nur kleine Unterschiede zwischen PRISCUS- und STOPP-Liste. Der *Diff-in-Diff* im ers-

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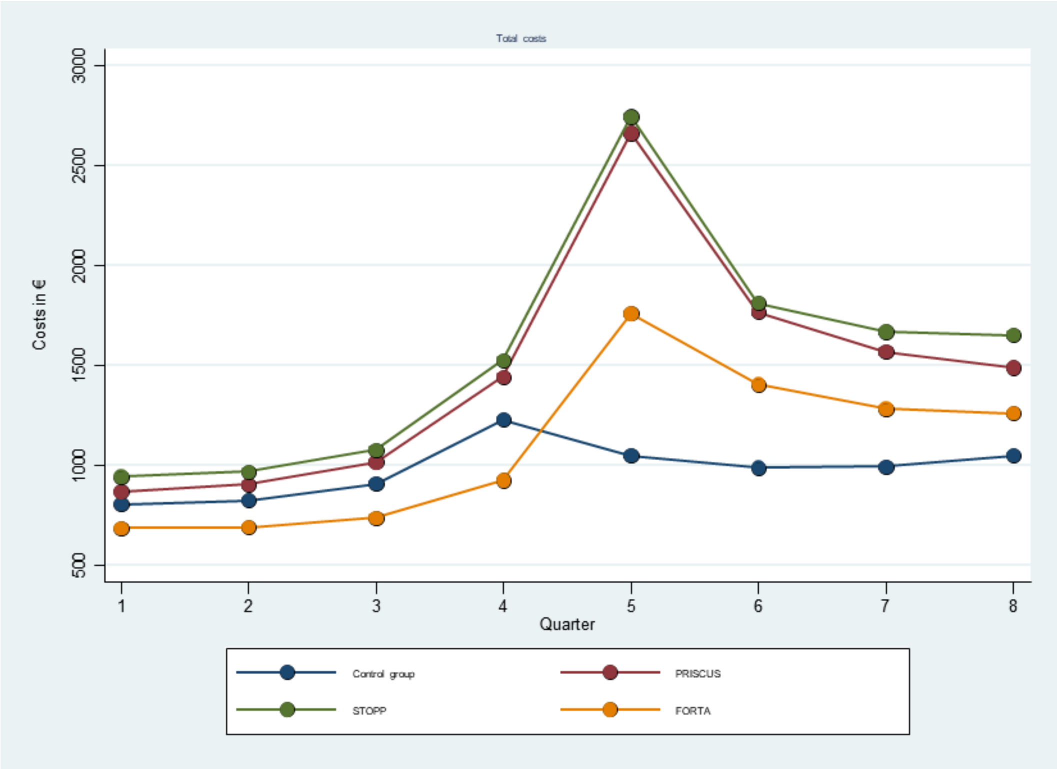
ten Quartal der Post-Phase für die Reha-Tage beträgt 0,35 Tage für PRISCUS (S. 26 i. Anlage_01) und 0,32 Tage für STOPP (S. 29 i. Anlage_01). Bei den stationären Krankenhaustagen ist der *Diff-in-Diff* mit 2,57 Tagen bei STOPP (S. 40 i. Anlage_01) etwas höher als bei PRISCUS mit 2,55 Tagen (S. 39 i. Anlage_01). Die Diskriminationsfähigkeit der FORTA-Liste ist bei beiden Variablen mit 0,24 Rehatagen (S. 30 i. Anlage_01) bzw. 1,73 Krankenhaustagen (S. 41 i. Anlage_01) niedriger. Hinsichtlich der *Defined Daily Doses* betragen die *Diff-in-Diffs* zwischen der KG und den 3 PIM-Gruppen 100.30 (STOPP) (S. 50 i. Anlage_01) 95.65 (PRISCUS) (S. 50 i. Anlage_01) und 92.65 (FORTA) (S. 51 i. Anlage_01) Einheiten. Die größten Unterschiede bezüglich der Kosten treten bei den Medikamentenkosten und den stationären Krankenhauskosten auf. Bei den Medikamentenkosten beträgt der *Diff-in-Diff* für PRISCUS 154,40 € (S. 94 i. Anlage_01) und für STOPP 102,95 € (S. 95 i. Anlage_01). Bei den stationären Krankenhauskosten ist der Unterschied am größten bei STOPP mit 1160,63 € (S. 106 i. Anlage_01) gefolgt von PRISCUS mit 1115,79 € (S. 105 i. Anlage_01). Die Diskriminationsfähigkeit der FORTA-Liste liegt in beiden Bereichen mit 66,79 € (Medikamente) (S. 95 i. Anlage_01) und 825,19 € (Krankenhaus) (S. 106 i. Anlage_01) erkennbar niedriger. Nur im Bereich der Kosten für Heilmittel verfügt die FORTA-Liste mit einem *Diff-in-Diff* von 4,52 € (S. 84 i. Anlage_01) über eine höhere Diskriminationsfähigkeit als die anderen beiden Listen. Allerdings ist der absolute Betrag der *Diff-in-Diffs* in diesem Bereich auch am niedrigsten. Betrachtet man die Gesamtkosten ist die Diskriminationsfähigkeit der PRISCUS- und STOPP-Liste mit *Diff-in-Diffs* von 1398,12 € (S. 116 i. Anlage_01) bzw. 1397.16 € (S. 117 i. Anlage_01) als praktisch gleichwertig anzusehen. Der *Diff-in-Diff* der FORTA-Liste liegt mit 1013,29 € deutlich niedriger (S. 117 i. Anlage_01). Die graphische Analyse der Wachstumskurven für die Gesamtkosten in **Abbildung 4** zeigt ein ähnliches Bild wie bei Betrachtung der UAWs in **Abbildung 3**. Im ersten Quartal der Post-Phase ist ein relativ starkes Ansteigen der Kosten für alle 3 PIM-Listen zu erkennen. Am stärksten ist dieser Anstieg auch hier wieder bei STOPP- und PRISCUS-Liste. Im folgenden Quartal sinken die Kosten relativ stark ab und nähern sich danach wieder der Kurve der KG an.

Tabelle 5 Unterschiede zwischen Studiengruppen bei Leistungsinanspruchnahme und Kosten für inzidente PIMs

		PRISCUS	p-Wert	STOPP	p-Wert	FORTA	p-Wert
Leistungsinanspruchnahme	Rehatage	0,35	0,000	0,32	0,000	0,24	0,000
	Stationäre Krankenhaustage	2,55	0,000	2,57	0,000	1,73	0,000
	DDD	95,65	0,000	100,30	0,000	92,65	0,000
Kosten in €	Ambulante Kosten	68,69	0,000	85,26	0,000	83,51	0,000
	Rehakosten	56,60	0,000	46,08	0,000	33,28	0,000
	Kosten Heilmittel	2,02	0,000	2,23	0,000	4,52	0,000
	Medikamentenkosten	154,40	0,000	102,95	0,000	66,79	0,000
	Stationäre Krankenhauskosten	1115,79	0,000	1160,63	0,000	825,19	0,000
	Gesamtkosten	1398,12	0,000	1397,16	0,000	1013,29	0,000

Bei den Koeffizienten handelt es sich um Diff-in-Diff Schätzer für das 1. Quartal der Post-Phase. Diese geben die Differenzen zwischen EG und KG unter Berücksichtigung unterschiedlicher Ausgangswerte im 4-Quartal der Pre-Phase an. Zur Verringerung von Selektionsbias wurden die Regressionsmodelle unter Anwendung von Entropy Balancing berechnet.

Abbildung 4 Wachstumskurven der 3 inzidenten PIMs für das Outcome Gesamtkosten



Auf der Y-Achse ist die Höhe der Gesamtkosten abgetragen. Die Zahlen 1-4 auf der X-Achse bezeichnen die 4 Quartale der Pre-Phase. Die Zahlen 5-8 bezeichnen die 4 Quartale der Post-Phase. Das der Grafik zugrundeliegende Regressionsmodell wurde unter Verwendung von Entropy Balancing berechnet.

Resultate Prävalente PIMs

Unerwünschte Arzneimittelwirkungen, Mortalität und Komorbidität

Zur Beantwortung der Fragestellung 4 ist bei einem Vergleich der Zahlen in **Tabelle 6** mit denen in **Tabelle 4** festzustellen, dass die berechneten Koeffizienten für die prävalenten PIMs generell niedriger sind als ihre Pendants für die inzidenten PIMs. Die Beobachtung, dass ein prävalenter PIM-Fall einen geringeren Effekt auf das Auftreten von unerwünschten Arzneimittelwirkungen (UAW) hat als ein inzidenter PIM-Fall, ist gut vereinbar mit der allgemeinen Erwartung. Mit jeweils um 2 % erhöhten Wahrscheinlichkeiten, erscheinen im Falle der inzidenten PIMs, PRISCUS und STOPP praktisch gleich gut zur Prädiktion von UAWs geeignet. Die Wahrscheinlichkeiten für das Auftreten einer UAW durch eine Prädiktion der FORTA-Liste liegen, für nur durch Einweisungs- und Entlassdiagnosen kodierte UAW, mit 1 % etwas niedriger als bei PRISCUS und STOPP. Im Fall der kombinierten Einweisungs- und Entlassdiagnosen ist die Wahrscheinlichkeit mit 2 % mit den anderen beiden Listen aber identisch (S. 393 ff. i. Anlage_01). Die Prädiktion der Wahrscheinlichkeit für den Eintritt des Todes geschieht am besten durch PRISCUS mit 2 % (S. 398 i. Anlage_01) gefolgt von STOPP mit 1 % (S. 398 i. Anlage_01). Die Prädiktion der Komorbidität erfolgt am besten durch STOPP (0,11) S. 361 i. Anlage_01) gefolgt von PRISCUS (0,10) (S. 360 i. Anlage_01). Diese Ergebnisse spiegeln sich auch bei Betrachtung der Area under the curve (AUC) wider. Bezüglich des Versterbens ergibt sich die größte gemessene AUC mit einem Wert von 0,62 (SE=0,001) bei der STOPP-

Liste gefolgt von PRISCUS mit 0,58 (SE= 0,001) und FORTA mit 0,51 (SE=0,001) (S. 481 i. Anlage_01).

Im Hinblick auf das Auftreten einer UAW (Einweisung/Entlassung) ergibt sich die größte gemessene AUC mit einem Wert von 0,61 (SE=0,001) bei der STOPP-Liste gefolgt von PRISCUS mit 0,56 (SE= 0,001) und FORTA mit 0,53 (SE=0,001) (485 i. Anlage_01). Bezüglich der Beantwortung von Fragestellung 1 lässt sich also feststellen, dass es insgesamt auch bei der Betrachtung der prävalenten PIM-Fälle ein Kopf an Kopf Rennen zwischen PRISCUS und STOPP zu beobachten gibt. Die Größe der Effekte ist hier noch geringer als bei den inzidenten Fällen. Das ziehen eindeutiger Schlussfolgerungen wird dadurch aber erschwert. **Abbildung 5** illustriert diesen Eindruck graphisch. Analog zu den inzidenten PIMS (**Abbildung 3**) ist auch hier ein deutlicher Anstieg der Wahrscheinlichkeiten für das Auftreten einer UAW im 1. Quartal der POST-Phase und bereits davor ein Anstieg während der Prä-Phase zu erkennen. Der Ausschlag während dem 1. Quartal der Post-Phase erscheint bei Betrachtung der prävalenten PIMs aber weniger markant. Auch hier ist wieder ein Absinken der Wahrscheinlichkeiten in den letzten Quartalen der Post-Phase zu erkennen. Analog zu den inzidenten PIMs ist festzustellen, dass die durch die AUCs angezeigte Diskriminationsfähigkeit der 3 PIM-Listen insgesamt als nicht akzeptabel einzustufen ist.

Tabelle 6 Unterschiede zwischen Studiengruppen bei UAWs und Komorbidität für prävalente PIMs

		PRISCUS	**p-Wert**	**STOPP**	**p-Wert**	**FORTA**	**p-Wert**
UAW (Probabilities)	UAW Einweisung	0,02	0,000	0,02	0,000	0,01	0,000
	UAW Entlassung	0,02	0,000	0,02	0,000	0,01	0,000
	UAW Einweisung / Entlassung	0,02	0,000	0,02	0,000	0,02	0,000
	Tod	0,02	0,000	0,01	0,000	0,00	0,000
Komorbidität	Elixhauser stationär	0,10	0,000	0,11	0,000	0,09	0,000

Bei den Koeffizienten handelt es sich um Diff-in-Diff Schätzer für das 1. Quartal der Post-Phase. Diese geben die unterschiedliche Wahrscheinlichkeit für das Vorliegen der jeweiligen Outcomes zwischen EG und KG unter Berücksichtigung unterschiedlicher Ausgangswerte im 4-Quartal der Pre-Phase an. Zur Verringerung von Selektionsbias wurden die Regressionsmodelle unter Anwendung von Entropy Balancing berechnet. Mit Ausnahme der Komorbidität (lineare Regression) entstammen alle Koeffizienten logistischen Regressionsmodellen.

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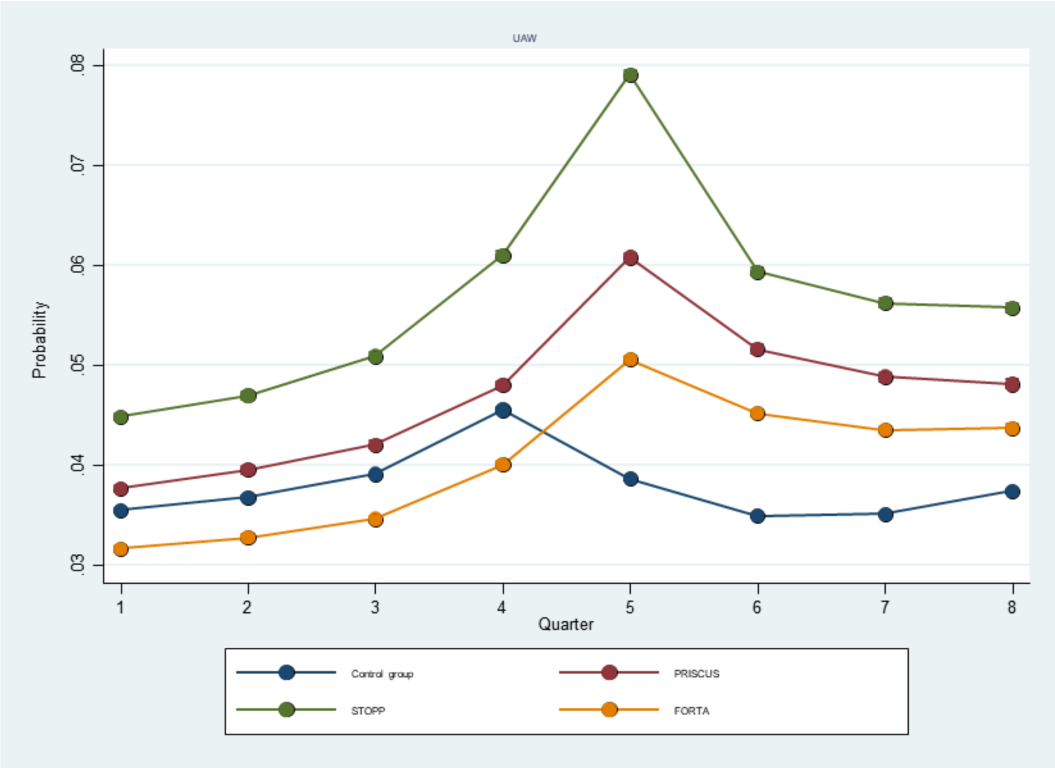
Abbildung 5 Wachstumskurven der 3 prävalenten PIMs für das Outcome UAW



Auf der Y-Achse ist die Wahrscheinlichkeit für das Auftreten einer UAW basierend auf Einweisungs- und Entlassdiagnose abgetragen. Die Zahlen 1-4 auf der X-Achse bezeichnen die 4 Quartale der Pre-Phase. Die Zahlen 5-8 bezeichnen die 4 Quartale der Post-Phase. Das der Grafik zugrundeliegende logistische Regressionsmodell wurde unter Verwendung von Entropy Balancing berechnet.

Leistungsinanspruchnahme und Kosten

Auch die in **Tabelle 7** zur Analyse der durch prävalente PIMs verursachten *Diff-in-Diffs* bei Leistungsinanspruchnahme und Kosten von Gesundheitsleistungen, sind niedriger als die ihnen entsprechenden Effekte bei inzidenten PIMs in **Tabelle 5** (Fragestellung 4). Die Werte für die Unterschiede bei den DDDs liegen auf einem Niveau das ca. 50 % der entsprechenden Werte bei Betrachtung inzidenter PIMs entspricht. Im Unterschied zu den inzidenten Fällen ist der größte Effekt bei PRISCUS mit 58 DDDs (S. 250 i. Anlage_01) gefolgt von FORTA mit 42 DDDs (S. 251 i. Anlage_01) und STOPP mit 40 DDDs (S. 251 i. Anlage_01) am größten. Auch bei Reha- und Krankenhaustagen liegen die Werte deutlich unter denen der Analysen mit inzidenten PIMs. Bei den Rehatagen erzeugt PRISCUS mit 0,12 Tagen den stärksten Effekt (S. 228 i. Anlage_01) bei den Krankenhaustagen ist es STOPP mit 0,9 Tagen (S. 240 i. Anlage_01).

Auch die Analyse der Gesamtkosten offenbart, dass die Betrachtung prävalenter PIMs relevant kleinere Effekte zeitigt (Fragestellung 4). Der größte *Diff-in-Diff* ist hier bei den Gesamtkosten mit 473 € bei der STOPP-Liste zu verzeichnen (S. 317 i. Anlage_01) gefolgt von PRISCUS mit 464 € (S. 316 i. Anlage_01) und FORTA mit 414 € (S. 317 i. Anlage_01). Dies ist letztlich wieder zu einem großen Teil auf die stationären Krankenhauskosten zurückzuführen bei denen der *Diff-in-Diff* für STOPP bei 390 € liegt (S. 306 i. Anlage_01), gefolgt von PRSICUS mit 359 € (S. 305 i. Anlage_01) und FORTA mit 330 € (S. 306 i. Anlage_01). Der größte *Diff-in-Diff* bei den Medikamentenkosten und Rehakosten ist bei der PRISCUS-Liste mit 55 € (S. 294 i. Anlage_01) respektive 16 € (S. 272 i. Anlage_01) verzeichnen. Verglichen mit den anderen beiden Listen ist der Diff-in-Diff der FORTA-Liste am größten bei den ambulanten Kosten (40 €) (S. 262 i. Anlage_01) und den Heilmitteln (2,41 €) (S. 284 i. Anlage_01).

Die graphische Analyse der Wachstumskurven für die prävalenten PIM-Fälle anhand der Gesamtkosten (**Abbildung 6**) zeigt einen undifferenzierteren Kurvenverlauf als bei den inzidenten PIMs (Fragestellung 4). Die Anstiege im 1. Quartal der Baseline verlaufen wie auch schon bei den prävalenten UAWs erwartungsgemäß weniger flacher und weniger ausgeprägt.

Tabelle 7 Unterschiede zwischen Studiengruppen bei Leistungsinanspruchnahme und Kosten für prävalente PIMs

		PRISCUS	p-Wert	STOPP	p-Wert	FORTA	p-Wert
Leistungsinanspruchnahme	Rehatage	0,12	0,000	0,11	0,000	0,11	0,000
	Stationäre Krankenhaustage	0,87	0,000	0,90	0,000	0,75	0,000
	DDD	58,10	0,000	39,43	0,000	41,68	0,000
Kosten in €	Ambulante Kosten	32,20	0,000	36,34	0,000	39,56	0,000
	Rehakosten	16,27	0,000	13,80	0,000	13,73	0,000
	Kosten Heilmittel	0,98	0,000	1,34	0,000	2,41	0,000
	Medikamentenkosten	55,20	0,000	32,94	0,000	27,40	0,000
	Stationäre Krankenhauskosten	359,34	0,000	389,55	0,000	330,98	0,000
	Gesamtkosten	463,99	0,000	473,97	0,000	414,08	0,000

Bei den Koeffizienten handelt es sich um Diff-in-Diff Schätzer für das 1. Quartal der Post-Phase. Diese geben die Differenzen zwischen EG und KG unter Berücksichtigung unterschiedlicher Ausgangswerte im 4-Quartal der Pre-Phase an. Zur Verringerung von Selektionsbias wurden die Regressionsmodelle unter Anwendung von Entropy Balancing berechnet.

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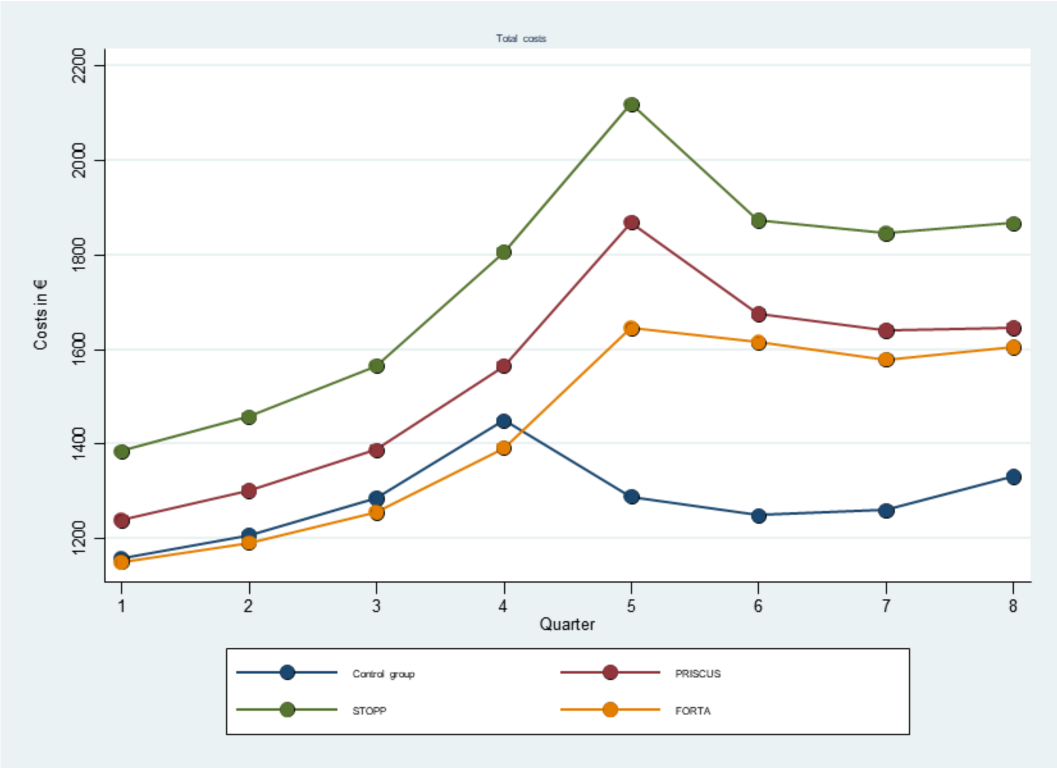
Abbildung 6 Wachstumskurven der 3 prävalenten PIMs für das Outcome Gesamtkosten



Auf der Y-Achse ist die Höhe der Gesamtkosten abgetragen. Die Zahlen 1-4 auf der X-Achse bezeichnen die 4 Quartale der Pre-Phase. Die Zahlen 5-8 bezeichnen die 4 Quartale der Post-Phase. Das der Grafik zugrundeliegende Regressionsmodell wurde unter Verwendung von Entropy Balancing berechnet.

Schlussfolgerungen

Zusammenfassend lässt sich feststellen, dass die Diskriminationsfähigkeit der 3 getesteten Listen am größten im Bereich inzidenter PIM ist. Die am stärksten belastbarsten Schlussfolgerungen lassen sich deshalb auch basierend auf den Analysen zu den inzidenten PIMs treffen. Über die größte Diskriminationsfähigkeit in Bezug auf UAWs und Komorbidität verfügt dabei die STOPP-Liste. PRISCUS verfügt über die größte Diskriminationsfähigkeit in Bezug auf die Mortalität. Im Bereich der Gesamtkosten ist die Diskriminationsfähigkeit von PRISCUS und STOPP praktisch identisch. Die FORTA-Liste verfügt relativ eindeutig über die geringste Diskriminationsfähigkeit. Die bestehenden Unterschiede in der Diskriminationsfähigkeit zwischen PRISCUS und STOPP sind aber generell als relativ gering mit leichten Vorteilen für STOPP einzuschätzen.

Limitationen und Stärken der Analysen

Die Kodierung der PIMs und somit sämtliche Resultate basieren lediglich auf der dokumentierten Medikamentenabgabe statt der tatsächlichen PIM-Einnahme. Dies könnte dazu führen, dass die Effekte der PIMs überschätzt werden. Die Einnahme von Medikamenten im stationären Setting konnte bei der Konstruktion der PIM-Listen keine Berücksichtigung finden, weil diese in den Routinedaten nicht abgebildet sind. Außerdem basieren die Resultate auf den Routinedaten nur einer Krankenkasse (AOK). Der sozioökonomische Status der Versicherten deutscher Krankenkassen ist aber zum Teil unterschiedlich wodurch die Repräsentativität der Analysen eingeschränkt sein könnte. Angesichts der großen Zahl der bei der AOK Versicherten dürfte diese Einschränkung aber zu vernachlässigen sein. Trotz erfolgter Balancierung

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lässt sich nicht ausschließen, dass unbeobachtete Heterogenität zu Verzerrungen der Ergebnisse geführt. Eine Balancierung anhand von Variablen, die über das Maß der in Routinedaten abgebildeten Konstrukte hinausgeht, wäre deshalb zu begrüßen. Hierzu zählt zum Beispiel die Gesundheitsbezogene Lebensqualität (HRQoL) der Versicherten. Hervorzuheben ist aber auch, dass die Analyse der Routinedaten uns in die Lage versetzt hat, bestimmte mit der Analyse von Primärdaten verbundene Schwächen zu umgehen. Eine Verzerrung der Ergebnisse durch Non-Responder bzw. Nicht-Teilnahme ist anders als bei der Analyse von Primärdaten naturgemäß bei Sekundärdaten relativ unwahrscheinlich. Die von uns gefundenen Resultate sind damit tendenziell also auf breitere Bevölkerungsgruppen anwendbar als Ergebnisse von Studien, die eine Bereitschaft zur Teilnahme der Probanden voraussetzen. Jedoch sind trotz der relativ hohen Verallgemeinerbarkeit der Resultate die erzielten Forschungsergebnisse letztlich unter Vorbehalt zu betrachten. Obwohl der Fokus unserer Analysen auf dem Vergleich der 3 PIM-Listen lag, gilt trotzdem zu beachten, dass die durch die AUCs angezeigte Diskriminationsfähigkeit der 3 PIM-Listen generell als nicht akzeptabel einzustufen ist.

7. Beitrag für die Weiterentwicklung der GKV-Versorgung und Fortführung nach Ende der Förderung

Im Rahmen des Projektes konnten wichtige Erkenntnisse darüber gewonnen werden, wie die einzelnen untersuchten PIM-Listen das Auftreten unerwünschter fataler und nicht-fataler Arzneimittelwirkungen (UAW) sowie die Inanspruchnahme und Kosten von Gesundheitsleistungen prädizieren. Durch die Verwendung eines sehr großen, auf Routinedaten basierenden Datensatzes ist eine hohe externe Validität und damit einhergehend eine hohe Übertragbarkeit der Resultate gewährleistet. Basierend auf diesen Ergebnissen empfehlen wir von einer Anwendung der FORTA-Liste in der Versorgungspraxis abzusehen, weil mit PRISCUS und STOPP bessere Alternativen zur Verfügung stehen. Wegen der oben beschriebenen Limitationen erscheint die direkte Übertragung der Forschungsergebnisse in die Versorgungspraxis aber nicht ohne weitere Untersuchungen möglich. Eine konfirmatorische Bestätigung anhand von Primärdaten oder bestenfalls interventionellen Studien stellen die nächsten Schritte dar. In letzteren gälte es dann, die Effekte der PRISCUS- oder STOPP-Liste vorzugsweise mit den Mitteln eines RCT-Designs zu untersuchen. Je nach vorhandenen Ressourcen könnte auch die Konzentration auf nur eine Liste gesetzt werden. Da sich PRISCUS- und STOPP hinsichtlich ihrer Diskriminationsfähigkeit nur unwesentlich zu unterscheiden scheinen, könnte sich hier aus pragmatischen Abwägungen die PRISCUS-Liste empfehlen. Wegen ihrem ausschließlichen Bezug auf ATC-Codes sind deren Voraussetzungen für Kodierungen niedriger und daher auch im Rahmen einer Primärstudie mit voraussichtlich geringerem Aufwand, höherer Datensparsamkeit und dadurch datenschutzkompatibler umsetzbar. Denkbar wäre ein (cluster-randomisiertes) Studiendesign mit einer Kontrollgruppe als care-as-usual und einer Interventionsgruppe, in welche PIM-Empfehlungen bereitgestellt werden. Dies wäre über die Praxissoftware einer Hausarztpraxis oder die Software zur Verschreibungsunterstützung im Krankenhaus zu bewerkstelligen, aber auch die elektronische Gesundheitskarte könnte zukünftige Möglichkeiten schaffen. Durch die Anwendung von Algorithmen könnte dabei bei der PIM-Verschreibung dem verschreibenden Arzt automatisiert die Information angezeigt werden, nach der es sich um ein potenziell inadäquates Medikament handelt. Basierend auf dieser Information und vor dem Hintergrund der ihm bekannten Krankengeschichte wäre der Arzt somit veranlasst, die Verschreibung des Medikamentes zu überprüfen und gegebenenfalls einen Alternativwirkstoff zu verschreiben. Zur Umsetzung dieses Forschungsvorhabens könnte

sich die Umsetzung der Studie in einem Klinikverbund eignen, bei dem ein Teil der Kliniken zufällig der Kontroll- und eine anderer der Interventionsgruppe zugeordnet wird.
Eine weitere zur Übertragung der gefundenen Studienergebnisse in die Versorgungspraxis bestehende Möglichkeit ist in der Entwicklung einer PIM-App zu sehen. Durch Einscannen der auf Medikamentenpackungen befindlichen Barcodes, wäre es möglich, die von Patienten eingenommenen Wirkstoffe zu ermitteln. Durch einen Listen-Abgleich wäre es möglich, dem Patienten eine Nachricht mit der Bitte zu schicken, die Verschreibung des betreffenden Medikaments mit dem verschreibenden Arzt abzuklären. Eine solche Plattform könnte man auch nutzen, um Patientenerfahrungen und patientenorientierte Outcomes zu sammeln. Da generell mit einem solchen Vorgehen Unwägbarkeiten wie eventuelle Überreaktionen von Patienten die sich vorschnell und evtl. unbegründet an den Hausarzt wenden und teilweise darauf basierend auch Vorbehalte von Ärzten zu erwarten wären, erscheint die Integration einer PIM-Liste in eine Praxis- oder Krankenhaussoftware als vielversprechendere Alternative zur Erhöhung der Patientensicherheit.
Wie bereits beschrieben erscheint die Übertragung der Forschungsergebnisse in die Versorgungspraxis ohne weiterführende Untersuchungen ausgeschlossen. Ein Einsatz im Monitoring von Routinedaten erscheint rein technisch für PRISCUS und STOPP prinzipiell machbar. Eine Optimierung der Syntax zur Operationalisierung der genannten Konstrukte im Hinblick auf eine deutliche Verringerung der hierfür erforderlichen Rechenkapazitäten wäre dafür aber eine notwendige Voraussetzung. Allerdings erscheint die für eine tatsächliche Intervention erforderliche Gabe eines möglichen Feedbacks an die behandelnden Ärzte der betroffenen Patienten im Falle einer vorliegenden potenziellen inadäquaten Medikation aus datenschutzrechtlichen Gründen aktuell nicht umsetzbar. Dies trifft im gleichen Maße für das Feedback an jedem Patienten zu, wenngleich aus unserer Sicht bei diesen auch noch unmittelbar auftauchenden Fragen der Patientensicherheit und die damit verbundenen ethischen Implikationen eines solchen Feedbacks von einer unabhängigen Ethikkommission zu bewerten wären.

Für den Einsatz im klinischen Alltag gilt unsere Empfehlung dem Einsatz der PRISCUS-Liste, weil sich durch diese, basierend nur auf den Informationen der Wirkstoffe (ATC), ein höherer Grad an Datensparsamkeit gepaart mit geringerem Rechenaufwand bei etwa gleicher Prädiktionskraft wie STOPP erreicht ließe. Allerdings erscheint auch hier eine Optimierung der Syntax zur Operationalisierung des Konstrukts im Hinblick auf höhere Recheneffizienz ratsam.

Für den Einsatz im klinischen Alltag wie auch das Monitoring von Routinedaten gilt aber, dass vorherige weitere Tests im Rahmen randomisiert kontrollierter Studien (RCT) eine unverzichtbare Voraussetzung darstellen. Dies ergibt sich daraus, dass:

1. die Generalisierbarkeit und Übertragbarkeit von auf Routinedaten basierenden Studien z.B. durch auftretende Artefakte in den Kodierungen der ICDs und ATCs eingeschränkt sein könnten oder zu falschen Schlüssen führen kann.

2. das von uns eingesetzte Verfahren des Entropy Balancings keinen 100 %igen Ersatz für eine „echte“ Randomisierung darstellen kann. Dies ist bedingt durch die unbeobachtete Heterogenität, die durch nicht berücksichtigte, weil in Routinedaten nicht enthaltene Confounder entstehen kann und den dadurch trotz Balancierung noch vorhandenen aber in dieser Form nicht überprüfbaren Bias.

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3. im Unterschied zu den von durchgeführten Vergleichen von Personen mit PIM-Exposition vs. Personen ohne PIM-Exposition z.B. Vergleiche mit Personen mit sicherer therapeutischer Alternative realistischer wären. Diese ließen sich in RCTs unter realen Bedingungen vermutlich am besten abbilden.
Dabei kommt ein Aspekt der PIMs zum Tragen, den es hier noch einmal herauszustellen gilt. Es handelt sich immer um potenziell inadäquate Medikamente. D.h., abhängig von der individuellen Krankengeschichte, Verfassung und Situation der Patienten kann die weitere Einnahme des betreffenden Medikaments in vielen Fällen auch als alternativlos erscheinen. Eine ersatzlose Absetzung eines Medikamentes wird in der Praxis vermutlich eher selten vorkommen. Vielmehr ist damit zu rechnen, dass potenziell inadäquate Medikamente durch sichere Alternativen ersetzt werden. Die Entscheidung über die zu wählende Handlungsalternativen sollte dabei immer dem behandelnden Arzt vorbehalten bleiben, weil dieser die spezifische Situation des Patienten am besten einzuschätzen weiß. Die Information über das Vorhandensein einer PIM kann hierbei immer nur Auslöser für eine mögliche Neubewertung der Medikation durch den Arzt sein.
Die adäquate Berücksichtigung der Effekte dieses Entscheidungsprozesses auf die Zielparameter unter realen Bedingungen ist nur sinnvoll im Rahmen eines RCTs abbildbar. Dabei ist es prinzipiell vorstellbar, dass sich, abhängig von dem durch die Information über eine vorliegende PIM induzierte veränderte Verschreibungsverhalten der behandelnden Ärzte, die im Rahmen des vorliegenden Projektes ermittelten Parameter als in der Versorgungsrealität zu hoch oder zu niedrig erweisen.

Über die Wirkung weiterreichender Patienteninformationen auf die Prädiktivtät und damit eine mögliche Erhöhung der Sensitivität und Spezifität lassen sich aus den vorliegenden Projektergebnissen keine Schlüsse ableiten. Die Sinnhaftigkeit einer damit verbunden nötigen Modifikation der getesteten Listen betrachten wir skeptisch. Stattdessen plädieren wir dafür, bei der Einordnung der Relevanz möglicher weiterer Kontextfaktoren auf die Verschreibungen in größtmöglichem Umfang auf die Erfahrung und Kompetenz der behandelnden Ärzte zu setzen und die PIM-Listen, wie ursprünglich vorgesehen, als Anlass und evtl. Bitte für eine mögliche Neubewertung der gegebenen Medikation zu verwenden.

8. Erfolgte bzw. geplante Veröffentlichungen

Beiträge in Fachzeitschriften

Meid AD, Groll A, Heider D, Mächler S, Adler J-B, Günster C, König H-H, Haefeli WE. Prediction of Drug-Related Risks Using Clinical Context Information in Longitudinal Claims Data. Value Health. 2018;21(12):1390–8. *publiziert*

Vorträge auf Fachtagungen

Heider D, Matschinger H, Meid AD, Dröge P, Klöss A, Haefeli WE, König HH. Vergleich der prädiktiven Validität von Instrumenten zur Bestimmung potenziell inadäquater Medikation bei Älteren hinsichtlich des Auftretens unerwünschter Arzneimittelwirkungen und medizinischer Versorgungskosten. 12. Jahrestagung der Deutschen Gesellschaft für Gesundheitsökonomie dggö am 23. und 24. März in Wuppertal. *angenommen*
Hinweis: die Tagung fand wegen der coronabedingten Kontaktbeschränkungen nicht statt.

Publikationsvorhaben

Ein Paper mit dem Titel *„Comparison of the predictive validity of instruments for the determination of potentially inadequate medication in the elderly with regard to the occurrence of adverse drug effects and medical care“* befindet sich in Arbeit und soll in den nächsten Monaten bei einer Fachzeitschrift zur Begutachtung eingereicht werden.

9. Anlagen

Anlage_01 Auflistung Outputs Studienergebnisse PIM-STOP

Anlage_02_UAW_Code-Definition

Anlage_03 Operationalisierung STOPP START A

Anlage_04 Operationalisierung STOPP START B

Anlage_05 Operationalisierung FORTA

Anlage_06 Operationalisierung PRISCUS

Anlage_07 Publikation Meid et al 2018

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Anlage_01 Auflistung Outputs Studienergebnisse PIM-STOP

Inzidente PIMs

Balancierung

```
. ebalance  gruppe_PSF4Q  alter sex ///             1
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>                    pf12 pf22 pf32 pf42 ///        3
>                    pf13 pf23 pf33 pf43 ///      4
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>                    med_kost_q1 med_kost_q2 med_kost_q3 med_kost_q4  ///          6
>                    ddd_q1 ddd_q2 ddd_q3 ddd_q4 ///    7
>            stat_kost_q1 stat_kost_q2 stat_kost_q3 stat_kost_q4 ///       8
>            stat_tage_q1 stat_tage_q2 stat_tage_q3 stat_tage_q4 ///       9
>                    amb_kost_q1 amb_kost_q2 amb_kost_q3 amb_kost_q4  ///          10
>            reha_kost_q1 reha_kost_q2 reha_kost_q3 reha_kost_q4 ///       11
>            reha_tage_q1 reha_tage_q2 reha_tage_q3 reha_tage_q4 ///       12
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>                    dmp14 dmp24 dmp34 dmp44 dmp54 dmp64 ///    17
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>                    bl1l1-bl16l1 ///    19
>                    bl1l2-bl16l2 ///    20
>                    bl1l3-bl16l3 ///    21
>                    bl1l4-bl16l4 ///    22
>                    chf_sum1 -aa_sum2 psyc_sum2 -depr_sum4  /// 23 chf_sum1- depr_sum4
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>                    vs12 vs22 vs32 /// 25
>                    vs13 vs23 vs33 /// 26
>                    vs14 vs24 vs34 /// 27
>                                   uaw_einw_q1 uaw_entl_q1 /// 28
>                                   uaw_einw_q2 uaw_entl_q2 /// 29
>                                   uaw_einw_q3 uaw_entl_q3 /// 30
>                                   uaw_einw_q4 uaw_entl_q4 /// 31
>                   atc_menge_q1 atc_menge_q2 atc_menge_q3 atc_menge_q4 /// 32
>   , tar(2) tol(0.0001) maxiter(50) gen(balance_PSF4Q_atc_uaw_ed_inz) keep(balance_PSF4Q_atc_uaw_ed_inz)
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note: pf44 omitted because of collinearity
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note: bl15l2 omitted because of collinearity
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note: dmp13 omitted because of collinearity
note: dmp23 omitted because of collinearity
note: dmp33 omitted because of collinearity
note: dmp43 omitted because of collinearity
note: dmp53 omitted because of collinearity
note: dmp63 omitted because of collinearity
note: med_kost_q3 omitted because of collinearity
note: ddd_q3 omitted because of collinearity
note: kosten_ges_q3 omitted because of collinearity
note: bl1l3 omitted because of collinearity
note: bl2l3 omitted because of collinearity
note: bl3l3 omitted because of collinearity
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note: bl4l3 omitted because of collinearity
note: bl5l3 omitted because of collinearity
note: bl6l3 omitted because of collinearity
note: bl7l3 omitted because of collinearity
note: bl8l3 omitted because of collinearity
note: bl9l3 omitted because of collinearity
note: bl10l3 omitted because of collinearity
note: bl11l3 omitted because of collinearity
note: bl12l3 omitted because of collinearity
note: bl13l3 omitted because of collinearity
note: bl14l3 omitted because of collinearity
note: bl15l3 omitted because of collinearity
note: bl16l3 omitted because of collinearity
note: vs33 omitted because of collinearity
note: pf13 omitted because of collinearity
note: pf23 omitted because of collinearity
note: pf33 omitted because of collinearity
note: pf43 omitted because of collinearity
note: gr_q13 omitted because of collinearity
note: gr_q23 omitted because of collinearity
note: gr_q33 omitted because of collinearity
note: gr_q43 omitted because of collinearity
note: stat_kost_q4 omitted because of collinearity
note: stat_tage_q4 omitted because of collinearity
note: amb_kost_q4 omitted because of collinearity
note: reha_kost_q4 omitted because of collinearity
note: reha_tage_q4 omitted because of collinearity
note: heil_kost_q4 omitted because of collinearity
note: dmp14 omitted because of collinearity
note: dmp24 omitted because of collinearity
note: dmp34 omitted because of collinearity
note: dmp44 omitted because of collinearity
note: dmp54 omitted because of collinearity
note: dmp64 omitted because of collinearity
note: med_kost_q4 omitted because of collinearity
note: ddd_q4 omitted because of collinearity
note: kosten_ges_q4 omitted because of collinearity
note: vs11 omitted because of collinearity
note: vs21 omitted because of collinearity
note: vs31 omitted because of collinearity
note: vs12 omitted because of collinearity
note: vs22 omitted because of collinearity
note: vs32 omitted because of collinearity
note: vs13 omitted because of collinearity
```

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note: vs23 omitted because of collinearity
note: vs33 omitted because of collinearity
note: vs34 omitted because of collinearity
note: uaw_einw_q1 omitted because of collinearity
note: uaw_entl_q1 omitted because of collinearity
note: uaw_einw_q2 omitted because of collinearity
note: uaw_entl_q2 omitted because of collinearity
note: uaw_einw_q3 omitted because of collinearity
note: uaw_entl_q3 omitted because of collinearity
note: atc_menge_q2 omitted because of collinearity
note: atc_menge_q3 omitted because of collinearity
note: atc_menge_q4 omitted because of collinearity


Data Setup
Treatment variable:   gruppe_PSF4Q
Covariate adjustment: alter sex pf11 pf21 pf31 pf12 pf22 pf32 pf13 pf23 pf33 pf14 pf24 pf34 med_kost_q1 med_kost_q2 med_kost_q3
med_kost_q4 ddd_q1 ddd_q2
>  ddd_q3 ddd_q4 stat_kost_q1 stat_kost_q2 stat_kost_q3 stat_kost_q4 stat_tage_q1 stat_tage_q2 stat_tage_q3 stat_tage_q4 amb_kost_q1
amb_kost_q2 amb_kost
> _q3 amb_kost_q4 reha_kost_q1 reha_kost_q2 reha_kost_q3 reha_kost_q4 reha_tage_q1 reha_tage_q2 reha_tage_q3 reha_tage_q4
heil_kost_q1 heil_kost_q2 heil_
> kost_q3 heil_kost_q4 dmp11 dmp21 dmp31 dmp41 dmp51 dmp61 dmp12 dmp22 dmp32 dmp42 dmp52 dmp62 dmp13 dmp23 dmp33 dmp43 dmp53 dmp63
dmp14 dmp24 dmp34 dmp4
> 4 dmp54 dmp64 gr_q11 gr_q21 gr_q31 bl1l1 bl2l1 bl3l1 bl4l1 bl5l1 bl6l1 bl7l1 bl8l1 bl9l1 bl10l1 bl11l1 bl12l1 bl13l1 bl14l1 bl15l1
bl1l2 bl2l2 bl3l2 bl
> 4l2 bl5l2 bl6l2 bl7l2 bl8l2 bl9l2 bl10l2 bl11l2 bl12l2 bl13l2 bl14l2 bl15l2 bl1l3 bl2l3 bl3l3 bl4l3 bl5l3 bl6l3 bl7l3 bl8l3 bl9l3
bl10l3 bl11l3 bl12l3
> bl13l3 bl14l3 bl15l3 bl1l4 bl2l4 bl3l4 bl4l4 bl5l4 bl6l4 bl7l4 bl8l4 bl9l4 bl10l4 bl11l4 bl12l4 bl13l4 bl14l4 bl15l4 chf_sum1
caar_sum1 vd_sum1 pcd_sum
> 1 pvd_sum1 hyu_sum1 hyc_sum1 paral_sum1 ond_sum1 cpd_sum1 diau_sum1 diac_sum1 hypot_sum1 rf_sum1 ld_sum1 pud_sum1 aids_sum1
lym_sum1 mc_sum1 stwm_sum1
> ra_sum1 coa_sum1 ob_sum1 wl_sum1 fed_sum1 bla_sum1 dean_sum1 aa_sum1 drab_sum1 psyc_sum1 depr_sum1 uaw_einw_q1 uaw_entl_q1 vs11
vs21 atc_menge_q2 chf_s
> um2 caar_sum2 vd_sum2 pcd_sum2 pvd_sum2 hyu_sum2 hyc_sum2 paral_sum2 ond_sum2 cpd_sum2 diau_sum2 diac_sum2 hypot_sum2 rf_sum2
ld_sum2 pud_sum2 aids_sum
> 2 lym_sum2 mc_sum2 stwm_sum2 ra_sum2 coa_sum2 ob_sum2 wl_sum2 fed_sum2 bla_sum2 dean_sum2 aa_sum2 psyc_sum2 depr_sum2 uaw_einw_q2
uaw_entl_q2 vs12 vs22
>  atc_menge_q3 chf_sum3 caar_sum3 vd_sum3 pcd_sum3 pvd_sum3 hyu_sum3 hyc_sum3 paral_sum3 ond_sum3 cpd_sum3 diau_sum3 diac_sum3
hypot_sum3 rf_sum3 ld_sum
> 3 pud_sum3 aids_sum3 lym_sum3 mc_sum3 stwm_sum3 ra_sum3 coa_sum3 ob_sum3 wl_sum3 fed_sum3 bla_sum3 dean_sum3 aa_sum3 drab_sum3
psyc_sum3 depr_sum3 uaw_
> einw_q3 uaw_entl_q3 vs13 vs23 atc_menge_q4 chf_sum4 caar_sum4 vd_sum4 pcd_sum4 pvd_sum4 hyu_sum4 hyc_sum4 paral_sum4 ond_sum4
cpd_sum4 diau_sum4 diac_s
```

```
> um4 hypot_sum4 rf_sum4 ld_sum4 pud_sum4 aids_sum4 lym_sum4 mc_sum4 stwm_sum4 ra_sum4 coa_sum4 ob_sum4 wl_sum4 fed_sum4 bla_sum4
dean_sum4 aa_sum4 drab_
> sum4 psyc_sum4 depr_sum4 vs14 vs24 uaw_einw_q4 uaw_entl_q4 atc_menge_q1 (1st order). alter sex pf11 pf21 pf31 pf12 pf22 pf32 pf13
pf23 pf33 pf14 pf24 p
> f34 med_kost_q1 med_kost_q2 med_kost_q3 med_kost_q4 ddd_q1 ddd_q2 ddd_q3 ddd_q4 stat_kost_q1 stat_kost_q2 stat_kost_q3
stat_kost_q4 stat_tage_q1 stat_t
> age_q2 stat_tage_q3 stat_tage_q4 amb_kost_q1 amb_kost_q2 amb_kost_q3 amb_kost_q4 reha_kost_q1 reha_kost_q2 reha_kost_q3
reha_kost_q4 reha_tage_q1 reha_
> tage_q2 reha_tage_q3 reha_tage_q4 heil_kost_q1 heil_kost_q2 heil_kost_q3 heil_kost_q4 dmp11 dmp21 dmp31 dmp41 dmp51 dmp61 dmp12
dmp22 dmp32 dmp42 dmp52
>  dmp62 dmp13 dmp23 dmp33 dmp43 dmp53 dmp63 dmp14 dmp24 dmp34 dmp44 dmp54 dmp64 gr_q11 gr_q21 gr_q31 bl1l1 bl2l1 bl3l1 bl4l1 bl5l1
bl6l1 bl7l1 bl8l1 bl9
> l1 bl10l1 bl11l1 bl12l1 bl13l1 bl14l1 bl15l1 bl1l2 bl2l2 bl3l2 bl4l2 bl5l2 bl6l2 bl7l2 bl8l2 bl9l2 bl10l2 bl11l2 bl12l2 bl13l2
bl14l2 bl15l2 bl1l3 bl2l
> 3 bl3l3 bl4l3 bl5l3 bl6l3 bl7l3 bl8l3 bl9l3 bl10l3 bl11l3 bl12l3 bl13l3 bl14l3 bl15l3 bl1l4 bl2l4 bl3l4 bl4l4 bl5l4 bl6l4 bl7l4
bl8l4 bl9l4 bl10l4 bl11
> l4 bl12l4 bl13l4 bl14l4 bl15l4 chf_sum1 caar_sum1 vd_sum1 pcd_sum1 pvd_sum1 hyu_sum1 hyc_sum1 paral_sum1 ond_sum1 cpd_sum1
diau_sum1 diac_sum1 hypot_su
> m1 rf_sum1 ld_sum1 pud_sum1 aids_sum1 lym_sum1 mc_sum1 stwm_sum1 ra_sum1 coa_sum1 ob_sum1 wl_sum1 fed_sum1 bla_sum1 dean_sum1
aa_sum1 drab_sum1 psyc_su
> m1 depr_sum1 uaw_einw_q1 uaw_entl_q1 vs11 vs21 atc_menge_q2 chf_sum2 caar_sum2 vd_sum2 pcd_sum2 pvd_sum2 hyu_sum2 hyc_sum2
paral_sum2 ond_sum2 cpd_sum2
>  diau_sum2 diac_sum2 hypot_sum2 rf_sum2 ld_sum2 pud_sum2 aids_sum2 lym_sum2 mc_sum2 stwm_sum2 ra_sum2 coa_sum2 ob_sum2 wl_sum2
fed_sum2 bla_sum2 dean_s
> um2 aa_sum2 psyc_sum2 depr_sum2 uaw_einw_q2 uaw_entl_q2 vs12 vs22 atc_menge_q3 chf_sum3 caar_sum3 vd_sum3 pcd_sum3 pvd_sum3
hyu_sum3 hyc_sum3 paral_sum
> 3 ond_sum3 cpd_sum3 diau_sum3 diac_sum3 hypot_sum3 rf_sum3 ld_sum3 pud_sum3 aids_sum3 lym_sum3 mc_sum3 stwm_sum3 ra_sum3 coa_sum3
ob_sum3 wl_sum3 fed_s
> um3 bla_sum3 dean_sum3 aa_sum3 drab_sum3 psyc_sum3 depr_sum3 uaw_einw_q3 uaw_entl_q3 vs13 vs23 atc_menge_q4 chf_sum4 caar_sum4
vd_sum4 pcd_sum4 pvd_sum
> 4 hyu_sum4 hyc_sum4 paral_sum4 ond_sum4 cpd_sum4 diau_sum4 diac_sum4 hypot_sum4 rf_sum4 ld_sum4 pud_sum4 aids_sum4 lym_sum4
mc_sum4 stwm_sum4 ra_sum4 c
> oa_sum4 ob_sum4 wl_sum4 fed_sum4 bla_sum4 dean_sum4 aa_sum4 drab_sum4 psyc_sum4 depr_sum4 vs14 vs24 uaw_einw_q4 uaw_entl_q4
atc_menge_q1 (2nd order).

Optimizing...
Iteration 1: Max Difference = 21507157.6
Iteration 2: Max Difference = 7912038.72
Iteration 3: Max Difference = 2910673.99
Iteration 4: Max Difference = 1070774.73
Iteration 5: Max Difference = 393913.614
Iteration 6: Max Difference = 144910.327
Iteration 7: Max Difference = 53307.1363
Iteration 8: Max Difference = 19608.2061
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Iteration 9: Max Difference = 7211.06337
Iteration 10: Max Difference = 2650.41172
Iteration 11: Max Difference = 972.647983
Iteration 12: Max Difference = 355.450104
Iteration 13: Max Difference = 128.44126
Iteration 14: Max Difference = 45.049909
Iteration 15: Max Difference = 14.6704273
Iteration 16: Max Difference = 4.08798429
Iteration 17: Max Difference = .875466152
Iteration 18: Max Difference = .100191971
Iteration 19: Max Difference = .027197619
Iteration 20: Max Difference = .007839154
Iteration 21: Max Difference = .000288074
Iteration 22: Max Difference = 6.5432e-07
maximum difference smaller than the tolerance level; convergence achieved


Treated units: 690543  total of weights: 690543
Control units: 2545261 total of weights: 690543


Before: without weighting
```

	Treat			Control		
	mean	variance	skewness	mean	variance	skewness
alter	76.31	50.33	.4461	75.5	49.6	.5619
sex	.6122	.2374	-.4604	.5722	.2448	-.2917
pf11	.8551	.1239	-2.017	.8927	.09581	-2.537
pf21	.09242	.08388	2.815	.06472	.06053	3.538
pf31	.04725	.04502	4.268	.03459	.03339	5.094
pf12	.01249	.01234	8.778	.01267	.01251	8.716
pf22	.09636	.08708	2.736	.06705	.06256	3.462
pf32	.05105	.04845	4.079	.03644	.03511	4.948
pf13	.8247	.1446	-1.708	.8771	.1078	-2.297
pf23	.05734	.05405	3.808	.03854	.03706	4.794
pf33	.01632	.01606	7.634	.01497	.01474	7.989
pf14	212.4	678389	27.03	144.8	404596	42.81
pf24	337.5	100964	1.839	262.2	84557	2.089
pf34	340.5	102262	1.953	264.8	85017	1.991
med_kost_q1	345.3	103702	2.062	268.3	86180	2.02
med_kost_q2	356.6	106421	1.843	271.5	87612	2.031
med_kost_q3	373.9	4660647	19.39	265	3598595	85.28
med_kost_q4	448.9	7992786	38.59	256.8	3149331	28.64

ddd_q1	734.6	1.49e+07	20.75	279.5	3746979	28.65
ddd_q2	.8012	18.16	11.69	.5517	12.27	15.62
ddd_q3	.8079	18.84	14.02	.5187	12.07	45.49
ddd_q4	1.467	39.04	9.107	.5659	12.98	25.56
stat_kost_q1	177.8	189304	14.01	112.2	109636	17.54
stat_kost_q2	199.5	217781	12.79	118.2	117215	17.13
stat_kost_q3	20.81	91447	25.91	16.59	70174	27.78
stat_kost_q4	20.62	104574	38.04	15.44	68210	33.69
stat_tage_q1	21.83	104939	26.98	14.95	65784	33.46
stat_tage_q2	.1563	4.155	24.73	.122	2.975	16.95
stat_tage_q3	.1492	3.889	17.44	.1119	2.752	18.05
stat_tage_q4	.1541	3.959	16.34	.1072	2.631	18.75
amb_kost_q1	27.92	11782	8.497	20.53	9259	10.37
amb_kost_q2	.08793	.0802	2.91	.06273	.05879	3.607
amb_kost_q3	.01507	.01484	7.961	.009395	.009306	10.17
amb_kost_q4	.1806	.148	1.661	.1491	.1269	1.97
reha_kost_q1	.003574	.003561	16.64	.002527	.00252	19.82
reha_kost_q2	.00134	.001338	27.27	.001212	.00121	28.68
reha_kost_q3	.0315	.0305	5.365	.01835	.01802	7.177
reha_kost_q4	.08873	.08086	2.893	.06359	.05954	3.577
reha_tage_q1	.01522	.01499	7.919	.009499	.009409	10.11
reha_tage_q2	.182	.1489	1.648	.1508	.128	1.952
reha_tage_q3	.00136	.001358	27.06	.001222	.00122	28.56
reha_tage_q4	.03205	.03102	5.314	.0187	.01835	7.106
heil_kost_q1	.01533	.0151	7.889	.009628	.009536	10.04
heil_kost_q2	.1834	.1498	1.636	.1524	.1292	1.934
heil_kost_q3	.003402	.00339	17.06	.002368	.002363	20.48
heil_kost_q4	.001379	.001377	26.88	.001236	.001234	28.39
dmp11	.03258	.03152	5.266	.01909	.01873	7.029
dmp21	.09074	.08251	2.85	.06521	.06096	3.522
dmp31	.01549	.01525	7.846	.009751	.009656	9.978
dmp41	.1848	.1506	1.625	.154	.1303	1.917
dmp51	.003376	.003364	17.12	.002302	.002297	20.77
dmp61	.001366	.001364	27.01	.001249	.001248	28.24
dmp12	.03332	.03221	5.201	.01947	.01909	6.956
dmp22	.2501	.1876	1.154	.2403	.1825	1.216
dmp32	.04104	.03935	4.627	.03676	.03541	4.924
dmp42	.011	.01087	9.378	.01056	.01045	9.576
dmp52	.1024	.09194	2.622	.08533	.07805	2.968
dmp62	.1569	.1323	1.887	.1304	.1134	2.195
dmp13	.04653	.04436	4.306	.03675	.0354	4.924
dmp23	.01186	.01172	9.018	.009166	.009082	10.3
dmp33	.09334	.08463	2.796	.08762	.07994	2.917
dmp43	.04636	.04421	4.315	.03942	.03787	4.734

dmp53	.04448	.0425	4.419	.04008	.03848	4.689
dmp63	.04105	.03937	4.626	.03678	.03542	4.922
dmp14	.09408	.08523	2.781	.2279	.1759	1.298
dmp24	.1784	.1466	1.68	.1464	.1249	2.001
dmp34	.0697	.06484	3.38	.0581	.05473	3.778
dmp44	.01099	.01087	9.382	.01055	.01044	9.58
dmp54	.1024	.09195	2.622	.08536	.07807	2.968
dmp64	.01187	.01173	9.014	.009164	.00908	10.3
gr_q11	.04446	.04249	4.42	.04008	.03847	4.689
gr_q21	.03591	.03462	4.989	.03282	.03174	5.244
gr_q31	.09401	.08517	2.782	.2278	.1759	1.298
bl1l1	.0697	.06484	3.38	.05811	.05473	3.778
bl2l1	.01097	.01085	9.389	.01054	.01043	9.585
bl3l1	.02916	.02831	5.597	.02318	.02264	6.338
bl4l1	.1569	.1323	1.887	.1304	.1134	2.195
bl5l1	.04653	.04437	4.306	.03676	.03541	4.923
bl6l1	.03113	.03016	5.4	.02876	.02793	5.639
bl7l1	.01187	.01173	9.012	.009161	.009077	10.3
bl8l1	.09335	.08464	2.796	.08761	.07993	2.917
bl9l1	.04634	.04419	4.316	.0394	.03785	4.735
bl10l1	.03589	.0346	4.99	.03282	.03174	5.245
bl11l1	.04111	.03942	4.622	.03681	.03546	4.92
bl12l1	.094	.08516	2.782	.2278	.1759	1.298
bl13l1	.1785	.1466	1.679	.1464	.125	2.001
bl14l1	.007755	.007695	11.22	.006779	.006733	12.02
bl15l1	.06966	.06481	3.381	.05812	.05474	3.777
bl1l2	.01094	.01082	9.403	.01053	.01042	9.588
bl2l2	.02915	.0283	5.598	.02318	.02264	6.337
bl3l2	.1025	.09199	2.621	.08538	.07809	2.967
bl4l2	.1569	.1323	1.887	.1304	.1134	2.195
bl5l2	.04654	.04437	4.305	.03677	.03542	4.923
bl6l2	.03116	.03019	5.396	.02877	.02794	5.638
bl7l2	.09333	.08462	2.796	.08761	.07993	2.917
bl8l2	.04632	.04417	4.317	.0394	.03785	4.735
bl9l2	.04442	.04244	4.423	.04008	.03847	4.69
bl10l2	.004944	.00492	14.12	.002973	.002964	18.26
bl11l2	.004756	.004733	14.4	.003048	.003038	18.03
bl12l2	.001347	.001345	27.19	.0008879	.0008871	33.51
bl13l2	.0006155	.0006151	40.27	.0004349	.0004347	47.92
bl14l2	.00307	.003061	17.96	.002091	.002086	21.8
bl15l2	.007733	.007673	11.24	.005548	.005517	13.31
bl1l3	.001254	.001253	28.19	.000787	.0007863	35.61
bl2l3	.0002795	.0002794	59.79	.0002047	.0002047	69.87
bl3l3	.001689	.001686	24.27	.001021	.00102	31.25

bl4l3	.003006	.002997	18.16	.001616	.001614	24.81
bl5l3	.002605	.002598	19.52	.001863	.00186	23.1
bl6l3	.002069	.002065	21.91	.001459	.001457	26.12
bl7l3	.0008515	.0008508	34.23	.0005752	.0005749	41.66
bl8l3	.001324	.001322	27.43	.0008726	.0008718	33.81
bl9l3	.001069	.001068	30.54	.0007386	.0007381	36.75
bl10l3	.0001709	.0001709	76.48	.0001167	.0001167	92.56
bl11l3	1.45e-06	1.45e-06	831	2.36e-06	2.36e-06	651.3
bl12l3	.0004286	.0004285	48.27	.0002656	.0002655	61.34
bl13l3	.0005619	.0005616	42.15	.0003021	.000302	57.51
bl14l3	.006279	.00624	12.5	.004004	.003988	15.71
bl15l3	.0006473	.0006469	39.27	.0003807	.0003806	51.22
bl1l4	.0002751	.0002751	60.26	.0001685	.0001685	77.01
bl2l4	.001056	.001055	30.73	.0007465	.0007459	36.56
bl3l4	.0002013	.0002013	70.46	.0001202	.0001202	91.19
bl4l4	.001315	.001313	27.52	.0009036	.0009028	33.22
bl5l4	.0000637	.0000637	125.3	.0000432	.0000432	152.1
bl6l4	.0004113	.0004111	49.28	.0002939	.0002938	58.31
bl7l4	.0005517	.0005514	42.54	.0004931	.0004928	45
bl8l4	.0000405	.0000405	157	.0000236	.0000236	206
bl9l4	.0002447	.0002447	63.9	.0001328	.0001328	86.76
bl10l4	.001917	.001914	22.77	.001091	.00109	30.22
bl11l4	.0184	.01806	7.167	.01347	.01329	8.441
bl12l4	.01657	.0163	7.573	.01233	.01217	8.84
bl13l4	.03594	.03464	4.986	.03283	.03175	5.243
bl14l4	.1784	.1465	1.68	.1464	.1249	2.001
bl15l4	.007782	.007722	11.2	.006784	.006738	12.02
chf_sum1	.06968	.06482	3.38	.0581	.05473	3.778
caar_sum1	.02913	.02828	5.6	.02317	.02263	6.339
vd_sum1	.03109	.03013	5.403	.02874	.02792	5.641
pcd_sum1	.5081	.2499	-.03243	.4567	.2481	.174
pvd_sum1	.4829	.2497	.06855	.5334	.2489	-.1339
hyu_sum1	.08911	.08117	2.884	.0626	.05868	3.611
hyc_sum1	.0444	.04243	4.424	.03295	.03186	5.233
paral_sum1	.253	.189	1.136	.2652	.1949	1.064
ond_sum1	.2529	.1889	1.137	.257	.191	1.112
cpd_sum1	382.9	5181140	23.96	253.9	3320274	40.53
diau_sum1	28.27	12467	8.619	20.49	9468	10.39
diac_sum1	.003477	.003465	16.87	.00244	.002434	20.17
hypot_sum1	3.76	8.317	.9676	2.872	7.094	1.167
rf_sum1	219.4	766396	28.6	147.7	446692	44.76
ld_sum1	831	7027975	17.76	550.8	4440209	29.53
pud_sum1	.005229	.005202	13.72	.002895	.002887	18.5
aids_sum1	.004934	.004909	14.13	.003007	.002998	18.15

lym_sum1	.001345	.001344	27.21	.0008856	.0008848	33.56
mc_sum1	.0006459	.0006455	39.31	.0004184	.0004182	48.86
stwm_sum1	.003244	.003233	17.47	.002115	.00211	21.68
ra_sum1	.007685	.007626	11.28	.005536	.005506	13.33
coa_sum1	.001318	.001316	27.49	.0007661	.0007655	36.09
ob_sum1	.0002737	.0002736	60.42	.0002019	.0002019	70.35
wl_sum1	.001745	.001742	23.88	.001	.0009993	31.57
fed_sum1	.003041	.003032	18.05	.001605	.001602	24.9
bla_sum1	.002623	.002616	19.45	.001878	.001874	23.01
dean_sum1	.002132	.002127	21.59	.001462	.00146	26.09
aa_sum1	.0008645	.0008638	33.97	.0005807	.0005804	41.46
drab_sum1	.00141	.001408	26.57	.0008805	.0008797	33.66
psyc_sum1	.001089	.001088	30.25	.0007359	.0007353	36.82
depr_sum1	.0001593	.0001593	79.21	.0001179	.0001179	92.09
uaw_einw_q1	7.24e-06	7.24e-06	371.6	2.36e-06	2.36e-06	651.3
uaw_entl_q1	.0004953	.000495	44.9	.000277	.0002769	60.06
vs11	.0007617	.0007611	36.19	.0003265	.0003264	55.32
vs21	.00658	.006537	12.21	.003968	.003952	15.78
atc_menge_q2	.0005995	.0005992	40.8	.0003693	.0003692	52.01
chf_sum2	.0003041	.000304	57.32	.000174	.000174	75.78
caar_sum2	.00106	.001059	30.67	.0007512	.0007506	36.44
vd_sum2	.0001651	.0001651	77.81	.0001167	.0001167	92.56
pcd_sum2	.001434	.001432	26.35	.00093	.0009291	32.75
pvd_sum2	.000097	.000097	101.5	.0000542	.0000542	135.8
hyu_sum2	.0004258	.0004256	48.43	.0002903	.0002903	58.66
hyc_sum2	.0005778	.0005775	41.57	.0004876	.0004873	45.25
paral_sum2	.0002274	.0002273	66.3	.0001328	.0001328	86.76
ond_sum2	.001813	.00181	23.42	.001034	.001033	31.06
cpd_sum2	.01877	.01842	7.092	.013	.01284	8.597
diau_sum2	.017	.01671	7.473	.01197	.01183	8.974
diac_sum2	.03592	.03463	4.987	.03283	.03175	5.243
hypot_sum2	.02915	.0283	5.598	.02317	.02264	6.339
rf_sum2	.1569	.1323	1.887	.1304	.1134	2.195
ld_sum2	.04651	.04435	4.307	.03676	.03541	4.924
pud_sum2	.0311	.03014	5.402	.02875	.02793	5.64
aids_sum2	.09337	.08465	2.795	.08761	.07994	2.917
lym_sum2	.04633	.04418	4.317	.03941	.03786	4.735
mc_sum2	.4521	.2477	.1924	.3717	.2335	.5311
stwm_sum2	.9112	21.47	12.13	.5215	10.99	14.94
ra_sum2	186.3	200945	13.51	115.6	113394	17.36
coa_sum2	.08961	.08158	2.874	.06441	.06026	3.549
ob_sum2	3.821	8.485	.9683	2.904	7.174	1.157
wl_sum2	230.3	930123	33.31	151.6	487061	40.09
fed_sum2	916.2	1.01e+07	29.07	559.6	4325925	21.47

bla_sum2	.005985	.005949	12.81	.003041	.003032	18.05
dean_sum2	.005384	.005355	13.52	.003077	.003068	17.94
aa_sum2	.001648	.001645	24.57	.0008852	.0008844	33.57
psyc_sum2	.0007414	.0007409	36.68	.0004121	.000412	49.23
depr_sum2	.003477	.003465	16.87	.002159	.002154	21.45
uaw_einw_q2	.00793	.007867	11.1	.005599	.005568	13.25
uaw_entl_q2	.001395	.001393	26.72	.000798	.0007973	35.36
vs12	.0002998	.0002997	57.73	.0002008	.0002007	70.55
vs22	.001888	.001885	22.95	.001033	.001031	31.07
atc_menge_q3	.003163	.003153	17.7	.001663	.001661	24.46
chf_sum3	.00264	.002633	19.39	.001884	.00188	22.97
caar_sum3	.002207	.002202	21.22	.001484	.001482	25.9
vd_sum3	.0008877	.0008869	33.52	.0005819	.0005815	41.42
pcd_sum3	.001481	.001479	25.92	.0009052	.0009044	33.19
pvd_sum3	.00114	.001138	29.57	.0007728	.0007722	35.93
hyu_sum3	.0001825	.0001824	74.01	.00011	.00011	95.33
hyc_sum3	5.79e-06	5.79e-06	415.5	4.71e-06	4.71e-06	460.5
paral_sum3	.0005315	.0005312	43.34	.0002703	.0002702	60.8
ond_sum3	.0008949	.0008941	33.38	.0003497	.0003495	53.45
cpd_sum3	.008081	.008015	10.99	.004166	.004149	15.4
diau_sum3	.000627	.0006267	39.9	.0003618	.0003617	52.54
diac_sum3	.0003157	.0003156	56.26	.0001713	.0001713	76.39
hypot_sum3	.00108	.001079	30.38	.0007587	.0007581	36.26
rf_sum3	.0001998	.0001998	70.72	.0001171	.0001171	92.4
ld_sum3	.001521	.001518	25.59	.0009355	.0009346	32.65
pud_sum3	.0000898	.0000898	105.5	.0000558	.0000558	133.9
aids_sum3	.0004822	.000482	45.5	.0002927	.0002926	58.42
lym_sum3	.0005894	.000589	41.15	.0005013	.0005011	44.63
mc_sum3	.0000377	.0000377	163	.0000244	.0000244	202.6
stwm_sum3	.0002317	.0002316	65.67	.0001277	.0001277	88.48
ra_sum3	.001883	.001879	22.98	.001033	.001031	31.07
coa_sum3	.02104	.0206	6.675	.0134	.01322	8.464
ob_sum3	.01927	.0189	6.993	.01217	.01202	8.899
wl_sum3	.04107	.03938	4.625	.03679	.03544	4.921
fed_sum3	.1784	.1466	1.68	.1464	.1249	2.001
bla_sum3	.1024	.09194	2.622	.08538	.07809	2.968
dean_sum3	.04444	.04247	4.421	.04008	.03847	4.69
aa_sum3	.3607	.2306	.5804	.296	.2084	.8938
drab_sum3	.01388	.01369	8.309	.01371	.01352	8.365
psyc_sum3	30.78	164024	24.54	15.4	68591	30.17
depr_sum3	.208	5.459	14.17	.1085	2.688	18.85
uaw_einw_q3	4.01	9.059	.9683	2.94	7.304	1.163
uaw_entl_q3	250.6	1092533	28.15	157.6	593863	50.32
vs13	1245	1.78e+07	17.18	591.9	5096395	21.94

vs23	.008412	.008341	10.76	.003455	.003444	16.92
atc_menge_q4	.007419	.007364	11.48	.003151	.003141	17.73
chf_sum4	.002581	.002574	19.61	.0009594	.0009585	32.24
caar_sum4	.0009905	.0009895	31.73	.0004616	.0004614	46.51
vd_sum4	.004179	.004162	15.37	.002289	.002284	20.83
pcd_sum4	.008894	.008815	10.46	.005615	.005583	13.23
pvd_sum4	.00161	.001608	24.86	.000838	.0008373	34.5
hyu_sum4	.0003953	.0003952	50.26	.0002126	.0002125	68.57
hyc_sum4	.002514	.002508	19.87	.00111	.001109	29.97
paral_sum4	.003981	.003965	15.75	.001741	.001738	23.9
ond_sum4	.002811	.002803	18.78	.001918	.001915	22.77
cpd_sum4	.002653	.002646	19.34	.001557	.001555	25.28
diau_sum4	.0009181	.0009173	32.96	.0005948	.0005945	40.97
diac_sum4	.001826	.001823	23.34	.0009736	.0009726	32
hypot_sum4	.001228	.001227	28.48	.0008046	.000804	35.21
rf_sum4	.0001839	.0001839	73.72	.00011	.00011	95.33
ld_sum4	5.79e-06	5.79e-06	415.5	5.11e-06	5.11e-06	442.5
pud_sum4	.0008805	.0008797	33.66	.0002935	.0002934	58.35
aids_sum4	.001765	.001762	23.74	.0004298	.0004296	48.2
lym_sum4	.01229	.01214	8.855	.004635	.004613	14.59
mc_sum4	.0007762	.0007756	35.85	.0003701	.00037	51.95
stwm_sum4	.0003794	.0003793	51.31	.0001725	.0001724	76.12
ra_sum4	.001111	.001109	29.96	.0007818	.0007812	35.72
coa_sum4	.0002896	.0002895	58.73	.000132	.000132	87.02
ob_sum4	.002517	.002511	19.86	.001075	.001074	30.45
wl_sum4	.0001419	.0001419	83.92	.0000538	.0000538	136.3
fed_sum4	.0006951	.0006946	37.89	.0003186	.0003185	55.99
bla_sum4	.0007139	.0007134	37.39	.0005198	.0005195	43.83
dean_sum4	.0000463	.0000463	146.9	.00002	.00002	223.4
aa_sum4	.0003418	.0003416	54.07	.0001261	.0001261	89.03
drab_sum4	.002145	.00214	21.52	.001028	.001027	31.14
psyc_sum4	.008951	.008871	10.43	.009861	.009764	9.921
depr_sum4	.008844	.008766	10.49	.00975	.009655	9.979
vs14	.008755	.008679	10.55	.009658	.009565	10.03
vs24	.7205	.2014	-.9827	.7649	.1798	-1.249
uaw_einw_q4	.03269	.03162	5.256	.01438	.01417	8.159
uaw_entl_q4	.03082	.02987	5.43	.01306	.01289	8.579
atc_menge_q1	3.732	8.227	.9648	2.853	7.071	1.174

After: balance_PSF4Q_atc_uaw_ed_inz as the weighting variable

	Treat			Control		
	mean	variance	skewness	mean	variance	skewness

alter	76.31	50.33	.4461	76.31	50.33	.4374
sex	.6122	.2374	-.4604	.6122	.2374	-.4604
pf11	.8551	.1239	-2.017	.8551	.1239	-2.017
pf21	.09242	.08388	2.815	.09242	.08388	2.815
pf31	.04725	.04502	4.268	.04725	.04502	4.268
pf12	.01249	.01234	8.778	.01249	.01234	8.778
pf22	.09636	.08708	2.736	.09636	.08708	2.736
pf32	.05105	.04845	4.079	.05105	.04845	4.079
pf13	.8247	.1446	-1.708	.8247	.1446	-1.708
pf23	.05734	.05405	3.808	.05734	.05405	3.808
pf33	.01632	.01606	7.634	.01632	.01606	7.634
pf14	212.4	678389	27.03	212.4	678389	40.99
pf24	337.5	100964	1.839	337.5	100964	3.669
pf34	340.5	102262	1.953	340.5	102262	3.495
med_kost_q1	345.3	103702	2.062	345.3	103702	3.454
med_kost_q2	356.6	106421	1.843	356.6	106421	3.931
med_kost_q3	373.9	4660647	19.39	373.9	4660644	18.58
med_kost_q4	448.9	7992786	38.59	448.9	7992781	27.21
ddd_q1	734.6	1.49e+07	20.75	734.6	1.49e+07	16.3
ddd_q2	.8012	18.16	11.69	.8012	18.16	10.4
ddd_q3	.8079	18.84	14.02	.8079	18.84	11.4
ddd_q4	1.467	39.04	9.107	1.467	39.04	7.237
stat_kost_q1	177.8	189304	14.01	177.8	189304	11.97
stat_kost_q2	199.5	217781	12.79	199.5	217780	10.62
stat_kost_q3	20.81	91447	25.91	20.81	91447	24.89
stat_kost_q4	20.62	104574	38.04	20.62	104574	37.99
stat_tage_q1	21.83	104939	26.98	21.83	104939	28.99
stat_tage_q2	.1563	4.155	24.73	.1563	4.155	17.56
stat_tage_q3	.1492	3.889	17.44	.1492	3.889	16.79
stat_tage_q4	.1541	3.959	16.34	.1541	3.959	16.4
amb_kost_q1	27.92	11782	8.497	27.92	11782	6.983
amb_kost_q2	.08793	.0802	2.91	.08793	.0802	2.91
amb_kost_q3	.01507	.01484	7.961	.01507	.01484	7.961
amb_kost_q4	.1806	.148	1.661	.1806	.148	1.661
reha_kost_q1	.003574	.003561	16.64	.003574	.003561	16.64
reha_kost_q2	.00134	.001338	27.27	.00134	.001338	27.27
reha_kost_q3	.0315	.0305	5.365	.0315	.0305	5.365
reha_kost_q4	.08873	.08086	2.893	.08873	.08086	2.893
reha_tage_q1	.01522	.01499	7.919	.01522	.01499	7.919
reha_tage_q2	.182	.1489	1.648	.182	.1489	1.648
reha_tage_q3	.00136	.001358	27.06	.00136	.001358	27.06
reha_tage_q4	.03205	.03102	5.314	.03205	.03102	5.314
heil_kost_q1	.01533	.0151	7.889	.01533	.0151	7.889

heil_kost_q2	.1834	.1498	1.636	.1834	.1498	1.636
heil_kost_q3	.003402	.00339	17.06	.003402	.00339	17.06
heil_kost_q4	.001379	.001377	26.88	.001379	.001377	26.88
dmp11	.03258	.03152	5.266	.03258	.03152	5.266
dmp21	.09074	.08251	2.85	.09074	.08251	2.85
dmp31	.01549	.01525	7.846	.01549	.01525	7.846
dmp41	.1848	.1506	1.625	.1848	.1506	1.625
dmp51	.003376	.003364	17.12	.003376	.003364	17.12
dmp61	.001366	.001364	27.01	.001366	.001364	27.01
dmp12	.03332	.03221	5.201	.03332	.03221	5.201
dmp22	.2501	.1876	1.154	.2501	.1876	1.154
dmp32	.04104	.03935	4.627	.04104	.03935	4.627
dmp42	.011	.01087	9.378	.011	.01087	9.378
dmp52	.1024	.09194	2.622	.1024	.09194	2.622
dmp62	.1569	.1323	1.887	.1569	.1323	1.887
dmp13	.04653	.04436	4.306	.04653	.04436	4.306
dmp23	.01186	.01172	9.018	.01186	.01172	9.018
dmp33	.09334	.08463	2.796	.09334	.08463	2.796
dmp43	.04636	.04421	4.315	.04636	.04421	4.315
dmp53	.04448	.0425	4.419	.04448	.0425	4.419
dmp63	.04105	.03937	4.626	.04105	.03937	4.626
dmp14	.09408	.08523	2.781	.09408	.08523	2.781
dmp24	.1784	.1466	1.68	.1784	.1466	1.68
dmp34	.0697	.06484	3.38	.0697	.06484	3.38
dmp44	.01099	.01087	9.382	.01099	.01087	9.382
dmp54	.1024	.09195	2.622	.1024	.09195	2.622
dmp64	.01187	.01173	9.014	.01187	.01173	9.014
gr_q11	.04446	.04249	4.42	.04446	.04249	4.42
gr_q21	.03591	.03462	4.989	.03591	.03462	4.989
gr_q31	.09401	.08517	2.782	.09401	.08517	2.782
bl1l1	.0697	.06484	3.38	.0697	.06484	3.38
bl2l1	.01097	.01085	9.389	.01097	.01085	9.389
bl3l1	.02916	.02831	5.597	.02916	.02831	5.597
bl4l1	.1569	.1323	1.887	.1569	.1323	1.887
bl5l1	.04653	.04437	4.306	.04653	.04437	4.306
bl6l1	.03113	.03016	5.4	.03113	.03016	5.4
bl7l1	.01187	.01173	9.012	.01187	.01173	9.012
bl8l1	.09335	.08464	2.796	.09335	.08464	2.796
bl9l1	.04634	.04419	4.316	.04634	.04419	4.316
bl10l1	.03589	.0346	4.99	.03589	.0346	4.99
bl11l1	.04111	.03942	4.622	.04111	.03942	4.622
bl12l1	.094	.08516	2.782	.094	.08516	2.782
bl13l1	.1785	.1466	1.679	.1785	.1466	1.679
bl14l1	.007755	.007695	11.22	.007755	.007695	11.22

bl15l1	.06966	.06481	3.381	.06966	.06481	3.381
bl1l2	.01094	.01082	9.403	.01094	.01082	9.403
bl2l2	.02915	.0283	5.598	.02915	.0283	5.598
bl3l2	.1025	.09199	2.621	.1025	.09199	2.621
bl4l2	.1569	.1323	1.887	.1569	.1323	1.887
bl5l2	.04654	.04437	4.305	.04654	.04437	4.305
bl6l2	.03116	.03019	5.396	.03116	.03019	5.396
bl7l2	.09333	.08462	2.796	.09333	.08462	2.796
bl8l2	.04632	.04417	4.317	.04632	.04417	4.317
bl9l2	.04442	.04244	4.423	.04442	.04244	4.423
bl10l2	.004944	.00492	14.12	.004944	.004919	14.12
bl11l2	.004756	.004733	14.4	.004756	.004733	14.4
bl12l2	.001347	.001345	27.19	.001347	.001345	27.19
bl13l2	.0006155	.0006151	40.27	.0006155	.0006151	40.27
bl14l2	.00307	.003061	17.96	.00307	.003061	17.96
bl15l2	.007733	.007673	11.24	.007733	.007673	11.24
bl1l3	.001254	.001253	28.19	.001254	.001253	28.19
bl2l3	.0002795	.0002794	59.79	.0002795	.0002794	59.79
bl3l3	.001689	.001686	24.27	.001689	.001686	24.27
bl4l3	.003006	.002997	18.16	.003006	.002997	18.16
bl5l3	.002605	.002598	19.52	.002605	.002598	19.52
bl6l3	.002069	.002065	21.91	.002069	.002065	21.91
bl7l3	.0008515	.0008508	34.23	.0008515	.0008508	34.23
bl8l3	.001324	.001322	27.43	.001324	.001322	27.43
bl9l3	.001069	.001068	30.54	.001069	.001068	30.54
bl10l3	.0001709	.0001709	76.48	.0001709	.0001709	76.48
bl11l3	1.45e-06	1.45e-06	831	1.45e-06	1.45e-06	831
bl12l3	.0004286	.0004285	48.27	.0004286	.0004285	48.27
bl13l3	.0005619	.0005616	42.15	.0005619	.0005616	42.15
bl14l3	.006279	.00624	12.5	.006279	.00624	12.5
bl15l3	.0006473	.0006469	39.27	.0006473	.0006469	39.27
bl1l4	.0002751	.0002751	60.26	.0002751	.0002751	60.26
bl2l4	.001056	.001055	30.73	.001056	.001055	30.73
bl3l4	.0002013	.0002013	70.46	.0002013	.0002013	70.46
bl4l4	.001315	.001313	27.52	.001315	.001313	27.52
bl5l4	.0000637	.0000637	125.3	.0000637	.0000637	125.3
bl6l4	.0004113	.0004111	49.28	.0004113	.0004111	49.28
bl7l4	.0005517	.0005514	42.54	.0005517	.0005514	42.54
bl8l4	.0000405	.0000405	157	.0000405	.0000405	157
bl9l4	.0002447	.0002447	63.9	.0002447	.0002447	63.9
bl10l4	.001917	.001914	22.77	.001917	.001914	22.77
bl11l4	.0184	.01806	7.167	.0184	.01806	7.167
bl12l4	.01657	.0163	7.573	.01657	.0163	7.573
bl13l4	.03594	.03464	4.986	.03594	.03464	4.986

bl14l4	.1784	.1465	1.68	.1784	.1465	1.68
bl15l4	.007782	.007722	11.2	.007782	.007722	11.2
chf_sum1	.06968	.06482	3.38	.06968	.06482	3.38
caar_sum1	.02913	.02828	5.6	.02913	.02828	5.6
vd_sum1	.03109	.03013	5.403	.03109	.03013	5.403
pcd_sum1	.5081	.2499	-.03243	.5081	.2499	-.03243
pvd_sum1	.4829	.2497	.06855	.4829	.2497	.06855
hyu_sum1	.08911	.08117	2.884	.08911	.08117	2.884
hyc_sum1	.0444	.04243	4.424	.0444	.04243	4.424
paral_sum1	.253	.189	1.136	.253	.189	1.136
ond_sum1	.2529	.1889	1.137	.2529	.1889	1.137
cpd_sum1	382.9	5181140	23.96	382.9	5181137	21.69
diau_sum1	28.27	12467	8.619	28.27	12467	7.129
diac_sum1	.003477	.003465	16.87	.003477	.003465	16.87
hypot_sum1	3.76	8.317	.9676	3.76	8.317	.852
rf_sum1	219.4	766396	28.6	219.4	766395	40.99
ld_sum1	831	7027975	17.76	831	7027971	16.48
pud_sum1	.005229	.005202	13.72	.005229	.005202	13.72
aids_sum1	.004934	.004909	14.13	.004934	.004909	14.13
lym_sum1	.001345	.001344	27.21	.001345	.001344	27.21
mc_sum1	.0006459	.0006455	39.31	.0006459	.0006455	39.31
stwm_sum1	.003244	.003233	17.47	.003244	.003233	17.47
ra_sum1	.007685	.007626	11.28	.007685	.007626	11.28
coa_sum1	.001318	.001316	27.49	.001318	.001316	27.49
ob_sum1	.0002737	.0002736	60.42	.0002737	.0002736	60.42
wl_sum1	.001745	.001742	23.88	.001745	.001742	23.88
fed_sum1	.003041	.003032	18.05	.003041	.003032	18.05
bla_sum1	.002623	.002616	19.45	.002623	.002616	19.45
dean_sum1	.002132	.002127	21.59	.002132	.002127	21.59
aa_sum1	.0008645	.0008638	33.97	.0008645	.0008638	33.97
drab_sum1	.00141	.001408	26.57	.00141	.001408	26.57
psyc_sum1	.001089	.001088	30.25	.001089	.001088	30.25
depr_sum1	.0001593	.0001593	79.21	.0001593	.0001593	79.21
uaw_einw_q1	7.24e-06	7.24e-06	371.6	7.24e-06	7.24e-06	371.6
uaw_entl_q1	.0004953	.000495	44.9	.0004953	.000495	44.9
vs11	.0007617	.0007611	36.19	.0007617	.0007611	36.19
vs21	.00658	.006537	12.21	.00658	.006537	12.21
atc_menge_q2	.0005995	.0005992	40.8	.0005995	.0005992	40.8
chf_sum2	.0003041	.000304	57.32	.0003041	.000304	57.32
caar_sum2	.00106	.001059	30.67	.00106	.001059	30.67
vd_sum2	.0001651	.0001651	77.81	.0001651	.0001651	77.81
pcd_sum2	.001434	.001432	26.35	.001434	.001432	26.35
pvd_sum2	.000097	.000097	101.5	.000097	.000097	101.5
hyu_sum2	.0004258	.0004256	48.43	.0004258	.0004256	48.43

hyc_sum2	.0005778	.0005775	41.57	.0005778	.0005775	41.57
paral_sum2	.0002274	.0002273	66.3	.0002274	.0002273	66.3
ond_sum2	.001813	.00181	23.42	.001813	.00181	23.42
cpd_sum2	.01877	.01842	7.092	.01877	.01842	7.092
diau_sum2	.017	.01671	7.473	.017	.01671	7.473
diac_sum2	.03592	.03463	4.987	.03592	.03463	4.987
hypot_sum2	.02915	.0283	5.598	.02915	.0283	5.598
rf_sum2	.1569	.1323	1.887	.1569	.1323	1.887
ld_sum2	.04651	.04435	4.307	.04651	.04435	4.307
pud_sum2	.0311	.03014	5.402	.0311	.03014	5.402
aids_sum2	.09337	.08465	2.795	.09337	.08465	2.795
lym_sum2	.04633	.04418	4.317	.04633	.04418	4.317
mc_sum2	.4521	.2477	.1924	.4521	.2477	.1924
stwm_sum2	.9112	21.47	12.13	.9112	21.47	9.84
ra_sum2	186.3	200945	13.51	186.3	200945	11.55
coa_sum2	.08961	.08158	2.874	.08961	.08158	2.874
ob_sum2	3.821	8.485	.9683	3.821	8.485	.8493
wl_sum2	230.3	930123	33.31	230.3	930123	34.93
fed_sum2	916.2	1.01e+07	29.07	916.2	1.01e+07	21.21
bla_sum2	.005985	.005949	12.81	.005985	.005949	12.81
dean_sum2	.005384	.005355	13.52	.005384	.005355	13.52
aa_sum2	.001648	.001645	24.57	.001648	.001645	24.57
psyc_sum2	.0007414	.0007409	36.68	.0007414	.0007409	36.68
depr_sum2	.003477	.003465	16.87	.003477	.003465	16.87
uaw_einw_q2	.00793	.007867	11.1	.00793	.007867	11.1
uaw_entl_q2	.001395	.001393	26.72	.001395	.001393	26.72
vs12	.0002998	.0002997	57.73	.0002998	.0002997	57.73
vs22	.001888	.001885	22.95	.001888	.001885	22.95
atc_menge_q3	.003163	.003153	17.7	.003163	.003153	17.7
chf_sum3	.00264	.002633	19.39	.00264	.002633	19.39
caar_sum3	.002207	.002202	21.22	.002207	.002202	21.22
vd_sum3	.0008877	.0008869	33.52	.0008877	.0008869	33.52
pcd_sum3	.001481	.001479	25.92	.001481	.001479	25.92
pvd_sum3	.00114	.001138	29.57	.00114	.001138	29.57
hyu_sum3	.0001825	.0001824	74.01	.0001825	.0001824	74.01
hyc_sum3	5.79e-06	5.79e-06	415.5	5.79e-06	5.79e-06	415.5
paral_sum3	.0005315	.0005312	43.34	.0005315	.0005312	43.34
ond_sum3	.0008949	.0008941	33.38	.0008949	.0008941	33.38
cpd_sum3	.008081	.008015	10.99	.008081	.008015	10.99
diau_sum3	.000627	.0006267	39.9	.000627	.0006266	39.9
diac_sum3	.0003157	.0003156	56.26	.0003157	.0003156	56.26
hypot_sum3	.00108	.001079	30.38	.00108	.001079	30.38
rf_sum3	.0001998	.0001998	70.72	.0001998	.0001998	70.72
ld_sum3	.001521	.001518	25.59	.001521	.001518	25.59

pud_sum3	.0000898	.0000898	105.5	.0000898	.0000898	105.5
aids_sum3	.0004822	.000482	45.5	.0004822	.000482	45.5
lym_sum3	.0005894	.000589	41.15	.0005894	.000589	41.15
mc_sum3	.0000377	.0000377	163	.0000377	.0000377	163
stwm_sum3	.0002317	.0002316	65.67	.0002317	.0002316	65.67
ra_sum3	.001883	.001879	22.98	.001883	.001879	22.98
coa_sum3	.02104	.0206	6.675	.02104	.0206	6.675
ob_sum3	.01927	.0189	6.993	.01927	.0189	6.993
wl_sum3	.04107	.03938	4.625	.04107	.03938	4.625
fed_sum3	.1784	.1466	1.68	.1784	.1466	1.68
bla_sum3	.1024	.09194	2.622	.1024	.09194	2.622
dean_sum3	.04444	.04247	4.421	.04444	.04247	4.421
aa_sum3	.3607	.2306	.5804	.3607	.2306	.5804
drab_sum3	.01388	.01369	8.309	.01388	.01369	8.309
psyc_sum3	30.78	164024	24.54	30.78	164024	27.91
depr_sum3	.208	5.459	14.17	.208	5.459	14.78
uaw_einw_q3	4.01	9.059	.9683	4.01	9.059	.8634
uaw_entl_q3	250.6	1092533	28.15	250.6	1092532	34.58
vs13	1245	1.78e+07	17.18	1245	1.78e+07	13.65
vs23	.008412	.008341	10.76	.008412	.008341	10.76
atc_menge_q4	.007419	.007364	11.48	.007419	.007364	11.48
chf_sum4	.002581	.002574	19.61	.002581	.002574	19.61
caar_sum4	.0009905	.0009895	31.73	.0009905	.0009895	31.73
vd_sum4	.004179	.004162	15.37	.004179	.004162	15.37
pcd_sum4	.008894	.008815	10.46	.008894	.008815	10.46
pvd_sum4	.00161	.001608	24.86	.00161	.001608	24.86
hyu_sum4	.0003953	.0003952	50.26	.0003953	.0003952	50.26
hyc_sum4	.002514	.002508	19.87	.002514	.002508	19.87
paral_sum4	.003981	.003965	15.75	.003981	.003965	15.75
ond_sum4	.002811	.002803	18.78	.002811	.002803	18.78
cpd_sum4	.002653	.002646	19.34	.002653	.002646	19.34
diau_sum4	.0009181	.0009173	32.96	.0009181	.0009173	32.96
diac_sum4	.001826	.001823	23.34	.001826	.001823	23.34
hypot_sum4	.001228	.001227	28.48	.001228	.001227	28.48
rf_sum4	.0001839	.0001839	73.72	.0001839	.0001839	73.72
ld_sum4	5.79e-06	5.79e-06	415.5	5.79e-06	5.79e-06	415.5
pud_sum4	.0008805	.0008797	33.66	.0008805	.0008797	33.66
aids_sum4	.001765	.001762	23.74	.001765	.001762	23.74
lym_sum4	.01229	.01214	8.855	.01229	.01214	8.855
mc_sum4	.0007762	.0007756	35.85	.0007762	.0007756	35.85
stwm_sum4	.0003794	.0003793	51.31	.0003794	.0003793	51.31
ra_sum4	.001111	.001109	29.96	.001111	.001109	29.96
coa_sum4	.0002896	.0002895	58.73	.0002896	.0002895	58.73
ob_sum4	.002517	.002511	19.86	.002517	.002511	19.86

```
     wl_sum4 |  .0001419   .0001419      83.92 |  .0001419   .0001419      83.92
    fed_sum4 |  .0006951   .0006946      37.89 |  .0006951   .0006946      37.89
    bla_sum4 |  .0007139   .0007134      37.39 |  .0007139   .0007134      37.39
   dean_sum4 |  .0000463   .0000463      146.9 |  .0000463   .0000463      146.9
     aa_sum4 |  .0003418   .0003416      54.07 |  .0003418   .0003416      54.07
   drab_sum4 |   .002145     .00214      21.52 |   .002145     .00214      21.52
   psyc_sum4 |   .008951    .008871      10.43 |   .008951    .008871      10.43
   depr_sum4 |   .008844    .008766      10.49 |   .008844    .008766      10.49
        vs14 |   .008755    .008679      10.55 |   .008755    .008679      10.55
        vs24 |     .7205      .2014     -.9827 |     .7205      .2014     -.9827
 uaw_einw_q4 |    .03269     .03162      5.256 |    .03269     .03162      5.256
 uaw_entl_q4 |    .03082     .02987       5.43 |    .03082     .02987       5.43
atc_menge_q1 |     3.732      8.227      .9648 |     3.732      8.227      .8473
```

Lineare Regressionen

Leistungsinanspruchnahme

reha_tage_q

Modell

```
       panel variable:  versid (unbalanced)

Fitting constant-only model:
Iteration 0:   log likelihood =  -24192979

Fitting full model:
Iteration 0:   log likelihood =  -24184013
Iteration 1:   log likelihood =  -24184013
Iteration 2:   log likelihood =  -24184013

Random-effects ML regression                    Number of obs     = 25,631,437
Group variable: versid                          Number of groups  =  3,235,804

Random effects u_i ~ Gaussian                   Obs per group:
                                                              min =          5
                                                              avg =        7.9
                                                              max =          8

                                                LR chi2(31)       =   17931.54
Log likelihood  =  -24184013                    Prob > chi2       =     0.0000

-----------------------------------------------------------------------------------
      reha_tage_q |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
------------------+----------------------------------------------------------------
         num_PSF4Q |
```

2	-.0067118	.0035799	-1.87	0.061	-.0137282	.0003046
3	-.0020723	.0035799	-0.58	0.563	-.0090887	.0049441
4	.0516471	.0035799	14.43	0.000	.0446308	.0586635
5	.0295797	.0035799	8.26	0.000	.0225633	.0365961
6	-.0192744	.0035975	-5.36	0.000	-.0263252	-.0122235
7	-.0265976	.0036123	-7.36	0.000	-.0336776	-.0195176
8	-.0199486	.0036249	-5.50	0.000	-.0270534	-.0128439
1.PRISCUS	.0219712	.0050781	4.33	0.000	.0120183	.0319242
num_PSF4Q#PRISCUS						
2 1	.0026071	.0071815	0.36	0.717	-.0114685	.0166826
3 1	-.0008059	.0071815	-0.11	0.911	-.0148815	.0132697
4 1	.010553	.0071815	1.47	0.142	-.0035226	.0246285
5 1	.2753565	.0071815	38.34	0.000	.261281	.2894321
6 1	.1186858	.0072522	16.37	0.000	.1044716	.1328999
7 1	.0716902	.007319	9.80	0.000	.0573452	.0860352
8 1	.0485189	.0073646	6.59	0.000	.0340846	.0629531
1.FORTA	-.0254596	.0045084	-5.65	0.000	-.0342959	-.0166234
num_PSF4Q#FORTA						
2 1	-.0112949	.0063758	-1.77	0.076	-.0237912	.0012013
3 1	-.0075588	.0063758	-1.19	0.236	-.0200551	.0049375
4 1	-.0422561	.0063758	-6.63	0.000	-.0547524	-.0297598
5 1	.1042679	.0063758	16.35	0.000	.0917716	.1167641
6 1	.1816262	.0063969	28.39	0.000	.1690885	.1941639
7 1	.1319528	.0064232	20.54	0.000	.1193635	.144542
8 1	.1062996	.0064453	16.49	0.000	.093667	.1189321
1.STOPP	.0069022	.0047055	1.47	0.142	-.0023204	.0161248
num_PSF4Q#STOPP						
2 1	.0084866	.0066546	1.28	0.202	-.0045561	.0215293
3 1	.0082768	.0066546	1.24	0.214	-.0047659	.0213195
4 1	.0389091	.0066546	5.85	0.000	.0258664	.0519518
5 1	.2778446	.0066546	41.75	0.000	.2648019	.2908873
6 1	.0801176	.0067047	11.95	0.000	.0669766	.0932586
7 1	.0523452	.0067607	7.74	0.000	.0390945	.0655959
8 1	.0404582	.0068035	5.95	0.000	.0271236	.0537928
_cons	.1570634	.0025313	62.05	0.000	.1521021	.1620248
/sigma_u	0	(omitted)				

```
        /sigma_e |   2.231311   .0004782                      2.230374    2.232249
             rho |          0  (omitted)
------------------------------------------------------------------------------------
LR test of sigma_u=0: chibar2(01) = 0.00              Prob >= chibar2 = 1.000
```

Margins

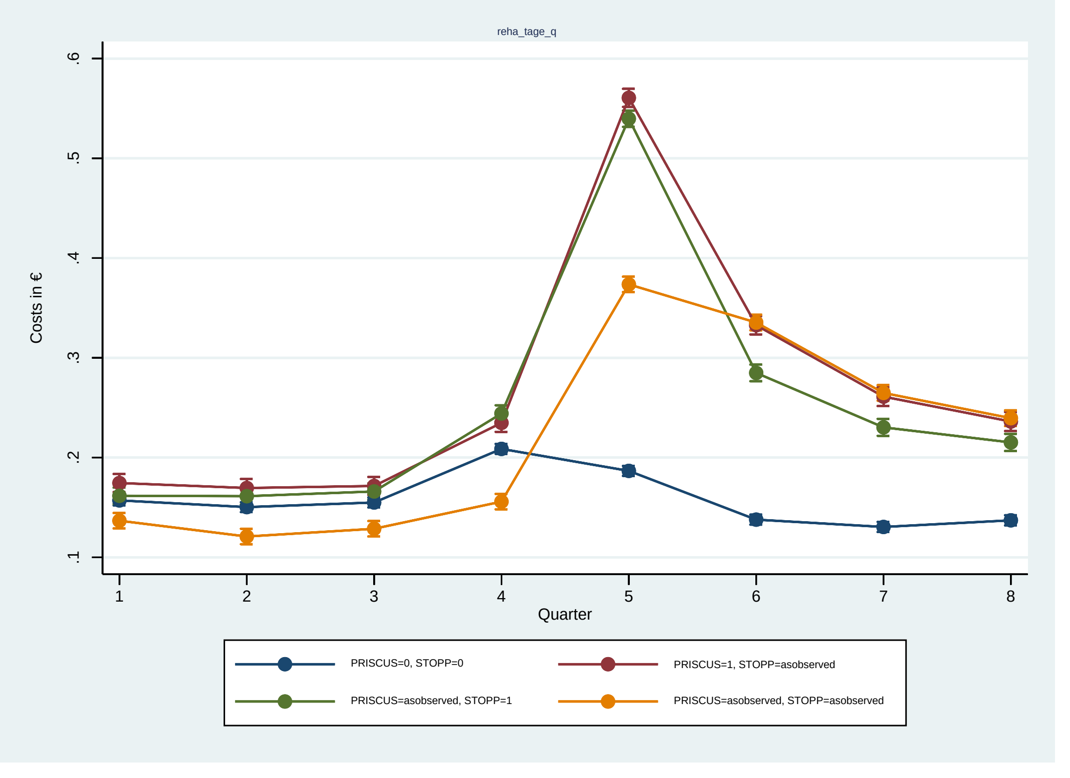
```
Predictive margins                               Number of obs     = 25,631,437
Model VCE    : OIM

Expression   : Linear prediction, predict()

------------------------------------------------------------------------------------------------
                              |            Delta-method
                              |     Margin   Std. Err.      z    P>|z|     [95% Conf. Interval]
------------------------------+-----------------------------------------------------------------
            num_PSF4Q#PRISCUS |
                          1 1 |   .1745037   .0046222    37.75   0.000     .1654443    .1835631
                          2 1 |   .1694982   .0046222    36.67   0.000     .1604389    .1785576
                          3 1 |   .1715539   .0046222    37.12   0.000     .1624945    .1806133
                          4 1 |   .2347982   .0046222    50.80   0.000     .2257388    .2438576
                          5 1 |   .5606006   .0046222   121.28   0.000     .5515412      .56966
                          6 1 |   .3326941   .0047236    70.43   0.000     .3234359    .3419523
                          7 1 |    .261101   .0048171    54.20   0.000     .2516598    .2705423
                          8 1 |   .2361599   .0048785    48.41   0.000     .2265983    .2457214
                              |
              num_PSF4Q#STOPP |
                          1 1 |   .1617114   .0041892    38.60   0.000     .1535007    .1699222
                          2 1 |   .1612875   .0041892    38.50   0.000     .1530768    .1694983
                          3 1 |   .1660163   .0041892    39.63   0.000     .1578055    .1742271
                          4 1 |   .2441761   .0041892    58.29   0.000     .2359654    .2523869
                          5 1 |   .5396982   .0041892   128.83   0.000     .5314874    .5479089
                          6 1 |   .2848727   .0042589    66.89   0.000     .2765255    .2932198
                          7 1 |   .2302934   .0043372    53.10   0.000     .2217926    .2387941
                          8 1 |   .2151777   .0043959    48.95   0.000      .206562    .2237934
                              |
              num_PSF4Q#FORTA |
                          1 1 |   .1367038   .0039478    34.63   0.000     .1289662    .1444414
                          2 1 |   .1208703   .0039478    30.62   0.000     .1131328    .1286079
                          3 1 |   .1286301   .0039478    32.58   0.000     .1208925    .1363677
                          4 1 |   .1558238   .0039478    39.47   0.000     .1480863    .1635614
                          5 1 |   .3735997   .0039478    94.63   0.000     .3658621    .3813373
                          6 1 |    .335365   .0039688    84.50   0.000     .3275863    .3431438
                          7 1 |   .2647992    .003999    66.22   0.000     .2569613    .2726372
                          8 1 |   .2394741   .0040244    59.51   0.000     .2315864    .2473617
```

```
                             |
num_PSF4Q#PRISCUS#STOPP#FORTA |
                     1 0 0 0  |    .1570634   .0025313    62.05   0.000     .1521021    .1620248
                     2 0 0 0  |    .1503516   .0025313    59.40   0.000     .1453903     .155313
                     3 0 0 0  |    .1549911   .0025313    61.23   0.000     .1500298    .1599524
                     4 0 0 0  |    .2087106   .0025313    82.45   0.000     .2037492    .2136719
                     5 0 0 0  |    .1866431   .0025313    73.73   0.000     .1816818    .1916044
                     6 0 0 0  |    .1377891   .0025562    53.90   0.000     .1327791    .1427991
                     7 0 0 0  |    .1304659    .002577    50.63   0.000      .125415    .1355168
                     8 0 0 0  |    .1371148   .0025947    52.84   0.000     .1320293    .1422003
-----------------------------------------------------------------------------------------------
```

Grafik



Lincom (IG vs. KG)

PRISCUS

```
( 1)  1bn.num_PSF4Q#1bn.PRISCUS - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0174403   .0052694     3.31   0.001     .0071125     .027768
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.PRISCUS - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0191466   .0052694     3.63   0.000     .0088188    .0294744
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.PRISCUS - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0165628   .0052694     3.14   0.002      .006235    .0268905
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.PRISCUS - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0260876   .0052694     4.95   0.000     .0157598    .0364154
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.PRISCUS - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .3739575   .0052694    70.97   0.000     .3636297    .3842853
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.PRISCUS - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .194905   .0053759    36.26   0.000     .1843684    .2054416
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.PRISCUS - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1306352   .0054716    23.88   0.000      .119911    .1413594
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q#1bn.PRISCUS - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .099045    .005535    17.89   0.000     .0881967    .1098934
------------------------------------------------------------------------------
```

STOPP

```
( 1)  1bn.num_PSF4Q#1bn.STOPP - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .004648   .0048581     0.96   0.339    -.0048736    .0141696
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.STOPP - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0109359   .0048581     2.25   0.024     .0014143    .0204575
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.STOPP - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
```

```
-------------+----------------------------------------------------------------
         (1) |   .0110252   .0048581     2.27   0.023     .0015036    .0205468
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.STOPP - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0354656   .0048581     7.30   0.000      .025944    .0449872
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.STOPP - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .3530551   .0048581    72.67   0.000     .3435334    .3625767
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.STOPP - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1470836   .0049375    29.79   0.000     .1374063    .1567609
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.STOPP - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0998275   .0050185    19.89   0.000     .0899913    .1096636
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q#1bn.STOPP - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0780629   .0050777    15.37   0.000     .0681108     .088015
------------------------------------------------------------------------------
```

FORTA

```
( 1)  1bn.num_PSF4Q#1bn.FORTA - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0203596   .0047415    -4.29   0.000    -.0296528   -.0110665
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.FORTA - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0294813   .0047415    -6.22   0.000    -.0387745   -.0201881
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.FORTA - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   -.026361   .0047415    -5.56   0.000    -.0356542   -.0170678
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.FORTA - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0528867   .0047415   -11.15   0.000    -.0621799   -.0435935
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.FORTA - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1869566   .0047415    39.43   0.000     .1776634    .1962498
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.FORTA - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
```

```
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .197576   .0047771    41.36   0.000      .188213    .2069389
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.FORTA - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1343334   .0048186    27.88   0.000      .124889    .1437777
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q#1bn.FORTA - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1023593   .0048519    21.10   0.000     .0928497    .1118688
------------------------------------------------------------------------------
```

Lincom (IG vs. KG mit Korrektur vor Q4 DiD)

PRISCUS

```
( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 5.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .3478699    .007452    46.68   0.000     .3332642    .3624755
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 6.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1688174   .0075277    22.43   0.000     .1540633    .1835715
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 7.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1045476   .0075964    13.76   0.000     .0896589    .1194362
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 8.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0729574   .0076421     9.55   0.000     .0579792    .0879357
------------------------------------------------------------------------------
```

STOPP

```
( 1)  - 4.num_PSF4Q#1bn.STOPP + 5.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .3175895   .0068703    46.23   0.000     .3041239    .3310551
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 6.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .111618   .0069267    16.11   0.000     .0980419    .1251941
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 7.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0643619   .0069847     9.21   0.000     .0506721    .0780517
------------------------------------------------------------------------------
```

```
 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 8.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0425973   .0070274     6.06   0.000     .0288239    .0563707
------------------------------------------------------------------------------
```

FORTA

```
( 1)  - 4.num_PSF4Q#1bn.FORTA + 5.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .2398433   .0067055    35.77   0.000     .2267008    .2529859
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 6.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .2504627   .0067307    37.21   0.000     .2372707    .2636547
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 7.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1872201   .0067603    27.69   0.000     .1739702      .20047
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 8.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .155246    .006784    22.88   0.000     .1419496    .1685424
```

```
------------------------------------------------------------------------------
```

stat_tage_q

Modell

```
       panel variable:  versid (unbalanced)

Fitting constant-only model:
Iteration 0:   log likelihood =  -33988320
Iteration 1:   log likelihood =  -33950427  (backed up)
Iteration 2:   log likelihood =  -33899514
Iteration 3:   log likelihood =  -33888650
Iteration 4:   log likelihood =  -33888593
Iteration 5:   log likelihood =  -33888593

Fitting full model:
Iteration 0:   log likelihood =  -33915730
Iteration 1:   log likelihood =  -33914495
Iteration 2:   log likelihood =  -33914494

Random-effects ML regression                    Number of obs     = 25,631,437
Group variable: versid                          Number of groups  =  3,235,804

Random effects u_i ~ Gaussian                   Obs per group:
                                                              min =          5
                                                              avg =        7.9
                                                              max =          8

                                                LR chi2(31)       =   51802.39
Log likelihood  =  -33914494                    Prob > chi2       =     0.0000

-----------------------------------------------------------------------------------
      stat_tage_q |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
------------------+----------------------------------------------------------------
        num_PSF4Q |
               2  |   .0062238   .0086255     0.72   0.471     -.010682    .0231295
               3  |   .1080741   .0086255    12.53   0.000     .0911683    .1249798
               4  |   .6465594   .0086255    74.96   0.000     .6296537    .6634651
               5  |   .2900675   .0086255    33.63   0.000     .2731618    .3069733
               6  |   .1434212   .0086687    16.54   0.000     .1264309    .1604116
               7  |   .1059926   .0087052    12.18   0.000     .0889308    .1230544
               8  |   .1813449   .0087361    20.76   0.000     .1642224    .1984673
                  |
        1.PRISCUS |   .1102396   .0123574     8.92   0.000     .0860196    .1344596
                  |
```

```
num_PSF4Q#PRISCUS |
              2 1  |   .0255406   .0173037     1.48   0.140     -.008374    .0594552
              3 1  |   .0755235   .0173037     4.36   0.000     .0416089    .1094381
              4 1  |   .2825093   .0173037    16.33   0.000     .2485947    .3164239
              5 1  |   2.191069   .0173037   126.62   0.000     2.157154    2.224983
              6 1  |   .7484465   .0174771    42.82   0.000      .714192     .782701
              7 1  |   .4501246   .0176408    25.52   0.000     .4155492       .4847
              8 1  |   .2467208   .0177525    13.90   0.000     .2119266    .2815149
                   |
          1.FORTA |  -.2671574   .0109709   -24.35   0.000    -.2886599   -.2456548
                   |
  num_PSF4Q#FORTA |
              2 1  |  -.0055472   .0153622    -0.36   0.718    -.0356566    .0245622
              3 1  |  -.0816258   .0153622    -5.31   0.000    -.1117352   -.0515164
              4 1  |  -.4070096   .0153622   -26.49   0.000     -.437119   -.3769002
              5 1  |   .5861918   .0153622    38.16   0.000     .5560824    .6163012
              6 1  |   .5827239   .0154141    37.80   0.000     .5525128    .6129349
              7 1  |    .457933   .0154785    29.59   0.000     .4275956    .4882704
              8 1  |   .3511354   .0155327    22.61   0.000     .3206919    .3815789
                   |
          1.STOPP |   .2180652   .0114506    19.04   0.000     .1956224    .2405079
                   |
  num_PSF4Q#STOPP |
              2 1  |  -.0124703   .0160339    -0.78   0.437    -.0438962    .0189557
              3 1  |   .0387854   .0160339     2.42   0.016     .0073595    .0702114
              4 1  |   .3182906   .0160339    19.85   0.000     .2868647    .3497166
              5 1  |   2.340096   .0160339   145.95   0.000      2.30867    2.371522
              6 1  |   .8022407    .016157    49.65   0.000     .7705737    .8339078
              7 1  |   .5816932   .0162942    35.70   0.000     .5497571    .6136292
              8 1  |   .4466503   .0163992    27.24   0.000     .4145085    .4787921
                   |
            _cons |   .7993812   .0061599   129.77   0.000      .787308    .8114544
------------------+----------------------------------------------------------------
         /sigma_u |   .7605651          .                            .           .
         /sigma_e |   5.376273   .0011823                     5.373956     5.37859
              rho |   .0196203          .                            .           .
-----------------------------------------------------------------------------------
LR test of sigma_u=0: chibar2(01) = 1.3e+05            Prob >= chibar2 = 0.000
```

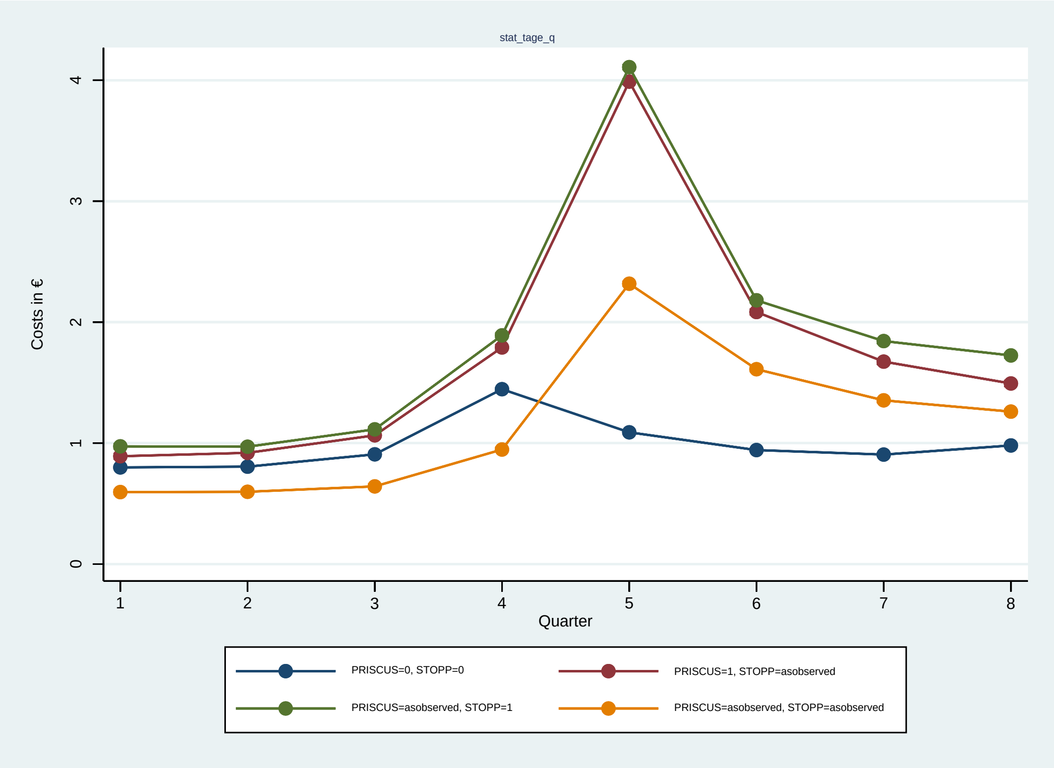
Margins

```
Predictive margins                             Number of obs     = 25,631,437
Model VCE    : OIM

Expression   : Linear prediction, predict()
```

	Margin	Delta-method Std. Err.	z	P>|z|	[95% Conf.	Interval]
num_PSF4Q#PRISCUS						
1 1	.8918605	.011248	79.29	0.000	.8698149	.9139061
2 1	.9197797	.011248	81.77	0.000	.8977341	.9418253
3 1	1.064338	.011248	94.62	0.000	1.042292	1.086383
4 1	1.791023	.011248	159.23	0.000	1.768978	1.813069
5 1	3.988405	.011248	354.59	0.000	3.96636	4.010451
6 1	2.083813	.0114943	181.29	0.000	2.061285	2.106342
7 1	1.67383	.0117212	142.80	0.000	1.650857	1.696803
8 1	1.493232	.0118703	125.80	0.000	1.469967	1.516497
num_PSF4Q#STOPP						
1 1	.9735949	.0101944	95.50	0.000	.9536143	.9935754
2 1	.9703412	.0101944	95.18	0.000	.9503606	.9903217
3 1	1.11408	.0101944	109.28	0.000	1.0941	1.134061
4 1	1.89087	.0101944	185.48	0.000	1.870889	1.91085
5 1	4.108405	.0101944	403.01	0.000	4.088425	4.128386
6 1	2.180916	.0103634	210.44	0.000	2.160604	2.201228
7 1	1.843732	.0105537	174.70	0.000	1.823047	1.864417
8 1	1.724967	.0106961	161.27	0.000	1.704003	1.745931
num_PSF4Q#FORTA						
1 1	.5953277	.0096069	61.97	0.000	.5764986	.6141568
2 1	.5977415	.0096069	62.22	0.000	.5789124	.6165705
3 1	.6423866	.0096069	66.87	0.000	.6235575	.6612156
4 1	.9473984	.0096069	98.62	0.000	.9285693	.9662275
5 1	2.317994	.0096069	241.29	0.000	2.299165	2.336823
6 1	1.611187	.0096579	166.83	0.000	1.592258	1.630116
7 1	1.353782	.0097312	139.12	0.000	1.334709	1.372855
8 1	1.260572	.0097927	128.73	0.000	1.241379	1.279766
num_PSF4Q#PRISCUS#STOPP#FORTA						
1 0 0 0	.7993812	.0061599	129.77	0.000	.787308	.8114544
2 0 0 0	.805605	.0061599	130.78	0.000	.7935318	.8176782
3 0 0 0	.9074553	.0061599	147.32	0.000	.8953821	.9195285
4 0 0 0	1.445941	.0061599	234.73	0.000	1.433867	1.458014
5 0 0 0	1.089449	.0061599	176.86	0.000	1.077376	1.101522
6 0 0 0	.9428024	.0062202	151.57	0.000	.930611	.9549938
7 0 0 0	.9053738	.0062709	144.38	0.000	.8930831	.9176646
8 0 0 0	.9807261	.0063138	155.33	0.000	.9683513	.9931008

Grafik



Lincom (IG vs. KG)

PRISCUS

(1) 1bn.num_PSF4Q#1bn.PRISCUS - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
(1)	.0924793	.0128228	7.21	0.000	.0673471	.1176115

(1) 2.num_PSF4Q#1bn.PRISCUS - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1141748   .0128228     8.90   0.000     .0890426     .139307
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.PRISCUS - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1568825   .0128228    12.23   0.000     .1317503    .1820147
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.PRISCUS - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .3450827   .0128228    26.91   0.000     .3199505    .3702149
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.PRISCUS - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   2.898956   .0128228   226.08   0.000     2.873824    2.924089
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.PRISCUS - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   1.141011   .0130816    87.22   0.000     1.115371     1.16665
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.PRISCUS - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .7684559    .013314    57.72   0.000     .7423608    .7945509
```

```
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q#1bn.PRISCUS - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .5125059   .0134678    38.05   0.000     .4861095    .5389023
------------------------------------------------------------------------------
```

STOPP

```
( 1)  1bn.num_PSF4Q#1bn.STOPP - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1742137   .0118219    14.74   0.000     .1510432    .1973841
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.STOPP - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1647362   .0118219    13.93   0.000     .1415658    .1879066
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.STOPP - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .206625   .0118219    17.48   0.000     .1834546    .2297955
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.STOPP - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .4449291   .0118219    37.64   0.000     .4217587    .4680995
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.STOPP - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   3.018956   .0118219   255.37   0.000     2.995786    3.042127
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.STOPP - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   1.238114   .0120148   103.05   0.000     1.214565    1.261662
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.STOPP - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .938358   .0122116    76.84   0.000     .9144237    .9622924
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q#1bn.STOPP - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .7442412   .0123553    60.24   0.000     .7200252    .7684572
------------------------------------------------------------------------------
```

FORTA

```
( 1)  1bn.num_PSF4Q#1bn.FORTA - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.2040535   .0115383   -17.68   0.000    -.2266681    -.181439
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.FORTA - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
```

```
-------------+----------------------------------------------------------------
         (1) |  -.2078635   .0115383   -18.02   0.000    -.2304781   -.1852489
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.FORTA - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.2650687   .0115383   -22.97   0.000    -.2876833   -.2424542
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.FORTA - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.4985422   .0115383   -43.21   0.000    -.5211567   -.4759276
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.FORTA - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   1.228545   .0115383   106.48   0.000      1.20593    1.251159
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.FORTA - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .6683848   .0116247    57.50   0.000     .6456007    .6911689
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.FORTA - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .4484083   .0117256    38.24   0.000     .4254265      .47139
------------------------------------------------------------------------------
```

```
 ( 1)  8.num_PSF4Q#1bn.FORTA - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .2798463   .0118063    23.70   0.000     .2567063    .3029863
------------------------------------------------------------------------------
```

Lincom (IG vs. KG mit Korrektur vor Q4 DiD)

PRISCUS

```
( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 5.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   2.553874   .0179554   142.23   0.000     2.518682    2.589066
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 6.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .795928   .0181411    43.87   0.000     .7603721     .831484
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 7.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .4233732   .0183094    23.12   0.000     .3874874     .459259
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 8.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |   .1674232   .0184215     9.09   0.000     .1313177    .2035288
------------------------------------------------------------------------------
```

STOPP

```
( 1)  - 4.num_PSF4Q#1bn.STOPP + 5.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   2.574027   .0165538   155.49   0.000     2.541582    2.606472
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 6.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .7931846   .0166921    47.52   0.000     .7604686    .8259006
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 7.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .4934289   .0168344    29.31   0.000     .4604341    .5264237
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 8.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .2993121   .0169389    17.67   0.000     .2661124    .3325117
------------------------------------------------------------------------------
```

FORTA

```
( 1)  - 4.num_PSF4Q#1bn.FORTA + 5.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
```

```
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   1.727087   .0161567   106.90   0.000     1.695421    1.758754
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 6.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   1.166927   .0162186    71.95   0.000     1.135139    1.198715
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 7.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .9469505    .016291    58.13   0.000     .9150207    .9788802
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 8.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .7783885   .0163492    47.61   0.000     .7463446    .8104324
------------------------------------------------------------------------------
```

ddd_q

Modell

```
       panel variable:  versid (unbalanced)

Fitting constant-only model:
Iteration 0:   log likelihood =  -74698276
Iteration 1:   log likelihood =  -74694495
Iteration 2:   log likelihood =  -74694485
Iteration 3:   log likelihood =  -74694485

Fitting full model:
Iteration 0:   log likelihood =  -74598544
```

```
Iteration 1:   log likelihood =  -74585029
Iteration 2:   log likelihood =  -74584883
Iteration 3:   log likelihood =  -74584883

Random-effects ML regression                    Number of obs     = 25,631,437
Group variable: versid                          Number of groups  =  3,235,804

Random effects u_i ~ Gaussian                   Obs per group:
                                                              min =          5
                                                              avg =        7.9
                                                              max =          8

                                                LR chi2(31)       =  219204.39
Log likelihood  =  -74584883                    Prob > chi2       =     0.0000

------------------------------------------------------------------------------------
            ddd_q |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
------------------+-----------------------------------------------------------------
        num_PSF4Q |
               2  |   2.989184   .3076714     9.72   0.000      2.38616    3.592209
               3  |   7.956033   .3076714    25.86   0.000     7.353008    8.559058
               4  |   19.20259   .3076714    62.41   0.000     18.59956    19.80561
               5  |   17.75934   .3076714    57.72   0.000     17.15631    18.36236
               6  |   17.14594    .309457    55.41   0.000     16.53942    17.75246
               7  |   18.94345   .3109285    60.93   0.000     18.33404    19.55286
               8  |   23.62991   .3121549    75.70   0.000      23.0181    24.24172
                  |
        1.PRISCUS |   2.724572   .7450814     3.66   0.000     1.264239    4.184904
                  |
num_PSF4Q#PRISCUS |
             2 1  |     1.2306    .617219     1.99   0.046     .0208731    2.440327
             3 1  |   .2579214    .617219     0.42   0.676    -.9518056    1.467648
             4 1  |  -1.319835    .617219    -2.14   0.032    -2.529562   -.1101077
             5 1  |   63.67216    .617219   103.16   0.000     62.46243    64.88189
             6 1  |   32.26376   .6243893    51.67   0.000     31.03998    33.48754
             7 1  |   31.87786   .6309919    50.52   0.000     30.64114    33.11459
             8 1  |    30.7567   .6354111    48.40   0.000     29.51131    32.00208
                  |
          1.FORTA |  -35.95115   .6614836   -54.35   0.000    -37.24764   -34.65467
                  |
  num_PSF4Q#FORTA |
             2 1  |  -1.098323   .5479673    -2.00   0.045    -2.172319   -.0243268
             3 1  |  -2.237336   .5479673    -4.08   0.000    -3.311332    -1.16334
             4 1  |  -5.154014   .5479673    -9.41   0.000     -6.22801   -4.080017
```

5 1	61.47973	.5479673	112.20	0.000	60.40574	62.55373
6 1	33.84838	.550113	61.53	0.000	32.77018	34.92658
7 1	33.56692	.5527161	60.73	0.000	32.48361	34.65022
8 1	32.95341	.5548628	59.39	0.000	31.86589	34.04092
1.STOPP	37.77457	.6904074	54.71	0.000	36.4214	39.12775
num_PSF4Q#STOPP						
2 1	.5591551	.5719275	0.98	0.328	-.5618023	1.680112
3 1	1.774027	.5719275	3.10	0.002	.6530697	2.894984
4 1	6.468823	.5719275	11.31	0.000	5.347866	7.58978
5 1	80.30722	.5719275	140.42	0.000	79.18626	81.42818
6 1	36.53242	.5770148	63.31	0.000	35.40149	37.66335
7 1	37.88283	.5825517	65.03	0.000	36.74105	39.02461
8 1	35.64842	.5867095	60.76	0.000	34.49849	36.79835
_cons	337.5334	.3714082	908.79	0.000	336.8054	338.2613
/sigma_u	265.3418	.1703635			265.0081	265.6759
/sigma_e	191.7706	.0439841			191.6844	191.8568
rho	.6568839	.0003097			.6562767	.6574906

LR test of sigma_u=0: chibar2(01) = 7.8e+06 Prob >= chibar2 = 0.000

Margins

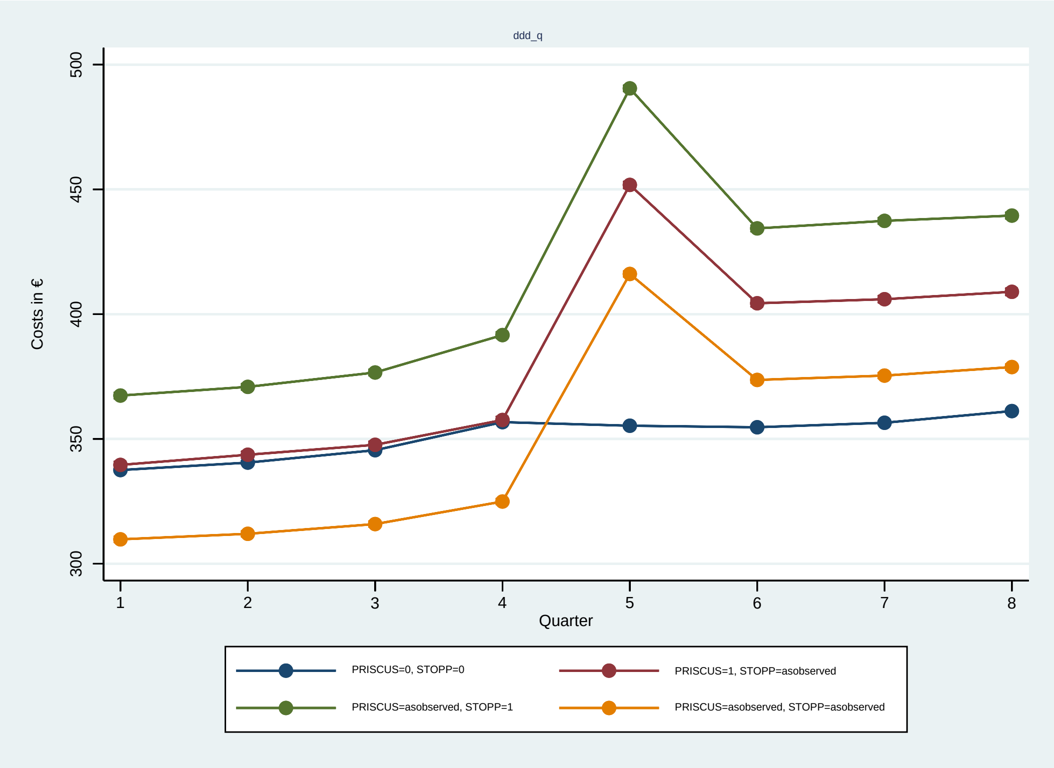
Predictive margins Number of obs = 25,631,437
Model VCE : OIM

Expression : Linear prediction, predict()

	Margin	Delta-method Std. Err.	z	P>|z|	[95% Conf.	Interval]
num_PSF4Q#PRISCUS						
1 1	339.5919	.6781906	500.73	0.000	338.2627	340.9212
2 1	343.6697	.6781906	506.75	0.000	342.3405	344.999
3 1	347.6465	.6781906	512.61	0.000	346.3173	348.9757
4 1	357.5947	.6781906	527.28	0.000	356.2654	358.9239
5 1	451.7976	.6781906	666.18	0.000	450.4683	453.1268
6 1	404.3737	.6842599	590.97	0.000	403.0326	405.7148
7 1	405.9958	.6897859	588.58	0.000	404.6438	407.3477
8 1	408.9609	.6933876	589.80	0.000	407.6019	410.3199

num_PSF4Q#STOPP						
1 1	367.3739	.614663	597.68	0.000	366.1692	368.5786
2 1	370.8724	.614663	603.38	0.000	369.6677	372.0772
3 1	376.625	.614663	612.73	0.000	375.4203	377.8297
4 1	391.6207	.614663	637.13	0.000	390.416	392.8254
5 1	490.4794	.614663	797.96	0.000	489.2747	491.6842
6 1	434.3691	.618822	701.93	0.000	433.1562	435.582
7 1	437.3865	.623441	701.57	0.000	436.1646	438.6085
8 1	439.5072	.6268695	701.11	0.000	438.2785	440.7358
num_PSF4Q#FORTA						
1 1	309.765	.5792398	534.78	0.000	308.6298	310.9003
2 1	311.9768	.5792398	538.60	0.000	310.8416	313.1121
3 1	315.8899	.5792398	545.35	0.000	314.7546	317.0251
4 1	324.915	.5792398	560.93	0.000	323.7797	326.0503
5 1	416.117	.5792398	718.38	0.000	414.9817	417.2523
6 1	373.647	.5804906	643.67	0.000	372.5093	374.7848
7 1	375.3745	.5822534	644.69	0.000	374.2333	376.5157
8 1	378.8022	.5837133	648.95	0.000	377.6582	379.9463
num_PSF4Q#PRISCUS#STOPP#FORTA						
1 0 0 0	337.5334	.3714082	908.79	0.000	336.8054	338.2613
2 0 0 0	340.5225	.3714082	916.84	0.000	339.7946	341.2505
3 0 0 0	345.4894	.3714082	930.21	0.000	344.7614	346.2173
4 0 0 0	356.7359	.3714082	960.50	0.000	356.008	357.4639
5 0 0 0	355.2927	.3714082	956.61	0.000	354.5647	356.0206
6 0 0 0	354.6793	.3728887	951.17	0.000	353.9485	355.4101
7 0 0 0	356.4768	.3741108	952.86	0.000	355.7436	357.2101
8 0 0 0	361.1633	.3751308	962.77	0.000	360.428	361.8985

Grafik



Lincom (IG vs. KG)

PRISCUS

```
( 1)  1bn.num_PSF4Q#1bn.PRISCUS - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   2.058587   .7731428     2.66   0.008     .5432549    3.573919
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.PRISCUS - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
```

```
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    3.14718   .7731428     4.07   0.000     1.631848    4.662513
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.PRISCUS - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   2.157101   .7731428     2.79   0.005     .6417692    3.672433
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.PRISCUS - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .8587118   .7731428     1.11   0.267    -.6566203    2.374044
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.PRISCUS - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   96.50488   .7731428   124.82   0.000     94.98955    98.02022
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.PRISCUS - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    49.6944   .7795164    63.75   0.000     48.16657    51.22222
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.PRISCUS - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   49.51898   .7851689    63.07   0.000     47.98008    51.05788
------------------------------------------------------------------------------
```

```
 ( 1)  8.num_PSF4Q#1bn.PRISCUS - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   47.79764   .7888747    60.59   0.000     46.25147    49.34381
------------------------------------------------------------------------------
```

STOPP

```
( 1)  1bn.num_PSF4Q#1bn.STOPP - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   29.84052   .7127934    41.86   0.000     28.44347    31.23757
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.STOPP - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   30.34989   .7127934    42.58   0.000     28.95285    31.74694
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.STOPP - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   31.13562   .7127934    43.68   0.000     29.73857    32.53267
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.STOPP - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   34.88476   .7127934    48.94   0.000     33.48771    36.28181
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.STOPP - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   135.1867   .7127934   189.66   0.000     133.7897    136.5838
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.STOPP - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    79.6898   .7175383   111.06   0.000     78.28345    81.09615
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.STOPP - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   80.90973   .7223133   112.01   0.000     79.49402    82.32544
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q#1bn.STOPP - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    78.3439   .7257662   107.95   0.000     76.92143    79.76638
------------------------------------------------------------------------------
```

FORTA

```
( 1)  1bn.num_PSF4Q#1bn.FORTA - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -27.76831   .6956927   -39.91   0.000    -29.13185   -26.40478
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.FORTA - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |   -28.5457   .6956927   -41.03   0.000    -29.90923   -27.18216
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.FORTA - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -29.59954   .6956927   -42.55   0.000    -30.96307     -28.236
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.FORTA - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -31.82092   .6956927   -45.74   0.000    -33.18446   -30.45739
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.FORTA - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    60.8243   .6956927    87.43   0.000     59.46077    62.18784
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.FORTA - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   18.96772   .6978142    27.18   0.000     17.60003    20.33541
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.FORTA - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   18.89765   .7002429    26.99   0.000      17.5252     20.2701
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q#1bn.FORTA - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   17.63896   .7021621    25.12   0.000     16.26274    19.01517
------------------------------------------------------------------------------
```

Lincom (IG vs. KG mit Korrektur vor Q4 DiD)

PRISCUS

```
( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 5.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   95.64617   .6404649   149.34   0.000     94.39088    96.90146
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 6.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   48.83569   .6481445    75.35   0.000     47.56535    50.10603
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 7.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   48.66027   .6549317    74.30   0.000     47.37663    49.94391
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 8.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   46.93893     .65937    71.19   0.000     45.64659    48.23127
------------------------------------------------------------------------------
```

STOPP

```
( 1)  - 4.num_PSF4Q#1bn.STOPP + 5.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    100.302   .5904719   169.87   0.000     99.14467    101.4593
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 6.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   44.80503   .5961912    75.15   0.000     43.63652    45.97355
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 7.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   46.02497   .6019296    76.46   0.000     44.84521    47.20473
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 8.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   43.45914   .6060686    71.71   0.000     42.27127    44.64701
------------------------------------------------------------------------------
```

FORTA

```
( 1)  - 4.num_PSF4Q#1bn.FORTA + 5.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |   92.64523   .5763058   160.76   0.000     91.51569    93.77477
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 6.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   50.78864    .578865    87.74   0.000     49.65409     51.9232
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 7.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   50.71857   .5817905    87.18   0.000     49.57829    51.85886
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 8.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   49.45988   .5840991    84.68   0.000     48.31507    50.60469
------------------------------------------------------------------------------
```

Kosten

amb_kost_q

Modell

```
       panel variable:  versid (unbalanced)

Fitting constant-only model:
Iteration 0:   log likelihood =  -78609204
Iteration 1:   log likelihood =  -78184078
Iteration 2:   log likelihood =  -77826184
Iteration 3:   log likelihood =  -77789747
Iteration 4:   log likelihood =  -77789128
Iteration 5:   log likelihood =  -77789127
```

```
Fitting full model:
Iteration 0:   log likelihood =  -78606549
Iteration 1:   log likelihood =  -78318239
Iteration 2:   log likelihood =  -77813175
Iteration 3:   log likelihood =  -77747263
Iteration 4:   log likelihood =  -77745387
Iteration 5:   log likelihood =  -77745385

Random-effects ML regression                    Number of obs     = 25,631,437
Group variable: versid                          Number of groups  =  3,235,804

Random effects u_i ~ Gaussian                   Obs per group:
                                                              min =          5
                                                              avg =        7.9
                                                              max =          8

                                                LR chi2(31)       =   87484.60
Log likelihood  =  -77745385                    Prob > chi2       =     0.0000

------------------------------------------------------------------------------
  amb_kost_q |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
    num_PSF4Q |
           2 |   1.625296   .4055596     4.01   0.000     .8304136    2.420178
           3 |   7.926875   .4055596    19.55   0.000     7.131993    8.721758
           4 |   20.69051   .4055596    51.02   0.000     19.89562    21.48539
           5 |   10.02697   .4055596    24.72   0.000      9.23209    10.82185
           6 |   8.523271   .4079205    20.89   0.000     7.723762    9.322781
           7 |   10.99459   .4098645    26.82   0.000     10.19127    11.79791
           8 |   14.79204   .4114839    35.95   0.000     13.98554    15.59853
             |
   1.PRISCUS |  -34.60648   1.064253   -32.52   0.000    -36.69238   -32.52059
             |
num_PSF4Q#PRISCUS |
         2 1 |   .7657431   .8135924     0.94   0.347    -.8288687    2.360355
         3 1 |   .0087472   .8135924     0.01   0.991    -1.585865    1.603359
         4 1 |   .4963057   .8135924     0.61   0.542    -1.098306    2.090918
         5 1 |   41.33351   .8135924    50.80   0.000     39.73889    42.92812
         6 1 |   30.62721   .8230732    37.21   0.000     29.01402    32.24041
         7 1 |   23.19388   .8317958    27.88   0.000     21.56359    24.82417
         8 1 |   18.06225   .8376308    21.56   0.000     16.42052    19.70398
             |
     1.FORTA |   9.192296   .9448443     9.73   0.000     7.340436    11.04416
             |
```

```
  num_PSF4Q#FORTA |
              2 1  |  -1.350542   .7223077    -1.87   0.062    -2.766239    .0651552
              3 1  |  -3.024202   .7223077    -4.19   0.000    -4.439899   -1.608505
              4 1  |  -7.240199   .7223077   -10.02   0.000    -8.655896   -5.824502
              5 1  |   56.41906   .7223077    78.11   0.000     55.00337    57.83476
              6 1  |   35.27785   .7251448    48.65   0.000     33.85659     36.6991
              7 1  |   27.42293   .7285839    37.64   0.000     25.99493    28.85093
              8 1  |   25.54202   .7314184    34.92   0.000     24.10847    26.97558
                   |
          1.STOPP |   39.62749   .9861582    40.18   0.000     37.69466    41.56033
                   |
  num_PSF4Q#STOPP |
              2 1  |   2.771813   .7538911     3.68   0.000     1.294213    4.249412
              3 1  |   6.436099   .7538911     8.54   0.000     4.958499    7.913698
              4 1  |   12.82108   .7538911    17.01   0.000     11.34348    14.29868
              5 1  |   76.37133   .7538911   101.30   0.000     74.89373    77.84893
              6 1  |   49.67941   .7606177    65.31   0.000     48.18863     51.1702
              7 1  |   45.39569   .7679324    59.11   0.000     43.89057    46.90081
              8 1  |   44.78702   .7734223    57.91   0.000     43.27114     46.3029
                   |
            _cons |   173.3642   .5305089   326.79   0.000     172.3245     174.404
------------------+----------------------------------------------------------------
         /sigma_u |   393.4187   .2496044                       392.9298    393.9082
         /sigma_e |   252.7841   .0579893                       252.6705    252.8978
              rho |   .7077905   .0002809                       .7072397    .7083407
-----------------------------------------------------------------------------------
LR test of sigma_u=0: chibar2(01) = 9.1e+06           Prob >= chibar2 = 0.000
```

Margins

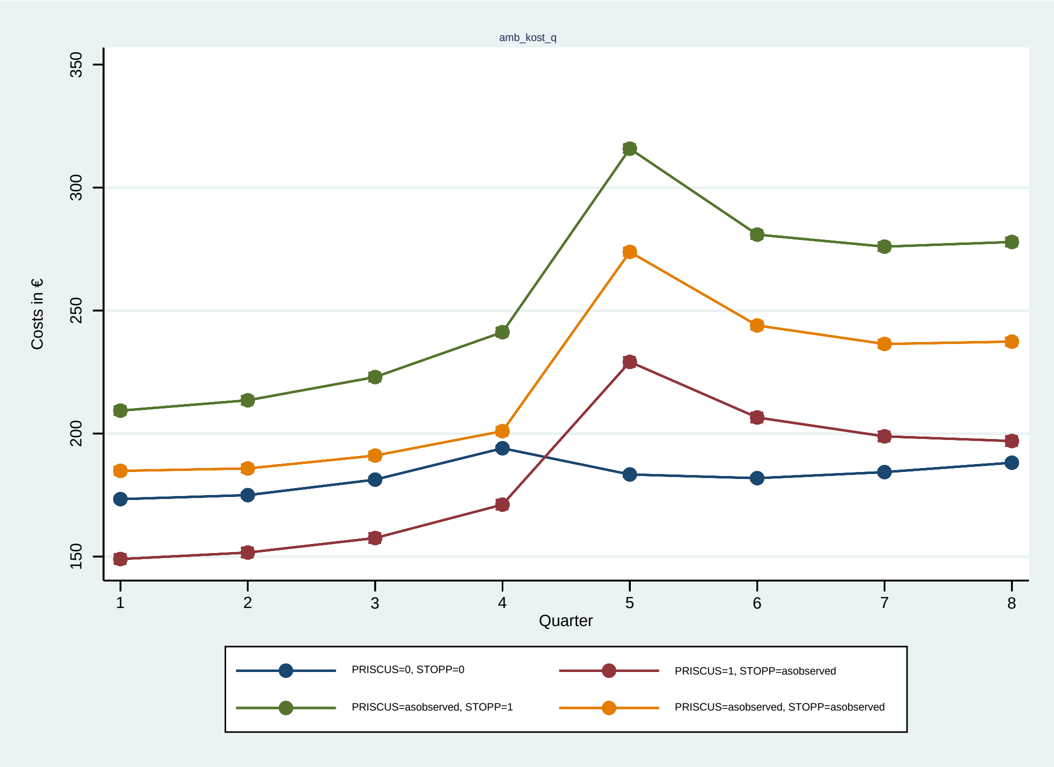
```
Predictive margins                                 Number of obs     = 25,631,437
Model VCE    : OIM

Expression   : Linear prediction, predict()

-----------------------------------------------------------------------------------------------
                              |            Delta-method
                              |      Margin   Std. Err.      z    P>|z|     [95% Conf. Interval]
------------------------------+----------------------------------------------------------------
            num_PSF4Q#PRISCUS |
                          1 1  |   149.0077    .968708   153.82   0.000     147.1091    150.9064
                          2 1  |   151.6504    .968708   156.55   0.000     149.7518    153.5491
                          3 1  |   157.5538    .968708   162.64   0.000     155.6551    159.4524
                          4 1  |   171.1267    .968708   176.65   0.000     169.2281    173.0253
                          5 1  |   229.1562    .968708   236.56   0.000     227.2576    231.0548
```

6 1	206.5527	.9761189	211.61	0.000	204.6395	208.4658
7 1	198.8812	.9828688	202.35	0.000	196.9548	200.8075
8 1	196.9835	.9872701	199.52	0.000	195.0484	198.9185
num_PSF4Q#STOPP						
1 1	209.3278	.8779671	238.42	0.000	207.607	211.0486
2 1	213.5382	.8779671	243.22	0.000	211.8174	215.259
3 1	222.9864	.8779671	253.98	0.000	221.2656	224.7071
4 1	241.2328	.8779671	274.76	0.000	239.512	242.9535
5 1	315.8338	.8779671	359.73	0.000	314.113	317.5546
6 1	280.9063	.8830446	318.11	0.000	279.1755	282.637
7 1	276.0126	.8886848	310.59	0.000	274.2708	277.7544
8 1	277.9009	.892873	311.24	0.000	276.1509	279.6509
num_PSF4Q#FORTA						
1 1	184.8514	.8273697	223.42	0.000	183.2298	186.473
2 1	185.8216	.8273697	224.59	0.000	184.2	187.4432
3 1	191.0718	.8273697	230.94	0.000	189.4502	192.6935
4 1	201.0071	.8273697	242.95	0.000	199.3855	202.6288
5 1	273.8553	.8273697	331.00	0.000	272.2337	275.4769
6 1	243.9542	.8288961	294.31	0.000	242.3296	245.5788
7 1	236.4467	.8310465	284.52	0.000	234.8178	238.0755
8 1	237.3773	.8328271	285.03	0.000	235.7449	239.0096
num_PSF4Q#PRISCUS#STOPP#FORTA						
1 0 0 0	173.3642	.5305089	326.79	0.000	172.3245	174.404
2 0 0 0	174.9895	.5305089	329.85	0.000	173.9497	176.0293
3 0 0 0	181.2911	.5305089	341.73	0.000	180.2513	182.3309
4 0 0 0	194.0547	.5305089	365.79	0.000	193.015	195.0945
5 0 0 0	183.3912	.5305089	345.69	0.000	182.3514	184.431
6 0 0 0	181.8875	.532316	341.69	0.000	180.8442	182.9308
7 0 0 0	184.3588	.5338071	345.37	0.000	183.3126	185.4051
8 0 0 0	188.1563	.5350515	351.66	0.000	187.1076	189.2049

Grafik



Lincom (IG vs. KG)

PRISCUS

```
( 1)  1bn.num_PSF4Q#1bn.PRISCUS - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -24.35648   1.104335   -22.06   0.000    -26.52094   -22.19203
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.PRISCUS - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
```

```
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   -23.3391   1.104335   -21.13   0.000    -25.50355   -21.17464
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.PRISCUS - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -23.73734   1.104335   -21.49   0.000     -25.9018   -21.57289
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.PRISCUS - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -22.92803   1.104335   -20.76   0.000    -25.09249   -20.76357
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.PRISCUS - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   45.76499   1.104335    41.44   0.000     43.60053    47.92944
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.PRISCUS - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   24.66518   1.112117    22.18   0.000     22.48548    26.84489
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.PRISCUS - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   14.52233    1.11902    12.98   0.000     12.32909    16.71557
------------------------------------------------------------------------------
```

```
 ( 1)  8.num_PSF4Q#1bn.PRISCUS - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   8.827196   1.123548     7.86   0.000     6.625083    11.02931
------------------------------------------------------------------------------
```

STOPP

```
( 1)  1bn.num_PSF4Q#1bn.STOPP - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   35.96357   1.018134    35.32   0.000     33.96807    37.95908
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.STOPP - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    38.5487   1.018134    37.86   0.000     36.55319     40.5442
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.STOPP - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   41.69525   1.018134    40.95   0.000     39.69975    43.69076
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.STOPP - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   47.17802   1.018134    46.34   0.000     45.18252    49.17353
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.STOPP - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   132.4426   1.018134   130.08   0.000     130.4471    134.4381
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.STOPP - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   99.01877   1.023926    96.70   0.000     97.01191    101.0256
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.STOPP - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   91.65375   1.029757    89.01   0.000     89.63546    93.67203
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q#1bn.STOPP - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   89.74459   1.033974    86.80   0.000     87.71804    91.77114
------------------------------------------------------------------------------
```

FORTA

```
( 1)  1bn.num_PSF4Q#1bn.FORTA - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   11.48719   .9937076    11.56   0.000     9.539556    13.43482
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.FORTA - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |   10.83207   .9937076    10.90   0.000     8.884439     12.7797
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.FORTA - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    9.78073   .9937076     9.84   0.000     7.833099    11.72836
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.FORTA - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   6.952405   .9937076     7.00   0.000     5.004774    8.900036
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.FORTA - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   90.46412   .9937076    91.04   0.000     88.51649    92.41175
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.FORTA - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   62.06671   .9962968    62.30   0.000       60.114    64.01941
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.FORTA - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   52.08784     .99926    52.13   0.000     50.12933    54.04635
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q#1bn.FORTA - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   49.22099   1.001601    49.14   0.000     47.25789    51.18409
------------------------------------------------------------------------------
```

Lincom (IG vs. KG mit Korrektur vor Q4 DiD)

PRISCUS

```
( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 5.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   68.69302   .8442341    81.37   0.000     67.03835    70.34768
------------------------------------------------------------------------------
```

```
 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 6.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   47.59321   .8543883    55.70   0.000     45.91864    49.26778
------------------------------------------------------------------------------
```

```
 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 7.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   37.45036   .8633549    43.38   0.000     35.75821     39.1425
------------------------------------------------------------------------------
```

```
 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 8.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   31.75522   .8692151    36.53   0.000     30.05159    33.45885
------------------------------------------------------------------------------
```

STOPP

```
( 1)  - 4.num_PSF4Q#1bn.STOPP + 5.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   85.26459   .7783355   109.55   0.000     83.73908     86.7901
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 6.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   51.84075   .7858977    65.96   0.000     50.30042    53.38108
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 7.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   44.47573   .7934787    56.05   0.000     42.92054    46.03092
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 8.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   42.56657   .7989439    53.28   0.000     41.00067    44.13247
------------------------------------------------------------------------------
```

FORTA

```
( 1)  - 4.num_PSF4Q#1bn.FORTA + 5.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |   83.51171   .7596624   109.93   0.000      82.0228    85.00062
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 6.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    55.1143   .7630462    72.23   0.000     53.61876    56.60984
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 7.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   45.13544   .7669111    58.85   0.000     43.63232    46.63855
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 8.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   42.26859   .7699595    54.90   0.000     40.75949    43.77768
------------------------------------------------------------------------------
```

reha_kost_q

Modell

```
       panel variable:  versid (unbalanced)

Fitting constant-only model:
Iteration 0:   log likelihood =  -79859786

Fitting full model:
Iteration 0:   log likelihood =  -79852046
Iteration 1:   log likelihood =  -79852046
Iteration 2:   log likelihood =  -79852046

Random-effects ML regression                    Number of obs     = 25,631,437
Group variable: versid                          Number of groups  =  3,235,804
```

```
Random effects u_i ~ Gaussian                   Obs per group:
                                                               min =          5
                                                               avg =        7.9
                                                               max =          8

                                                LR chi2(31)        =   15480.89
Log likelihood  =  -79852046                    Prob > chi2        =     0.0000

------------------------------------------------------------------------------------
      reha_kost_q |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
------------------+-----------------------------------------------------------------
        num_PSF4Q |
               2  |  -.0390964   .5952318    -0.07   0.948    -1.205729    1.127536
               3  |   1.016292   .5952318     1.71   0.088    -.1503409    2.182925
               4  |   9.897592   .5952318    16.63   0.000     8.730959    11.06422
               5  |   7.008319   .5952318    11.77   0.000     5.841686    8.174952
               6  |  -1.140849   .5981578    -1.91   0.056    -2.313217    .0315188
               7  |  -1.999837   .6006289    -3.33   0.001    -3.177048    -.822626
               8  |  -.7319411   .6027268    -1.21   0.225    -1.913264    .4493816
                  |
        1.PRISCUS |   4.552609   .8443515     5.39   0.000      2.89771    6.207508
                  |
num_PSF4Q#PRISCUS |
             2 1  |  -.1989639   1.194093    -0.17   0.868    -2.539344    2.141416
             3 1  |   -.126205   1.194093    -0.11   0.916    -2.466585    2.214175
             4 1  |   2.689893   1.194093     2.25   0.024     .3495127    5.030273
             5 1  |    47.9493   1.194093    40.16   0.000     45.60892    50.28968
             6 1  |   14.84089   1.205849    12.31   0.000     12.47747    17.20431
             7 1  |   9.047319   1.216951     7.43   0.000     6.662139     11.4325
             8 1  |   5.567565   1.224524     4.55   0.000     3.167541    7.967588
                  |
          1.FORTA |  -5.159214   .7496157    -6.88   0.000    -6.628434   -3.689994
                  |
  num_PSF4Q#FORTA |
             2 1  |  -1.761153   1.060117    -1.66   0.097    -3.838943    .3166377
             3 1  |  -1.491814   1.060117    -1.41   0.159    -3.569604     .585977
             4 1  |  -7.340621   1.060117    -6.92   0.000    -9.418411    -5.26283
             5 1  |   11.35976   1.060117    10.72   0.000     9.281974    13.43755
             6 1  |   22.56356   1.063632    21.21   0.000     20.47888    24.64824
             7 1  |   16.72102   1.068003    15.66   0.000     14.62777    18.81427
             8 1  |   13.48169   1.071674    12.58   0.000     11.38125    15.58213
                  |
          1.STOPP |   1.141078   .7823931     1.46   0.145    -.3923847     2.67454
```

```
                 |
  num_PSF4Q#STOPP |
             2 1  |   1.428543   1.106471     1.29   0.197    -.7401005    3.597186
             3 1  |   1.807209   1.106471     1.63   0.102    -.3614345    3.975852
             4 1  |    6.35926   1.106471     5.75   0.000     4.190617    8.527903
             5 1  |   40.47706   1.106471    36.58   0.000     38.30842     42.6457
             6 1  |   9.856225    1.11481     8.84   0.000     7.671238    12.04121
             7 1  |   7.652208   1.124116     6.81   0.000     5.448982    9.855434
             8 1  |   5.384664   1.131237     4.76   0.000      3.16748    7.601847
                  |
            _cons |   20.99508   .4208924    49.88   0.000     20.17015    21.82001
------------------+----------------------------------------------------------------
         /sigma_u |          0  (omitted)
         /sigma_e |    371.006   .0795111                      370.8502    371.1619
              rho |          0  (omitted)
-----------------------------------------------------------------------------------
LR test of sigma_u=0: chibar2(01) = 0.00              Prob >= chibar2 = 1.000
```

Margins

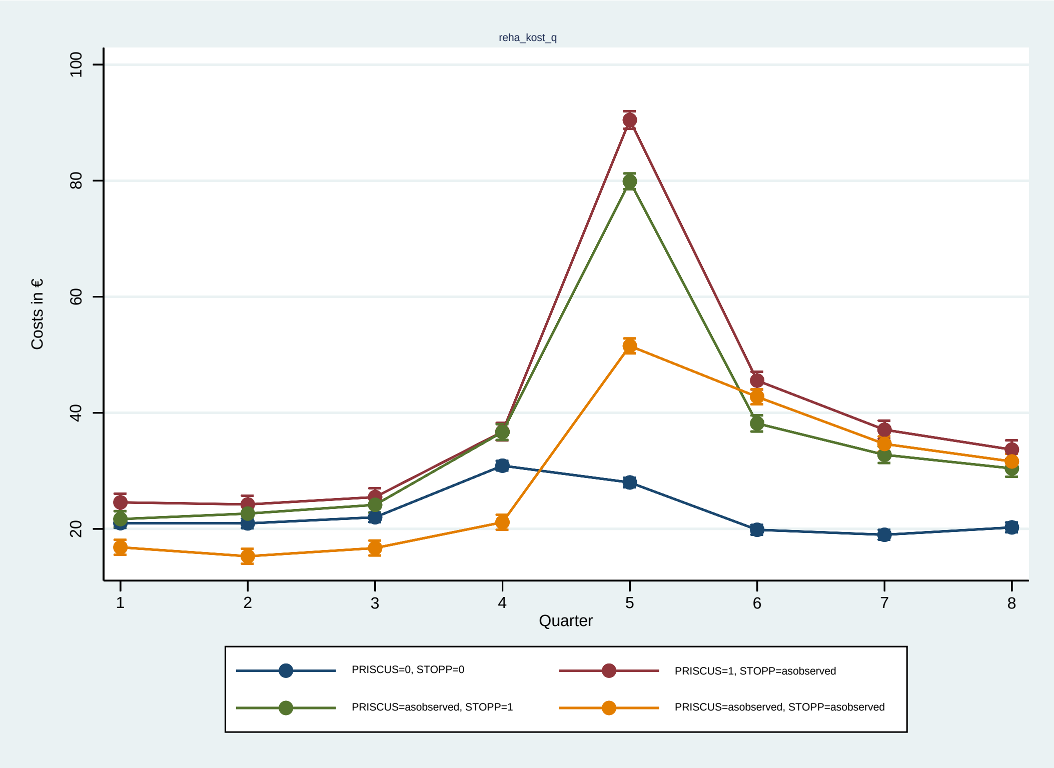
```
Predictive margins                              Number of obs     = 25,631,437
Model VCE    : OIM

Expression   : Linear prediction, predict()

------------------------------------------------------------------------------------------------
                              |            Delta-method
                              |     Margin   Std. Err.      z    P>|z|     [95% Conf. Interval]
------------------------------+-----------------------------------------------------------------
              num_PSF4Q#PRISCUS |
                          1 1 |   24.57683   .7685486    31.98   0.000      23.0705    26.08316
                          2 1 |   24.21985   .7685486    31.51   0.000     22.71353    25.72618
                          3 1 |   25.48831   .7685486    33.16   0.000     23.98198    26.99464
                          4 1 |   36.75149   .7685486    47.82   0.000     35.24516    38.25781
                          5 1 |   90.46411   .7685486   117.71   0.000     88.95778    91.97044
                          6 1 |   45.55922   .7854118    58.01   0.000     44.01985     47.0986
                          7 1 |   37.09219   .8009446    46.31   0.000     35.52237    38.66202
                          8 1 |   33.66049   .8111534    41.50   0.000     32.07066    35.25032
                              |
              num_PSF4Q#STOPP |
                          1 1 |    21.6962    .696557    31.15   0.000     20.33097    23.06142
                          2 1 |   22.64117    .696557    32.50   0.000     21.27594    24.00639
                          3 1 |    24.1503    .696557    34.67   0.000     22.78508    25.51553
                          4 1 |   36.69122    .696557    52.68   0.000     35.32599    38.05644
                          5 1 |    79.8825    .696557   114.68   0.000     78.51728    81.24773
```

6 1	38.16958	.7081305	53.90	0.000	36.78167	39.55749
7 1	32.77026	.7211588	45.44	0.000	31.35682	34.18371
8 1	30.43036	.7309114	41.63	0.000	28.9978	31.86292
num_PSF4Q#FORTA						
1 1	16.8335	.6564143	25.64	0.000	15.54695	18.12004
2 1	15.292	.6564143	23.30	0.000	14.00545	16.57855
3 1	16.70639	.6564143	25.45	0.000	15.41984	17.99294
4 1	21.14259	.6564143	32.21	0.000	19.85604	22.42914
5 1	51.52915	.6564143	78.50	0.000	50.24261	52.8157
6 1	42.76334	.6599062	64.80	0.000	41.46995	44.05673
7 1	34.63847	.664927	52.09	0.000	33.33524	35.94171
8 1	31.61914	.6691422	47.25	0.000	30.30764	32.93063
num_PSF4Q#PRISCUS#STOPP#FORTA						
1 0 0 0	20.99508	.4208924	49.88	0.000	20.17015	21.82001
2 0 0 0	20.95598	.4208924	49.79	0.000	20.13105	21.78092
3 0 0 0	22.01137	.4208924	52.30	0.000	21.18644	22.83631
4 0 0 0	30.89267	.4208924	73.40	0.000	30.06774	31.71761
5 0 0 0	28.0034	.4208924	66.53	0.000	27.17846	28.82833
6 0 0 0	19.85423	.4250203	46.71	0.000	19.02121	20.68726
7 0 0 0	18.99524	.4284912	44.33	0.000	18.15541	19.83507
8 0 0 0	20.26314	.4314268	46.97	0.000	19.41756	21.10872

Grafik



Lincom (IG vs. KG)

PRISCUS

```
( 1)  1bn.num_PSF4Q#1bn.PRISCUS - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   3.581752   .8761517     4.09   0.000     1.864526    5.298978
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.PRISCUS - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
```

```
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   3.263871   .8761517     3.73   0.000     1.546646    4.981097
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.PRISCUS - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    3.47694   .8761517     3.97   0.000     1.759715    5.194166
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.PRISCUS - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   5.858816   .8761517     6.69   0.000      4.14159    7.576042
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.PRISCUS - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   62.46071   .8761517    71.29   0.000     60.74349    64.17794
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.PRISCUS - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   25.70499   .8938691    28.76   0.000     23.95304    27.45695
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.PRISCUS - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   18.09695   .9097824    19.89   0.000     16.31381    19.88009
------------------------------------------------------------------------------
```

```
 ( 1)  8.num_PSF4Q#1bn.PRISCUS - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   13.39735   .9203123    14.56   0.000     11.59357    15.20113
------------------------------------------------------------------------------
```

STOPP

```
( 1)  1bn.num_PSF4Q#1bn.STOPP - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .7011164   .8077617     0.87   0.385    -.8820674      2.2843
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.STOPP - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   1.685183   .8077617     2.09   0.037     .1019997    3.268367
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.STOPP - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   2.138931   .8077617     2.65   0.008      .555747    3.722115
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.STOPP - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   5.798547   .8077617     7.18   0.000     4.215364    7.381731
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.STOPP - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    51.8791   .8077617    64.23   0.000     50.29592    53.46229
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.STOPP - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   18.31535   .8209666    22.31   0.000     16.70628    19.92441
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.STOPP - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   13.77502   .8344448    16.51   0.000     12.13954     15.4105
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q#1bn.STOPP - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   10.16722   .8442845    12.04   0.000     8.512453    11.82199
------------------------------------------------------------------------------
```

FORTA

```
( 1)  1bn.num_PSF4Q#1bn.FORTA - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -4.161584   .7883826    -5.28   0.000    -5.706786   -2.616383
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.FORTA - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |   -5.66398   .7883826    -7.18   0.000    -7.209181   -4.118778
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.FORTA - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -5.304983   .7883826    -6.73   0.000    -6.850185   -3.759782
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.FORTA - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -9.750081   .7883826   -12.37   0.000    -11.29528   -8.204879
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.FORTA - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   23.52576   .7883826    29.84   0.000     21.98055    25.07096
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.FORTA - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   22.90911   .7943019    28.84   0.000     21.35231    24.46591
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.FORTA - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   15.64323   .8012082    19.52   0.000     14.07289    17.21357
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q#1bn.FORTA - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |     11.356   .8067383    14.08   0.000      9.77482    12.93718
------------------------------------------------------------------------------
```

Lincom (IG vs. KG mit Korrektur vor Q4 DiD)

PRISCUS

```
( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 5.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    56.6019   1.239066    45.68   0.000     54.17337    59.03042
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 6.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   19.84618   1.251656    15.86   0.000     17.39298    22.29938
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 7.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   12.23814    1.26307     9.69   0.000     9.762565    14.71371
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 8.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   7.538536   1.270676     5.93   0.000     5.048058    10.02901
------------------------------------------------------------------------------
```

STOPP

```
( 1)  - 4.num_PSF4Q#1bn.STOPP + 5.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   46.08056   1.142347    40.34   0.000      43.8416    48.31952
------------------------------------------------------------------------------
```

```
 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 6.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    12.5168   1.151723    10.87   0.000     10.25946    14.77413
------------------------------------------------------------------------------
```

```
 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 7.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   7.976475   1.161369     6.87   0.000     5.700235    10.25272
------------------------------------------------------------------------------
```

```
 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 8.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   4.368672   1.168458     3.74   0.000     2.078536    6.658809
------------------------------------------------------------------------------
```

FORTA

```
( 1)  - 4.num_PSF4Q#1bn.FORTA + 5.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |   33.27584   1.114941    29.85   0.000     31.09059    35.46108
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 6.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   32.65919   1.119135    29.18   0.000     30.46573    34.85265
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 7.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   25.39331   1.124047    22.59   0.000     23.19022    27.59641
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 8.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   21.10608   1.127995    18.71   0.000     18.89525    23.31691
------------------------------------------------------------------------------
```

heil_kost_q

Modell

```
       panel variable:  versid (unbalanced)

Fitting constant-only model:
Iteration 0:   log likelihood =  -64517155
Iteration 1:   log likelihood =  -64448501
Iteration 2:   log likelihood =  -64234414
Iteration 3:   log likelihood =  -64218659
Iteration 4:   log likelihood =  -64218528
Iteration 5:   log likelihood =  -64218528

Fitting full model:
Iteration 0:   log likelihood =  -64502203
```

```
Iteration 1:   log likelihood =  -64440455
Iteration 2:   log likelihood =  -64216024
Iteration 3:   log likelihood =  -64198912
Iteration 4:   log likelihood =  -64198759
Iteration 5:   log likelihood =  -64198759

Random-effects ML regression                    Number of obs     = 25,631,437
Group variable: versid                          Number of groups  =  3,235,804

Random effects u_i ~ Gaussian                   Obs per group:
                                                              min =          5
                                                              avg =        7.9
                                                              max =          8

                                                LR chi2(31)       =   39537.66
Log likelihood  =  -64198759                    Prob > chi2       =     0.0000

------------------------------------------------------------------------------------
      heil_kost_q |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
------------------+-----------------------------------------------------------------
        num_PSF4Q |
               2  |   .4136728    .119544     3.46   0.001     .1793708    .6479748
               3  |   .8630099    .119544     7.22   0.000     .6287079    1.097312
               4  |   1.993072    .119544    16.67   0.000      1.75877    2.227374
               5  |   3.157638    .119544    26.41   0.000     2.923336     3.39194
               6  |   4.100703   .1202362    34.11   0.000     3.865045    4.336362
               7  |   4.297855    .120807    35.58   0.000     4.061078    4.534632
               8  |   4.726904   .1212829    38.97   0.000     4.489194    4.964614
                  |
        1.PRISCUS |   6.271515   .2761715    22.71   0.000     5.730228    6.812801
                  |
num_PSF4Q#PRISCUS |
             2 1  |   .2996301    .239817     1.25   0.212    -.1704027    .7696628
             3 1  |    .746565    .239817     3.11   0.002     .2765323    1.216598
             4 1  |   1.021015    .239817     4.26   0.000     .5509825    1.491048
             5 1  |   2.502275    .239817    10.43   0.000     2.032243    2.972308
             6 1  |   8.466486   .2425967    34.90   0.000     7.991005    8.941967
             7 1  |   9.210598   .2451579    37.57   0.000     8.730097    9.691099
             8 1  |   8.874914   .2468729    35.95   0.000     8.391052    9.358776
                  |
          1.FORTA |  -6.093268   .2451852   -24.85   0.000    -6.573822   -5.612714
                  |
  num_PSF4Q#FORTA |
             2 1  |   -.653376   .2129097    -3.07   0.002    -1.070671   -.2360807
```

```
             3 1  |  -.9446807   .2129097    -4.44   0.000    -1.361976   -.5273854
             4 1  |  -1.229291   .2129097    -5.77   0.000    -1.646586   -.8119956
             5 1  |   2.832375   .2129097    13.30   0.000      2.41508    3.249671
             6 1  |     9.5953   .2137415    44.89   0.000     9.176374    10.01423
             7 1  |   4.830864   .2147512    22.50   0.000     4.409959    5.251769
             8 1  |   3.416582   .2155843    15.85   0.000     2.994044    3.839119
                  |
          1.STOPP |   1.128181   .2559061     4.41   0.000     .6266141    1.629747
                  |
  num_PSF4Q#STOPP |
             2 1  |   .1575863   .2222193     0.71   0.478    -.2779554    .5931281
             3 1  |   .4989617   .2222193     2.25   0.025       .06342    .9345035
             4 1  |   .5096875   .2222193     2.29   0.022     .0741457    .9452292
             5 1  |   1.544209   .2222193     6.95   0.000     1.108667    1.979751
             6 1  |     6.1816   .2241915    27.57   0.000     5.742193    6.621007
             7 1  |   6.880832   .2263392    30.40   0.000     6.437216    7.324449
             8 1  |   6.998892   .2279527    30.70   0.000     6.552113    7.445671
                  |
            _cons |   28.03467    .137666   203.64   0.000     27.76485    28.30449
------------------+----------------------------------------------------------------
         /sigma_u |    95.7792   .0621633                      95.65744    95.90112
         /sigma_e |    74.5114   .0170919                      74.47791    74.54491
              rho |   .6229731   .0003262                      .6223336    .6236123
-----------------------------------------------------------------------------------
LR test of sigma_u=0: chibar2(01) = 6.9e+06           Prob >= chibar2 = 0.000
```

Margins

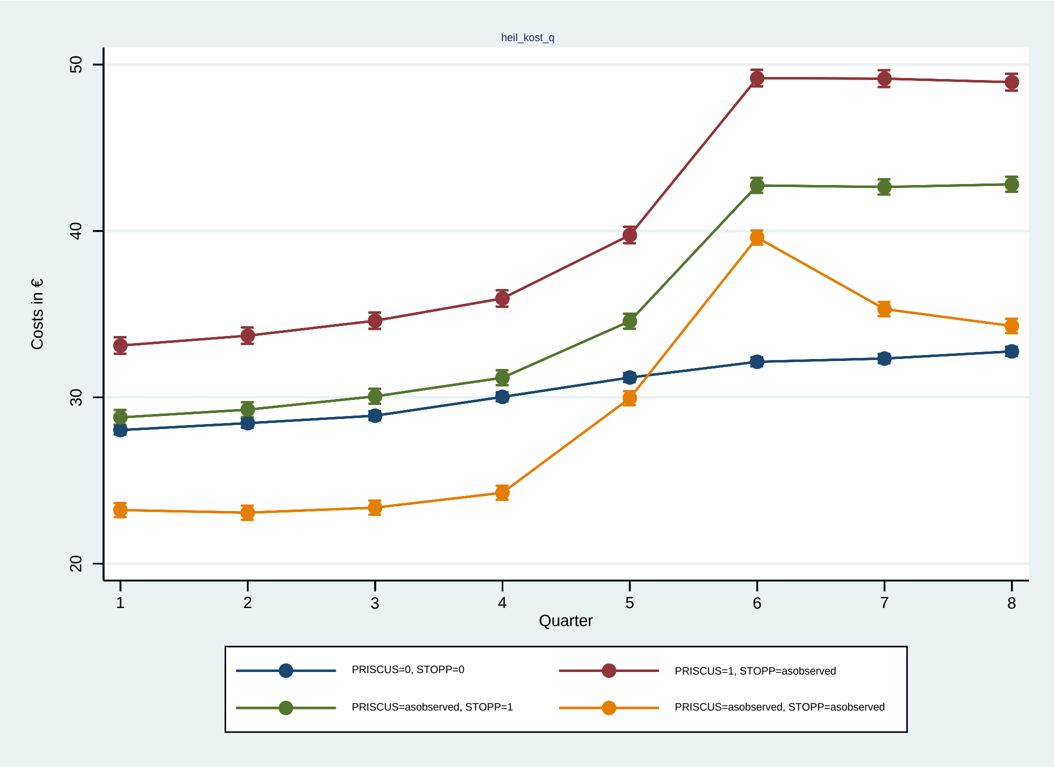
```
Predictive margins                                 Number of obs     = 25,631,437
Model VCE    : OIM

Expression   : Linear prediction, predict()

-----------------------------------------------------------------------------------------------
                              |            Delta-method
                              |     Margin   Std. Err.      z    P>|z|     [95% Conf. Interval]
------------------------------+----------------------------------------------------------------
            num_PSF4Q#PRISCUS |
                          1 1 |   33.11467   .2513778   131.73   0.000     32.62198    33.60736
                          2 1 |    33.7077   .2513778   134.09   0.000       33.215    34.20039
                          3 1 |   34.60579   .2513778   137.66   0.000      34.1131    35.09848
                          4 1 |   35.94607   .2513778   143.00   0.000     35.45337    36.43876
                          5 1 |   39.75151   .2513778   158.13   0.000     39.25882     40.2442
                          6 1 |   49.18575   .2538431   193.76   0.000     48.68823    49.68327
                          7 1 |   49.15794   .2560873   191.96   0.000     48.65602    49.65986
```

8 1	48.94534	.2575496	190.04	0.000	48.44055	49.45013
num_PSF4Q#STOPP						
1 1	28.79343	.2278307	126.38	0.000	28.34689	29.23997
2 1	29.26248	.2278307	128.44	0.000	28.81594	29.70902
3 1	30.06023	.2278307	131.94	0.000	29.61369	30.50677
4 1	31.18066	.2278307	136.86	0.000	30.73412	31.6272
5 1	34.57645	.2278307	151.76	0.000	34.12991	35.02299
6 1	42.73669	.2295203	186.20	0.000	42.28684	43.18654
7 1	42.64592	.2313965	184.30	0.000	42.19239	43.09944
8 1	42.80656	.2327889	183.89	0.000	42.3503	43.26282
num_PSF4Q#FORTA						
1 1	23.22495	.2147008	108.17	0.000	22.80415	23.64576
2 1	23.06778	.2147008	107.44	0.000	22.64697	23.48858
3 1	23.37066	.2147008	108.85	0.000	22.94985	23.79146
4 1	24.26437	.2147008	113.01	0.000	23.84357	24.68518
5 1	29.95085	.2147008	139.50	0.000	29.53004	30.37165
6 1	39.60648	.215209	184.04	0.000	39.18468	40.02829
7 1	35.30712	.2159255	163.52	0.000	34.88391	35.73033
8 1	34.28968	.216519	158.37	0.000	33.86531	34.71405
num_PSF4Q#PRISCUS#STOPP#FORTA						
1 0 0 0	28.03467	.137666	203.64	0.000	27.76485	28.30449
2 0 0 0	28.44834	.137666	206.65	0.000	28.17852	28.71816
3 0 0 0	28.89768	.137666	209.91	0.000	28.62786	29.1675
4 0 0 0	30.02774	.137666	218.12	0.000	29.75792	30.29756
5 0 0 0	31.19231	.137666	226.58	0.000	30.92249	31.46213
6 0 0 0	32.13537	.1382675	232.41	0.000	31.86437	32.40637
7 0 0 0	32.33253	.1387641	233.00	0.000	32.06055	32.6045
8 0 0 0	32.76157	.1391787	235.39	0.000	32.48879	33.03436

Grafik



Lincom (IG vs. KG)

PRISCUS

```
( 1)  1bn.num_PSF4Q#1bn.PRISCUS - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |       5.08   .2865727    17.73   0.000     4.518328    5.641673
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.PRISCUS - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
```

```
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   5.259353   .2865727    18.35   0.000     4.697681    5.821026
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.PRISCUS - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    5.70811   .2865727    19.92   0.000     5.146438    6.269783
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.PRISCUS - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   5.918323   .2865727    20.65   0.000      5.35665    6.479995
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.PRISCUS - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |     8.5592   .2865727    29.87   0.000     7.997528    9.120873
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.PRISCUS - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   17.05038   .2891618    58.96   0.000     16.48363    17.61712
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.PRISCUS - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   16.82541   .2914575    57.73   0.000     16.25417    17.39666
------------------------------------------------------------------------------
```

```
 ( 1)  8.num_PSF4Q#1bn.PRISCUS - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   16.18376   .2929624    55.24   0.000     15.60957    16.75796
------------------------------------------------------------------------------
```

STOPP

```
( 1)  1bn.num_PSF4Q#1bn.STOPP - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .7587587   .2642036     2.87   0.004     .2409291    1.276588
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.STOPP - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .8141391   .2642036     3.08   0.002     .2963094    1.331969
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.STOPP - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   1.162549   .2642036     4.40   0.000     .6447193    1.680379
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.STOPP - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   1.152916   .2642036     4.36   0.000     .6350865    1.670746
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.STOPP - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   3.384145   .2642036    12.81   0.000     2.866315    3.901974
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.STOPP - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   10.60132   .2661312    39.83   0.000     10.07971    11.12293
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.STOPP - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   10.31339    .268071    38.47   0.000     9.787981     10.8388
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q#1bn.STOPP - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   10.04499   .2694734    37.28   0.000     9.516828    10.57314
------------------------------------------------------------------------------
```

FORTA

```
( 1)  1bn.num_PSF4Q#1bn.FORTA - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -4.809717   .2578651   -18.65   0.000    -5.315123   -4.304311
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.FORTA - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |  -5.380564   .2578651   -20.87   0.000    -5.885971   -4.875158
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.FORTA - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -5.527024   .2578651   -21.43   0.000     -6.03243   -5.021618
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.FORTA - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -5.763368   .2578651   -22.35   0.000    -6.268774   -5.257961
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.FORTA - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -1.241462   .2578651    -4.81   0.000    -1.746868   -.7360558
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.FORTA - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   7.471111   .2587271    28.88   0.000     6.964015    7.978206
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.FORTA - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   2.974595   .2597142    11.45   0.000     2.465564    3.483625
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q#1bn.FORTA - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   1.528105   .2604943     5.87   0.000     1.017545    2.038664
------------------------------------------------------------------------------
```

Lincom (IG vs. KG mit Korrektur vor Q4 DiD)

PRISCUS

```
( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 5.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   33.27584   .2488491    10.61   0.000     2.153143    3.128613
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 6.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   11.13205   .2518262    44.21   0.000     10.63848    11.62562
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 7.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   10.90709   .2544591    42.86   0.000     10.40836    11.40582
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 8.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   10.26544   .2561814    40.07   0.000     9.763334    10.76755
------------------------------------------------------------------------------
```

STOPP

```
( 1)  - 4.num_PSF4Q#1bn.STOPP + 5.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   2.231229   .2294246     9.73   0.000     1.781565    2.680893
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 6.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   9.448403   .2316418    40.79   0.000     8.994393    9.902412
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 7.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   9.160474   .2338677    39.17   0.000     8.702102    9.618846
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 8.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    8.89207    .235474    37.76   0.000      8.43055    9.353591
------------------------------------------------------------------------------
```

FORTA

```
( 1)  - 4.num_PSF4Q#1bn.FORTA + 5.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |   4.521905   .2239204    20.19   0.000     4.083029    4.960781
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 6.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA - 
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   13.23448   .2249126    58.84   0.000     12.79366     13.6753
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 7.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA - 
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   8.737962   .2260474    38.66   0.000     8.294918    9.181007
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 8.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA - 
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   7.291473   .2269432    32.13   0.000     6.846672    7.736273
------------------------------------------------------------------------------
```

med_kost_q

Modell

```
       panel variable:  versid (unbalanced)

Fitting constant-only model:
Iteration 0:   log likelihood =  -89280328
Iteration 1:   log likelihood =  -88897981
Iteration 2:   log likelihood =  -88874302
Iteration 3:   log likelihood =  -88873291
Iteration 4:   log likelihood =  -88873288
Iteration 5:   log likelihood =  -88873288

Fitting full model:
Iteration 0:   log likelihood =  -89263819
```

```
Iteration 1:   log likelihood =  -88874692
Iteration 2:   log likelihood =  -88850962
Iteration 3:   log likelihood =  -88849917
Iteration 4:   log likelihood =  -88849913
Iteration 5:   log likelihood =  -88849913

Random-effects ML regression                    Number of obs     = 25,631,437
Group variable: versid                          Number of groups  =  3,235,804

Random effects u_i ~ Gaussian                   Obs per group:
                                                              min =          5
                                                              avg =        7.9
                                                              max =          8

                                                LR chi2(31)       =   46748.59
Log likelihood  =  -88849913                    Prob > chi2       =     0.0000

------------------------------------------------------------------------------------
      med_kost_q |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----------------+------------------------------------------------------------------
       num_PSF4Q |
              2  |    6.73286   1.172297     5.74   0.000     4.435201     9.03052
              3  |   17.54086   1.172297    14.96   0.000      15.2432    19.83852
              4  |   37.87057   1.172297    32.30   0.000     35.57291    40.16823
              5  |   41.37178   1.172297    35.29   0.000     39.07412    43.66944
              6  |   44.48103   1.179045    37.73   0.000     42.17014    46.79192
              7  |   47.85405   1.184619    40.40   0.000     45.53224    50.17586
              8  |   53.27745   1.189271    44.80   0.000     50.94652    55.60838
                 |
       1.PRISCUS |   37.52764   2.466554    15.21   0.000     32.69328    42.36199
                 |
num_PSF4Q#PRISCUS |
            2 1  |    3.98955   2.351743     1.70   0.090    -.6197812    8.598881
            3 1  |    10.3993   2.351743     4.42   0.000     5.789965    15.00863
            4 1  |   20.73256   2.351743     8.82   0.000     16.12323     25.3419
            5 1  |   153.1502   2.351743    65.12   0.000     148.5409    157.7595
            6 1  |    138.333   2.378842    58.15   0.000     133.6705    142.9954
            7 1  |   95.91029   2.403853    39.90   0.000     91.19883    100.6218
            8 1  |   79.39891   2.420618    32.80   0.000     74.65459    84.14323
                 |
         1.FORTA |  -50.86187   2.189808   -23.23   0.000    -55.15382   -46.56992
                 |
  num_PSF4Q#FORTA |
            2 1  |  -3.606119   2.087878    -1.73   0.084    -7.698285    .4860474
```

```
             3 1  |  -10.28104   2.087878    -4.92   0.000    -14.37321   -6.188875
             4 1  |  -22.23451   2.087878   -10.65   0.000    -26.32667   -18.14234
             5 1  |   7.223238   2.087878     3.46   0.001     3.131072     11.3154
             6 1  |   6.359668   2.095987     3.03   0.002     2.251608    10.46773
             7 1  |   13.33708   2.105846     6.33   0.000     9.209701    17.46447
             8 1  |   18.05583   2.113988     8.54   0.000     13.91249    22.19917
                  |
          1.STOPP |   32.96494   2.285559    14.42   0.000     28.48533    37.44456
                  |
  num_PSF4Q#STOPP |
             2 1  |   2.129765   2.179172     0.98   0.328    -2.141333    6.400864
             3 1  |   4.960668   2.179172     2.28   0.023     .6895689    9.231766
             4 1  |   9.608213   2.179172     4.41   0.000     5.337114    13.87931
             5 1  |   83.45527   2.179172    38.30   0.000     79.18417    87.72637
             6 1  |   76.74352   2.198398    34.91   0.000     72.43474     81.0523
             7 1  |   69.55307   2.219369    31.34   0.000     65.20319    73.90296
             8 1  |   68.60684    2.23514    30.69   0.000     64.22605    72.98764
                  |
            _cons |   210.9792   1.229528   171.59   0.000     208.5694     213.389
------------------+----------------------------------------------------------------
         /sigma_u |    800.445   .5352521                      799.3966    801.4948
         /sigma_e |   730.6889    .167679                      730.3603    731.0176
              rho |   .5454641   .0003548                      .5447687    .5461594
-----------------------------------------------------------------------------------
LR test of sigma_u=0: chibar2(01) = 5.2e+06           Prob >= chibar2 = 0.000
```

Margins

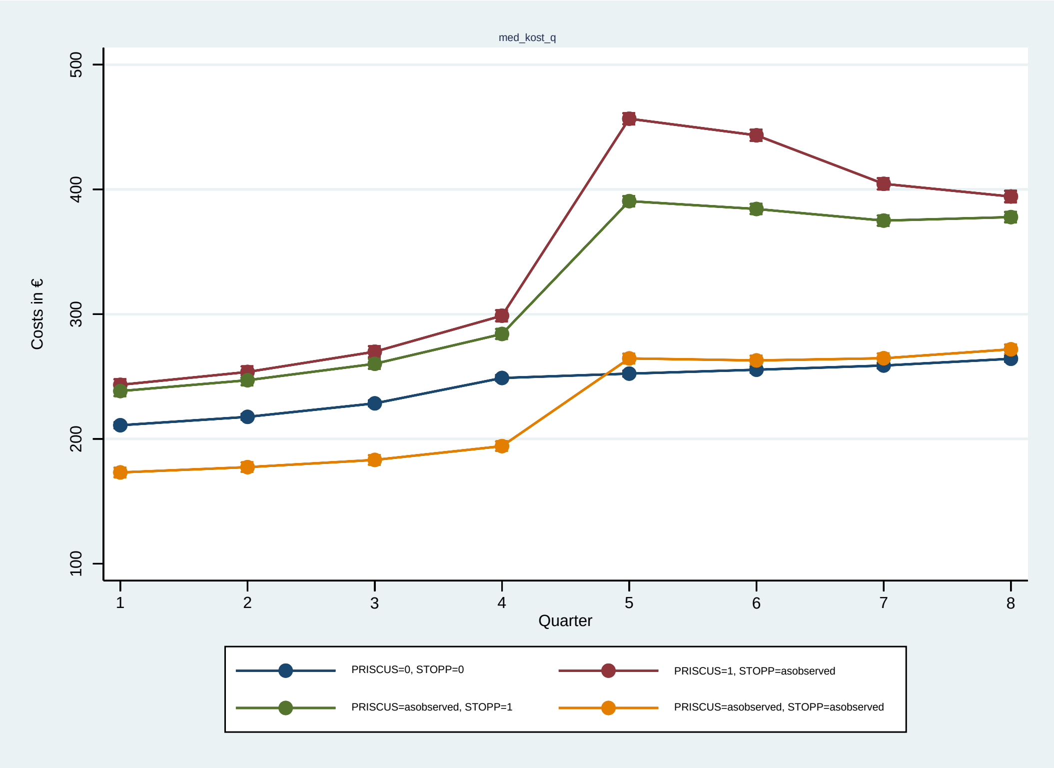
```
Predictive margins                                Number of obs     = 25,631,437
Model VCE    : OIM

Expression   : Linear prediction, predict()

-----------------------------------------------------------------------------------------------
                              |            Delta-method
                              |     Margin   Std. Err.      z    P>|z|     [95% Conf. Interval]
------------------------------+----------------------------------------------------------------
            num_PSF4Q#PRISCUS |
                         1 1  |   243.3769   2.245116   108.40   0.000     238.9765    247.7772
                         2 1  |   253.6931   2.245116   113.00   0.000     249.2928    258.0935
                         3 1  |   269.9318   2.245116   120.23   0.000     265.5315    274.3322
                         4 1  |   298.7552   2.245116   133.07   0.000     294.3549    303.1555
                         5 1  |   456.6527   2.245116   203.40   0.000     452.2523     461.053
                         6 1  |   443.3705    2.27148   195.19   0.000     438.9185    447.8225
                         7 1  |   404.4789   2.295476   176.21   0.000     399.9798    408.9779
```

8 1	394.2988	2.311108	170.61	0.000	389.7691	398.8285
num_PSF4Q#STOPP						
1 1	238.3722	2.034811	117.15	0.000	234.3841	242.3604
2 1	247.0629	2.034811	121.42	0.000	243.0747	251.0511
3 1	260.2198	2.034811	127.88	0.000	256.2317	264.208
4 1	284.1417	2.034811	139.64	0.000	280.1535	288.1298
5 1	390.5952	2.034811	191.96	0.000	386.607	394.5833
6 1	384.3037	2.052883	187.20	0.000	380.2801	388.3273
7 1	374.9932	2.072953	180.90	0.000	370.9303	379.0561
8 1	377.8	2.087842	180.95	0.000	373.7079	381.8921
num_PSF4Q#FORTA						
1 1	173.159	1.917544	90.30	0.000	169.4007	176.9174
2 1	177.3911	1.917544	92.51	0.000	173.6328	181.1494
3 1	183.1791	1.917544	95.53	0.000	179.4208	186.9375
4 1	194.2406	1.917544	101.30	0.000	190.4822	197.9989
5 1	264.5318	1.917544	137.95	0.000	260.7734	268.2901
6 1	262.9174	1.922983	136.72	0.000	259.1484	266.6863
7 1	264.6756	1.930658	137.09	0.000	260.8916	268.4596
8 1	271.8524	1.937018	140.35	0.000	268.0559	275.6489
num_PSF4Q#PRISCUS#STOPP#FORTA						
1 0 0 0	210.9792	1.229528	171.59	0.000	208.5694	213.389
2 0 0 0	217.712	1.229528	177.07	0.000	215.3022	220.1219
3 0 0 0	228.52	1.229528	185.86	0.000	226.1102	230.9299
4 0 0 0	248.8498	1.229528	202.39	0.000	246.4399	251.2596
5 0 0 0	252.351	1.229528	205.24	0.000	249.9411	254.7608
6 0 0 0	255.4602	1.235964	206.69	0.000	253.0378	257.8827
7 0 0 0	258.8332	1.241282	208.52	0.000	256.4004	261.2661
8 0 0 0	264.2566	1.245723	212.13	0.000	261.8151	266.6982

Grafik



Lincom (IG vs. KG)

PRISCUS

```
( 1)  1bn.num_PSF4Q#1bn.PRISCUS - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   32.39767    2.55945    12.66   0.000     27.38123     37.4141
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.PRISCUS - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
```

```
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   35.98107    2.55945    14.06   0.000     30.96464     40.9975
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.PRISCUS - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   41.41177    2.55945    16.18   0.000     36.39534     46.4282
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.PRISCUS - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   49.90544    2.55945    19.50   0.000     44.88901    54.92187
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.PRISCUS - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   204.3017    2.55945    79.82   0.000     199.2853    209.3181
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.PRISCUS - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   187.9103   2.587138    72.63   0.000     182.8396     192.981
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.PRISCUS - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   145.6456   2.611689    55.77   0.000     140.5268    150.7644
------------------------------------------------------------------------------
```

```
 ( 1)  8.num_PSF4Q#1bn.PRISCUS - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   130.0421   2.627779    49.49   0.000     124.8918    135.1925
------------------------------------------------------------------------------
```

STOPP

```
( 1)  1bn.num_PSF4Q#1bn.STOPP - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   27.39306   2.359667    11.61   0.000     22.76819    32.01792
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.STOPP - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   29.35085   2.359667    12.44   0.000     24.72599    33.97571
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.STOPP - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   31.69977   2.359667    13.43   0.000     27.07491    36.32463
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.STOPP - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   35.29191   2.359667    14.96   0.000     30.66705    39.91677
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.STOPP - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   138.2442   2.359667    58.59   0.000     133.6193    142.8691
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.STOPP - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   128.8435   2.380284    54.13   0.000     124.1782    133.5087
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.STOPP - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |     116.16   2.401034    48.38   0.000      111.454    120.8659
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q#1bn.STOPP - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   113.5433   2.416033    47.00   0.000      108.808    118.2787
------------------------------------------------------------------------------
```

FORTA

```
( 1)  1bn.num_PSF4Q#1bn.FORTA - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -37.82015   2.303056   -16.42   0.000    -42.33406   -33.30625
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.FORTA - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |  -40.32097   2.303056   -17.51   0.000    -44.83487   -35.80706
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.FORTA - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   -45.3409   2.303056   -19.69   0.000    -49.85481   -40.82699
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.FORTA - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -54.60919   2.303056   -23.71   0.000     -59.1231   -50.09529
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.FORTA - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   12.18079   2.303056     5.29   0.000     7.666885     16.6947
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.FORTA - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   7.457148   2.312279     3.23   0.001     2.925165    11.98913
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.FORTA - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   5.842362    2.32285     2.52   0.012     1.289661    10.39506
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q#1bn.FORTA - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   7.595767   2.331207     3.26   0.001     3.026686    12.16485
------------------------------------------------------------------------------
```

Lincom (IG vs. KG mit Korrektur vor Q4 DiD)

PRISCUS

```
( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 5.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   154.3963   2.440315    63.27   0.000     149.6133    159.1792
------------------------------------------------------------------------------
```

```
 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 6.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   138.0048   2.469339    55.89   0.000      133.165    142.8446
------------------------------------------------------------------------------
```

```
 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 7.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   95.74018   2.495049    38.37   0.000     90.84998    100.6304
------------------------------------------------------------------------------
```

```
 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 8.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    80.1367   2.511886    31.90   0.000     75.21349     85.0599
------------------------------------------------------------------------------
```

STOPP

```
( 1)  - 4.num_PSF4Q#1bn.STOPP + 5.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   102.9523    2.24983    45.76   0.000      98.5427    107.3619
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 6.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   93.55155   2.271445    41.19   0.000      89.0996     98.0035
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 7.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   80.86806    2.29318    35.26   0.000     76.37351    85.36261
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 8.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   78.25142    2.30888    33.89   0.000      73.7261    82.77674
------------------------------------------------------------------------------
```

FORTA

```
( 1)  - 4.num_PSF4Q#1bn.FORTA + 5.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |   66.78998   2.195854    30.42   0.000     62.48619    71.09378
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 6.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   62.06634   2.205526    28.14   0.000     57.74359    66.38909
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 7.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   60.45155   2.216606    27.27   0.000     56.10709    64.79602
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 8.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   62.20496   2.225362    27.95   0.000     57.84333    66.56659
------------------------------------------------------------------------------
```

stat_kost_q

Modell

```
       panel variable:  versid (unbalanced)

Fitting constant-only model:
Iteration 0:   log likelihood = -1.036e+08
Iteration 1:   log likelihood = -1.036e+08
Iteration 2:   log likelihood = -1.036e+08

Fitting full model:
Iteration 0:   log likelihood = -1.035e+08
Iteration 1:   log likelihood = -1.035e+08
Iteration 2:   log likelihood = -1.035e+08
Iteration 3:   log likelihood = -1.035e+08
```

```
Random-effects ML regression                    Number of obs     = 25,631,437
Group variable: versid                          Number of groups  =  3,235,804

Random effects u_i ~ Gaussian                   Obs per group:
                                                              min =          5
                                                              avg =        7.9
                                                              max =          8

                                                LR chi2(31)       =   89473.21
Log likelihood  = -1.035e+08                    Prob > chi2       =     0.0000

------------------------------------------------------------------------------------
      stat_kost_q |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
------------------+-----------------------------------------------------------------
        num_PSF4Q |
               2  |    8.34607   5.220145     1.60   0.110    -1.885226    18.57737
               3  |   74.61824   5.220145    14.29   0.000     64.38695    84.84954
               4  |   351.6046   5.220145    67.36   0.000     341.3733    361.8359
               5  |   182.2336   5.220145    34.91   0.000     172.0023    192.4649
               6  |   103.3756   5.245855    19.71   0.000     93.09396    113.6573
               7  |    89.1228   5.267568    16.92   0.000     78.79855    99.44704
               8  |   123.9031   5.286001    23.44   0.000     113.5427    134.2634
                  |
        1.PRISCUS |   52.91895   7.412128     7.14   0.000     38.39145    67.44646
                  |
num_PSF4Q#PRISCUS |
             2 1  |   15.17868   10.47212     1.45   0.147    -5.346303    35.70366
             3 1  |   42.11141   10.47212     4.02   0.000     21.58643    62.63639
             4 1  |   146.5571   10.47212    13.99   0.000     126.0321     167.082
             5 1  |   959.4349   10.47212    91.62   0.000     938.9099    979.9598
             6 1  |   327.3109   10.57542    30.95   0.000     306.5834    348.0383
             7 1  |   197.0636   10.67297    18.46   0.000      176.145    217.9822
             8 1  |   96.36889   10.73951     8.97   0.000     75.31985    117.4179
                  |
          1.FORTA |  -112.8074   6.580491   -17.14   0.000    -125.7049   -99.90987
                  |
  num_PSF4Q#FORTA |
             2 1  |  -10.11869   9.297155    -1.09   0.276    -28.34078    8.103401
             3 1  |  -52.43653   9.297155    -5.64   0.000    -70.65862   -34.21444
             4 1  |  -212.5689   9.297155   -22.86   0.000     -230.791   -194.3468
             5 1  |    290.727   9.297155    31.27   0.000     272.5049     308.949
             6 1  |   282.9301   9.328047    30.33   0.000     264.6474    301.2127
             7 1  |   218.9827    9.36645    23.38   0.000     200.6248    237.3406
```

```
             8 1  |   169.0289   9.398706    17.98   0.000     150.6078    187.4501
                  |
          1.STOPP |   88.04654   6.868226    12.82   0.000     74.58506     101.508
                  |
  num_PSF4Q#STOPP |
             2 1  |   2.356308   9.703679     0.24   0.808    -16.66255    21.37517
             3 1  |   26.12814   9.703679     2.69   0.007     7.109283    45.14701
             4 1  |   161.7831   9.703679    16.67   0.000     142.7642     180.802
             5 1  |   1068.481   9.703679   110.11   0.000     1049.462      1087.5
             6 1  |   373.0412    9.77695    38.16   0.000     353.8788    392.2037
             7 1  |   270.9661   9.858718    27.48   0.000     251.6434    290.2889
             8 1  |   220.8896   9.921289    22.26   0.000     201.4442    240.3349
                  |
            _cons |   372.8454   3.694798   100.91   0.000     365.6038    380.0871
------------------+----------------------------------------------------------------
         /sigma_u |   143.7069          .                            .           .
         /sigma_e |   3253.699   .6993468                     3252.329     3255.07
              rho |   .0019469          .                            .           .
-----------------------------------------------------------------------------------
LR test of sigma_u=0: chibar2(01) = 1.1e+04            Prob >= chibar2 = 0.000
```

Margins

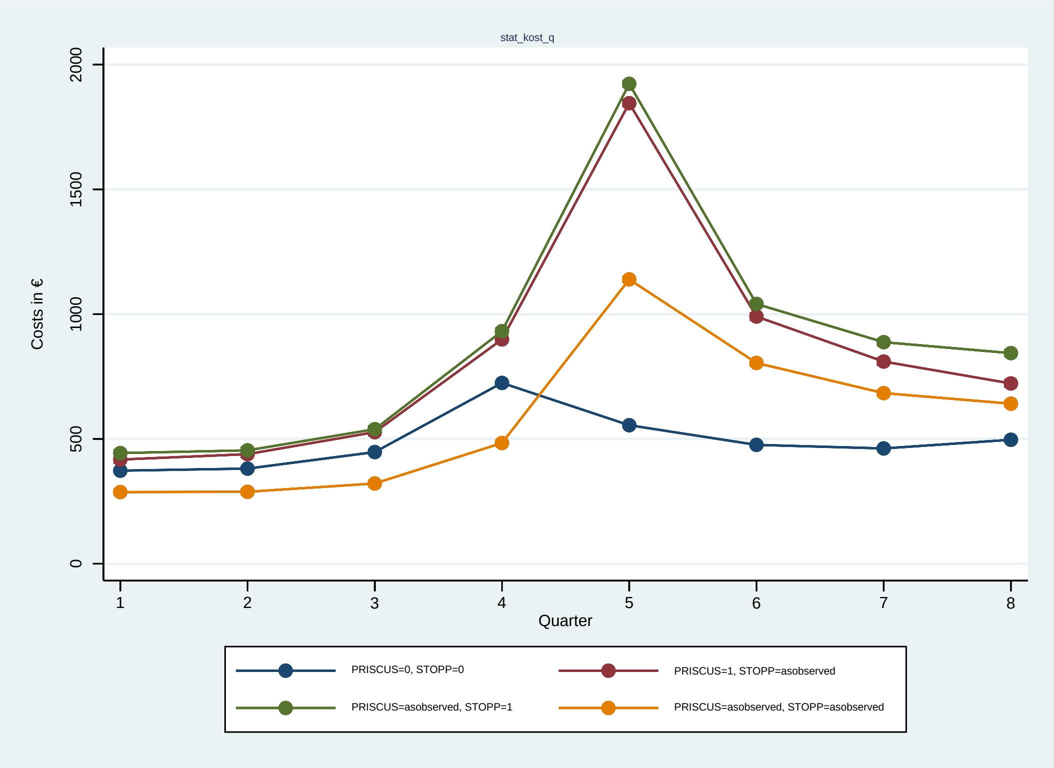
```
Predictive margins                                Number of obs     = 25,631,437
Model VCE    : OIM

Expression   : Linear prediction, predict()

-----------------------------------------------------------------------------------------------
                            |            Delta-method
                            |      Margin   Std. Err.      z    P>|z|     [95% Conf. Interval]
----------------------------+------------------------------------------------------------------
          num_PSF4Q#PRISCUS |
                       1 1  |    417.4406   6.746693    61.87   0.000     404.2173    430.6638
                       2 1  |    439.0854   6.746693    65.08   0.000     425.8621    452.3087
                       3 1  |    527.2745   6.746693    78.15   0.000     514.0512    540.4977
                       4 1  |     899.073   6.746693   133.26   0.000     885.8498    912.2963
                       5 1  |    1845.488   6.746693   273.54   0.000     1832.265    1858.712
                       6 1  |    990.4589   6.894723   143.65   0.000     976.9454    1003.972
                       7 1  |    810.1568   7.031075   115.23   0.000     796.3761    823.9374
                       8 1  |    722.3411   7.120691   101.44   0.000     708.3848    736.2974
                            |
            num_PSF4Q#STOPP |
                       1 1  |     443.445   6.114716    72.52   0.000     431.4604    455.4297
                       2 1  |    454.3337   6.114716    74.30   0.000     442.3491    466.3183
```

3 1	539.0215	6.114716	88.15	0.000	527.0369	551.0061
4 1	931.8196	6.114716	152.39	0.000	919.835	943.8042
5 1	1923.083	6.114716	314.50	0.000	1911.098	1935.067
6 1	1040.848	6.216312	167.44	0.000	1028.664	1053.032
7 1	887.729	6.330678	140.23	0.000	875.3211	900.1369
8 1	843.8689	6.416289	131.52	0.000	831.2932	856.4446
num_PSF4Q#FORTA						
1 1	286.9285	5.762323	49.79	0.000	275.6346	298.2225
2 1	288.1859	5.762323	50.01	0.000	276.892	299.4799
3 1	321.5232	5.762323	55.80	0.000	310.2293	332.8172
4 1	483.6543	5.762323	83.93	0.000	472.3604	494.9483
5 1	1139.473	5.762323	197.75	0.000	1128.179	1150.767
6 1	804.4735	5.792977	138.87	0.000	793.1195	815.8276
7 1	683.5324	5.837051	117.10	0.000	672.092	694.9728
8 1	641.2135	5.874053	109.16	0.000	629.7006	652.7264
num_PSF4Q#PRISCUS#STOPP#FORTA						
1 0 0 0	372.8454	3.694798	100.91	0.000	365.6038	380.0871
2 0 0 0	381.1915	3.694798	103.17	0.000	373.9498	388.4332
3 0 0 0	447.4637	3.694798	121.11	0.000	440.222	454.7053
4 0 0 0	724.45	3.694798	196.07	0.000	717.2083	731.6917
5 0 0 0	555.079	3.694798	150.23	0.000	547.8374	562.3207
6 0 0 0	476.2211	3.731034	127.64	0.000	468.9084	483.5338
7 0 0 0	461.9682	3.761502	122.81	0.000	454.5958	469.3406
8 0 0 0	496.7485	3.787272	131.16	0.000	489.3256	504.1714

Grafik



Lincom (IG vs. KG)

PRISCUS

```
( 1)  1bn.num_PSF4Q#1bn.PRISCUS - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   44.59513   7.691285     5.80   0.000     29.52049    59.66978
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.PRISCUS - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
```

```
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   57.89389   7.691285     7.53   0.000     42.81925    72.96853
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.PRISCUS - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    79.8108   7.691285    10.38   0.000     64.73616    94.88544
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.PRISCUS - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    174.623   7.691285    22.70   0.000     159.5484    189.6977
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.PRISCUS - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   1290.409   7.691285   167.78   0.000     1275.335    1305.484
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.PRISCUS - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   514.2378   7.846814    65.53   0.000     498.8583    529.6172
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.PRISCUS - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   348.1886   7.986506    43.60   0.000     332.5353    363.8418
------------------------------------------------------------------------------
```

```
 ( 1)  8.num_PSF4Q#1bn.PRISCUS - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   225.5926    8.07894    27.92   0.000     209.7582    241.4271
------------------------------------------------------------------------------
```

STOPP

```
( 1)  1bn.num_PSF4Q#1bn.STOPP - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    70.5996   7.090924     9.96   0.000     56.70165    84.49756
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.STOPP - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   73.14218   7.090924    10.31   0.000     59.24423    87.04014
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.STOPP - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   91.55781   7.090924    12.91   0.000     77.65985    105.4558
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.STOPP - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   207.3696   7.090924    29.24   0.000     193.4716    221.2675
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.STOPP - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   1368.004   7.090924   192.92   0.000     1354.106    1381.902
------------------------------------------------------------------------------
```

```
 ( 1)  6.num_PSF4Q#1bn.STOPP - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   564.6271   7.206842    78.35   0.000     550.5019    578.7522
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.STOPP - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   425.7608   7.325157    58.12   0.000     411.4037    440.1178
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q#1bn.STOPP - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   347.1204   7.411532    46.84   0.000     332.5941    361.6467
------------------------------------------------------------------------------
```

FORTA

```
( 1)  1bn.num_PSF4Q#1bn.FORTA - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -85.91689   6.920805   -12.41   0.000    -99.48142   -72.35236
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.FORTA - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |  -93.00558   6.920805   -13.44   0.000    -106.5701   -79.44105
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.FORTA - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -125.9404   6.920805   -18.20   0.000     -139.505   -112.3759
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.FORTA - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -240.7957   6.920805   -34.79   0.000    -254.3602   -227.2312
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.FORTA - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    584.394   6.920805    84.44   0.000     570.8295    597.9585
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.FORTA - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   328.2525   6.972767    47.08   0.000     314.5861    341.9188
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.FORTA - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   221.5642   7.033393    31.50   0.000      207.779    235.3494
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q#1bn.FORTA - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    144.465   7.081937    20.40   0.000     130.5847    158.3453
------------------------------------------------------------------------------
```

Lincom (IG vs. KG mit Korrektur vor Q4 DiD)

PRISCUS

```
( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 5.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   1115.786   10.86653   102.68   0.000     1094.488    1137.084
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 6.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   339.6148   10.97716    30.94   0.000     318.0999    361.1296
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 7.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   173.5655   11.07745    15.67   0.000     151.8541    195.2769
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 8.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    50.9696   11.14427     4.57   0.000     29.12723    72.81198
------------------------------------------------------------------------------
```

STOPP

```
( 1)  - 4.num_PSF4Q#1bn.STOPP + 5.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   1160.634   10.01831   115.85   0.000     1140.999     1180.27
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 6.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   357.2575   10.10069    35.37   0.000     337.4605    377.0545
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 7.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   218.3912   10.18545    21.44   0.000     198.4281    238.3543
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 8.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   139.7508   10.24774    13.64   0.000     119.6656     159.836
------------------------------------------------------------------------------
```

FORTA

```
( 1)  - 4.num_PSF4Q#1bn.FORTA + 5.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |   825.1897   9.777964    84.39   0.000     806.0252    844.3541
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 6.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA - 
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   569.0482   9.814811    57.98   0.000     549.8115    588.2848
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 7.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA - 
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   462.3599   9.857974    46.90   0.000     443.0386    481.6811
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 8.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA - 
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   385.2607   9.892668    38.94   0.000     365.8714      404.65
------------------------------------------------------------------------------
```

kosten_ges_q

Modell

```
       panel variable:  versid (unbalanced)

Fitting constant-only model:
Iteration 0:   log likelihood = -1.045e+08
Iteration 1:   log likelihood = -1.044e+08
Iteration 2:   log likelihood = -1.044e+08
Iteration 3:   log likelihood = -1.044e+08
Iteration 4:   log likelihood = -1.044e+08

Fitting full model:
Iteration 0:   log likelihood = -1.045e+08
Iteration 1:   log likelihood = -1.044e+08
```

```
Iteration 2:   log likelihood = -1.043e+08
Iteration 3:   log likelihood = -1.043e+08
Iteration 4:   log likelihood = -1.043e+08

Random-effects ML regression                    Number of obs     = 25,631,437
Group variable: versid                          Number of groups  =  3,235,804

Random effects u_i ~ Gaussian                   Obs per group:
                                                              min =          5
                                                              avg =        7.9
                                                              max =          8

                                                LR chi2(31)       =  145084.55
Log likelihood  = -1.043e+08                    Prob > chi2       =     0.0000

------------------------------------------------------------------------------------
     kosten_ges_q |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
------------------+-----------------------------------------------------------------
        num_PSF4Q |
               2  |    17.0788   5.273822     3.24   0.001     6.742301     27.4153
               3  |   101.9653   5.273822    19.33   0.000     91.62877    112.3018
               4  |   422.0563   5.273822    80.03   0.000     411.7198    432.3928
               5  |   243.7983   5.273822    46.23   0.000     233.4618    254.1348
               6  |   180.7812   5.302626    34.09   0.000     170.3882    191.1741
               7  |    185.752    5.32676    34.87   0.000     175.3118    196.1923
               8  |   243.3352   5.347109    45.51   0.000     232.8551    253.8154
                  |
        1.PRISCUS |   66.66423   8.326784     8.01   0.000     50.34404    82.98443
                  |
num_PSF4Q#PRISCUS |
             2 1  |   20.03464   10.57981     1.89   0.058    -.7013988    40.77068
             3 1  |   53.13981   10.57981     5.02   0.000     32.40377    73.87585
             4 1  |   171.4968   10.57981    16.21   0.000     150.7608    192.2329
             5 1  |    1204.37   10.57981   113.84   0.000     1183.634    1225.106
             6 1  |   532.9742   10.69526    49.83   0.000     512.0119    553.9366
             7 1  |   368.1696   10.80323    34.08   0.000     346.9957    389.3436
             8 1  |   251.4092   10.87624    23.12   0.000     230.0922    272.7263
                  |
          1.FORTA |  -165.7295   7.392523   -22.42   0.000    -180.2185   -151.2404
                  |
  num_PSF4Q#FORTA |
             2 1  |  -17.48988   9.392756    -1.86   0.063    -35.89934    .9195854
             3 1  |  -68.17827   9.392756    -7.26   0.000    -86.58773   -49.76881
             4 1  |  -250.6135   9.392756   -26.68   0.000     -269.023    -232.204
```

```
             5 1  |   368.5614   9.392756    39.24   0.000     350.1519    386.9709
             6 1  |   342.6167   9.427308    36.34   0.000     324.1395    361.0938
             7 1  |   264.8518   9.469818    27.97   0.000     246.2913    283.4123
             8 1  |   212.4554   9.505222    22.35   0.000     193.8255    231.0853
                  |
          1.STOPP |   162.9082   7.715765    21.11   0.000     147.7856    178.0309
                  |
  num_PSF4Q#STOPP |
             2 1  |   8.844015    9.80346     0.90   0.367    -10.37041    28.05844
             3 1  |   39.83108    9.80346     4.06   0.000     20.61665    59.04551
             4 1  |   191.0814    9.80346    19.49   0.000     171.8669    210.2958
             5 1  |   1270.329    9.80346   129.58   0.000     1251.115    1289.544
             6 1  |   518.9184   9.885355    52.49   0.000     499.5434    538.2933
             7 1  |    417.223   9.975817    41.82   0.000     397.6707    436.7752
             8 1  |    374.518   10.04445    37.29   0.000     354.8312    394.2047
                  |
            _cons |   806.2186   4.150736   194.24   0.000     798.0833    814.3539
------------------+----------------------------------------------------------------
         /sigma_u |   1606.609   1.540115                      1603.594    1609.631
         /sigma_e |   3287.157   .7570203                      3285.673    3288.641
              rho |   .1928193   .0003171                      .1921985    .1934414
-----------------------------------------------------------------------------------
LR test of sigma_u=0: chibar2(01) = 7.8e+05           Prob >= chibar2 = 0.000
```

Margins

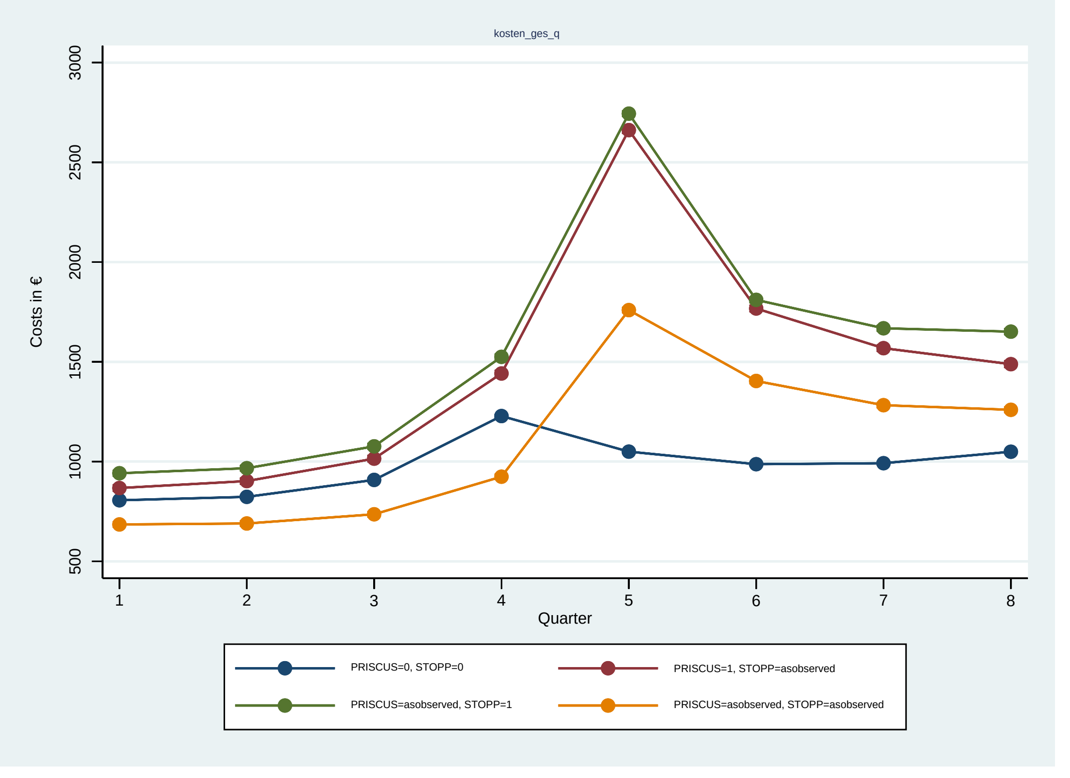
```
Predictive margins                                 Number of obs     = 25,631,437
Model VCE    : OIM

Expression   : Linear prediction, predict()

-----------------------------------------------------------------------------------------------
                              |            Delta-method
                              |     Margin   Std. Err.      z    P>|z|     [95% Conf. Interval]
------------------------------+----------------------------------------------------------------
            num_PSF4Q#PRISCUS |
                          1 1 |   867.5167   7.579234   114.46   0.000     852.6616    882.3717
                          2 1 |   902.3565   7.579234   119.06   0.000     887.5015    917.2115
                          3 1 |   1014.854   7.579234   133.90   0.000     999.9991    1029.709
                          4 1 |   1441.653   7.579234   190.21   0.000     1426.797    1456.508
                          5 1 |   2661.513   7.579234   351.16   0.000     2646.658    2676.368
                          6 1 |   1767.369   7.728398   228.69   0.000     1752.222    1782.517
                          7 1 |   1568.586   7.865047   199.44   0.000     1553.171    1584.001
                          8 1 |   1488.445   7.954429   187.12   0.000     1472.855    1504.036
                              |
```

num_PSF4Q#STOPP						
1 1	941.6347	6.869271	137.08	0.000	928.1712	955.0982
2 1	966.8385	6.869271	140.75	0.000	953.3749	980.302
3 1	1076.438	6.869271	156.70	0.000	1062.975	1089.902
4 1	1525.066	6.869271	222.01	0.000	1511.602	1538.529
5 1	2743.971	6.869271	399.46	0.000	2730.507	2757.434
6 1	1810.777	6.9716	259.74	0.000	1797.113	1824.442
7 1	1668.235	7.08606	235.42	0.000	1654.347	1682.124
8 1	1651.283	7.17131	230.26	0.000	1637.227	1665.338
num_PSF4Q#FORTA						
1 1	684.9974	6.473394	105.82	0.000	672.3098	697.6851
2 1	689.7584	6.473394	106.55	0.000	677.0708	702.446
3 1	735.8513	6.473394	113.67	0.000	723.1636	748.5389
4 1	924.309	6.473394	142.79	0.000	911.6214	936.9966
5 1	1759.34	6.473394	271.78	0.000	1746.652	1772.028
6 1	1403.994	6.504239	215.86	0.000	1391.246	1416.742
7 1	1282.735	6.548247	195.89	0.000	1269.901	1295.57
8 1	1259.588	6.584972	191.28	0.000	1246.681	1272.494
num_PSF4Q#PRISCUS#STOPP#FORTA						
1 0 0 0	806.2186	4.150736	194.24	0.000	798.0833	814.3539
2 0 0 0	823.2974	4.150736	198.35	0.000	815.1621	831.4327
3 0 0 0	908.1839	4.150736	218.80	0.000	900.0486	916.3192
4 0 0 0	1228.275	4.150736	295.92	0.000	1220.14	1236.41
5 0 0 0	1050.017	4.150736	252.97	0.000	1041.882	1058.152
6 0 0 0	986.9998	4.187272	235.71	0.000	978.7929	995.2067
7 0 0 0	991.9706	4.217794	235.19	0.000	983.7039	1000.237
8 0 0 0	1049.554	4.243464	247.33	0.000	1041.237	1057.871

Grafik



Lincom (IG vs. KG)

PRISCUS

```
( 1)  1bn.num_PSF4Q#1bn.PRISCUS - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   61.29807   8.640389     7.09   0.000     44.36322    78.23292
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.PRISCUS - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
```

```
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   79.05909   8.640389     9.15   0.000     62.12424    95.99394
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.PRISCUS - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   106.6703   8.640389    12.35   0.000     89.73543    123.6051
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.PRISCUS - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   213.3776   8.640389    24.70   0.000     196.4427    230.3124
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.PRISCUS - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   1611.496   8.640389   186.51   0.000     1594.561    1628.431
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.PRISCUS - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   780.3697   8.796966    88.71   0.000      763.128    797.6114
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.PRISCUS - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   576.6156   8.936619    64.52   0.000     559.1002    594.1311
------------------------------------------------------------------------------
```

```
 ( 1)  8.num_PSF4Q#1bn.PRISCUS - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   438.8915   9.028463    48.61   0.000      421.196    456.5869
------------------------------------------------------------------------------
```

STOPP

```
( 1)  1bn.num_PSF4Q#1bn.STOPP - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   135.4161   7.965944    17.00   0.000     119.8031    151.0291
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.STOPP - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   143.5411   7.965944    18.02   0.000     127.9281     159.154
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.STOPP - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   168.2543   7.965944    21.12   0.000     152.6413    183.8673
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.STOPP - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    296.791   7.965944    37.26   0.000      281.178    312.4039
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.STOPP - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   1693.954   7.965944   212.65   0.000     1678.341    1709.567
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.STOPP - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   823.7777   8.082603   101.92   0.000     807.9361    839.6193
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.STOPP - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   676.2647    8.20077    82.46   0.000     660.1915    692.3379
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q#1bn.STOPP - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   601.7287   8.286503    72.62   0.000     585.4875      617.97
------------------------------------------------------------------------------
```

FORTA

```
( 1)  1bn.num_PSF4Q#1bn.FORTA - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -121.2212   7.774832   -15.59   0.000    -136.4595   -105.9828
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.FORTA - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |   -133.539   7.774832   -17.18   0.000    -148.7774   -118.3006
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.FORTA - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -172.3326   7.774832   -22.17   0.000     -187.571   -157.0942
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.FORTA - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -303.9659   7.774832   -39.10   0.000    -319.2043   -288.7275
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.FORTA - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   709.3232   7.774832    91.23   0.000     694.0848    724.5616
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.FORTA - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   416.9942   7.827111    53.28   0.000     401.6534    432.3351
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.FORTA - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   290.7649   7.887555    36.86   0.000     275.3055    306.2242
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q#1bn.FORTA - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   210.0337   7.935611    26.47   0.000     194.4802    225.5872
------------------------------------------------------------------------------
```

Lincom (IG vs. KG mit Korrektur vor Q4 DiD)

PRISCUS

```
( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 5.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA - 
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   1398.118   10.97826   127.35   0.000     1376.601    1419.635
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 6.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA - 
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   566.9921   11.10192    51.07   0.000     545.2328    588.7515
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 7.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA - 
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    363.238    11.2129    32.39   0.000     341.2611    385.2149
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 8.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA - 
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   225.5139   11.28624    19.98   0.000     203.3933    247.6345
------------------------------------------------------------------------------
```

STOPP

```
( 1)  - 4.num_PSF4Q#1bn.STOPP + 5.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   1397.163   10.12133   138.04   0.000     1377.325        1417
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 6.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   526.9867    10.2134    51.60   0.000     506.9688    547.0046
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 7.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   379.4737   10.30717    36.82   0.000      359.272    399.6754
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 8.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   304.9378   10.37551    29.39   0.000     284.6021    325.2734
------------------------------------------------------------------------------
```

FORTA

```
( 1)  - 4.num_PSF4Q#1bn.FORTA + 5.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |   1013.289   9.878509   102.58   0.000     993.9276    1032.651
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 6.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   720.9602   9.919707    72.68   0.000     701.5179    740.4024
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 7.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   594.7308    9.96747    59.67   0.000     575.1949    614.2667
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 8.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   513.9996   10.00554    51.37   0.000     494.3891    533.6101
------------------------------------------------------------------------------
```

Komorbidität (Elixhauser Score)

elix_score_amb_q

Modell

```
       panel variable:  versid (unbalanced)

Fitting constant-only model:
Iteration 0:   log likelihood = -8271878.9
Iteration 1:   log likelihood = -8176047.9
Iteration 2:   log likelihood = -8162369.5
Iteration 3:   log likelihood = -8161890.2
Iteration 4:   log likelihood = -8161889.3

Fitting full model:
```

```
Iteration 0:   log likelihood = -8270668.1
Iteration 1:   log likelihood = -8174835.2
Iteration 2:   log likelihood = -8161158.8
Iteration 3:   log likelihood = -8160679.7
Iteration 4:   log likelihood = -8160678.8

Random-effects ML regression                    Number of obs     = 25,631,437
Group variable: versid                          Number of groups  =  3,235,804

Random effects u_i ~ Gaussian                   Obs per group:
                                                              min =          5
                                                              avg =        7.9
                                                              max =          8

                                                LR chi2(31)       =    2421.03
Log likelihood  = -8160678.8                    Prob > chi2       =     0.0000

------------------------------------------------------------------------------
 elix_score_amb_q |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
------------------+-----------------------------------------------------------
        num_PSF4Q |
               2  |   .0019376   .0009799     1.98   0.048      .000017    .0038583
               3  |   .0036349   .0009799     3.71   0.000     .0017143    .0055556
               4  |   .0068461   .0009799     6.99   0.000     .0049254    .0087667
               5  |   .0062735   .0009799     6.40   0.000     .0043528    .0081941
               6  |   .0066828   .0009856     6.78   0.000      .004751    .0086145
               7  |   .0073922   .0009903     7.46   0.000     .0054513    .0093332
               8  |   .0085843   .0009942     8.63   0.000     .0066357    .0105329
                  |
        1.PRISCUS |  -.0153628   .0022537    -6.82   0.000    -.0197801   -.0109456
                  |
num_PSF4Q#PRISCUS |
             2 1  |  -.0007032   .0019659    -0.36   0.721    -.0045562    .0031498
             3 1  |  -.0010064   .0019659    -0.51   0.609    -.0048594    .0028466
             4 1  |  -.0022264   .0019659    -1.13   0.257    -.0060794    .0016266
             5 1  |   .0000236   .0019659     0.01   0.990    -.0038294    .0038766
             6 1  |  -.0005476   .0019886    -0.28   0.783    -.0044452    .0033501
             7 1  |  -.0019411   .0020096    -0.97   0.334    -.0058799    .0019977
             8 1  |  -.0022831   .0020237    -1.13   0.259    -.0062494    .0016833
                  |
          1.FORTA |  -.0065155   .0020009    -3.26   0.001    -.0104372   -.0025939
                  |
  num_PSF4Q#FORTA |
             2 1  |  -.0002853   .0017453    -0.16   0.870    -.0037061    .0031354
```

```
             3 1  |  -.0005748   .0017453    -0.33   0.742    -.0039955    .0028459
             4 1  |  -.0028048   .0017453    -1.61   0.108    -.0062255    .0006159
             5 1  |   .0031369   .0017453     1.80   0.072    -.0002838    .0065576
             6 1  |   .0017721   .0017521     1.01   0.312     -.001662    .0052062
             7 1  |   .0026878   .0017604     1.53   0.127    -.0007625    .0061381
             8 1  |   .0017441   .0017672     0.99   0.324    -.0017195    .0052078
                  |
          1.STOPP |   .0172152   .0020884     8.24   0.000     .0131221    .0213084
                  |
  num_PSF4Q#STOPP |
             2 1  |  -.0001375   .0018216    -0.08   0.940    -.0037078    .0034328
             3 1  |  -.0004483   .0018216    -0.25   0.806    -.0040186     .003122
             4 1  |   .0007626   .0018216     0.42   0.675    -.0028077    .0043329
             5 1  |   .0113658   .0018216     6.24   0.000     .0077955    .0149361
             6 1  |   .0106049   .0018378     5.77   0.000      .007003    .0142069
             7 1  |   .0099735   .0018554     5.38   0.000     .0063371      .01361
             8 1  |   .0090194   .0018686     4.83   0.000      .005357    .0126818
                  |
            _cons |   .0425761   .0011234    37.90   0.000     .0403742     .044778
------------------+----------------------------------------------------------------
         /sigma_u |   .7794909   .0005065                      .7784988    .7804843
         /sigma_e |   .6107939          .                             .           .
              rho |   .6195793          .                             .           .
-----------------------------------------------------------------------------------
LR test of sigma_u=0: chibar2(01) = 1.1e+07           Prob >= chibar2 = 0.000
```

Margins

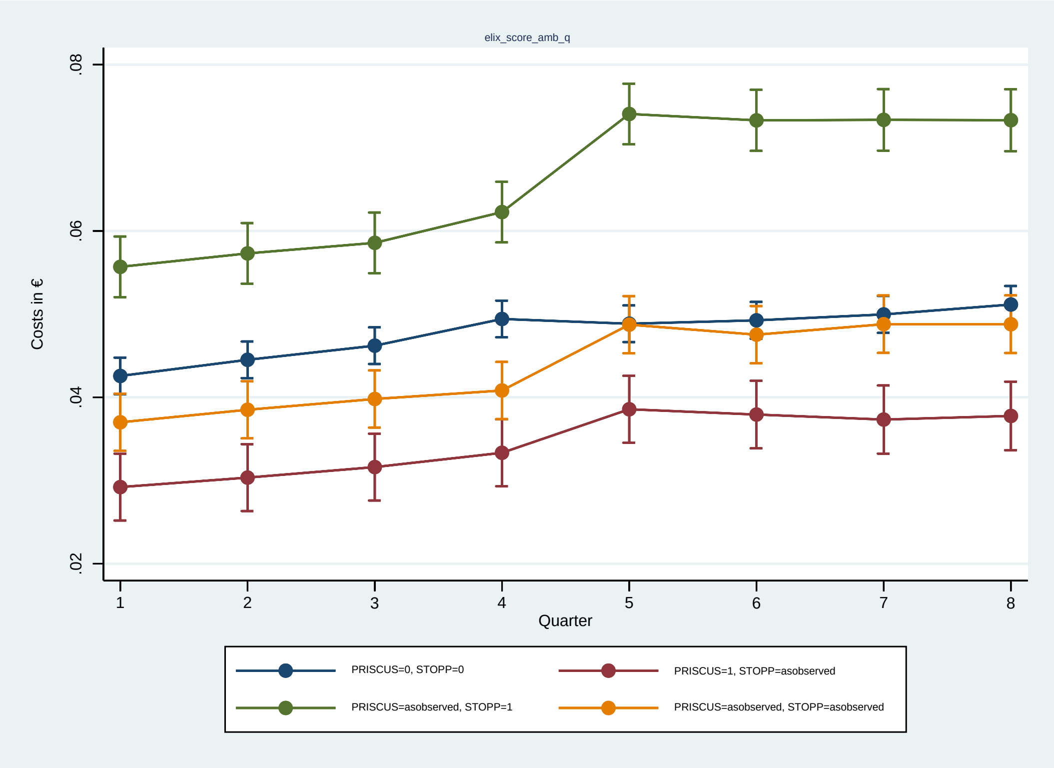
```
Predictive margins                                Number of obs     = 25,631,437
Model VCE    : OIM

Expression   : Linear prediction, predict()

-----------------------------------------------------------------------------------------------
                              |            Delta-method
                              |     Margin   Std. Err.      z    P>|z|     [95% Conf. Interval]
------------------------------+----------------------------------------------------------------
              num_PSF4Q#PRISCUS |
                          1 1  |   .0292132   .0020514    14.24   0.000     .0251925    .0332339
                          2 1  |    .030353   .0020514    14.80   0.000     .0263323    .0343736
                          3 1  |   .0316159   .0020514    15.41   0.000     .0275952    .0356366
                          4 1  |   .0333342   .0020514    16.25   0.000     .0293135    .0373549
                          5 1  |    .038567   .0020514    18.80   0.000     .0345463    .0425877
                          6 1  |   .0379309   .0020717    18.31   0.000     .0338705    .0419914
                          7 1  |   .0373314   .0020902    17.86   0.000     .0332347    .0414281
```

8 1	.0377662	.0021022	17.96	0.000	.0336459	.0418864
num_PSF4Q#STOPP						
1 1	.0556915	.0018593	29.95	0.000	.0520474	.0593355
2 1	.057307	.0018593	30.82	0.000	.0536629	.060951
3 1	.058575	.0018593	31.50	0.000	.0549309	.0622191
4 1	.0622718	.0018593	33.49	0.000	.0586277	.0659158
5 1	.074067	.0018593	39.84	0.000	.0704229	.077711
6 1	.0733009	.0018732	39.13	0.000	.0696296	.0769722
7 1	.0733587	.0018886	38.84	0.000	.0696571	.0770603
8 1	.073319	.0019001	38.59	0.000	.069595	.0770431
num_PSF4Q#FORTA						
1 1	.0370023	.0017521	21.12	0.000	.0335682	.0404363
2 1	.0385084	.0017521	21.98	0.000	.0350744	.0419425
3 1	.0398018	.0017521	22.72	0.000	.0363677	.0432358
4 1	.0408258	.0017521	23.30	0.000	.0373917	.0442599
5 1	.0487411	.0017521	27.82	0.000	.0453071	.0521752
6 1	.0475341	.0017563	27.07	0.000	.0440918	.0509764
7 1	.0487962	.0017622	27.69	0.000	.0453424	.05225
8 1	.048792	.0017671	27.61	0.000	.0453286	.0522554
num_PSF4Q#PRISCUS#STOPP#FORTA						
1 0 0 0	.0425761	.0011234	37.90	0.000	.0403742	.044778
2 0 0 0	.0445137	.0011234	39.62	0.000	.0423118	.0467156
3 0 0 0	.046211	.0011234	41.13	0.000	.0440091	.0484129
4 0 0 0	.0494222	.0011234	43.99	0.000	.0472202	.0516241
5 0 0 0	.0488496	.0011234	43.48	0.000	.0466476	.0510515
6 0 0 0	.0492588	.0011284	43.65	0.000	.0470472	.0514705
7 0 0 0	.0499683	.0011325	44.12	0.000	.0477487	.0521879
8 0 0 0	.0511604	.0011359	45.04	0.000	.048934	.0533867

Grafik



Lincom (IG vs. KG)

PRISCUS

```
( 1)  1bn.num_PSF4Q#1bn.PRISCUS - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0133628   .0023386    -5.71   0.000    -.0179465   -.0087792
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.PRISCUS - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
```

```
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0141608   .0023386    -6.06   0.000    -.0187444   -.0095771
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.PRISCUS - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0145951   .0023386    -6.24   0.000    -.0191787   -.0100115
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.PRISCUS - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0160879   .0023386    -6.88   0.000    -.0206715   -.0115043
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.PRISCUS - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0102826   .0023386    -4.40   0.000    -.0148662   -.0056989
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.PRISCUS - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0113279   .0023599    -4.80   0.000    -.0159533   -.0067025
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.PRISCUS - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0126369   .0023788    -5.31   0.000    -.0172993   -.0079745
------------------------------------------------------------------------------
```

```
 ( 1)  8.num_PSF4Q#1bn.PRISCUS - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0133942   .0023912    -5.60   0.000    -.0180809   -.0087075
------------------------------------------------------------------------------
```

STOPP

```
( 1)  1bn.num_PSF4Q#1bn.STOPP - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0131154   .0021561     6.08   0.000     .0088896    .0173413
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.STOPP - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0127932   .0021561     5.93   0.000     .0085674    .0170191
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.STOPP - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .012364   .0021561     5.73   0.000     .0081382    .0165898
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.STOPP - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0128496   .0021561     5.96   0.000     .0086238    .0170754
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.STOPP - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0252174   .0021561    11.70   0.000     .0209916    .0294432
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.STOPP - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0240421   .0021719    11.07   0.000     .0197851     .028299
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.STOPP - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0233904   .0021879    10.69   0.000     .0191022    .0276787
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q#1bn.STOPP - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0221587   .0021995    10.07   0.000     .0178478    .0264695
------------------------------------------------------------------------------
```

FORTA

```
( 1)  1bn.num_PSF4Q#1bn.FORTA - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0055738   .0021044    -2.65   0.008    -.0096982   -.0014493
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.FORTA - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |  -.0060053   .0021044    -2.85   0.004    -.0101298   -.0018809
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.FORTA - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0064092   .0021044    -3.05   0.002    -.0105337   -.0022848
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.FORTA - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0085964   .0021044    -4.09   0.000    -.0127208   -.0044719
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.FORTA - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0001084   .0021044    -0.05   0.959    -.0042329     .004016
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.FORTA - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0017247   .0021114    -0.82   0.414    -.0058631    .0024136
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.FORTA - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0011721   .0021196    -0.55   0.580    -.0053264    .0029822
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q#1bn.FORTA - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0023683    .002126    -1.11   0.265    -.0065352    .0017985
------------------------------------------------------------------------------
```

Lincom (IG vs. KG mit Korrektur vor Q4 DiD)

PRISCUS

```
( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 5.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0058054   .0020399     2.85   0.004     .0018073    .0098035
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 6.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |     .00476   .0020643     2.31   0.021     .0007141    .0088059
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 7.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .003451   .0020859     1.65   0.098    -.0006372    .0075393
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 8.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0026937      .0021     1.28   0.200    -.0014222    .0068096
------------------------------------------------------------------------------
```

STOPP

```
( 1)  - 4.num_PSF4Q#1bn.STOPP + 5.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0123678   .0018807     6.58   0.000     .0086818    .0160538
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 6.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0111925   .0018988     5.89   0.000     .0074708    .0149141
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 7.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0105408   .0019171     5.50   0.000     .0067834    .0142982
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 8.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0093091   .0019302     4.82   0.000     .0055259    .0130923
------------------------------------------------------------------------------
```

FORTA

```
( 1)  - 4.num_PSF4Q#1bn.FORTA + 5.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |   .0084879   .0018355     4.62   0.000     .0048903    .0120855
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 6.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0068716   .0018437     3.73   0.000     .0032581    .0104852
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 7.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0074242    .001853     4.01   0.000     .0037925     .011056
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 8.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .006228   .0018603     3.35   0.001     .0025819    .0098742
------------------------------------------------------------------------------
```

elix_score_stat_q

Modell

```
       panel variable:  versid (unbalanced)

Fitting constant-only model:
Iteration 0:   log likelihood =  -15798564
Iteration 1:   log likelihood =  -15723823
Iteration 2:   log likelihood =  -15684928
Iteration 3:   log likelihood =  -15681908
Iteration 4:   log likelihood =  -15681899
Iteration 5:   log likelihood =  -15681899

Fitting full model:
Iteration 0:   log likelihood =  -15763168
```

```
Iteration 1:   log likelihood =  -15760804
Iteration 2:   log likelihood =  -15760800
Iteration 3:   log likelihood =  -15760800

Random-effects ML regression                    Number of obs     = 25,631,437
Group variable: versid                          Number of groups  =  3,235,804

Random effects u_i ~ Gaussian                   Obs per group:
                                                              min =          5
                                                              avg =        7.9
                                                              max =          8

                                                LR chi2(31)       =  157801.93
Log likelihood  =  -15760800                    Prob > chi2       =     0.0000

----------------------------------------------------------------------------------
elix_score_stat_q |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
------------------+---------------------------------------------------------------
        num_PSF4Q |
               2  |   .0063438   .0016192     3.92   0.000     .0031702    .0095175
               3  |    .022787   .0016192    14.07   0.000     .0196134    .0259606
               4  |   .0886377   .0016192    54.74   0.000     .0854641    .0918114
               5  |   .0540251   .0016192    33.36   0.000     .0508515    .0571987
               6  |   .0386384   .0016274    23.74   0.000     .0354488     .041828
               7  |   .0358265   .0016343    21.92   0.000     .0326234    .0390296
               8  |   .0444468   .0016401    27.10   0.000     .0412323    .0476614
                  |
        1.PRISCUS |    .022079   .0023286     9.48   0.000      .017515     .026643
                  |
num_PSF4Q#PRISCUS |
             2 1  |   .0079704   .0032483     2.45   0.014     .0016038     .014337
             3 1  |   .0166749   .0032483     5.13   0.000     .0103083    .0230415
             4 1  |   .0530518   .0032483    16.33   0.000     .0466852    .0594184
             5 1  |   .2670108   .0032483    82.20   0.000     .2606442    .2733774
             6 1  |   .0917179   .0032811    27.95   0.000     .0852871    .0981487
             7 1  |   .0463015    .003312    13.98   0.000     .0398101    .0527929
             8 1  |   .0228543   .0033331     6.86   0.000     .0163217     .029387
                  |
          1.FORTA |  -.0327742   .0020673   -15.85   0.000    -.0368261   -.0287223
                  |
  num_PSF4Q#FORTA |
             2 1  |  -.0046873   .0028839    -1.63   0.104    -.0103396    .0009649
             3 1  |  -.0150422   .0028839    -5.22   0.000    -.0206944   -.0093899
             4 1  |  -.0521731   .0028839   -18.09   0.000    -.0578253   -.0465208
```

```
             5 1  |   .0820041   .0028839    28.44   0.000     .0763518    .0876564
             6 1  |    .066954   .0028937    23.14   0.000     .0612825    .0726255
             7 1  |   .0499454   .0029058    17.19   0.000       .04425    .0556407
             8 1  |   .0380643   .0029161    13.05   0.000      .032349    .0437797
                  |
          1.STOPP |   .0343672   .0021577    15.93   0.000     .0301381    .0385963
                  |
  num_PSF4Q#STOPP |
             2 1  |   .0060765     .00301     2.02   0.044     .0001771    .0119759
             3 1  |     .01242     .00301     4.13   0.000     .0065206    .0183195
             4 1  |   .0433102     .00301    14.39   0.000     .0374108    .0492096
             5 1  |   .2945238     .00301    97.85   0.000     .2886244    .3004232
             6 1  |   .1260173   .0030332    41.55   0.000     .1200723    .1319623
             7 1  |    .086395   .0030591    28.24   0.000     .0803992    .0923907
             8 1  |   .0674132   .0030789    21.90   0.000     .0613786    .0734478
                  |
            _cons |   .0921321   .0011608    79.37   0.000      .089857    .0944072
------------------+----------------------------------------------------------------
         /sigma_u |   .1682655          .                            .           .
         /sigma_e |   1.009259   .0002237                      1.00882    1.009697
              rho |   .0270445          .                            .           .
-----------------------------------------------------------------------------------
LR test of sigma_u=0: chibar2(01) = 1.9e+05           Prob >= chibar2 = 0.000
```

Margins

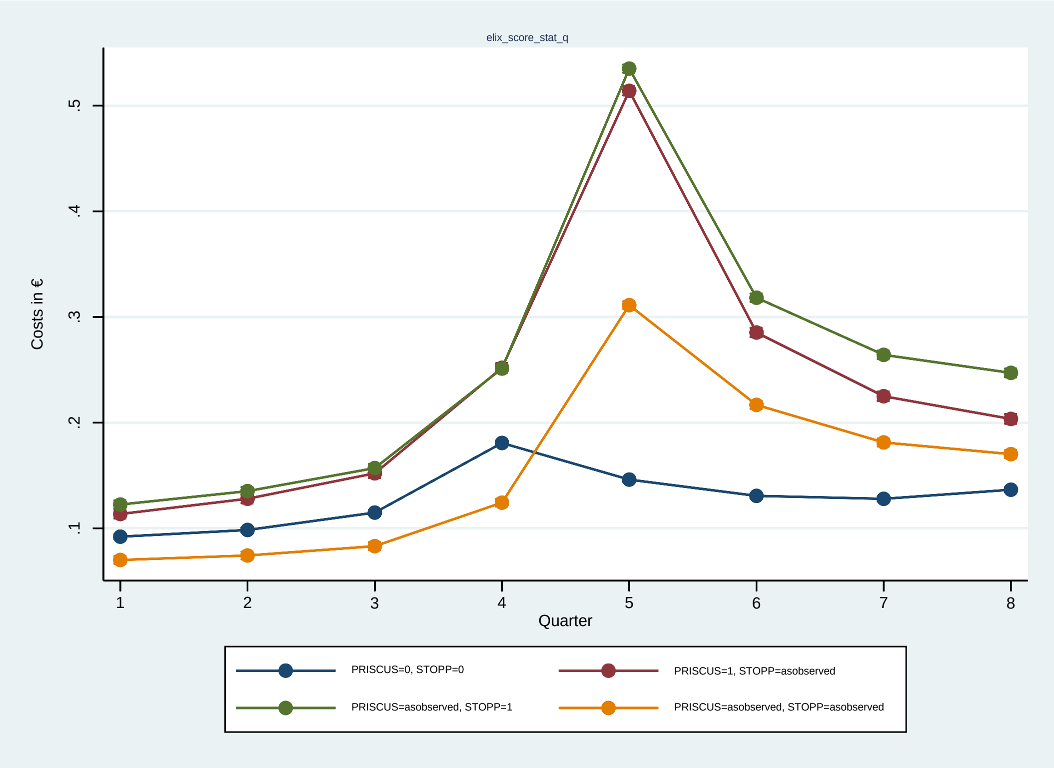
```
Predictive margins                                 Number of obs     = 25,631,437
Model VCE    : OIM

Expression   : Linear prediction, predict()

-----------------------------------------------------------------------------------------------
                              |            Delta-method
                              |      Margin   Std. Err.      z    P>|z|     [95% Conf. Interval]
------------------------------+----------------------------------------------------------------
            num_PSF4Q#PRISCUS |
                         1 1  |   .1135898   .0021196    53.59   0.000     .1094355    .1177441
                         2 1  |   .1280527   .0021196    60.41   0.000     .1238985     .132207
                         3 1  |   .1520808   .0021196    71.75   0.000     .1479265    .1562351
                         4 1  |   .2519591   .0021196   118.87   0.000     .2478048    .2561134
                         5 1  |   .5140009   .0021196   242.50   0.000     .5098467    .5181552
                         6 1  |   .2853464   .0021659   131.74   0.000     .2811013    .2895915
                         7 1  |   .2250447   .0022086   101.89   0.000      .220716    .2293735
                         8 1  |   .2035626   .0022366    91.01   0.000     .1991789    .2079464
                              |
```

num_PSF4Q#STOPP						
1 1	.1225559	.001921	63.80	0.000	.1187907	.126321
2 1	.1352202	.001921	70.39	0.000	.131455	.1389853
3 1	.1570512	.001921	81.75	0.000	.1532861	.1608163
4 1	.251232	.001921	130.78	0.000	.2474668	.2549971
5 1	.5350696	.001921	278.53	0.000	.5313044	.5388347
6 1	.3182365	.0019528	162.96	0.000	.314409	.3220639
7 1	.264208	.0019886	132.86	0.000	.2603104	.2681056
8 1	.2471372	.0020154	122.62	0.000	.2431871	.2510873
num_PSF4Q#FORTA						
1 1	.070093	.0018103	38.72	0.000	.0665448	.0736411
2 1	.0743303	.0018103	41.06	0.000	.0707821	.0778784
3 1	.0831772	.0018103	45.95	0.000	.0796291	.0867253
4 1	.1243212	.0018103	68.67	0.000	.1207731	.1278694
5 1	.3111807	.0018103	171.89	0.000	.3076325	.3147288
6 1	.2168548	.0018199	119.16	0.000	.2132878	.2204217
7 1	.1813067	.0018337	98.87	0.000	.1777127	.1849007
8 1	.1702278	.0018453	92.25	0.000	.1666111	.1738445
num_PSF4Q#PRISCUS#STOPP#FORTA						
1 0 0 0	.0921321	.0011608	79.37	0.000	.089857	.0944072
2 0 0 0	.0984759	.0011608	84.84	0.000	.0962009	.100751
3 0 0 0	.1149191	.0011608	99.00	0.000	.112644	.1171942
4 0 0 0	.1807698	.0011608	155.73	0.000	.1784948	.1830449
5 0 0 0	.1461572	.0011608	125.91	0.000	.1438821	.1484323
6 0 0 0	.1307705	.0011721	111.57	0.000	.1284732	.1330678
7 0 0 0	.1279586	.0011817	108.29	0.000	.1256426	.1302746
8 0 0 0	.1365789	.0011897	114.80	0.000	.1342471	.1389107

Grafik



Lincom (IG vs. KG)

PRISCUS

```
( 1)  1bn.num_PSF4Q#1bn.PRISCUS - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0214577   .0024163     8.88   0.000     .0167218    .0261936
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.PRISCUS - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
```

```
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0295768   .0024163    12.24   0.000     .0248409    .0343127
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.PRISCUS - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0371617   .0024163    15.38   0.000     .0324258    .0418976
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.PRISCUS - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0711893   .0024163    29.46   0.000     .0664534    .0759252
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.PRISCUS - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .3678437   .0024163   152.23   0.000     .3631078    .3725796
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.PRISCUS - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1545759    .002465    62.71   0.000     .1497445    .1594073
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.PRISCUS - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0970861   .0025087    38.70   0.000     .0921691    .1020032
------------------------------------------------------------------------------
```

```
 ( 1)  8.num_PSF4Q#1bn.PRISCUS - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0669837   .0025377    26.40   0.000       .06201    .0719574
------------------------------------------------------------------------------
```

STOPP

```
( 1)  1bn.num_PSF4Q#1bn.STOPP - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0304238   .0022277    13.66   0.000     .0260575      .03479
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.STOPP - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0367442   .0022277    16.49   0.000      .032378    .0411104
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.STOPP - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0421321   .0022277    18.91   0.000     .0377658    .0464983
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.STOPP - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0704621   .0022277    31.63   0.000     .0660959    .0748284
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.STOPP - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .3889124   .0022277   174.58   0.000     .3845462    .3932786
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.STOPP - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .187466    .002264    82.80   0.000     .1830286    .1919033
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.STOPP - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1362494    .002301    59.21   0.000     .1317395    .1407594
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q#1bn.STOPP - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1105583   .0023281    47.49   0.000     .1059954    .1151212
------------------------------------------------------------------------------
```

FORTA

```
( 1)  1bn.num_PSF4Q#1bn.FORTA - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0220391   .0021743   -10.14   0.000    -.0263006   -.0177776
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.FORTA - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |  -.0241457   .0021743   -11.11   0.000    -.0284072   -.0198842
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.FORTA - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0317419   .0021743   -14.60   0.000    -.0360034   -.0274804
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.FORTA - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0564486   .0021743   -25.96   0.000    -.0607101   -.0521871
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.FORTA - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1650235   .0021743    75.90   0.000      .160762     .169285
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.FORTA - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0860843   .0021905    39.30   0.000     .0817909    .0903777
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.FORTA - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0533481   .0022095    24.14   0.000     .0490175    .0576787
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q#1bn.FORTA - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0336489   .0022247    15.13   0.000     .0292885    .0380092
------------------------------------------------------------------------------
```

Lincom (IG vs. KG mit Korrektur vor Q4 DiD)

PRISCUS

```
( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 5.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .2966545   .0033707    88.01   0.000     .2900481    .3032609
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 6.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0833866   .0034057    24.48   0.000     .0767115    .0900618
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 7.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0258969   .0034375     7.53   0.000     .0191594    .0326343
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 8.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0042055   .0034587    -1.22   0.224    -.0109844    .0025734
------------------------------------------------------------------------------
```

STOPP

```
( 1)  - 4.num_PSF4Q#1bn.STOPP + 5.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .3184503   .0031076   102.48   0.000     .3123595     .324541
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 6.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1170038   .0031337    37.34   0.000     .1108619    .1231458
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 7.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0657873   .0031605    20.82   0.000     .0595927    .0719818
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 8.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0400961   .0031803    12.61   0.000     .0338629    .0463294
------------------------------------------------------------------------------
```

FORTA

```
( 1)  - 4.num_PSF4Q#1bn.FORTA + 5.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |   .2214721    .003033    73.02   0.000     .2155275    .2274167
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 6.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1425329   .0030447    46.81   0.000     .1365654    .1485004
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 7.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1097967   .0030584    35.90   0.000     .1038024     .115791
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 8.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0900975   .0030694    29.35   0.000     .0840816    .0961133
------------------------------------------------------------------------------
```

elix_score_reha_q

Modell

```
       panel variable:  versid (unbalanced)

Fitting constant-only model:
Iteration 0:   log likelihood =  5865686.3

Fitting full model:
Iteration 0:   log likelihood =  5866331.5
Iteration 1:   log likelihood =  5866331.5

Random-effects ML regression                    Number of obs     = 25,631,437
Group variable: versid                          Number of groups  =  3,235,804
```

```
Random effects u_i ~ Gaussian                   Obs per group:
                                                              min =          5
                                                              avg =        7.9
                                                              max =          8

                                                LR chi2(31)       =    1290.45
Log likelihood  =  5866331.5                    Prob > chi2       =     0.0000

-----------------------------------------------------------------------------------
elix_score_reha_q |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
------------------+----------------------------------------------------------------
        num_PSF4Q |
               2  |  -.0001437   .0002265    -0.63   0.526    -.0005876    .0003002
               3  |   .0005114   .0002265     2.26   0.024     .0000675    .0009553
               4  |   .0017013   .0002265     7.51   0.000     .0012574    .0021452
               5  |    .001219   .0002265     5.38   0.000     .0007751    .0016629
               6  |    .000203   .0002276     0.89   0.373    -.0002431     .000649
               7  |   .0001031   .0002285     0.45   0.652    -.0003448     .000551
               8  |   .0001963   .0002293     0.86   0.392    -.0002532    .0006458
                  |
        1.PRISCUS |   .0006139   .0003213     1.91   0.056    -.0000158    .0012436
                  |
num_PSF4Q#PRISCUS |
             2 1  |   .0001255   .0004543     0.28   0.782     -.000765     .001016
             3 1  |   5.70e-06   .0004543     0.01   0.990    -.0008848    .0008962
             4 1  |   .0001887   .0004543     0.42   0.678    -.0007018    .0010792
             5 1  |   .0045785   .0004543    10.08   0.000      .003688     .005469
             6 1  |   .0020271   .0004588     4.42   0.000     .0011278    .0029263
             7 1  |    .001575    .000463     3.40   0.001     .0006674    .0024825
             8 1  |   .0007029   .0004659     1.51   0.131    -.0002103    .0016161
                  |
          1.FORTA |  -.0007624   .0002852    -2.67   0.008    -.0013215   -.0002034
                  |
  num_PSF4Q#FORTA |
             2 1  |   1.52e-07   .0004034     0.00   1.000    -.0007904    .0007907
             3 1  |   -.000591   .0004034    -1.47   0.143    -.0013816    .0001996
             4 1  |  -.0010158   .0004034    -2.52   0.012    -.0018064   -.0002252
             5 1  |   .0000335   .0004034     0.08   0.934    -.0007571    .0008241
             6 1  |   .0016843   .0004047     4.16   0.000     .0008911    .0024775
             7 1  |   .0016604   .0004064     4.09   0.000     .0008639    .0024569
             8 1  |   .0014144   .0004078     3.47   0.001     .0006152    .0022136
                  |
          1.STOPP |   .0005815   .0002977     1.95   0.051    -1.95e-06     .001165
                  |
```

```
  num_PSF4Q#STOPP |
              2 1  |   .0002935    .000421     0.70   0.486    -.0005316    .0011187
              3 1  |  -.0003051    .000421    -0.72   0.469    -.0011302    .0005201
              4 1  |   .0002571    .000421     0.61   0.541     -.000568    .0010823
              5 1  |   .0036304    .000421     8.62   0.000     .0028053    .0044556
              6 1  |   .0013162   .0004242     3.10   0.002     .0004848    .0021476
              7 1  |   .0006667   .0004277     1.56   0.119    -.0001716     .001505
              8 1  |   .0007463   .0004304     1.73   0.083    -.0000973      .00159
                   |
             _cons |   .0021285   .0001601    13.29   0.000     .0018147    .0024424
-------------------+----------------------------------------------------------------
          /sigma_u |          0  (omitted)
          /sigma_e |   .1411664   .0000303                      .1411071    .1412257
               rho |          0  (omitted)
------------------------------------------------------------------------------------
LR test of sigma_u=0: chibar2(01) = 0.00              Prob >= chibar2 = 1.000
```

Margins

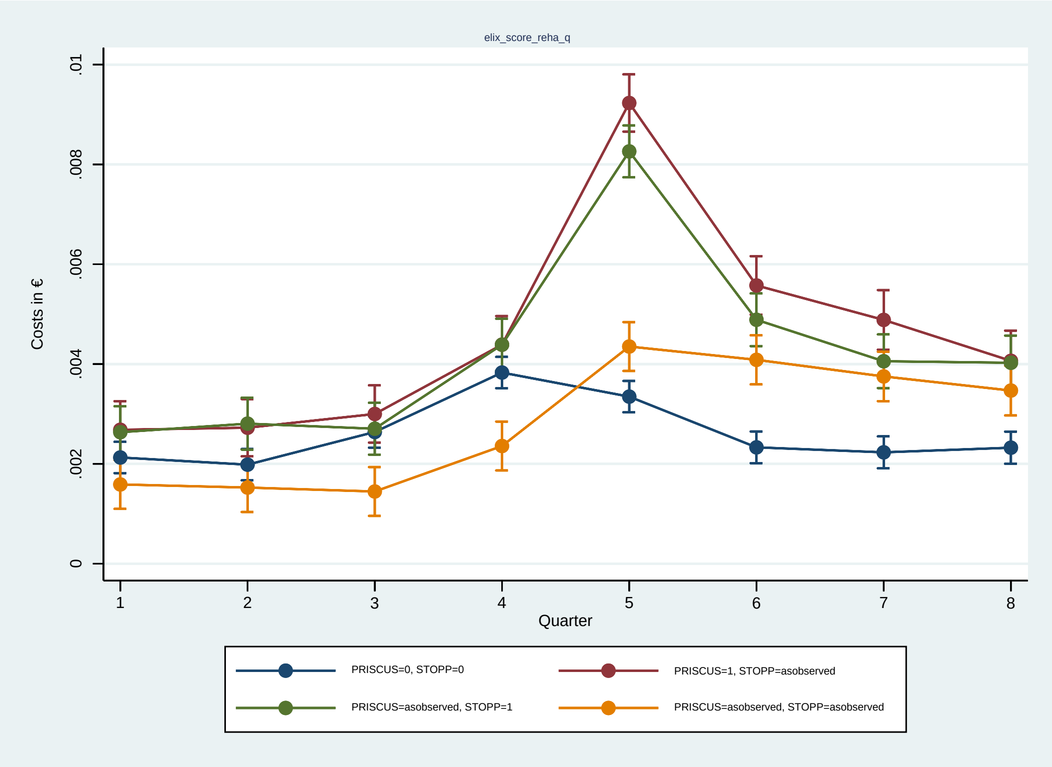
```
Predictive margins                              Number of obs     = 25,631,437
Model VCE    : OIM

Expression   : Linear prediction, predict()

------------------------------------------------------------------------------------------------
                              |            Delta-method
                              |      Margin   Std. Err.      z    P>|z|     [95% Conf. Interval]
------------------------------+-----------------------------------------------------------------
            num_PSF4Q#PRISCUS |
                          1 1 |    .0026834   .0002924     9.18   0.000     .0021103    .0032566
                          2 1 |    .0027252   .0002924     9.32   0.000      .002152    .0032983
                          3 1 |    .0030002   .0002924    10.26   0.000      .002427    .0035733
                          4 1 |    .0043889   .0002924    15.01   0.000     .0038158    .0049621
                          5 1 |    .0092312   .0002924    31.57   0.000     .0086581    .0098044
                          6 1 |    .0055757   .0002988    18.66   0.000       .00499    .0061615
                          7 1 |    .0048854   .0003048    16.03   0.000     .0042881    .0054827
                          8 1 |    .0040654   .0003086    13.17   0.000     .0034604    .0046703
                              |
              num_PSF4Q#STOPP |
                          1 1 |    .0026352    .000265     9.94   0.000     .0021157    .0031546
                          2 1 |     .002806    .000265    10.59   0.000     .0022866    .0033255
                          3 1 |    .0027045    .000265    10.20   0.000      .002185     .003224
                          4 1 |    .0043882    .000265    16.56   0.000     .0038687    .0049076
                          5 1 |    .0082611    .000265    31.17   0.000     .0077416    .0087805
                          6 1 |    .0048877   .0002694    18.14   0.000     .0043596    .0054158
```

```
                  7 1  |   .0040569   .0002744    14.78   0.000     .0035191    .0045947
                  8 1  |   .0040259   .0002781    14.48   0.000     .0034808     .004571
                       |
       num_PSF4Q#FORTA |
                  1 1  |   .0015881   .0002498     6.36   0.000     .0010986    .0020776
                  2 1  |   .0015256   .0002498     6.11   0.000     .0010361    .0020151
                  3 1  |    .001447   .0002498     5.79   0.000     .0009575    .0019366
                  4 1  |   .0023579   .0002498     9.44   0.000     .0018683    .0028474
                  5 1  |   .0043517   .0002498    17.42   0.000     .0038622    .0048413
                  6 1  |   .0040848   .0002511    16.27   0.000     .0035927    .0045769
                  7 1  |   .0037523    .000253    14.83   0.000     .0032564    .0042482
                  8 1  |   .0034694   .0002546    13.63   0.000     .0029704    .0039684
                       |
num_PSF4Q#PRISCUS#STOPP#FORTA |
              1 0 0 0  |   .0021285   .0001601    13.29   0.000     .0018147    .0024424
              2 0 0 0  |   .0019848   .0001601    12.39   0.000     .0016709    .0022987
              3 0 0 0  |     .00264   .0001601    16.48   0.000     .0023261    .0029538
              4 0 0 0  |   .0038298   .0001601    23.91   0.000     .0035159    .0041437
              5 0 0 0  |   .0033476   .0001601    20.90   0.000     .0030337    .0036615
              6 0 0 0  |   .0023315   .0001617    14.42   0.000     .0020145    .0026485
              7 0 0 0  |   .0022316    .000163    13.69   0.000     .0019121    .0025512
              8 0 0 0  |   .0023248   .0001642    14.16   0.000     .0020031    .0026466
------------------------------------------------------------------------------------------------
```

Grafik



Lincom (IG vs. KG)

PRISCUS

```
( 1)  1bn.num_PSF4Q#1bn.PRISCUS - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0005549   .0003334     1.66   0.096    -.0000985    .0012083
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.PRISCUS - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
```

```
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0007404   .0003334     2.22   0.026      .000087    .0013938
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.PRISCUS - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0003602   .0003334     1.08   0.280    -.0002932    .0010136
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.PRISCUS - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0005591   .0003334     1.68   0.094    -.0000943    .0012125
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.PRISCUS - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0058837   .0003334    17.65   0.000     .0052303    .0065371
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.PRISCUS - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0032443   .0003401     9.54   0.000     .0025776    .0039109
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.PRISCUS - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0026537   .0003462     7.67   0.000     .0019753    .0033322
------------------------------------------------------------------------------
```

```
 ( 1)  8.num_PSF4Q#1bn.PRISCUS - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0017405   .0003502     4.97   0.000     .0010542    .0024269
------------------------------------------------------------------------------
```

STOPP

```
( 1)  1bn.num_PSF4Q#1bn.STOPP - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0005066   .0003074     1.65   0.099    -.0000958     .001109
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.STOPP - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0008212   .0003074     2.67   0.008     .0002188    .0014236
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.STOPP - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0000645   .0003074     0.21   0.834    -.0005379    .0006669
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.STOPP - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0005583   .0003074     1.82   0.069     -.000044    .0011607
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.STOPP - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0049135   .0003074    15.99   0.000     .0043111    .0055159
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.STOPP - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0025562   .0003124     8.18   0.000      .001944    .0031685
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.STOPP - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0018252   .0003175     5.75   0.000      .001203    .0024475
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q#1bn.STOPP - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0017011   .0003212     5.30   0.000     .0010715    .0023307
------------------------------------------------------------------------------
```

FORTA

```
( 1)  1bn.num_PSF4Q#1bn.FORTA - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0005404      .0003    -1.80   0.072    -.0011284    .0000475
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.FORTA - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |  -.0004592       .0003    -1.53   0.126    -.0010472    .0001287
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.FORTA - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0011929       .0003    -3.98   0.000    -.0017808    -.000605
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.FORTA - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   -.001472       .0003    -4.91   0.000    -.0020599    -.000884
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.FORTA - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0010042       .0003     3.35   0.001     .0004162    .0015921
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.FORTA - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0017533   .0003022     5.80   0.000     .0011609    .0023457
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.FORTA - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0015207   .0003049     4.99   0.000     .0009232    .0021182
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q#1bn.FORTA - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0011446    .000307     3.73   0.000     .0005429    .0017462
------------------------------------------------------------------------------
```

Lincom (IG vs. KG mit Korrektur vor Q4 DiD)

PRISCUS

```
( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 5.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0053246   .0004715    11.29   0.000     .0044005    .0062486
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 6.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0026852   .0004763     5.64   0.000     .0017517    .0036186
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 7.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0020946   .0004806     4.36   0.000     .0011527    .0030366
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 8.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0011814   .0004835     2.44   0.015     .0002338    .0021291
------------------------------------------------------------------------------
```

STOPP

```
( 1)  - 4.num_PSF4Q#1bn.STOPP + 5.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0043551   .0004347    10.02   0.000     .0035032    .0052071
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 6.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0019979   .0004382     4.56   0.000      .001139    .0028568
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 7.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0012669   .0004419     2.87   0.004     .0004008     .002133
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 8.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0011427   .0004446     2.57   0.010     .0002714    .0020141
------------------------------------------------------------------------------
```

FORTA

```
( 1)  - 4.num_PSF4Q#1bn.FORTA + 5.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |   .0024761   .0004242     5.84   0.000     .0016446    .0033076
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 6.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0032253   .0004258     7.57   0.000     .0023907    .0040599
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 7.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0029926   .0004277     7.00   0.000     .0021544    .0038309
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 8.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0026165   .0004292     6.10   0.000     .0017753    .0034577
------------------------------------------------------------------------------
```

elix_score_ges_q

Modell

```
       panel variable:  versid (unbalanced)

Fitting constant-only model:
Iteration 0:   log likelihood =  -17267976
Iteration 1:   log likelihood =  -17140705
Iteration 2:   log likelihood =  -16939794
Iteration 3:   log likelihood =  -16925821
Iteration 4:   log likelihood =  -16925716
Iteration 5:   log likelihood =  -16925716

Fitting full model:
```

```
Iteration 0:   log likelihood =  -17239087
Iteration 1:   log likelihood =  -17122076
Iteration 2:   log likelihood =  -16903490
Iteration 3:   log likelihood =  -16887280
Iteration 4:   log likelihood =  -16887141
Iteration 5:   log likelihood =  -16887141

Random-effects ML regression                    Number of obs     = 25,631,437
Group variable: versid                          Number of groups  =  3,235,804

Random effects u_i ~ Gaussian                   Obs per group:
                                                              min =          5
                                                              avg =        7.9
                                                              max =          8

                                                LR chi2(31)       =   77150.07
Log likelihood  =  -16887141                    Prob > chi2       =     0.0000

----------------------------------------------------------------------------------
 elix_score_ges_q |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
------------------+---------------------------------------------------------------
        num_PSF4Q |
               2  |   .0082002   .0016154     5.08   0.000     .0050342    .0113663
               3  |   .0266358   .0016154    16.49   0.000     .0234697    .0298019
               4  |   .0960771   .0016154    59.48   0.000      .092911    .0992432
               5  |   .0608935   .0016154    37.70   0.000     .0577274    .0640596
               6  |   .0539893   .0016246    33.23   0.000     .0508051    .0571734
               7  |   .0578242   .0016322    35.43   0.000     .0546251    .0610233
               8  |   .0726021   .0016386    44.31   0.000     .0693905    .0758137
                  |
        1.PRISCUS |   .0072278   .0030674     2.36   0.018     .0012159    .0132397
                  |
num_PSF4Q#PRISCUS |
             2 1  |   .0072201   .0032406     2.23   0.026     .0008686    .0135716
             3 1  |   .0156953   .0032406     4.84   0.000     .0093438    .0220468
             4 1  |   .0506172   .0032406    15.62   0.000     .0442657    .0569687
             5 1  |   .2680126   .0032406    82.70   0.000     .2616611    .2743641
             6 1  |   .1076205   .0032776    32.84   0.000     .1011966    .1140445
             7 1  |   .0742928   .0033118    22.43   0.000     .0678018    .0807839
             8 1  |   .0558774   .0033348    16.76   0.000     .0493413    .0624134
                  |
          1.FORTA |   -.039294   .0027232   -14.43   0.000    -.0446314   -.0339567
                  |
  num_PSF4Q#FORTA |
```

```
             2 1  |  -.0052178    .002877    -1.81   0.070    -.0108566    .0004211
             3 1  |   -.015995    .002877    -5.56   0.000    -.0216338   -.0103561
             4 1  |  -.0554317    .002877   -19.27   0.000    -.0610706   -.0497929
             5 1  |    .084434    .002877    29.35   0.000     .0787951    .0900728
             6 1  |   .0628234   .0028881    21.75   0.000     .0571629     .068484
             7 1  |   .0459226   .0029016    15.83   0.000     .0402356    .0516095
             8 1  |   .0333449   .0029127    11.45   0.000      .027636    .0390537
                  |
          1.STOPP |   .0521456   .0028423    18.35   0.000     .0465749    .0577164
                  |
  num_PSF4Q#STOPP |
             2 1  |   .0053759   .0030028     1.79   0.073    -.0005095    .0112614
             3 1  |   .0112793   .0030028     3.76   0.000     .0053939    .0171647
             4 1  |    .043138   .0030028    14.37   0.000     .0372526    .0490234
             5 1  |   .3048113   .0030028   101.51   0.000     .2989259    .3106968
             6 1  |   .1419327   .0030291    46.86   0.000     .1359958    .1478695
             7 1  |   .1097808   .0030577    35.90   0.000     .1037877    .1157738
             8 1  |   .0950236   .0030793    30.86   0.000     .0889882     .101059
                  |
            _cons |    .135349    .001529    88.52   0.000     .1323522    .1383459
------------------+----------------------------------------------------------------
         /sigma_u |   .8959658   .0006312                      .8947296    .8972038
         /sigma_e |   1.006864   .0002312                      1.006411    1.007317
              rho |   .4419165   .0003716                      .4411882     .442645
-----------------------------------------------------------------------------------
LR test of sigma_u=0: chibar2(01) = 3.5e+06            Prob >= chibar2 = 0.000
```

Margins

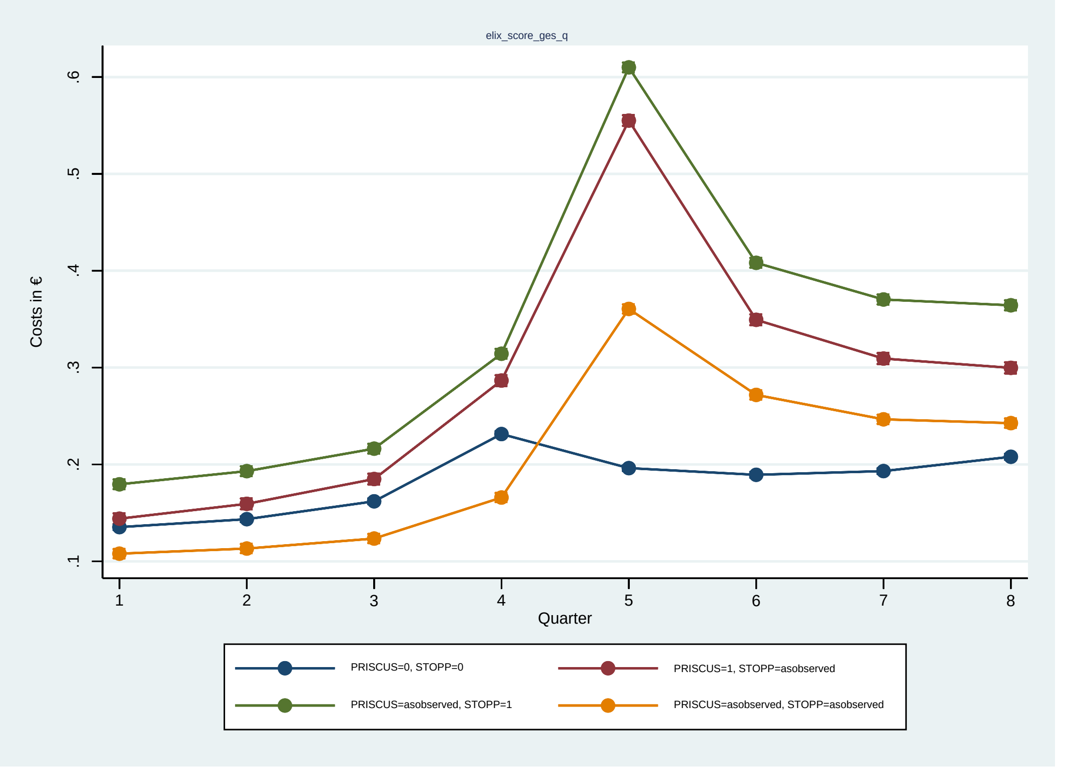
```
Predictive margins                                Number of obs     = 25,631,437
Model VCE    : OIM

Expression   : Linear prediction, predict()

-----------------------------------------------------------------------------------------------
                              |            Delta-method
                              |      Margin   Std. Err.      z    P>|z|     [95% Conf. Interval]
------------------------------+----------------------------------------------------------------
            num_PSF4Q#PRISCUS |
                         1 1  |    .1440697    .002792    51.60   0.000     .1385975    .1495419
                         2 1  |    .1593716    .002792    57.08   0.000     .1538995    .1648438
                         3 1  |    .1849742    .002792    66.25   0.000      .179502    .1904464
                         4 1  |    .2866479    .002792   102.67   0.000     .2811757      .29212
                         5 1  |    .5550222    .002792   198.79   0.000       .54955    .5604944
                         6 1  |    .3493706   .0028318   123.37   0.000     .3438203    .3549208
```

7 1	.3093574	.002868	107.86	0.000	.3037362	.3149787
8 1	.299766	.0028917	103.67	0.000	.2940984	.3054335
num_PSF4Q#STOPP						
1 1	.1795363	.0025304	70.95	0.000	.1745768	.1844959
2 1	.1931067	.0025304	76.31	0.000	.1881471	.1980663
3 1	.2163529	.0025304	85.50	0.000	.2113933	.2213125
4 1	.3143103	.0025304	124.21	0.000	.3093507	.3192698
5 1	.6099414	.0025304	241.04	0.000	.6049818	.614901
6 1	.4081887	.0025577	159.59	0.000	.4031756	.4132018
7 1	.370332	.0025881	143.09	0.000	.3652595	.3754046
8 1	.3643255	.0026106	139.56	0.000	.3592088	.3694421
num_PSF4Q#FORTA						
1 1	.1079329	.0023846	45.26	0.000	.1032592	.1126067
2 1	.1132269	.0023846	47.48	0.000	.1085532	.1179007
3 1	.1235154	.0023846	51.80	0.000	.1188417	.1281892
4 1	.1658979	.0023846	69.57	0.000	.1612242	.1705717
5 1	.3605911	.0023846	151.22	0.000	.3559173	.3652648
6 1	.2718396	.0023928	113.61	0.000	.2671497	.2765295
7 1	.2466033	.0024045	102.56	0.000	.2418907	.251316
8 1	.2426939	.0024141	100.53	0.000	.2379624	.2474255
num_PSF4Q#PRISCUS#STOPP#FORTA						
1 0 0 0	.135349	.001529	88.52	0.000	.1323522	.1383459
2 0 0 0	.1435493	.001529	93.88	0.000	.1405525	.1465461
3 0 0 0	.1619849	.001529	105.94	0.000	.158988	.1649817
4 0 0 0	.2314261	.001529	151.36	0.000	.2284293	.2344229
5 0 0 0	.1962426	.001529	128.35	0.000	.1932458	.1992394
6 0 0 0	.1893383	.0015387	123.05	0.000	.1863224	.1923542
7 0 0 0	.1931733	.0015468	124.89	0.000	.1901416	.1962049
8 0 0 0	.2079511	.0015535	133.86	0.000	.2049063	.210996

Grafik



Lincom (IG vs. KG)

PRISCUS

```
( 1)  1bn.num_PSF4Q#1bn.PRISCUS - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0087206   .0031829     2.74   0.006     .0024823     .014959
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.PRISCUS - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
```

```
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0158223   .0031829     4.97   0.000      .009584    .0220607
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.PRISCUS - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0229893   .0031829     7.22   0.000      .016751    .0292277
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.PRISCUS - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0552217   .0031829    17.35   0.000     .0489834    .0614601
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.PRISCUS - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .3587796   .0031829   112.72   0.000     .3525413    .3650179
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.PRISCUS - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1600323   .0032247    49.63   0.000      .153712    .1663525
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.PRISCUS - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1161842   .0032618    35.62   0.000     .1097912    .1225771
------------------------------------------------------------------------------
```

```
 ( 1)  8.num_PSF4Q#1bn.PRISCUS - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0918148   .0032861    27.94   0.000     .0853742    .0982554
------------------------------------------------------------------------------
```

STOPP

```
( 1)  1bn.num_PSF4Q#1bn.STOPP - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0441873   .0029344    15.06   0.000     .0384359    .0499387
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.STOPP - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0495574   .0029344    16.89   0.000      .043806    .0553088
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.STOPP - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .054368   .0029344    18.53   0.000     .0486166    .0601194
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.STOPP - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0828842   .0029344    28.25   0.000     .0771328    .0886355
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.STOPP - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .4136988   .0029344   140.98   0.000     .4079474    .4194502
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.STOPP - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .2188504   .0029656    73.80   0.000      .213038    .2246628
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.STOPP - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1771588   .0029969    59.11   0.000     .1712849    .1830326
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q#1bn.STOPP - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1563743   .0030196    51.79   0.000      .150456    .1622926
------------------------------------------------------------------------------
```

FORTA

```
( 1)  1bn.num_PSF4Q#1bn.FORTA - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0274161    .002864    -9.57   0.000    -.0330295   -.0218027
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.FORTA - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |  -.0303223    .002864   -10.59   0.000    -.0359357   -.0247089
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.FORTA - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0384694    .002864   -13.43   0.000    -.0440828   -.0328561
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.FORTA - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0655282    .002864   -22.88   0.000    -.0711416   -.0599148
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.FORTA - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1643485    .002864    57.38   0.000     .1587351    .1699619
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.FORTA - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0825013    .002878    28.67   0.000     .0768606     .088142
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.FORTA - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |     .05343    .002894    18.46   0.000      .047758    .0591021
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q#1bn.FORTA - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0347428   .0029066    11.95   0.000     .0290459    .0404397
------------------------------------------------------------------------------
```

Lincom (IG vs. KG mit Korrektur vor Q4 DiD)

PRISCUS

```
( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 5.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .3035579   .0033627    90.27   0.000     .2969672    .3101486
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 6.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1048105   .0034023    30.81   0.000     .0981422    .1114788
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 7.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0609624   .0034374    17.73   0.000     .0542251    .0676997
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 8.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0365931   .0034605    10.57   0.000     .0298106    .0433756
------------------------------------------------------------------------------
```

STOPP

```
( 1)  - 4.num_PSF4Q#1bn.STOPP + 5.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .3308147   .0031002   106.71   0.000     .3247384    .3368909
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 6.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1359662   .0031297    43.44   0.000     .1298322    .1421003
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 7.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0942746   .0031594    29.84   0.000     .0880823    .1004669
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 8.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0734902   .0031809    23.10   0.000     .0672557    .0797247
------------------------------------------------------------------------------
```

FORTA

```
( 1)  - 4.num_PSF4Q#1bn.FORTA + 5.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |   .2298767   .0030258    75.97   0.000     .2239462    .2358072
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 6.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1480295    .003039    48.71   0.000     .1420731    .1539858
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 7.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1189582   .0030542    38.95   0.000     .1129722    .1249443
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 8.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .100271   .0030662    32.70   0.000     .0942614    .1062805
------------------------------------------------------------------------------
```

Logistische Regressionen

uaw_einw_q

Modell

```
       panel variable:  versid (unbalanced)
        time variable:  num_PSF4Q, 1 to 8, but with a gap
                delta:  1 unit

Iteration 1: tolerance = .02196322
Iteration 2: tolerance = .00030443
Iteration 3: tolerance = 2.522e-06
Iteration 4: tolerance = 4.007e-08

GEE population-averaged model                   Number of obs     = 25,631,437
```

```
Group and time vars:      versid num_PSF4Q      Number of groups  =  1,381,086
Link:                                logit      Obs per group:
Family:                           binomial                    min =          5
Correlation:                  unstructured                    avg =        7.9
                                                              max =          8
                                                Wald chi2(31)     =   72701.98
Scale parameter:                         1      Prob > chi2       =     0.0000
```

uaw_einw_q	Odds Ratio	Std. Err.	z	P>|z|	[95% Conf.	Interval]
num_PSF4Q						
2	1.025518	.0118115	2.19	0.029	1.002627	1.048931
3	1.153681	.0130731	12.62	0.000	1.128341	1.179591
4	1.799384	.018704	56.51	0.000	1.763095	1.836419
5	1.558258	.016186	42.70	0.000	1.526855	1.590307
6	1.252687	.0138045	20.44	0.000	1.225921	1.280037
7	1.22637	.0137193	18.24	0.000	1.199774	1.253557
8	1.314137	.0145943	24.60	0.000	1.285841	1.343055
1.PRISCUS	1.107262	.0178819	6.31	0.000	1.072763	1.14287
num_PSF4Q#PRISCUS						
2 1	1.007776	.0222109	0.35	0.725	.9651699	1.052262
3 1	1.04445	.0225281	2.02	0.044	1.001216	1.089551
4 1	1.074804	.0212077	3.66	0.000	1.034031	1.117184
5 1	1.740936	.0318879	30.27	0.000	1.679546	1.804571
6 1	1.372542	.0272673	15.94	0.000	1.320126	1.427039
7 1	1.239656	.0254648	10.46	0.000	1.190738	1.290585
8 1	1.123871	.0233979	5.61	0.000	1.078935	1.170679
1.FORTA	.6665796	.0113092	-23.91	0.000	.6447784	.6891179
num_PSF4Q#FORTA						
2 1	.9877429	.0229375	-0.53	0.595	.943794	1.033738
3 1	.9095226	.0210513	-4.10	0.000	.8691846	.9517326
4 1	.8445603	.0179979	-7.93	0.000	.8100116	.8805825
5 1	1.596212	.0308071	24.23	0.000	1.536959	1.657749
6 1	1.553395	.0318621	21.47	0.000	1.492185	1.617116
7 1	1.497133	.0313644	19.26	0.000	1.436904	1.559885
8 1	1.421693	.0299138	16.72	0.000	1.364256	1.481549
1.STOPP	1.325304	.0192645	19.38	0.000	1.288079	1.363605

```
  num_PSF4Q#STOPP |
              2 1  |   .9834859   .0195652    -0.84   0.403     .9458768     1.02259
              3 1  |   1.003315   .0195911     0.17   0.865     .9656426    1.042457
              4 1  |   1.060937   .0189107     3.32   0.001     1.024513    1.098657
              5 1  |   2.285619   .0378163    49.96   0.000      2.21269    2.360953
              6 1  |   1.456439    .026089    20.99   0.000     1.406193    1.508481
              7 1  |     1.3232   .0243911    15.19   0.000     1.276248     1.37188
              8 1  |   1.217949   .0226476    10.60   0.000      1.17436    1.263157
                   |
             _cons |   .0186968   .0001578  -471.59   0.000     .0183901    .0190086
------------------------------------------------------------------------------------
```

Margins

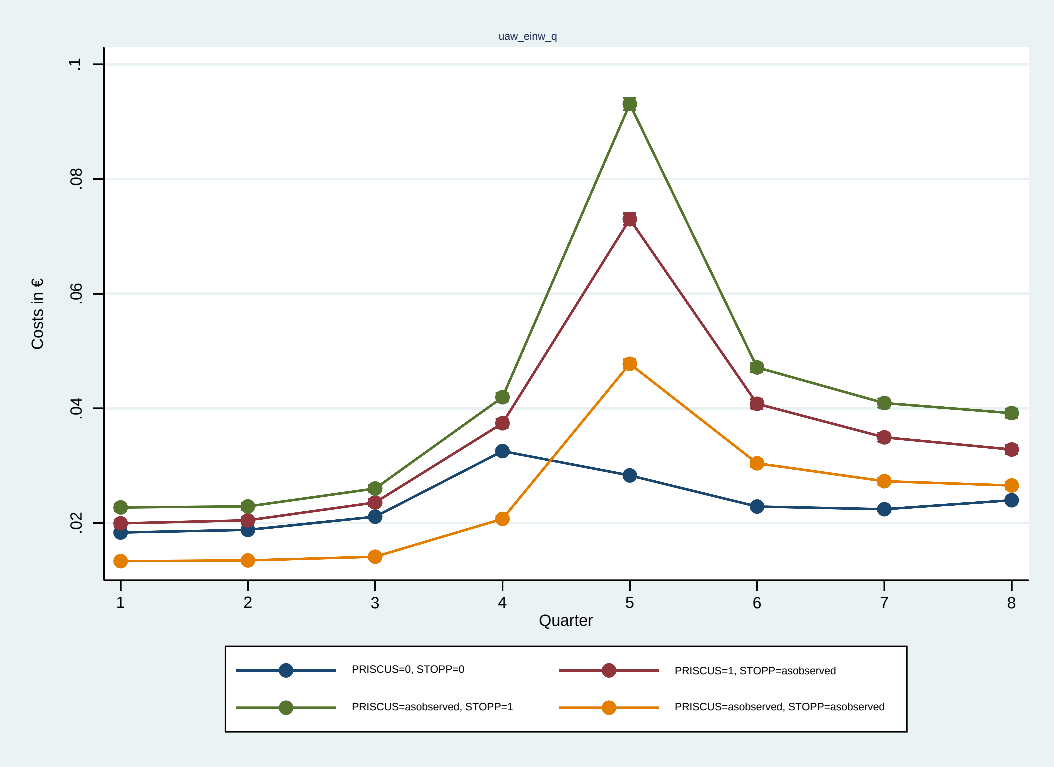
```
Predictive margins                              Number of obs     = 25,631,437
Model VCE    : Conventional

Expression   : Pr(uaw_einw_q != 0), predict()

------------------------------------------------------------------------------------------------
                              |            Delta-method
                              |     Margin   Std. Err.      z    P>|z|     [95% Conf. Interval]
------------------------------+-----------------------------------------------------------------
            num_PSF4Q#PRISCUS |
                          1 1 |   .0199469   .0002834    70.38   0.000     .0193913    .0205024
                          2 1 |   .0204745   .0002872    71.30   0.000     .0199116    .0210373
                          3 1 |   .0235925    .000307    76.85   0.000     .0229908    .0241942
                          4 1 |   .0374114   .0003825    97.81   0.000     .0366617     .038161
                          5 1 |   .0729905   .0005138   142.05   0.000     .0719834    .0739976
                          6 1 |   .0408065   .0004097    99.59   0.000     .0400034    .0416095
                          7 1 |   .0349539   .0003896    89.73   0.000     .0341904    .0357174
                          8 1 |   .0328302   .0003836    85.59   0.000     .0320784    .0335819
                              |
              num_PSF4Q#STOPP |
                          1 1 |    .022729   .0002781    81.74   0.000     .0221839     .023274
                          2 1 |    .022905    .000279    82.09   0.000     .0223581    .0234519
                          3 1 |   .0260262   .0002964    87.79   0.000     .0254452    .0266073
                          4 1 |   .0419473   .0003727   112.55   0.000     .0412168    .0426779
                          5 1 |   .0930863    .000536   173.66   0.000     .0920357    .0941369
                          6 1 |   .0471454   .0004007   117.67   0.000     .0463601    .0479306
                          7 1 |   .0409285   .0003826   106.99   0.000     .0401787    .0416782
                          8 1 |   .0391774   .0003805   102.97   0.000     .0384317     .039923
                              |
              num_PSF4Q#FORTA |
                          1 1 |   .0133526   .0002037    65.54   0.000     .0129533    .0137518
```

2 1	.0134863	.0002047	65.87	0.000	.013085	.0138876
3 1	.0141271	.0002096	67.39	0.000	.0137162	.014538
4 1	.0207322	.0002532	81.87	0.000	.0202358	.0212285
5 1	.04778	.0003796	125.87	0.000	.0470361	.048524
6 1	.0304247	.0003087	98.55	0.000	.0298196	.0310298
7 1	.0272968	.000295	92.54	0.000	.0267187	.027875
8 1	.0265567	.0002923	90.85	0.000	.0259838	.0271297
num_PSF4Q#PRISCUS#STOPP#FORTA						
1 0 0 0	.0183536	.000152	120.72	0.000	.0180557	.0186516
2 0 0 0	.0188132	.000154	122.17	0.000	.0185114	.019115
3 0 0 0	.0211147	.000163	129.54	0.000	.0207952	.0214342
4 0 0 0	.0325477	.000201	161.93	0.000	.0321538	.0329417
5 0 0 0	.0283097	.0001739	162.78	0.000	.0279688	.0286505
6 0 0 0	.0228852	.0001639	139.63	0.000	.022564	.0232065
7 0 0 0	.0224152	.0001654	135.53	0.000	.0220911	.0227394
8 0 0 0	.0239809	.0001738	137.99	0.000	.0236403	.0243216

Grafik



Lincom (IG vs.KG)

PRISCUS

(1) 1bn.num_PSF4Q#1bn.PRISCUS - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
(1)	.0015932	.0003199	4.98	0.000	.0009662	.0022202

(1) 2.num_PSF4Q#1bn.PRISCUS - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

```
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0016613   .0003241     5.13   0.000      .001026    .0022966
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.PRISCUS - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0024778   .0003456     7.17   0.000     .0018005    .0031551
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.PRISCUS - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0048636   .0004293    11.33   0.000     .0040223     .005705
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.PRISCUS - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0446809    .000536    83.37   0.000     .0436304    .0457313
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.PRISCUS - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0179212   .0004384    40.87   0.000     .0170619    .0187806
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.PRISCUS - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0125387   .0004213    29.76   0.000      .011713    .0133644
------------------------------------------------------------------------------
```

```
 ( 1)  8.num_PSF4Q#1bn.PRISCUS - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0088492   .0004196    21.09   0.000     .0080268    .0096716
------------------------------------------------------------------------------
```

STOPP

```
( 1)  1bn.num_PSF4Q#1bn.STOPP - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0043753   .0003142    13.93   0.000     .0037595    .0049911
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.STOPP - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0040918   .0003159    12.95   0.000     .0034727     .004711
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.STOPP - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0049115   .0003352    14.65   0.000     .0042545    .0055685
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.STOPP - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0093996   .0004195    22.41   0.000     .0085774    .0102218
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.STOPP - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0647766   .0005569   116.32   0.000     .0636852    .0658681
------------------------------------------------------------------------------
```

```
 ( 1)  6.num_PSF4Q#1bn.STOPP - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0242601   .0004287    56.58   0.000     .0234198    .0251005
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.STOPP - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0185132   .0004135    44.77   0.000     .0177027    .0193237
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q#1bn.STOPP - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0151964   .0004154    36.58   0.000     .0143823    .0160106
------------------------------------------------------------------------------
```

FORTA

```
( 1)  1bn.num_PSF4Q#1bn.FORTA - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0050011   .0002567   -19.49   0.000    -.0055041    -.004498
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.FORTA - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |  -.0053269   .0002587   -20.59   0.000    -.0058339   -.0048199
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.FORTA - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0069876   .0002681   -26.07   0.000     -.007513   -.0064622
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.FORTA - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0118156   .0003263   -36.21   0.000    -.0124551   -.0111761
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.FORTA - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0194704   .0004199    46.37   0.000     .0186474    .0202933
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.FORTA - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0075395   .0003529    21.36   0.000     .0068477    .0082312
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.FORTA - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0048816   .0003421    14.27   0.000     .0042111    .0055521
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q#1bn.FORTA - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0025758   .0003443     7.48   0.000      .001901    .0032506
------------------------------------------------------------------------------
```

Lincom IG vs. KG mit Korrektur vor Q4 DiD)

PRISCUS

```
( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 5.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0398173   .0006599    60.34   0.000     .0385239    .0411106
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 6.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0130576   .0006003    21.75   0.000      .011881    .0142342
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 7.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0076751   .0005904    13.00   0.000     .0065179    .0088322
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 8.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0039856   .0005899     6.76   0.000     .0028293    .0051419
------------------------------------------------------------------------------
```

STOPP

```
( 1)  - 4.num_PSF4Q#1bn.STOPP + 5.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .055377   .0006703    82.61   0.000     .0540632    .0566908
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 6.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0148605   .0005867    25.33   0.000     .0137105    .0160105
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 7.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0091136   .0005781    15.76   0.000     .0079805    .0102467
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 8.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0057968   .0005801     9.99   0.000     .0046598    .0069338
------------------------------------------------------------------------------
```

FORTA

```
( 1)  - 4.num_PSF4Q#1bn.FORTA + 5.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |   .0312859   .0005114    61.17   0.000     .0302835    .0322883
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 6.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .019355   .0004702    41.16   0.000     .0184335    .0202766
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 7.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0166971   .0004639    35.99   0.000      .015788    .0176063
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 8.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0143914    .000466    30.89   0.000     .0134781    .0153046
------------------------------------------------------------------------------
```

uaw_entl_q

Modell

```
        time variable:  num_PSF4Q, 1 to 8, but with a gap
                delta:  1 unit

Iteration 1: tolerance = .02296712
Iteration 2: tolerance = .00034913
Iteration 3: tolerance = 3.059e-06
Iteration 4: tolerance = 5.967e-08

GEE population-averaged model                   Number of obs     = 25,631,437
Group and time vars:      versid num_PSF4Q      Number of groups  =  1,381,086
Link:                                logit      Obs per group:
Family:                           binomial                    min =          5
```

Correlation: unstructured avg = 7.9
max = 8
Wald chi2(31) = 74340.17
Scale parameter: 1 Prob > chi2 = 0.0000

uaw_entl_q	Odds Ratio	Std. Err.	z	P>|z|	[95% Conf.	Interval]
num_PSF4Q						
2	1.025579	.0123641	2.10	0.036	1.00163	1.050101
3	1.16667	.0138517	12.98	0.000	1.139835	1.194137
4	1.869152	.0202863	57.63	0.000	1.829811	1.909338
5	1.614544	.0174906	44.22	0.000	1.580625	1.649192
6	1.272849	.014687	20.91	0.000	1.244386	1.301963
7	1.252094	.0146484	19.22	0.000	1.22371	1.281136
8	1.348195	.0156501	25.74	0.000	1.317868	1.37922
1.PRISCUS	1.097666	.0186983	5.47	0.000	1.061624	1.134933
num_PSF4Q#PRISCUS						
2 1	1.025303	.0236756	1.08	0.279	.9799339	1.072772
3 1	1.028843	.0233825	1.25	0.211	.9840201	1.075708
4 1	1.051287	.0217806	2.41	0.016	1.009453	1.094855
5 1	1.779305	.0341157	30.05	0.000	1.71368	1.847443
6 1	1.384866	.0289106	15.60	0.000	1.329346	1.442705
7 1	1.230374	.0265736	9.60	0.000	1.179377	1.283575
8 1	1.115889	.0244132	5.01	0.000	1.069051	1.164778
1.FORTA	.6493549	.0116987	-23.97	0.000	.6268259	.6726936
num_PSF4Q#FORTA						
2 1	.9864178	.0242342	-0.56	0.578	.9400451	1.035078
3 1	.9409292	.022927	-2.50	0.012	.8970492	.9869556
4 1	.8659973	.0193961	-6.42	0.000	.8288039	.9048597
5 1	1.67373	.0339746	25.37	0.000	1.608448	1.741661
6 1	1.600667	.0346617	21.72	0.000	1.534152	1.670065
7 1	1.50784	.0333829	18.55	0.000	1.44381	1.57471
8 1	1.430038	.0317895	16.09	0.000	1.36907	1.493722
1.STOPP	1.318194	.0201889	18.04	0.000	1.279212	1.358363
num_PSF4Q#STOPP						
2 1	.9922471	.0206889	-0.37	0.709	.952515	1.033636
3 1	1.015649	.0208065	0.76	0.448	.9756772	1.057259

```
         4 1  |   1.092505   .0203425     4.75   0.000     1.053353    1.133112
         5 1  |   2.367895   .0409772    49.81   0.000     2.288927    2.449586
         6 1  |   1.444562     .02719    19.54   0.000     1.392242    1.498849
         7 1  |    1.32782   .0256827    14.66   0.000     1.278425    1.379124
         8 1  |    1.22228   .0238349    10.29   0.000     1.176446      1.2699
              |
        _cons |   .0169342   .0001501  -460.26   0.000     .0166426    .0172309
------------------------------------------------------------------------------
```

Margins

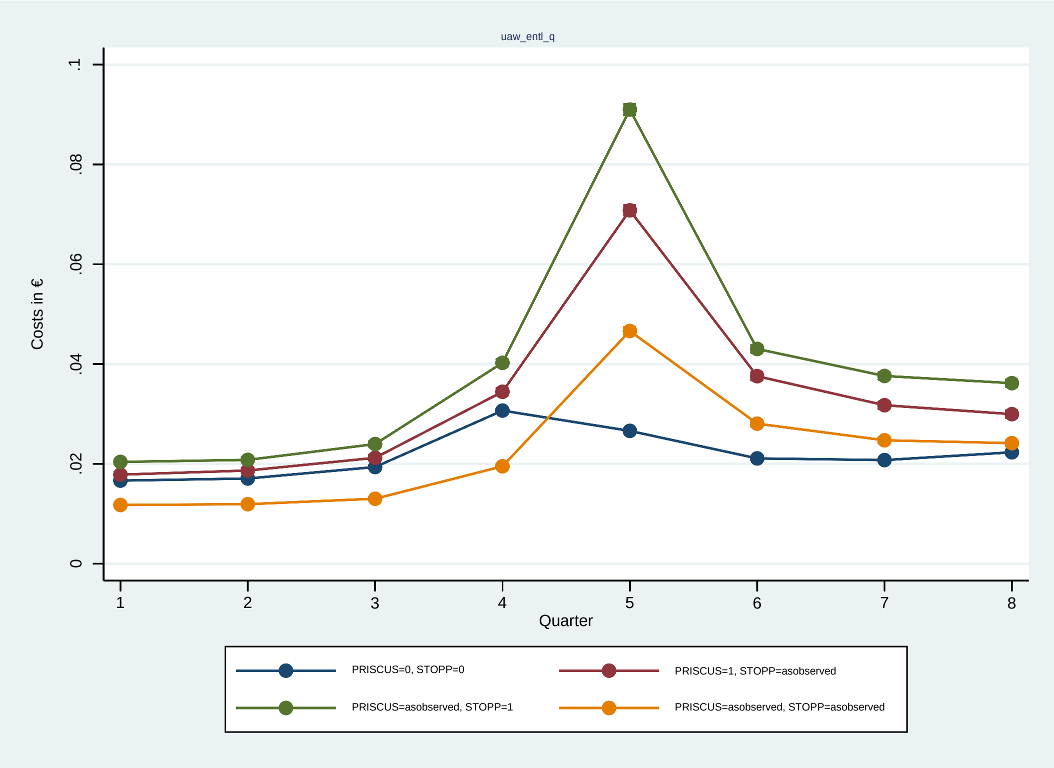
```
Predictive margins                              Number of obs     = 25,631,437
Model VCE    : Conventional

Expression   : Pr(uaw_entl_q != 0), predict()

------------------------------------------------------------------------------
                              |            Delta-method
                              |     Margin   Std. Err.      z    P>|z|     [95% Conf. Interval]
------------------------------+-----------------------------------------------------------------
            num_PSF4Q#PRISCUS |
                          1 1 |   .0178466   .0002682    66.53   0.000     .0173209    .0183724
                          2 1 |   .0186709   .0002743    68.08   0.000     .0181333    .0192084
                          3 1 |   .0212183   .0002914    72.81   0.000     .0206471    .0217895
                          4 1 |   .0344532   .0003672    93.82   0.000     .0337334    .0351729
                          5 1 |   .0707954   .0005059   139.93   0.000     .0698038    .0717869
                          6 1 |   .0375735   .0003941    95.35   0.000     .0368011    .0383458
                          7 1 |   .0317576   .0003718    85.43   0.000      .031029    .0324862
                          8 1 |   .0299688   .0003668    81.70   0.000     .0292498    .0306878
                              |
              num_PSF4Q#STOPP |
                          1 1 |   .0204026   .0002638    77.35   0.000     .0198856    .0209196
                          2 1 |   .0208034   .0002661    78.19   0.000     .0202819    .0213249
                          3 1 |   .0239746    .000285    84.11   0.000      .023416    .0245333
                          4 1 |   .0402488   .0003657   110.05   0.000     .0395319    .0409656
                          5 1 |   .0909949   .0005304   171.56   0.000     .0899553    .0920345
                          6 1 |   .0430342   .0003836   112.19   0.000     .0422824     .043786
                          7 1 |   .0376149   .0003675   102.36   0.000     .0368946    .0383351
                          8 1 |   .0361749   .0003662    98.77   0.000     .0354571    .0368928
                              |
              num_PSF4Q#FORTA |
                          1 1 |   .0117655   .0001913    61.49   0.000     .0113905    .0121405
                          2 1 |   .0119326   .0001928    61.90   0.000     .0115547    .0123104
                          3 1 |    .013019   .0002013    64.69   0.000     .0126245    .0134134
                          4 1 |   .0195164   .0002457    79.42   0.000     .0190348    .0199981
```

```
                        5 1  |    .046631   .0003752   124.30   0.000     .0458957    .0473662
                        6 1  |   .0280615   .0002969    94.51   0.000     .0274795    .0286434
                        7 1  |   .0247337   .0002811    87.99   0.000     .0241827    .0252846
                        8 1  |   .0241521    .000279    86.55   0.000     .0236052     .024699
                             |
num_PSF4Q#PRISCUS#STOPP#FORTA |
                    1 0 0 0  |   .0166522   .0001451   114.76   0.000     .0163678    .0169366
                    2 0 0 0  |   .0170709   .0001469   116.24   0.000      .016783    .0173587
                    3 0 0 0  |   .0193739   .0001563   123.94   0.000     .0190675    .0196802
                    4 0 0 0  |   .0306814   .0001954   157.05   0.000     .0302985    .0310643
                    5 0 0 0  |   .0266134   .0001681   158.34   0.000      .026284    .0269428
                    6 0 0 0  |   .0210999   .0001575   133.93   0.000     .0207911    .0214087
                    7 0 0 0  |    .020763   .0001595   130.16   0.000     .0204503    .0210756
                    8 0 0 0  |    .022321    .000168   132.85   0.000     .0219917    .0226503
-----------------------------------------------------------------------------------------------
```

Grafik



Lincom (IG vs.KG)

PRISCUS

```
( 1)  1bn.num_PSF4Q#1bn.PRISCUS - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0011944   .0003033     3.94   0.000        .0006    .0017889
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.PRISCUS - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
```

```
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |      .0016   .0003094     5.17   0.000     .0009935    .0022065
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.PRISCUS - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0018445   .0003288     5.61   0.000     .0012001    .0024889
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.PRISCUS - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0037717   .0004131     9.13   0.000      .002962    .0045814
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.PRISCUS - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .044182   .0005266    83.91   0.000     .0431499     .045214
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.PRISCUS - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0164736   .0004217    39.07   0.000     .0156471    .0173001
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.PRISCUS - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0109946   .0004027    27.30   0.000     .0102054    .0117839
------------------------------------------------------------------------------
```

```
 ( 1)  8.num_PSF4Q#1bn.PRISCUS - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0076478    .000402    19.02   0.000     .0068598    .0084358
------------------------------------------------------------------------------
```

STOPP

```
( 1)  1bn.num_PSF4Q#1bn.STOPP - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0037504   .0002985    12.57   0.000     .0031654    .0043354
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.STOPP - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0037325   .0003012    12.39   0.000     .0031421    .0043229
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.STOPP - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0046008   .0003222    14.28   0.000     .0039693    .0052323
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.STOPP - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0095673   .0004109    23.28   0.000      .008762    .0103726
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.STOPP - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0643815   .0005498   117.10   0.000     .0633039    .0654591
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.STOPP - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0219343   .0004107    53.41   0.000     .0211294    .0227393
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.STOPP - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0168519   .0003975    42.39   0.000     .0160728     .017631
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q#1bn.STOPP - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0138539   .0004002    34.62   0.000     .0130695    .0146384
------------------------------------------------------------------------------
```

FORTA

```
( 1)  1bn.num_PSF4Q#1bn.FORTA - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0048867   .0002425   -20.16   0.000    -.0053619   -.0044115
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.FORTA - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |  -.0051383   .0002447   -21.00   0.000    -.0056179   -.0046588
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.FORTA - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0063549   .0002573   -24.70   0.000    -.0068591   -.0058507
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.FORTA - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   -.011165   .0003168   -35.25   0.000    -.0117858   -.0105441
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.FORTA - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0200176   .0004133    48.44   0.000     .0192076    .0208276
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.FORTA - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0069616   .0003394    20.51   0.000     .0062964    .0076269
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.FORTA - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0039707   .0003269    12.15   0.000     .0033299    .0046115
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q#1bn.FORTA - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0018311   .0003298     5.55   0.000     .0011848    .0024774
------------------------------------------------------------------------------
```

Lincom IG vs. KG mit Korrektur vor Q4 DiD)

PRISCUS

```
( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 5.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0404103    .000641    63.05   0.000      .039154    .0416665
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 6.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0127019   .0005777    21.99   0.000     .0115696    .0138342
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 7.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0072229    .000567    12.74   0.000     .0061116    .0083343
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 8.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0038761   .0005669     6.84   0.000      .002765    .0049872
------------------------------------------------------------------------------
```

STOPP

```
( 1)  - 4.num_PSF4Q#1bn.STOPP + 5.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0548142   .0006576    83.36   0.000     .0535253    .0561031
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 6.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .012367   .0005684    21.76   0.000     .0112529    .0134811
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 7.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0072846   .0005618    12.97   0.000     .0061834    .0083857
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 8.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0042866    .000564     7.60   0.000     .0031812    .0053921
------------------------------------------------------------------------------
```

FORTA

```
( 1)  - 4.num_PSF4Q#1bn.FORTA + 5.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |   .0311826   .0004991    62.47   0.000     .0302043    .0321609
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 6.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0181266   .0004543    39.90   0.000     .0172362     .019017
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 7.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0151357   .0004473    33.84   0.000     .0142591    .0160123
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 8.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0129961   .0004495    28.91   0.000     .0121151     .013877
------------------------------------------------------------------------------
```

uaw_q

Modell

```
       panel variable:  versid (unbalanced)
        time variable:  num_PSF4Q, 1 to 8, but with a gap
                delta:  1 unit

Iteration 1: tolerance = .0272278
Iteration 2: tolerance = .00046317
Iteration 3: tolerance = 4.637e-06
Iteration 4: tolerance = 8.813e-08

GEE population-averaged model                   Number of obs     = 25,631,437
Group and time vars:      versid num_PSF4Q      Number of groups  =  1,381,086
Link:                                logit      Obs per group:
```

```
Family:                          binomial                    min =          5
Correlation:                 unstructured                    avg =        7.9
                                                             max =          8
                                            Wald chi2(31)      =   93422.89
Scale parameter:                        1      Prob > chi2       =     0.0000

------------------------------------------------------------------------------
            uaw_q | Odds Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
------------------+-----------------------------------------------------------
        num_PSF4Q |
               2  |   1.021903   .0103799     2.13   0.033     1.001759    1.042451
               3  |   1.153036   .0115704    14.19   0.000      1.13058    1.175938
               4  |   1.786929   .0164937    62.89   0.000     1.754893     1.81955
               5  |   1.574576   .0144844    49.35   0.000     1.546441    1.603222
               6  |   1.267062   .0123558    24.27   0.000     1.243076    1.291512
               7  |   1.245128   .0123167    22.16   0.000     1.221221    1.269504
               8  |   1.332946   .0130952    29.25   0.000     1.307525     1.35886
                  |
        1.PRISCUS |   1.108223   .0158971     7.16   0.000     1.077499    1.139823
                  |
num_PSF4Q#PRISCUS |
             2 1  |   1.013208     .01966     0.68   0.499     .9753983    1.052483
             3 1  |   1.038089   .0198214     1.96   0.050     .9999576    1.077674
             4 1  |   1.071299   .0187523     3.93   0.000     1.035168     1.10869
             5 1  |   1.783437   .0289429    35.65   0.000     1.727603    1.841076
             6 1  |   1.386388   .0243626    18.59   0.000     1.339451     1.43497
             7 1  |    1.24022   .0225365    11.85   0.000     1.196826    1.285187
             8 1  |   1.121209   .0206548     6.21   0.000     1.081449    1.162431
                  |
          1.FORTA |   .6680614   .0100489   -26.82   0.000     .6486534    .6880501
                  |
  num_PSF4Q#FORTA |
             2 1  |   .9842229   .0201116    -0.78   0.436     .9455838    1.024441
             3 1  |   .9271869    .018879    -3.71   0.000     .8909134    .9649372
             4 1  |   .8589458   .0161536    -8.09   0.000     .8278618     .891197
             5 1  |   1.631992   .0278254    28.73   0.000     1.578356     1.68745
             6 1  |   1.569121   .0284105    24.88   0.000     1.514413    1.625804
             7 1  |    1.48055    .027418    21.19   0.000     1.427775    1.535276
             8 1  |   1.413324    .026277    18.61   0.000     1.362749    1.465776
                  |
          1.STOPP |   1.341658   .0172887    22.81   0.000     1.308197    1.375974
                  |
  num_PSF4Q#STOPP |
             2 1  |   .9791316   .0171353    -1.21   0.228     .9461166    1.013299
```

```
         3 1  |    1.00431   .0173091     0.25   0.803     .9709513    1.038815
         4 1  |   1.073172   .0169193     4.48   0.000     1.040517    1.106851
         5 1  |   2.299934   .0336636    56.90   0.000     2.234891    2.366869
         6 1  |   1.450133   .0229556    23.48   0.000     1.405832     1.49583
         7 1  |   1.322906   .0215352    17.19   0.000     1.281364    1.365794
         8 1  |   1.217021   .0199866    11.96   0.000     1.178472    1.256831
              |
        _cons |   .0238635   .0001791  -497.83   0.000     .0235152    .0242171
-----------------------------------------------------------------------------------
Note: _cons estimates baseline odds (conditional on zero random effects).
```

Margins

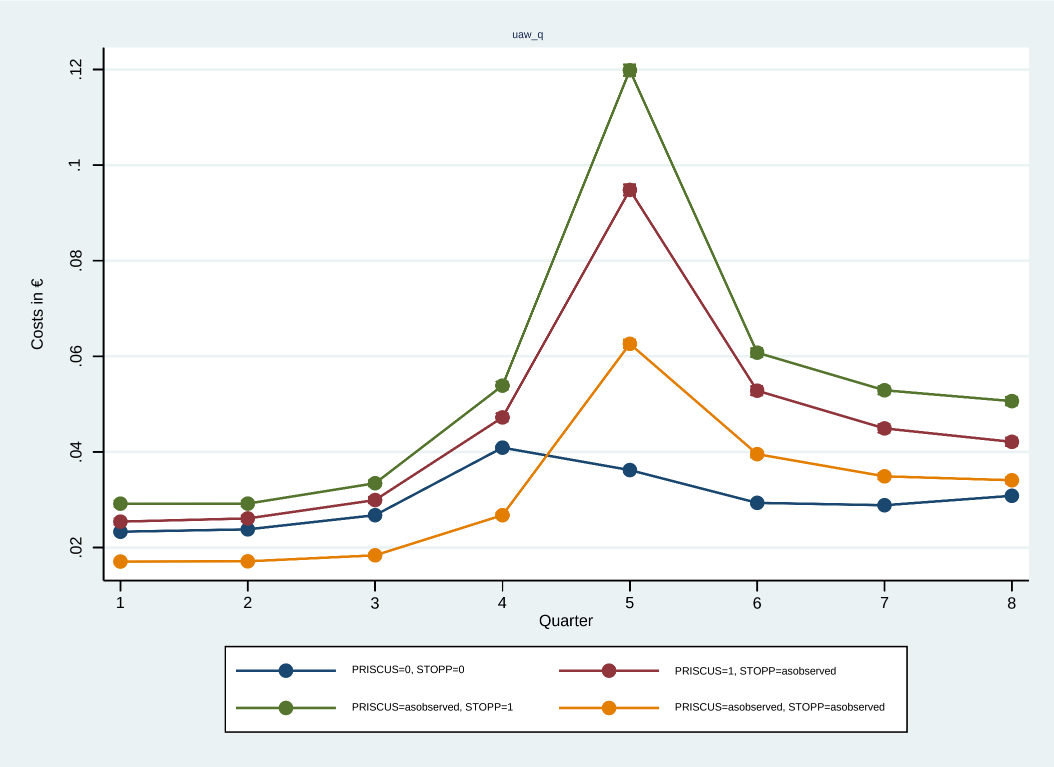
```
Predictive margins                                Number of obs     = 25,631,437
Model VCE    : Conventional

Expression   : Pr(uaw_q != 0), predict()

-----------------------------------------------------------------------------------------------
                              |            Delta-method
                              |     Margin   Std. Err.      z    P>|z|     [95% Conf. Interval]
------------------------------+----------------------------------------------------------------
            num_PSF4Q#PRISCUS |
                          1 1 |   .0254218    .000319    79.70   0.000     .0247966     .026047
                          2 1 |   .0260925   .0003232    80.73   0.000     .0254591    .0267259
                          3 1 |   .0299367   .0003447    86.84   0.000      .029261    .0306123
                          4 1 |   .0472219   .0004274   110.49   0.000     .0463842    .0480596
                          5 1 |   .0948101   .0005786   163.86   0.000      .093676    .0959441
                          6 1 |   .0528158   .0004632   114.02   0.000     .0519079    .0537237
                          7 1 |   .0449262   .0004391   102.32   0.000     .0440657    .0457867
                          8 1 |   .0421156   .0004321    97.46   0.000     .0412686    .0429625
                              |
              num_PSF4Q#STOPP |
                          1 1 |   .0291848   .0003141    92.93   0.000     .0285693    .0298003
                          2 1 |   .0291939   .0003139    93.00   0.000     .0285786    .0298092
                          3 1 |   .0334577   .0003349    99.89   0.000     .0328012    .0341141
                          4 1 |   .0538679   .0004198   128.32   0.000     .0530451    .0546907
                          5 1 |   .1198467    .000599   200.06   0.000     .1186726    .1210208
                          6 1 |     .06077   .0004515   134.59   0.000      .059885     .061655
                          7 1 |   .0529057   .0004322   122.42   0.000     .0520587    .0537528
                          8 1 |    .050633   .0004299   117.77   0.000     .0497904    .0514756
                              |
              num_PSF4Q#FORTA |
                          1 1 |   .0170708   .0002299    74.25   0.000     .0166202    .0175215
                          2 1 |   .0171189   .0002303    74.34   0.000     .0166675    .0175702
```

```
                         3 1  |   .0183746   .0002385    77.03   0.000     .0179071    .0188422
                         4 1  |   .0267713   .0002868    93.33   0.000     .0262091    .0273335
                         5 1  |     .06262   .0004298   145.69   0.000     .0617776    .0634625
                         6 1  |   .0395421   .0003501   112.96   0.000      .038856    .0402282
                         7 1  |    .034899    .000332   105.10   0.000     .0342482    .0355498
                         8 1  |   .0340773   .0003297   103.35   0.000      .033431    .0347235
                              |
num_PSF4Q#PRISCUS#STOPP#FORTA |
                     1 0 0 0  |   .0233074   .0001708   136.45   0.000     .0229726    .0236421
                     2 0 0 0  |   .0238057   .0001727   137.84   0.000     .0234672    .0241442
                     3 0 0 0  |   .0267787   .0001829   146.43   0.000     .0264203    .0271371
                     4 0 0 0  |   .0408985   .0002241   182.51   0.000     .0404593    .0413377
                     5 0 0 0  |   .0362142    .000196   184.74   0.000       .03583    .0365984
                     6 0 0 0  |   .0293492   .0001849   158.69   0.000     .0289867    .0297117
                     7 0 0 0  |   .0288558   .0001871   154.22   0.000     .0284891    .0292225
                     8 0 0 0  |   .0308282   .0001964   156.98   0.000     .0304433    .0312131
-----------------------------------------------------------------------------------------------
```

Grafik



Lincom (IG vs.KG)

PRISCUS

```
( 1)  1bn.num_PSF4Q#1bn.PRISCUS - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0021145   .0003598     5.88   0.000     .0014092    .0028197
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.PRISCUS - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
```

```
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0022868   .0003645     6.27   0.000     .0015724    .0030012
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.PRISCUS - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .003158    .000388     8.14   0.000     .0023976    .0039184
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.PRISCUS - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0063235   .0004794    13.19   0.000     .0053839     .007263
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.PRISCUS - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0585959   .0006039    97.03   0.000     .0574123    .0597794
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.PRISCUS - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0234666   .0004956    47.35   0.000     .0224952     .024438
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.PRISCUS - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0160704   .0004751    33.83   0.000     .0151393    .0170015
------------------------------------------------------------------------------
```

```
 ( 1)  8.num_PSF4Q#1bn.PRISCUS - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0112874    .000473    23.86   0.000     .0103604    .0122144
------------------------------------------------------------------------------
```

STOPP

```
( 1)  1bn.num_PSF4Q#1bn.STOPP - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0058775   .0003544    16.58   0.000     .0051828    .0065721
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.STOPP - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0053882   .0003551    15.17   0.000     .0046921    .0060843
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.STOPP - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .006679   .0003782    17.66   0.000     .0059378    .0074202
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.STOPP - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0129695   .0004714    27.51   0.000     .0120455    .0138935
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.STOPP - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0836325   .0006229   134.26   0.000     .0824116    .0848534
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.STOPP - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0314208   .0004833    65.02   0.000     .0304736     .032368
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.STOPP - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0240499   .0004673    51.47   0.000     .0231341    .0249658
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q#1bn.STOPP - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0198048   .0004694    42.19   0.000     .0188848    .0207248
------------------------------------------------------------------------------
```

FORTA

```
( 1)  1bn.num_PSF4Q#1bn.FORTA - 1bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0062365   .0002892   -21.57   0.000    -.0068033   -.0056697
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q#1bn.FORTA - 2.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |  -.0066868   .0002906   -23.01   0.000    -.0072565   -.0061172
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q#1bn.FORTA - 3.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   -.008404   .0003034   -27.70   0.000    -.0089988   -.0078093
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q#1bn.FORTA - 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0141272   .0003673   -38.46   0.000    -.0148471   -.0134073
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q#1bn.FORTA - 5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0264058   .0004752    55.56   0.000     .0254744    .0273373
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.FORTA - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0101929   .0003998    25.49   0.000     .0094093    .0109765
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.FORTA - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0060432   .0003855    15.67   0.000     .0052876    .0067989
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q#1bn.FORTA - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0032491   .0003885     8.36   0.000     .0024876    .0040106
------------------------------------------------------------------------------
```

Lincom IG vs. KG mit Korrektur vor Q4 DiD)

PRISCUS

```
( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 5.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA - 
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0522724   .0007323    71.38   0.000     .0508371    .0537077
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 6.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA - 
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0171432   .0006703    25.58   0.000     .0158294    .0184569
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 7.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA - 
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0097469   .0006595    14.78   0.000     .0084543    .0110396
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.PRISCUS + 8.num_PSF4Q#1bn.PRISCUS + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA - 
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0049639   .0006588     7.53   0.000     .0036726    .0062552
------------------------------------------------------------------------------
```

STOPP

```
( 1)  - 4.num_PSF4Q#1bn.STOPP + 5.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .070663   .0007423    95.19   0.000      .069208     .072118
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 6.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0184513   .0006562    28.12   0.000     .0171653    .0197373
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 7.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0110804   .0006485    17.09   0.000     .0098094    .0123515
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.STOPP + 8.num_PSF4Q#1bn.STOPP + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0068353   .0006508    10.50   0.000     .0055598    .0081108
------------------------------------------------------------------------------
```

FORTA

```
( 1)  - 4.num_PSF4Q#1bn.FORTA + 5.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
5.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |    .040533   .0005711    70.98   0.000     .0394137    .0416523
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 6.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0243201   .0005277    46.09   0.000     .0232858    .0253544
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 7.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0201704   .0005201    38.78   0.000     .0191509    .0211899
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q#1bn.FORTA + 8.num_PSF4Q#1bn.FORTA + 4.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA -
8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0173762   .0005228    33.24   0.000     .0163516    .0184009
------------------------------------------------------------------------------
```

tod_q

Modell

```
       panel variable:  versid (unbalanced)
        time variable:  num_PSF4Q, 5 to 8, but with a gap
                delta:  1 unit

. xtlogit tod_q i.num_PSF4Q##PRISCUS  i.num_PSF4Q##FORTA i.num_PSF4Q##STOPP [iw=balance_PSF4Q_atc_uaw_ed_inz], pa corr(uns) or

Iteration 1: tolerance = 8.314e-06
Iteration 2: tolerance = 4.283e-07

GEE population-averaged model                   Number of obs     = 12,688,221
Group and time vars:      versid num_PSF4Q      Number of groups  =  1,381,086
Link:                                logit      Obs per group:
```

```
Family:                          binomial                    min =          1
Correlation:                 unstructured                    avg =        3.9
                                                             max =          4
                                             Wald chi2(15)     =   30440.39
Scale parameter:                        1      Prob > chi2       =     0.0000

----------------------------------------------------------------------------------
           tod_q | Odds Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----------------+----------------------------------------------------------------
        num_PSF4Q |
               6 |    .895259   .0112805    -8.78   0.000     .8734205    .9176436
               7 |    .816479   .0107082   -15.46   0.000     .7957587    .8377387
               8 |   .7224974   .0098587   -23.82   0.000     .7034308    .7420807
                 |
        1.PRISCUS |   2.607927   .0326919    76.47   0.000     2.544633    2.672796
                 |
num_PSF4Q#PRISCUS |
             6 1 |   .8745743    .015942    -7.35   0.000     .8438801    .9063849
             7 1 |    .641182   .0129879   -21.94   0.000     .6162249    .6671499
             8 1 |   .5915875   .0127156   -24.42   0.000     .5671832     .617042
                 |
          1.FORTA |    .441616   .0083044   -43.46   0.000     .4256358     .458196
                 |
  num_PSF4Q#FORTA |
             6 1 |   1.585132   .0394852    18.49   0.000     1.509601    1.664442
             7 1 |   1.664486   .0432577    19.61   0.000     1.581826    1.751467
             8 1 |   1.639689   .0442063    18.34   0.000     1.555296    1.728662
                 |
          1.STOPP |    1.84801   .0234837    48.33   0.000     1.802551    1.894615
                 |
  num_PSF4Q#STOPP |
             6 1 |   1.194714   .0215544     9.86   0.000     1.153206    1.237716
             7 1 |   1.046147    .020354     2.32   0.020     1.007005    1.086811
             8 1 |    1.09322    .022138     4.40   0.000      1.05068    1.137482
                 |
           _cons |   .0162353   .0001413  -473.33   0.000     .0159606    .0165147
----------------------------------------------------------------------------------
Note: _cons estimates baseline odds (conditional on zero random effects).
```

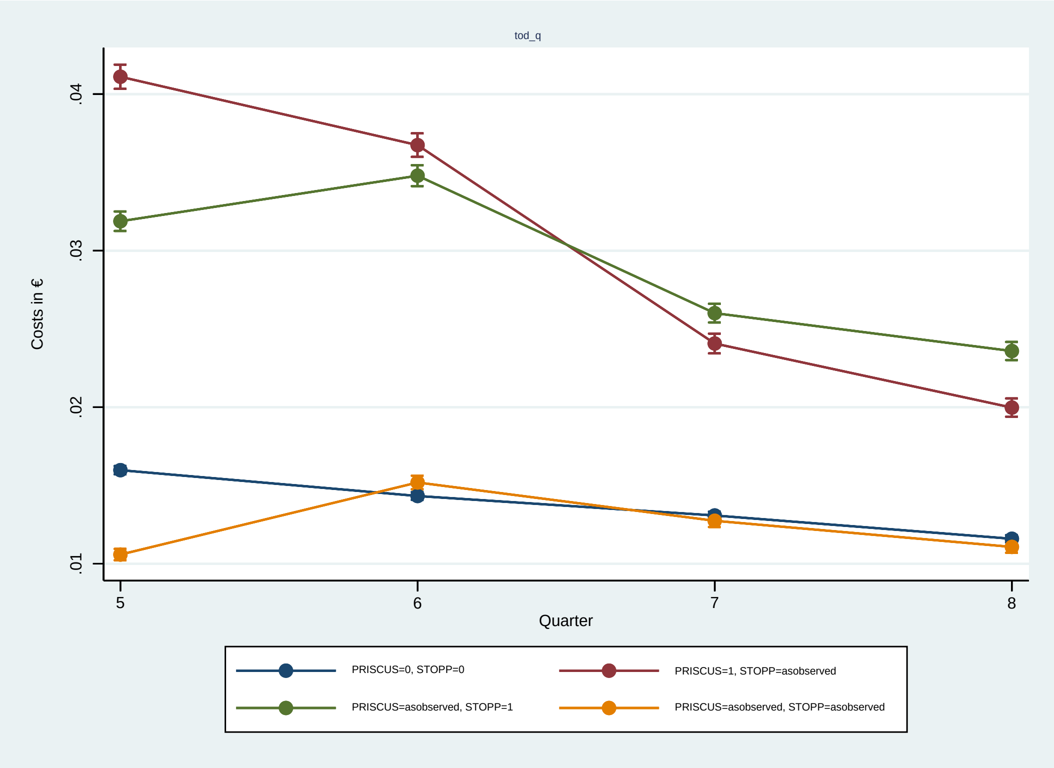
Margins

```
Predictive margins                              Number of obs     = 12,688,221
Model VCE    : Conventional

Expression   : Pr(tod_q != 0), predict()
```

	Margin	Delta-method Std. Err.	z	P>|z|	[95% Conf.	Interval]
num_PSF4Q#PRISCUS						
5 1	.0411087	.0003948	104.12	0.000	.0403348	.0418826
6 1	.0367408	.0003844	95.58	0.000	.0359874	.0374942
7 1	.0240675	.0003218	74.79	0.000	.0234368	.0246981
8 1	.0199737	.0002972	67.21	0.000	.0193912	.0205562
num_PSF4Q#STOPP						
5 1	.0318774	.0003171	100.51	0.000	.0312558	.032499
6 1	.0347886	.0003409	102.05	0.000	.0341205	.0354567
7 1	.0260072	.0003052	85.22	0.000	.025409	.0266053
8 1	.0235871	.0002957	79.76	0.000	.0230074	.0241667
num_PSF4Q#FORTA						
5 1	.0105835	.0001846	57.34	0.000	.0102218	.0109453
6 1	.01519	.0002212	68.66	0.000	.0147564	.0156236
7 1	.0127439	.0002038	62.54	0.000	.0123445	.0131433
8 1	.0110725	.0001912	57.91	0.000	.0106978	.0114473
num_PSF4Q#PRISCUS#STOPP#FORTA						
5 0 0 0	.0159759	.0001369	116.74	0.000	.0157077	.0162442
6 0 0 0	.0143266	.0001286	111.37	0.000	.0140744	.0145787
7 0 0 0	.0130824	.0001266	103.30	0.000	.0128341	.0133306
8 0 0 0	.011594	.0001204	96.29	0.000	.011358	.01183

Grafik



Lincom (IG vs.KG)

PRISCUS

```
( 1)  5bn.num_PSF4Q#1bn.PRISCUS - 5bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0251328    .000414    60.70   0.000     .0243213    .0259442
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.PRISCUS - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
```

```
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0224142    .000402    55.76   0.000     .0216263    .0232021
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.PRISCUS - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0109851   .0003437    31.97   0.000     .0103115    .0116586
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q#1bn.PRISCUS - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0083797   .0003186    26.30   0.000     .0077553    .0090042
------------------------------------------------------------------------------
```

STOPP

```
( 1)  5bn.num_PSF4Q#1bn.STOPP - 5bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0159014   .0003395    46.84   0.000     .0152361    .0165668
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.STOPP - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .020462   .0003596    56.91   0.000     .0197573    .0211668
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.STOPP - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0129248   .0003273    39.49   0.000     .0122834    .0135663
```

```
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q#1bn.STOPP - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0119931   .0003166    37.88   0.000     .0113725    .0126136
------------------------------------------------------------------------------
```

FORTA

```
( 1)  5bn.num_PSF4Q#1bn.FORTA - 5bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0053924    .000231   -23.34   0.000    -.0058452   -.0049395
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.FORTA - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0008634   .0002576     3.35   0.001     .0003586    .0013682
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.FORTA - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0003384   .0002422    -1.40   0.162    -.0008131    .0001362
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q#1bn.FORTA - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0005214   .0002282    -2.29   0.022    -.0009687   -.0000742
------------------------------------------------------------------------------
```

Prävalente PIMs

Balancierung

```
. ebalance  gruppe_PSF4Q  alter sex ///            1
>           pf11 pf21 pf31 pf41 ///        2
>           pf12 pf22 pf32 pf42 ///        3
>           pf13 pf23 pf33 pf43 ///      4
>           pf14 pf24 pf34 pf44 ///     5
>           med_kost_q1 med_kost_q2 med_kost_q3 med_kost_q4  ///          6
>           ddd_q1 ddd_q2 ddd_q3 ddd_q4 ///    7
>           stat_kost_q1 stat_kost_q2 stat_kost_q3 stat_kost_q4 ///       8
>           stat_tage_q1 stat_tage_q2 stat_tage_q3 stat_tage_q4 ///       9
>           amb_kost_q1 amb_kost_q2 amb_kost_q3 amb_kost_q4  ///          10
>           reha_kost_q1 reha_kost_q2 reha_kost_q3 reha_kost_q4 ///       11
>           reha_tage_q1 reha_tage_q2 reha_tage_q3 reha_tage_q4 ///       12
>           heil_kost_q1 heil_kost_q2 heil_kost_q3 heil_kost_q4 ///       13
>           dmp11 dmp21 dmp31 dmp41 dmp51 dmp61 /// 14
>           dmp12 dmp22 dmp32 dmp42 dmp52 dmp62 ///   15
>           dmp13 dmp23 dmp33 dmp43 dmp53 dmp63 ///   16
>           dmp14 dmp24 dmp34 dmp44 dmp54 dmp64 ///    17
>                   gr_q11 gr_q21 gr_q31 gr_q41 ///   18
>           bl1l1-bl16l1 ///    19
>           bl1l2-bl16l2 ///    20
>           bl1l3-bl16l3 ///    21
>           bl1l4-bl16l4 ///    22
>           chf_sum1 -aa_sum2 psyc_sum2 -depr_sum4  /// 23 chf_sum1- depr_sum4
>           vs11 vs21 vs31 /// 24
>           vs12 vs22 vs32 /// 25
>           vs13 vs23 vs33 /// 26
>           vs14 vs24 vs34 /// 27
>                   uaw_einw_q1 uaw_entl_q1 /// 28
>                   uaw_einw_q2 uaw_entl_q2 /// 29
>                   uaw_einw_q3 uaw_entl_q3 /// 30
>                   uaw_einw_q4 uaw_entl_q4 /// 31
>           atc_menge_q1 atc_menge_q2 atc_menge_q3 atc_menge_q4 /// 32
>   , tar(2) tol(0.0001) maxiter(50) gen(balance_PSF4Q_atc_uaw_ed_prev) keep(balance_PSF4Q_atc_uaw_ed_prev)
note: pf41 omitted because of collinearity
note: pf42 omitted because of collinearity
note: pf43 omitted because of collinearity
note: pf44 omitted because of collinearity
note: gr_q41 omitted because of collinearity
note: bl16l1 omitted because of collinearity
note: bl16l2 omitted because of collinearity
```

```
note: bl16l3 omitted because of collinearity
note: bl16l4 omitted because of collinearity
note: bl1l1 omitted because of collinearity
note: bl2l1 omitted because of collinearity
note: bl3l1 omitted because of collinearity
note: bl4l1 omitted because of collinearity
note: bl5l1 omitted because of collinearity
note: bl6l1 omitted because of collinearity
note: bl7l1 omitted because of collinearity
note: bl8l1 omitted because of collinearity
note: bl9l1 omitted because of collinearity
note: bl10l1 omitted because of collinearity
note: bl11l1 omitted because of collinearity
note: bl12l1 omitted because of collinearity
note: bl13l1 omitted because of collinearity
note: bl14l1 omitted because of collinearity
note: bl15l1 omitted because of collinearity
note: bl16l1 omitted because of collinearity
note: vs31 omitted because of collinearity
note: pf11 omitted because of collinearity
note: pf21 omitted because of collinearity
note: pf31 omitted because of collinearity
note: pf41 omitted because of collinearity
note: gr_q11 omitted because of collinearity
note: gr_q21 omitted because of collinearity
note: gr_q31 omitted because of collinearity
note: gr_q41 omitted because of collinearity
note: stat_kost_q2 omitted because of collinearity
note: stat_tage_q2 omitted because of collinearity
note: amb_kost_q2 omitted because of collinearity
note: reha_kost_q2 omitted because of collinearity
note: reha_tage_q2 omitted because of collinearity
note: heil_kost_q2 omitted because of collinearity
note: dmp12 omitted because of collinearity
note: dmp22 omitted because of collinearity
note: dmp32 omitted because of collinearity
note: dmp42 omitted because of collinearity
note: dmp52 omitted because of collinearity
note: dmp62 omitted because of collinearity
note: med_kost_q2 omitted because of collinearity
note: ddd_q2 omitted because of collinearity
note: kosten_ges_q2 omitted because of collinearity
note: bl1l2 omitted because of collinearity
note: bl2l2 omitted because of collinearity
```

```
note: bl3l2 omitted because of collinearity
note: bl4l2 omitted because of collinearity
note: bl5l2 omitted because of collinearity
note: bl6l2 omitted because of collinearity
note: bl7l2 omitted because of collinearity
note: bl8l2 omitted because of collinearity
note: bl9l2 omitted because of collinearity
note: bl10l2 omitted because of collinearity
note: bl11l2 omitted because of collinearity
note: bl12l2 omitted because of collinearity
note: bl13l2 omitted because of collinearity
note: bl14l2 omitted because of collinearity
note: bl15l2 omitted because of collinearity
note: bl16l2 omitted because of collinearity
note: vs32 omitted because of collinearity
note: pf12 omitted because of collinearity
note: pf22 omitted because of collinearity
note: pf32 omitted because of collinearity
note: pf42 omitted because of collinearity
note: gr_q12 omitted because of collinearity
note: gr_q22 omitted because of collinearity
note: gr_q32 omitted because of collinearity
note: gr_q42 omitted because of collinearity
note: stat_kost_q3 omitted because of collinearity
note: stat_tage_q3 omitted because of collinearity
note: amb_kost_q3 omitted because of collinearity
note: reha_kost_q3 omitted because of collinearity
note: reha_tage_q3 omitted because of collinearity
note: heil_kost_q3 omitted because of collinearity
note: dmp13 omitted because of collinearity
note: dmp23 omitted because of collinearity
note: dmp33 omitted because of collinearity
note: dmp43 omitted because of collinearity
note: dmp53 omitted because of collinearity
note: dmp63 omitted because of collinearity
note: med_kost_q3 omitted because of collinearity
note: ddd_q3 omitted because of collinearity
note: kosten_ges_q3 omitted because of collinearity
note: bl1l3 omitted because of collinearity
note: bl2l3 omitted because of collinearity
note: bl3l3 omitted because of collinearity
note: bl4l3 omitted because of collinearity
note: bl5l3 omitted because of collinearity
note: bl6l3 omitted because of collinearity
```

```
note: bl7l3 omitted because of collinearity
note: bl8l3 omitted because of collinearity
note: bl9l3 omitted because of collinearity
note: bl10l3 omitted because of collinearity
note: bl11l3 omitted because of collinearity
note: bl12l3 omitted because of collinearity
note: bl13l3 omitted because of collinearity
note: bl14l3 omitted because of collinearity
note: bl15l3 omitted because of collinearity
note: bl16l3 omitted because of collinearity
note: vs33 omitted because of collinearity
note: pf13 omitted because of collinearity
note: pf23 omitted because of collinearity
note: pf33 omitted because of collinearity
note: pf43 omitted because of collinearity
note: gr_q13 omitted because of collinearity
note: gr_q23 omitted because of collinearity
note: gr_q33 omitted because of collinearity
note: gr_q43 omitted because of collinearity
note: stat_kost_q4 omitted because of collinearity
note: stat_tage_q4 omitted because of collinearity
note: amb_kost_q4 omitted because of collinearity
note: reha_kost_q4 omitted because of collinearity
note: reha_tage_q4 omitted because of collinearity
note: heil_kost_q4 omitted because of collinearity
note: dmp14 omitted because of collinearity
note: dmp24 omitted because of collinearity
note: dmp34 omitted because of collinearity
note: dmp44 omitted because of collinearity
note: dmp54 omitted because of collinearity
note: dmp64 omitted because of collinearity
note: med_kost_q4 omitted because of collinearity
note: ddd_q4 omitted because of collinearity
note: kosten_ges_q4 omitted because of collinearity
note: vs11 omitted because of collinearity
note: vs21 omitted because of collinearity
note: vs31 omitted because of collinearity
note: vs12 omitted because of collinearity
note: vs22 omitted because of collinearity
note: vs32 omitted because of collinearity
note: vs13 omitted because of collinearity
note: vs23 omitted because of collinearity
note: vs33 omitted because of collinearity
note: vs34 omitted because of collinearity
```

```
note: uaw_einw_q1 omitted because of collinearity
note: uaw_entl_q1 omitted because of collinearity
note: uaw_einw_q2 omitted because of collinearity
note: uaw_entl_q2 omitted because of collinearity
note: uaw_einw_q3 omitted because of collinearity
note: uaw_entl_q3 omitted because of collinearity
note: atc_menge_q2 omitted because of collinearity
note: atc_menge_q3 omitted because of collinearity
note: atc_menge_q4 omitted because of collinearity


Data Setup
Treatment variable:   gruppe_PSF4Q_prev
Covariate adjustment: alter sex pf11 pf21 pf31 pf12 pf22 pf32 pf13 pf23 pf33 pf14 pf24 pf34 med_kost_q1 med_kost_q2 med_kost_q3
med_kost_q4 ddd_q1 ddd_q2
>  ddd_q3 ddd_q4 stat_kost_q1 stat_kost_q2 stat_kost_q3 stat_kost_q4 stat_tage_q1 stat_tage_q2 stat_tage_q3 stat_tage_q4 amb_kost_q1
amb_kost_q2 amb_kost
> _q3 amb_kost_q4 reha_kost_q1 reha_kost_q2 reha_kost_q3 reha_kost_q4 reha_tage_q1 reha_tage_q2 reha_tage_q3 reha_tage_q4
heil_kost_q1 heil_kost_q2 heil_
> kost_q3 heil_kost_q4 dmp11 dmp21 dmp31 dmp41 dmp51 dmp61 dmp12 dmp22 dmp32 dmp42 dmp52 dmp62 dmp13 dmp23 dmp33 dmp43 dmp53 dmp63
dmp14 dmp24 dmp34 dmp4
> 4 dmp54 dmp64 gr_q11 gr_q21 gr_q31 bl1l1 bl2l1 bl3l1 bl4l1 bl5l1 bl6l1 bl7l1 bl8l1 bl9l1 bl10l1 bl11l1 bl12l1 bl13l1 bl14l1 bl15l1
bl1l2 bl2l2 bl3l2 bl
> 4l2 bl5l2 bl6l2 bl7l2 bl8l2 bl9l2 bl10l2 bl11l2 bl12l2 bl13l2 bl14l2 bl15l2 bl1l3 bl2l3 bl3l3 bl4l3 bl5l3 bl6l3 bl7l3 bl8l3 bl9l3
bl10l3 bl11l3 bl12l3
> bl13l3 bl14l3 bl15l3 bl1l4 bl2l4 bl3l4 bl4l4 bl5l4 bl6l4 bl7l4 bl8l4 bl9l4 bl10l4 bl11l4 bl12l4 bl13l4 bl14l4 bl15l4 chf_sum1
caar_sum1 vd_sum1 pcd_sum
> 1 pvd_sum1 hyu_sum1 hyc_sum1 paral_sum1 ond_sum1 cpd_sum1 diau_sum1 diac_sum1 hypot_sum1 rf_sum1 ld_sum1 pud_sum1 aids_sum1
lym_sum1 mc_sum1 stwm_sum1
> ra_sum1 coa_sum1 ob_sum1 wl_sum1 fed_sum1 bla_sum1 dean_sum1 aa_sum1 drab_sum1 psyc_sum1 depr_sum1 uaw_einw_q1 uaw_entl_q1 vs11
vs21 atc_menge_q2 chf_s
> um2 caar_sum2 vd_sum2 pcd_sum2 pvd_sum2 hyu_sum2 hyc_sum2 paral_sum2 ond_sum2 cpd_sum2 diau_sum2 diac_sum2 hypot_sum2 rf_sum2
ld_sum2 pud_sum2 aids_sum
> 2 lym_sum2 mc_sum2 stwm_sum2 ra_sum2 coa_sum2 ob_sum2 wl_sum2 fed_sum2 bla_sum2 dean_sum2 aa_sum2 psyc_sum2 depr_sum2 uaw_einw_q2
uaw_entl_q2 vs12 vs22
>  atc_menge_q3 chf_sum3 caar_sum3 vd_sum3 pcd_sum3 pvd_sum3 hyu_sum3 hyc_sum3 paral_sum3 ond_sum3 cpd_sum3 diau_sum3 diac_sum3
hypot_sum3 rf_sum3 ld_sum
> 3 pud_sum3 aids_sum3 lym_sum3 mc_sum3 stwm_sum3 ra_sum3 coa_sum3 ob_sum3 wl_sum3 fed_sum3 bla_sum3 dean_sum3 aa_sum3 drab_sum3
psyc_sum3 depr_sum3 uaw_
> einw_q3 uaw_entl_q3 vs13 vs23 atc_menge_q4 chf_sum4 caar_sum4 vd_sum4 pcd_sum4 pvd_sum4 hyu_sum4 hyc_sum4 paral_sum4 ond_sum4
cpd_sum4 diau_sum4 diac_s
> um4 hypot_sum4 rf_sum4 ld_sum4 pud_sum4 aids_sum4 lym_sum4 mc_sum4 stwm_sum4 ra_sum4 coa_sum4 ob_sum4 wl_sum4 fed_sum4 bla_sum4
dean_sum4 aa_sum4 drab_
```

```
> sum4 psyc_sum4 depr_sum4 vs14 vs24 uaw_einw_q4 uaw_entl_q4 atc_menge_q1 (1st order). alter sex pf11 pf21 pf31 pf12 pf22 pf32 pf13
pf23 pf33 pf14 pf24 p
> f34 med_kost_q1 med_kost_q2 med_kost_q3 med_kost_q4 ddd_q1 ddd_q2 ddd_q3 ddd_q4 stat_kost_q1 stat_kost_q2 stat_kost_q3
stat_kost_q4 stat_tage_q1 stat_t
> age_q2 stat_tage_q3 stat_tage_q4 amb_kost_q1 amb_kost_q2 amb_kost_q3 amb_kost_q4 reha_kost_q1 reha_kost_q2 reha_kost_q3
reha_kost_q4 reha_tage_q1 reha_
> tage_q2 reha_tage_q3 reha_tage_q4 heil_kost_q1 heil_kost_q2 heil_kost_q3 heil_kost_q4 dmp11 dmp21 dmp31 dmp41 dmp51 dmp61 dmp12
dmp22 dmp32 dmp42 dmp52
>  dmp62 dmp13 dmp23 dmp33 dmp43 dmp53 dmp63 dmp14 dmp24 dmp34 dmp44 dmp54 dmp64 gr_q11 gr_q21 gr_q31 bl1l1 bl2l1 bl3l1 bl4l1 bl5l1
bl6l1 bl7l1 bl8l1 bl9
> l1 bl10l1 bl11l1 bl12l1 bl13l1 bl14l1 bl15l1 bl1l2 bl2l2 bl3l2 bl4l2 bl5l2 bl6l2 bl7l2 bl8l2 bl9l2 bl10l2 bl11l2 bl12l2 bl13l2
bl14l2 bl15l2 bl1l3 bl2l
> 3 bl3l3 bl4l3 bl5l3 bl6l3 bl7l3 bl8l3 bl9l3 bl10l3 bl11l3 bl12l3 bl13l3 bl14l3 bl15l3 bl1l4 bl2l4 bl3l4 bl4l4 bl5l4 bl6l4 bl7l4
bl8l4 bl9l4 bl10l4 bl11
> l4 bl12l4 bl13l4 bl14l4 bl15l4 chf_sum1 caar_sum1 vd_sum1 pcd_sum1 pvd_sum1 hyu_sum1 hyc_sum1 paral_sum1 ond_sum1 cpd_sum1
diau_sum1 diac_sum1 hypot_su
> m1 rf_sum1 ld_sum1 pud_sum1 aids_sum1 lym_sum1 mc_sum1 stwm_sum1 ra_sum1 coa_sum1 ob_sum1 wl_sum1 fed_sum1 bla_sum1 dean_sum1
aa_sum1 drab_sum1 psyc_su
> m1 depr_sum1 uaw_einw_q1 uaw_entl_q1 vs11 vs21 atc_menge_q2 chf_sum2 caar_sum2 vd_sum2 pcd_sum2 pvd_sum2 hyu_sum2 hyc_sum2
paral_sum2 ond_sum2 cpd_sum2
>  diau_sum2 diac_sum2 hypot_sum2 rf_sum2 ld_sum2 pud_sum2 aids_sum2 lym_sum2 mc_sum2 stwm_sum2 ra_sum2 coa_sum2 ob_sum2 wl_sum2
fed_sum2 bla_sum2 dean_s
> um2 aa_sum2 psyc_sum2 depr_sum2 uaw_einw_q2 uaw_entl_q2 vs12 vs22 atc_menge_q3 chf_sum3 caar_sum3 vd_sum3 pcd_sum3 pvd_sum3
hyu_sum3 hyc_sum3 paral_sum
> 3 ond_sum3 cpd_sum3 diau_sum3 diac_sum3 hypot_sum3 rf_sum3 ld_sum3 pud_sum3 aids_sum3 lym_sum3 mc_sum3 stwm_sum3 ra_sum3 coa_sum3
ob_sum3 wl_sum3 fed_s
> um3 bla_sum3 dean_sum3 aa_sum3 drab_sum3 psyc_sum3 depr_sum3 uaw_einw_q3 uaw_entl_q3 vs13 vs23 atc_menge_q4 chf_sum4 caar_sum4
vd_sum4 pcd_sum4 pvd_sum
> 4 hyu_sum4 hyc_sum4 paral_sum4 ond_sum4 cpd_sum4 diau_sum4 diac_sum4 hypot_sum4 rf_sum4 ld_sum4 pud_sum4 aids_sum4 lym_sum4
mc_sum4 stwm_sum4 ra_sum4 c
> oa_sum4 ob_sum4 wl_sum4 fed_sum4 bla_sum4 dean_sum4 aa_sum4 drab_sum4 psyc_sum4 depr_sum4 vs14 vs24 uaw_einw_q4 uaw_entl_q4
atc_menge_q1 (2nd order).

Optimizing...
Iteration 1: Max Difference = 19216095.9
Iteration 2: Max Difference = 7069204.58
Iteration 3: Max Difference = 2600612.99
Iteration 4: Max Difference = 956710.017
Iteration 5: Max Difference = 351951.909
Iteration 6: Max Difference = 129473.834
Iteration 7: Max Difference = 47628.7243
Iteration 8: Max Difference = 17519.5915
Iteration 9: Max Difference = 6443.06181
Iteration 10: Max Difference = 2368.23761
```

```
Iteration 11: Max Difference = 869.202657
Iteration 12: Max Difference = 317.763041
Iteration 13: Max Difference = 114.964906
Iteration 14: Max Difference = 40.5232492
Iteration 15: Max Difference = 13.4887201
Iteration 16: Max Difference = 4.08107796
Iteration 17: Max Difference = 1.11688641
Iteration 18: Max Difference = .294754119
Iteration 19: Max Difference = .047616664
Iteration 20: Max Difference = .003316448
Iteration 21: Max Difference = .000050558
maximum difference smaller than the tolerance level; convergence achieved


Treated units: 2745350 total of weights: 2745350
Control units: 2545306 total of weights: 2745350


Before: without weighting
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	Treat			Control		
	mean	variance	skewness	mean	variance	skewness
alter	77.11	50.15	.3353	75.5	49.61	.562
sex	.626	.2341	-.5207	.5722	.2448	-.2918
pf11	.1226	.1076	2.301	.0626	.05868	3.611
pf21	.127	.1109	2.241	.0647	.06052	3.539
pf31	.07244	.0672	3.299	.03644	.03511	4.948
pf12	.01993	.01953	6.87	.01372	.01353	8.362
pf22	.7608	.182	-1.223	.8771	.1078	-2.297
pf32	.07903	.07278	3.121	.03853	.03704	4.796
pf13	.02329	.02275	6.321	.01498	.01475	7.987
pf23	310.9	919729	29.41	144.8	403056	42.37
pf33	323.1	1024313	25.41	147.7	446468	44.92
pf14	338.7	1167475	23.47	151.6	486340	40.31
pf24	362.6	1412572	23.36	157.5	588224	50.24
pf34	494.2	150482	1.592	262.3	84430	2.042
med_kost_q1	498.5	152910	1.648	264.8	85086	2
med_kost_q2	505.5	154380	1.577	268.4	86234	2.024
med_kost_q3	516.2	156734	1.539	271.5	87611	2.029
med_kost_q4	595.7	7958311	19.1	264.7	3576009	85.16
ddd_q1	629.8	8994561	20.64	253.6	3272909	35.56
ddd_q2	818.6	1.33e+07	18.84	278.8	3656957	26.54
ddd_q3	1.322	31.4	9.262	.5511	12.22	15.09

ddd_q4	1.379	33.2	9.844	.5179	12.04	45.53
stat_kost_q1	229.7	274654	12.2	112.3	109895	17.56
stat_kost_q2	242.8	300788	11.72	115.5	113578	17.39
stat_kost_q3	254.1	326345	11.4	118.2	117083	17.09
stat_kost_q4	30.2	129374	22.62	16.61	70189	27.69
stat_tage_q1	31.94	147182	27.18	15.59	71458	36.82
stat_tage_q2	33.01	148831	22.1	14.9	64094	30.77
stat_tage_q3	.2282	5.661	14.04	.1221	2.976	16.94
stat_tage_q4	.2367	5.949	14.32	.1127	2.799	18.58
amb_kost_q1	.2641	11.55	464.6	.1083	2.68	18.87
amb_kost_q2	37.96	16969	7.625	20.53	9212	10.13
amb_kost_q3	39.25	17882	7.619	20.48	9470	10.42
amb_kost_q4	.1344	.1164	2.143	.06274	.0588	3.606
reha_kost_q1	.01764	.01733	7.329	.00939	.009302	10.17
reha_kost_q2	.2437	.1843	1.194	.1491	.1269	1.97
reha_kost_q3	.003677	.003664	16.4	.002524	.002518	19.83
reha_kost_q4	.001352	.001351	27.14	.00121	.001208	28.7
reha_tage_q1	.04376	.04185	4.46	.01834	.018	7.18
reha_tage_q2	.1356	.1172	2.129	.06358	.05954	3.577
reha_tage_q3	.01773	.01741	7.31	.009504	.009413	10.11
reha_tage_q4	.2448	.1849	1.187	.1508	.128	1.952
heil_kost_q1	.003596	.003583	16.59	.002436	.00243	20.19
heil_kost_q2	.001368	.001366	26.98	.001221	.001219	28.57
heil_kost_q3	.1368	.1181	2.114	.06443	.06028	3.548
heil_kost_q4	.2459	.1854	1.18	.1524	.1292	1.935
dmp11	.003533	.00352	16.73	.002367	.002361	20.48
dmp21	.001375	.001373	26.92	.001234	.001232	28.42
dmp31	.0449	.04289	4.395	.01911	.01874	7.026
dmp41	.1382	.1191	2.097	.06523	.06098	3.521
dmp51	.01793	.01761	7.265	.00976	.009665	9.973
dmp61	.247	.186	1.173	.154	.1303	1.917
dmp12	.00347	.003457	16.89	.002306	.002301	20.75
dmp22	.001378	.001376	26.88	.001249	.001247	28.25
dmp32	.04547	.0434	4.364	.01947	.01909	6.956
dmp42	.2441	.1845	1.192	.2403	.1825	1.216
dmp52	.2495	.1873	1.158	.257	.1909	1.112
dmp62	.03709	.03572	4.899	.03283	.03175	5.244
dmp13	.06685	.06238	3.468	.05811	.05474	3.777
dmp23	.01114	.01102	9.315	.01056	.01045	9.575
dmp33	.168	.1398	1.776	.1304	.1134	2.195
dmp43	.04904	.04664	4.176	.03676	.03541	4.924
dmp53	.03165	.03064	5.351	.02875	.02792	5.641
dmp63	.01266	.0125	8.718	.009164	.00908	10.3
dmp14	.09389	.08507	2.785	.08761	.07994	2.917

dmp24	.04914	.04673	4.171	.03942	.03787	4.734
dmp34	.04675	.04456	4.294	.04009	.03848	4.689
dmp44	.03708	.03571	4.9	.03283	.03175	5.244
dmp54	.07119	.06612	3.335	.2279	.1759	1.298
dmp64	.007727	.007667	11.24	.00678	.006734	12.02
gr_q11	.01113	.01101	9.319	.01055	.01044	9.579
gr_q21	.03277	.0317	5.249	.02317	.02263	6.339
gr_q31	.1049	.09387	2.579	.08534	.07806	2.968
bl1l1	.168	.1398	1.776	.1304	.1134	2.195
bl2l1	.03166	.03066	5.349	.02876	.02793	5.639
bl3l1	.09389	.08507	2.785	.08761	.07993	2.917
bl4l1	.03706	.03569	4.901	.03281	.03174	5.245
bl5l1	.04338	.0415	4.483	.0368	.03544	4.921
bl6l1	.07119	.06612	3.335	.2278	.1759	1.298
bl7l1	.007717	.007657	11.25	.006779	.006733	12.02
bl8l1	.1049	.09388	2.579	.08536	.07808	2.968
bl9l1	.01266	.0125	8.719	.009161	.009077	10.3
bl10l1	.04911	.0467	4.173	.0394	.03785	4.735
bl11l1	.03704	.03567	4.903	.03281	.03173	5.245
bl12l1	.04342	.04154	4.481	.03682	.03546	4.919
bl13l1	.0712	.06613	3.335	.2278	.1759	1.298
bl14l1	.174	.1437	1.72	.1464	.125	2.001
bl15l1	.00771	.00765	11.26	.006777	.006731	12.02
bl1l2	.06685	.06238	3.469	.05813	.05475	3.777
bl2l2	.0111	.01098	9.331	.01053	.01042	9.588
bl3l2	.03276	.03169	5.249	.02317	.02263	6.339
bl4l2	.1049	.0939	2.579	.08537	.07809	2.968
bl5l2	.1679	.1397	1.777	.1304	.1134	2.195
bl6l2	.04905	.04665	4.176	.03677	.03542	4.923
bl7l2	.03171	.0307	5.345	.02877	.02795	5.638
bl8l2	.09384	.08504	2.786	.0876	.07993	2.917
bl9l2	.04909	.04668	4.174	.0394	.03785	4.735
bl10l2	.0467	.04452	4.297	.04008	.03848	4.689
bl11l2	.008762	.008685	10.54	.002961	.002952	18.3
bl12l2	.008094	.008029	10.98	.003057	.003047	18
bl13l2	.002054	.00205	22	.0008757	.000875	33.75
bl14l2	.0009423	.0009414	32.53	.0004353	.0004351	47.9
bl15l2	.004582	.004561	14.67	.002078	.002074	21.87
bl1l3	.009973	.009874	9.863	.005553	.005522	13.31
bl2l3	.002029	.002025	22.13	.0007818	.0007812	35.72
bl3l3	.0004364	.0004362	47.84	.0002047	.0002046	69.87
bl4l3	.002386	.002381	20.4	.001018	.001017	31.3
bl5l3	.005727	.005694	13.1	.001619	.001616	24.8
bl6l3	.00369	.003676	16.37	.001863	.00186	23.1

bl7l3	.003404	.003392	17.05	.001449	.001446	26.22
bl8l3	.0009503	.0009494	32.39	.0005736	.0005733	41.72
bl9l3	.002129	.002125	21.6	.0008761	.0008754	33.74
bl10l3	.001223	.001222	28.54	.0007304	.0007298	36.96
bl11l3	.0002852	.0002851	59.19	.0001151	.0001151	93.19
bl12l3	3.64e-06	3.64e-06	524	1.96e-06	1.96e-06	713.5
bl13l3	.0005358	.0005355	43.17	.0002734	.0002734	60.45
bl14l3	.0007092	.0007087	37.51	.0003033	.0003032	57.39
bl15l3	.00702	.006971	11.81	.00402	.004004	15.68
bl1l4	.001436	.001433	26.34	.0003807	.0003806	51.22
bl2l4	.0004652	.0004649	46.33	.0001682	.0001681	77.1
bl3l4	.001439	.001437	26.31	.0007422	.0007416	36.67
bl4l4	.00024	.00024	64.52	.0001175	.0001175	92.25
bl5l4	.002186	.002181	21.32	.0008962	.0008954	33.36
bl6l4	.0002328	.0002327	65.52	.0000452	.0000452	148.8
bl7l4	.0009551	.0009542	32.31	.0002939	.0002938	58.31
bl8l4	.0005675	.0005672	41.94	.0004927	.0004924	45.02
bl9l4	.00013	.00013	87.68	.0000251	.0000251	199.4
bl10l4	.0005562	.0005559	42.37	.0001348	.0001347	86.13
bl11l4	.00315	.00314	17.73	.001085	.001084	30.31
bl12l4	.02837	.02757	5.681	.01349	.01331	8.435
bl13l4	.02641	.02572	5.906	.01234	.01219	8.835
bl14l4	.04333	.04146	4.486	.03676	.03541	4.924
bl15l4	.174	.1437	1.72	.1464	.1249	2.001
chf_sum1	.007731	.007671	11.24	.006783	.006737	12.02
caar_sum1	.03277	.03169	5.249	.02317	.02263	6.34
vd_sum1	.1048	.09385	2.58	.08533	.07805	2.969
pcd_sum1	.4646	.2487	.1419	.5334	.2489	-.134
pvd_sum1	.7985	.1609	-1.488	.8927	.09579	-2.538
hyu_sum1	.06293	.05897	3.6	.03294	.03185	5.234
hyc_sum1	.2654	.1949	1.063	.2652	.1949	1.064
paral_sum1	.04434	.04237	4.427	.01869	.01834	7.109
ond_sum1	5.54	12.28	.8113	2.872	7.092	1.167
cpd_sum1	1258	1.18e+07	15.67	550.7	4394627	26.15
diau_sum1	.009345	.009258	10.2	.002866	.002857	18.6
diac_sum1	.008328	.008258	10.82	.003009	.003	18.15
hypot_sum1	.002155	.00215	21.47	.0008887	.0008879	33.5
rf_sum1	.0009762	.0009752	31.96	.0004223	.0004222	48.63
ld_sum1	.004644	.004622	14.57	.002119	.002114	21.66
pud_sum1	.00988	.009782	9.911	.005538	.005508	13.33
aids_sum1	.002054	.00205	21.99	.0007669	.0007663	36.07
lym_sum1	.0004542	.000454	46.89	.0002019	.0002019	70.35
mc_sum1	.002474	.002468	20.03	.0009999	.0009989	31.58
stwm_sum1	.005815	.005781	13	.001609	.001607	24.87

ra_sum1	.003682	.003668	16.39	.001878	.001874	23.01
coa_sum1	.003474	.003462	16.88	.001461	.001459	26.1
ob_sum1	.0009576	.0009567	32.27	.000583	.0005827	41.38
wl_sum1	.002222	.002217	21.14	.0008761	.0008754	33.74
fed_sum1	.001229	.001227	28.48	.0007433	.0007428	36.64
bla_sum1	.0002685	.0002684	61.01	.0001179	.0001179	92.09
dean_sum1	5.83e-06	5.83e-06	414.2	2.36e-06	2.36e-06	651.3
aa_sum1	.0006123	.0006119	40.38	.0002762	.0002761	60.15
drab_sum1	.0008462	.0008454	34.33	.0003273	.0003272	55.25
psyc_sum1	.007635	.007577	11.31	.003973	.003957	15.77
depr_sum1	.001444	.001441	26.26	.0003689	.0003688	52.04
uaw_einw_q1	.0004906	.0004904	45.11	.0001752	.0001752	75.52
uaw_entl_q1	.001448	.001446	26.22	.0007508	.0007502	36.45
vs11	.0002604	.0002604	61.94	.0001167	.0001167	92.56
vs21	.002412	.002406	20.29	.0009256	.0009248	32.82
atc_menge_q2	.0002612	.0002611	61.85	.0000519	.0000519	138.9
chf_sum2	.0009751	.0009742	31.98	.0002868	.0002867	59.02
caar_sum2	.0005799	.0005796	41.49	.0004939	.0004936	44.97
vd_sum2	.0005602	.0005599	42.21	.0001297	.0001296	87.81
pcd_sum2	.003209	.003199	17.57	.001026	.001025	31.17
pvd_sum2	.02958	.0287	5.554	.01304	.01287	8.586
hyu_sum2	.02762	.02685	5.765	.01198	.01184	8.971
hyc_sum2	.04335	.04147	4.485	.03678	.03542	4.922
paral_sum2	.174	.1437	1.72	.1464	.1249	2.001
ond_sum2	.06685	.06238	3.469	.05811	.05473	3.778
cpd_sum2	.04905	.04664	4.176	.03676	.03541	4.923
diau_sum2	.04912	.04671	4.172	.03941	.03785	4.735
diac_sum2	.04673	.04455	4.295	.04009	.03848	4.689
hypot_sum2	.4713	.2492	.115	.3717	.2335	.5309
rf_sum2	.5204	.2496	-.08173	.6184	.236	-.4875
ld_sum2	.06722	.0627	3.457	.03459	.03339	5.094
pud_sum2	.01771	.0174	7.313	.01267	.01251	8.714
aids_sum2	685.4	1.06e+07	21.92	257.3	3161420	29.07
lym_sum2	1.486	36.21	8.45	.5227	10.94	13.96
mc_sum2	.2411	6.007	13.49	.107	2.609	18.25
stwm_sum2	.01781	.0175	7.291	.009628	.009536	10.04
ra_sum2	5.624	12.47	.8062	2.904	7.177	1.158
coa_sum2	1340	1.36e+07	16.66	560	4337370	21.74
ob_sum2	.01033	.01023	9.684	.003066	.003057	17.98
wl_sum2	.008544	.008471	10.68	.003075	.003065	17.95
fed_sum2	.002376	.002371	20.44	.0008966	.0008957	33.35
bla_sum2	.001051	.00105	30.79	.0004066	.0004065	49.56
dean_sum2	.00485	.004826	14.25	.002159	.002154	21.45
aa_sum2	.01013	.01002	9.785	.005584	.005553	13.27

psyc_sum2	.002135	.00213	21.58	.0007932	.0007926	35.46
depr_sum2	.0004728	.0004726	45.96	.0001984	.0001984	70.97
uaw_einw_q2	.002667	.00266	19.29	.001043	.001042	30.91
uaw_entl_q2	.006088	.006051	12.7	.001664	.001661	24.45
vs12	.003771	.003757	16.19	.001886	.001882	22.96
vs22	.003659	.003645	16.44	.001478	.001476	25.95
atc_menge_q3	.0009842	.0009832	31.83	.0005822	.0005819	41.41
chf_sum3	.002374	.002368	20.45	.0009123	.0009114	33.06
caar_sum3	.001272	.00127	27.99	.0007681	.0007675	36.04
vd_sum3	.0002899	.0002899	58.7	.0001116	.0001116	94.65
pcd_sum3	4.01e-06	4.01e-06	499.6	4.71e-06	4.71e-06	460.5
pvd_sum3	.0006804	.00068	38.3	.0002731	.000273	60.49
hyu_sum3	.001048	.001047	30.84	.0003453	.0003452	53.78
hyc_sum3	.008655	.00858	10.61	.004178	.00416	15.37
paral_sum3	.001469	.001467	26.03	.0003622	.0003621	52.51
ond_sum3	.0005063	.0005061	44.41	.0001717	.0001717	76.3
cpd_sum3	.001478	.001476	25.95	.0007606	.00076	36.22
diau_sum3	.0002881	.000288	58.89	.0001179	.0001179	92.09
diac_sum3	.00255	.002543	19.73	.0009421	.0009412	32.53
hypot_sum3	.0002768	.0002768	60.08	.0000589	.0000589	130.3
rf_sum3	.001089	.001088	30.25	.000299	.0002989	57.81
ld_sum3	.0005701	.0005697	41.85	.000495	.0004948	44.91
pud_sum3	.000141	.0001409	84.21	.0000232	.0000232	207.7
aids_sum3	.0005435	.0005432	42.86	.0001312	.0001312	87.28
lym_sum3	.003308	.003297	17.3	.001031	.00103	31.1
mc_sum3	.03168	.03067	5.348	.01339	.01321	8.466
stwm_sum3	.174	.1437	1.72	.1464	.1249	2.001
ra_sum3	.06686	.06239	3.468	.05812	.05475	3.777
coa_sum3	.03278	.0317	5.248	.02317	.02264	6.339
ob_sum3	.168	.1397	1.776	.1304	.1134	2.195
wl_sum3	.04904	.04664	4.176	.03677	.03542	4.923
fed_sum3	.03168	.03068	5.347	.02876	.02793	5.639
bla_sum3	.09387	.08506	2.785	.08761	.07993	2.917
dean_sum3	.04672	.04454	4.296	.04009	.03848	4.689
aa_sum3	.008203	.008135	10.91	.009766	.009671	9.97
drab_sum3	.3775	.235	.5052	.296	.2084	.8938
psyc_sum3	.132	.1146	2.174	.06704	.06255	3.462
depr_sum3	1.773	45.16	7.965	.5651	12.98	26.09
uaw_einw_q3	36.79	182730	26.48	15.34	67283	28.82
uaw_entl_q3	5.788	12.87	.8083	2.94	7.302	1.163
vs13	1514	1.70e+07	14.7	591	4999096	20.57
vs23	.01237	.01222	8.824	.003447	.003435	16.94
atc_menge_q4	.009486	.009396	10.12	.003152	.003142	17.73
chf_sum4	.002696	.002689	19.18	.000959	.0009581	32.24

caar_sum4	.00114	.001139	29.56	.0004581	.0004579	46.69
vd_sum4	.00521	.005183	13.75	.002298	.002292	20.79
pcd_sum4	.01045	.01034	9.628	.005616	.005585	13.23
pvd_sum4	.00222	.002216	21.15	.0008408	.0008401	34.44
hyu_sum4	.0005263	.0005261	43.55	.0002129	.0002129	68.51
hyc_sum4	.00297	.002961	18.27	.001111	.001109	29.96
paral_sum4	.006835	.006788	11.97	.001732	.001729	23.97
ond_sum4	.003898	.003883	15.92	.001921	.001917	22.75
cpd_sum4	.004005	.003989	15.71	.001573	.001571	25.15
diau_sum4	.001008	.001007	31.45	.0005909	.0005905	41.1
diac_sum4	.002684	.002677	19.22	.0009692	.0009683	32.07
hypot_sum4	.00136	.001359	27.06	.0008066	.0008059	35.17
rf_sum4	.0002838	.0002837	59.34	.000108	.000108	96.19
ld_sum4	4.37e-06	4.37e-06	478.3	5.50e-06	5.50e-06	426.4
pud_sum4	.0008615	.0008607	34.03	.0002951	.000295	58.19
aids_sum4	.001538	.001536	25.44	.0004271	.0004269	48.36
lym_sum4	.01071	.0106	9.506	.004606	.004585	14.63
mc_sum4	.001532	.001529	25.49	.0003669	.0003668	52.17
stwm_sum4	.0005806	.0005803	41.46	.0001705	.0001705	76.56
ra_sum4	.001516	.001514	25.62	.000783	.0007824	35.69
coa_sum4	.0003267	.0003266	55.3	.0001324	.0001324	86.89
ob_sum4	.003228	.003217	17.52	.001066	.001065	30.58
wl_sum4	.0003136	.0003135	56.44	.0000511	.0000511	139.9
fed_sum4	.001243	.001241	28.31	.0003096	.0003095	56.81
bla_sum4	.0006345	.0006341	39.66	.000519	.0005187	43.86
dean_sum4	.0001417	.0001417	83.99	.0000208	.0000208	219.1
aa_sum4	.0005912	.0005908	41.09	.0001234	.0001233	90.02
drab_sum4	.00341	.003398	17.04	.001042	.001041	30.93
psyc_sum4	.527	.2493	-.1083	.4566	.2481	.1743
depr_sum4	.008107	.008041	10.97	.009679	.009585	10.02
vs14	.7059	.2076	-.9038	.7649	.1798	-1.25
vs24	.02953	.02866	5.558	.01218	.01203	8.896
uaw_einw_q4	.03694	.03557	4.91	.01434	.01413	8.17
uaw_entl_q4	.03486	.03364	5.072	.01302	.01285	8.593
atc_menge_q1	5.507	12.1	.8158	2.854	7.07	1.174

After: balance_PSF4Q_atc_uaw_ed_prev as the weighting variable

	Treat			Control		
	mean	variance	skewness	mean	variance	skewness
alter	77.11	50.15	.3353	77.11	50.15	.3168
sex	.626	.2341	-.5207	.626	.2341	-.5207

pf11	.1226	.1076	2.301	.1226	.1076	2.301
pf21	.127	.1109	2.241	.127	.1109	2.241
pf31	.07244	.0672	3.299	.07244	.0672	3.299
pf12	.01993	.01953	6.87	.01993	.01953	6.87
pf22	.7608	.182	-1.223	.7608	.182	-1.223
pf32	.07903	.07278	3.121	.07903	.07278	3.121
pf13	.02329	.02275	6.321	.02329	.02275	6.321
pf23	310.9	919729	29.41	310.9	919729	98.58
pf33	323.1	1024313	25.41	323.1	1024313	88.33
pf14	338.7	1167475	23.47	338.7	1167476	61.81
pf24	362.6	1412572	23.36	362.6	1412571	66.31
pf34	494.2	150482	1.592	494.2	150482	3.885
med_kost_q1	498.5	152910	1.648	498.5	152910	3.329
med_kost_q2	505.5	154380	1.577	505.5	154380	3.174
med_kost_q3	516.2	156734	1.539	516.2	156734	3.71
med_kost_q4	595.7	7958311	19.1	595.7	7958312	31.02
ddd_q1	629.8	8994561	20.64	629.8	8994566	18.82
ddd_q2	818.6	1.33e+07	18.84	818.6	1.33e+07	13.29
ddd_q3	1.322	31.4	9.262	1.322	31.4	7.476
ddd_q4	1.379	33.2	9.844	1.379	33.2	7.629
stat_kost_q1	229.7	274654	12.2	229.7	274654	10.07
stat_kost_q2	242.8	300788	11.72	242.8	300788	9.586
stat_kost_q3	254.1	326345	11.4	254.1	326345	9.176
stat_kost_q4	30.2	129374	22.62	30.2	129374	22.6
stat_tage_q1	31.94	147182	27.18	31.94	147182	29.81
stat_tage_q2	33.01	148831	22.1	33.01	148831	24.6
stat_tage_q3	.2282	5.661	14.04	.2282	5.661	12.46
stat_tage_q4	.2367	5.949	14.32	.2367	5.949	12.85
amb_kost_q1	.2641	11.55	464.6	.2641	11.55	22.31
amb_kost_q2	37.96	16969	7.625	37.96	16969	6.317
amb_kost_q3	39.25	17882	7.619	39.25	17882	6.135
amb_kost_q4	.1344	.1164	2.143	.1344	.1164	2.143
reha_kost_q1	.01764	.01733	7.329	.01764	.01733	7.329
reha_kost_q2	.2437	.1843	1.194	.2437	.1843	1.194
reha_kost_q3	.003677	.003664	16.4	.003677	.003664	16.4
reha_kost_q4	.001352	.001351	27.14	.001352	.001351	27.14
reha_tage_q1	.04376	.04185	4.46	.04376	.04185	4.46
reha_tage_q2	.1356	.1172	2.129	.1356	.1172	2.129
reha_tage_q3	.01773	.01741	7.31	.01773	.01741	7.31
reha_tage_q4	.2448	.1849	1.187	.2448	.1849	1.187
heil_kost_q1	.003596	.003583	16.59	.003596	.003583	16.59
heil_kost_q2	.001368	.001366	26.98	.001368	.001366	26.98
heil_kost_q3	.1368	.1181	2.114	.1368	.1181	2.114
heil_kost_q4	.2459	.1854	1.18	.2459	.1854	1.18

dmp11	.003533	.00352	16.73	.003533	.00352	16.73
dmp21	.001375	.001373	26.92	.001375	.001373	26.92
dmp31	.0449	.04289	4.395	.0449	.04289	4.395
dmp41	.1382	.1191	2.097	.1382	.1191	2.097
dmp51	.01793	.01761	7.265	.01793	.01761	7.265
dmp61	.247	.186	1.173	.247	.186	1.173
dmp12	.00347	.003457	16.89	.00347	.003457	16.89
dmp22	.001378	.001376	26.88	.001378	.001376	26.88
dmp32	.04547	.0434	4.364	.04547	.0434	4.364
dmp42	.2441	.1845	1.192	.2441	.1845	1.192
dmp52	.2495	.1873	1.158	.2495	.1873	1.158
dmp62	.03709	.03572	4.899	.03709	.03572	4.899
dmp13	.06685	.06238	3.468	.06685	.06238	3.468
dmp23	.01114	.01102	9.315	.01114	.01102	9.315
dmp33	.168	.1398	1.776	.168	.1398	1.776
dmp43	.04904	.04664	4.176	.04904	.04664	4.176
dmp53	.03165	.03064	5.351	.03165	.03064	5.351
dmp63	.01266	.0125	8.718	.01266	.0125	8.718
dmp14	.09389	.08507	2.785	.09389	.08507	2.785
dmp24	.04914	.04673	4.171	.04914	.04673	4.171
dmp34	.04675	.04456	4.294	.04675	.04456	4.294
dmp44	.03708	.03571	4.9	.03708	.03571	4.9
dmp54	.07119	.06612	3.335	.07119	.06612	3.335
dmp64	.007727	.007667	11.24	.007727	.007667	11.24
gr_q11	.01113	.01101	9.319	.01113	.01101	9.319
gr_q21	.03277	.0317	5.249	.03277	.0317	5.249
gr_q31	.1049	.09387	2.579	.1049	.09387	2.579
bl1l1	.168	.1398	1.776	.168	.1398	1.776
bl2l1	.03166	.03066	5.349	.03166	.03066	5.349
bl3l1	.09389	.08507	2.785	.09389	.08507	2.785
bl4l1	.03706	.03569	4.901	.03706	.03569	4.901
bl5l1	.04338	.0415	4.483	.04338	.0415	4.483
bl6l1	.07119	.06612	3.335	.07119	.06612	3.335
bl7l1	.007717	.007657	11.25	.007717	.007657	11.25
bl8l1	.1049	.09388	2.579	.1049	.09388	2.579
bl9l1	.01266	.0125	8.719	.01266	.0125	8.719
bl10l1	.04911	.0467	4.173	.04911	.0467	4.173
bl11l1	.03704	.03567	4.903	.03704	.03567	4.903
bl12l1	.04342	.04154	4.481	.04342	.04154	4.481
bl13l1	.0712	.06613	3.335	.0712	.06613	3.335
bl14l1	.174	.1437	1.72	.174	.1437	1.72
bl15l1	.00771	.00765	11.26	.00771	.00765	11.26
bl1l2	.06685	.06238	3.469	.06685	.06238	3.469
bl2l2	.0111	.01098	9.331	.0111	.01098	9.331

bl3l2	.03276	.03169	5.249	.03276	.03169	5.249
bl4l2	.1049	.0939	2.579	.1049	.0939	2.579
bl5l2	.1679	.1397	1.777	.1679	.1397	1.777
bl6l2	.04905	.04665	4.176	.04905	.04665	4.176
bl7l2	.03171	.0307	5.345	.03171	.0307	5.345
bl8l2	.09384	.08504	2.786	.09384	.08504	2.786
bl9l2	.04909	.04668	4.174	.04909	.04668	4.174
bl10l2	.0467	.04452	4.297	.0467	.04452	4.297
bl11l2	.008762	.008685	10.54	.008762	.008685	10.54
bl12l2	.008094	.008029	10.98	.008094	.008029	10.98
bl13l2	.002054	.00205	22	.002054	.00205	22
bl14l2	.0009423	.0009414	32.53	.0009423	.0009414	32.53
bl15l2	.004582	.004561	14.67	.004582	.004561	14.67
bl1l3	.009973	.009874	9.863	.009973	.009874	9.863
bl2l3	.002029	.002025	22.13	.002029	.002025	22.13
bl3l3	.0004364	.0004362	47.84	.0004364	.0004362	47.84
bl4l3	.002386	.002381	20.4	.002386	.002381	20.4
bl5l3	.005727	.005694	13.1	.005727	.005694	13.1
bl6l3	.00369	.003676	16.37	.00369	.003676	16.37
bl7l3	.003404	.003392	17.05	.003404	.003392	17.05
bl8l3	.0009503	.0009494	32.39	.0009503	.0009494	32.39
bl9l3	.002129	.002125	21.6	.002129	.002125	21.6
bl10l3	.001223	.001222	28.54	.001223	.001222	28.54
bl11l3	.0002852	.0002851	59.19	.0002852	.0002851	59.19
bl12l3	3.64e-06	3.64e-06	524	3.64e-06	3.64e-06	524
bl13l3	.0005358	.0005355	43.17	.0005358	.0005355	43.17
bl14l3	.0007092	.0007087	37.51	.0007092	.0007087	37.51
bl15l3	.00702	.006971	11.81	.00702	.006971	11.81
bl1l4	.001436	.001433	26.34	.001436	.001433	26.34
bl2l4	.0004652	.0004649	46.33	.0004652	.0004649	46.33
bl3l4	.001439	.001437	26.31	.001439	.001437	26.31
bl4l4	.00024	.00024	64.52	.00024	.00024	64.52
bl5l4	.002186	.002181	21.32	.002186	.002181	21.32
bl6l4	.0002328	.0002327	65.52	.0002328	.0002327	65.52
bl7l4	.0009551	.0009542	32.31	.0009551	.0009542	32.31
bl8l4	.0005675	.0005672	41.94	.0005676	.0005672	41.94
bl9l4	.00013	.00013	87.68	.00013	.00013	87.68
bl10l4	.0005562	.0005559	42.37	.0005562	.0005559	42.37
bl11l4	.00315	.00314	17.73	.00315	.00314	17.73
bl12l4	.02837	.02757	5.681	.02837	.02757	5.681
bl13l4	.02641	.02572	5.906	.02641	.02572	5.906
bl14l4	.04333	.04146	4.486	.04333	.04146	4.486
bl15l4	.174	.1437	1.72	.174	.1437	1.72
chf_sum1	.007731	.007671	11.24	.007731	.007671	11.24

caar_sum1	.03277	.03169	5.249	.03277	.03169	5.249
vd_sum1	.1048	.09385	2.58	.1048	.09385	2.58
pcd_sum1	.4646	.2487	.1419	.4646	.2487	.1419
pvd_sum1	.7985	.1609	-1.488	.7985	.1609	-1.488
hyu_sum1	.06293	.05897	3.6	.06293	.05897	3.6
hyc_sum1	.2654	.1949	1.063	.2654	.1949	1.063
paral_sum1	.04434	.04237	4.427	.04434	.04237	4.427
ond_sum1	5.54	12.28	.8113	5.54	12.28	.6576
cpd_sum1	1258	1.18e+07	15.67	1258	1.18e+07	15.96
diau_sum1	.009345	.009258	10.2	.009345	.009258	10.2
diac_sum1	.008328	.008258	10.82	.008328	.008258	10.82
hypot_sum1	.002155	.00215	21.47	.002155	.00215	21.47
rf_sum1	.0009762	.0009752	31.96	.0009762	.0009752	31.96
ld_sum1	.004644	.004622	14.57	.004644	.004622	14.57
pud_sum1	.00988	.009782	9.911	.00988	.009782	9.911
aids_sum1	.002054	.00205	21.99	.002054	.00205	21.99
lym_sum1	.0004542	.000454	46.89	.0004542	.000454	46.89
mc_sum1	.002474	.002468	20.03	.002474	.002468	20.03
stwm_sum1	.005815	.005781	13	.005815	.005781	13
ra_sum1	.003682	.003668	16.39	.003682	.003668	16.39
coa_sum1	.003474	.003462	16.88	.003474	.003462	16.88
ob_sum1	.0009576	.0009567	32.27	.0009576	.0009567	32.27
wl_sum1	.002222	.002217	21.14	.002222	.002217	21.14
fed_sum1	.001229	.001227	28.48	.001229	.001227	28.48
bla_sum1	.0002685	.0002684	61.01	.0002685	.0002684	61.01
dean_sum1	5.83e-06	5.83e-06	414.2	5.83e-06	5.83e-06	414.2
aa_sum1	.0006123	.0006119	40.38	.0006123	.0006119	40.38
drab_sum1	.0008462	.0008454	34.33	.0008462	.0008454	34.33
psyc_sum1	.007635	.007577	11.31	.007635	.007577	11.31
depr_sum1	.001444	.001441	26.26	.001444	.001441	26.26
uaw_einw_q1	.0004906	.0004904	45.11	.0004906	.0004904	45.11
uaw_entl_q1	.001448	.001446	26.22	.001448	.001446	26.22
vs11	.0002604	.0002604	61.94	.0002604	.0002604	61.94
vs21	.002412	.002406	20.29	.002412	.002406	20.29
atc_menge_q2	.0002612	.0002611	61.85	.0002612	.0002611	61.85
chf_sum2	.0009751	.0009742	31.98	.0009751	.0009742	31.98
caar_sum2	.0005799	.0005796	41.49	.0005799	.0005796	41.49
vd_sum2	.0005602	.0005599	42.21	.0005602	.0005599	42.21
pcd_sum2	.003209	.003199	17.57	.003209	.003199	17.57
pvd_sum2	.02958	.0287	5.554	.02958	.0287	5.554
hyu_sum2	.02762	.02685	5.765	.02762	.02685	5.765
hyc_sum2	.04335	.04147	4.485	.04335	.04147	4.485
paral_sum2	.174	.1437	1.72	.174	.1437	1.72
ond_sum2	.06685	.06238	3.469	.06685	.06238	3.469

cpd_sum2	.04905	.04664	4.176	.04905	.04664	4.176
diau_sum2	.04912	.04671	4.172	.04912	.04671	4.172
diac_sum2	.04673	.04455	4.295	.04673	.04455	4.295
hypot_sum2	.4713	.2492	.115	.4713	.2492	.115
rf_sum2	.5204	.2496	-.08173	.5204	.2496	-.08173
ld_sum2	.06722	.0627	3.457	.06722	.0627	3.457
pud_sum2	.01771	.0174	7.313	.01771	.0174	7.313
aids_sum2	685.4	1.06e+07	21.92	685.4	1.06e+07	16.19
lym_sum2	1.486	36.21	8.45	1.486	36.21	7.107
mc_sum2	.2411	6.007	13.49	.2411	6.007	12.31
stwm_sum2	.01781	.0175	7.291	.01781	.0175	7.291
ra_sum2	5.624	12.47	.8062	5.624	12.47	.6536
coa_sum2	1340	1.36e+07	16.66	1340	1.36e+07	13.6
ob_sum2	.01033	.01023	9.684	.01033	.01023	9.684
wl_sum2	.008544	.008471	10.68	.008544	.008471	10.68
fed_sum2	.002376	.002371	20.44	.002376	.002371	20.44
bla_sum2	.001051	.00105	30.79	.001051	.00105	30.79
dean_sum2	.00485	.004826	14.25	.00485	.004827	14.25
aa_sum2	.01013	.01002	9.785	.01013	.01002	9.785
psyc_sum2	.002135	.00213	21.58	.002135	.00213	21.58
depr_sum2	.0004728	.0004726	45.96	.0004728	.0004726	45.96
uaw_einw_q2	.002667	.00266	19.29	.002667	.00266	19.29
uaw_entl_q2	.006088	.006051	12.7	.006088	.006051	12.7
vs12	.003771	.003757	16.19	.003771	.003757	16.19
vs22	.003659	.003645	16.44	.003659	.003645	16.44
atc_menge_q3	.0009842	.0009832	31.83	.0009842	.0009832	31.83
chf_sum3	.002374	.002368	20.45	.002374	.002368	20.45
caar_sum3	.001272	.00127	27.99	.001272	.00127	27.99
vd_sum3	.0002899	.0002899	58.7	.0002899	.0002899	58.7
pcd_sum3	4.01e-06	4.01e-06	499.6	4.01e-06	4.01e-06	499.6
pvd_sum3	.0006804	.00068	38.3	.0006804	.00068	38.3
hyu_sum3	.001048	.001047	30.84	.001048	.001047	30.84
hyc_sum3	.008655	.00858	10.61	.008655	.00858	10.61
paral_sum3	.001469	.001467	26.03	.001469	.001467	26.03
ond_sum3	.0005063	.0005061	44.41	.0005063	.0005061	44.41
cpd_sum3	.001478	.001476	25.95	.001478	.001476	25.95
diau_sum3	.0002881	.000288	58.89	.0002881	.000288	58.89
diac_sum3	.00255	.002543	19.73	.00255	.002543	19.73
hypot_sum3	.0002768	.0002768	60.08	.0002768	.0002768	60.08
rf_sum3	.001089	.001088	30.25	.001089	.001088	30.25
ld_sum3	.0005701	.0005697	41.85	.0005701	.0005697	41.85
pud_sum3	.000141	.0001409	84.21	.000141	.0001409	84.21
aids_sum3	.0005435	.0005432	42.86	.0005435	.0005432	42.86
lym_sum3	.003308	.003297	17.3	.003308	.003297	17.3

mc_sum3	.03168	.03067	5.348	.03168	.03067	5.348
stwm_sum3	.174	.1437	1.72	.174	.1437	1.72
ra_sum3	.06686	.06239	3.468	.06686	.06239	3.468
coa_sum3	.03278	.0317	5.248	.03278	.0317	5.248
ob_sum3	.168	.1397	1.776	.168	.1397	1.776
wl_sum3	.04904	.04664	4.176	.04904	.04664	4.176
fed_sum3	.03168	.03068	5.347	.03168	.03068	5.347
bla_sum3	.09387	.08506	2.785	.09387	.08506	2.785
dean_sum3	.04672	.04454	4.296	.04672	.04454	4.296
aa_sum3	.008203	.008135	10.91	.008203	.008135	10.91
drab_sum3	.3775	.235	.5052	.3775	.235	.5052
psyc_sum3	.132	.1146	2.174	.132	.1146	2.174
depr_sum3	1.773	45.16	7.965	1.773	45.16	6.274
uaw_einw_q3	36.79	182730	26.48	36.79	182732	16.39
uaw_entl_q3	5.788	12.87	.8083	5.788	12.87	.6512
vs13	1514	1.70e+07	14.7	1514	1.70e+07	11.64
vs23	.01237	.01222	8.824	.01237	.01222	8.824
atc_menge_q4	.009486	.009396	10.12	.009486	.009396	10.12
chf_sum4	.002696	.002689	19.18	.002696	.002689	19.18
caar_sum4	.00114	.001139	29.56	.00114	.001139	29.56
vd_sum4	.00521	.005183	13.75	.00521	.005183	13.75
pcd_sum4	.01045	.01034	9.628	.01045	.01034	9.628
pvd_sum4	.00222	.002216	21.15	.00222	.002216	21.15
hyu_sum4	.0005263	.0005261	43.55	.0005263	.0005261	43.55
hyc_sum4	.00297	.002961	18.27	.00297	.002961	18.27
paral_sum4	.006835	.006788	11.97	.006835	.006788	11.97
ond_sum4	.003898	.003883	15.92	.003898	.003883	15.92
cpd_sum4	.004005	.003989	15.71	.004005	.003989	15.71
diau_sum4	.001008	.001007	31.45	.001008	.001007	31.45
diac_sum4	.002684	.002677	19.22	.002684	.002677	19.22
hypot_sum4	.00136	.001359	27.06	.00136	.001359	27.06
rf_sum4	.0002838	.0002837	59.34	.0002838	.0002837	59.34
ld_sum4	4.37e-06	4.37e-06	478.3	4.37e-06	4.37e-06	478.3
pud_sum4	.0008615	.0008607	34.03	.0008615	.0008607	34.03
aids_sum4	.001538	.001536	25.44	.001538	.001536	25.44
lym_sum4	.01071	.0106	9.506	.01071	.0106	9.506
mc_sum4	.001532	.001529	25.49	.001532	.001529	25.49
stwm_sum4	.0005806	.0005803	41.46	.0005806	.0005803	41.46
ra_sum4	.001516	.001514	25.62	.001516	.001514	25.62
coa_sum4	.0003267	.0003266	55.3	.0003267	.0003266	55.3
ob_sum4	.003228	.003217	17.52	.003228	.003217	17.52
wl_sum4	.0003136	.0003135	56.44	.0003136	.0003135	56.44
fed_sum4	.001243	.001241	28.31	.001243	.001241	28.31
bla_sum4	.0006345	.0006341	39.66	.0006346	.0006342	39.66

```
   dean_sum4 |  .0001417   .0001417      83.99 |  .0001417   .0001417      83.99
     aa_sum4 |  .0005912   .0005908      41.09 |  .0005912   .0005908      41.09
   drab_sum4 |    .00341    .003398      17.04 |    .00341    .003398      17.04
   psyc_sum4 |      .527      .2493     -.1083 |      .527      .2493     -.1083
   depr_sum4 |   .008107    .008041      10.97 |   .008107    .008041      10.97
        vs14 |     .7059      .2076     -.9038 |     .7059      .2076     -.9038
        vs24 |    .02953     .02866      5.558 |    .02953     .02866      5.558
  uaw_einw_q4 |    .03694     .03557       4.91 |    .03694     .03557       4.91
  uaw_entl_q4 |    .03486     .03364      5.072 |    .03486     .03364      5.072
atc_menge_q1 |     5.507       12.1      .8158 |     5.507       12.1      .6374
```

Lineare Regressionen

Leistungsinanspruchnahme

reha_tage_q

Modell

```
       panel variable:  versid (unbalanced)

Fitting constant-only model:
Iteration 0:   log likelihood = -1.007e+08

Fitting full model:
Iteration 0:   log likelihood = -1.007e+08
Iteration 1:   log likelihood = -1.007e+08

Random-effects ML regression                    Number of obs     = 41,723,270
Group variable: versid                          Number of groups  =  5,290,656

Random effects u_i ~ Gaussian                   Obs per group:
                                                              min =          5
                                                              avg =        7.9
                                                              max =          8

                                                LR chi2(31)       =   17771.05
Log likelihood  = -1.007e+08                    Prob > chi2       =     0.0000

------------------------------------------------------------------------------------------
           reha_tage_q |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----------------------+------------------------------------------------------------------
        num_PSF4Q_prev |
                    2  |   .0088488   .0019815     4.47   0.000     .0049651    .0127324
                    3  |   .0125485   .0019815     6.33   0.000     .0086649    .0164322
                    4  |   .0353363   .0019815    17.83   0.000     .0314527    .0392199
                    5  |  -.0500248   .0019815   -25.25   0.000    -.0539084   -.0461411
```

6	-.0763043	.0019947	-38.25	0.000	-.0802138	-.0723948
7	-.0815466	.0020053	-40.67	0.000	-.0854769	-.0776164
8	-.0744186	.0020144	-36.94	0.000	-.0783668	-.0704704
1.PRISCUS	.0037521	.0027313	1.37	0.170	-.0016012	.0091055
num_PSF4Q_prev#PRISCUS						
2 1	.0025103	.0038627	0.65	0.516	-.0050605	.010081
3 1	.0013488	.0038627	0.35	0.727	-.0062219	.0089196
4 1	-.0129421	.0038627	-3.35	0.001	-.0205129	-.0053714
5 1	.0689259	.0038627	17.84	0.000	.0613552	.0764967
6 1	.0598067	.0038952	15.35	0.000	.0521722	.0674413
7 1	.0602488	.003927	15.34	0.000	.052552	.0679457
8 1	.0504894	.0039511	12.78	0.000	.0427454	.0582333
1.FORTA	.0020597	.0025044	0.82	0.411	-.0028489	.0069682
num_PSF4Q_prev#FORTA						
2 1	-.0064276	.0035418	-1.81	0.070	-.0133694	.0005141
3 1	-.0034678	.0035418	-0.98	0.328	-.0104096	.0034739
4 1	-.00359	.0035418	-1.01	0.311	-.0105318	.0033517
5 1	.069922	.0035418	19.74	0.000	.0629803	.0768638
6 1	.1216472	.003563	34.14	0.000	.1146639	.1286305
7 1	.1043001	.0035833	29.11	0.000	.097277	.1113232
8 1	.0868006	.0035999	24.11	0.000	.0797449	.0938563
1.STOPP	.0149996	.0025344	5.92	0.000	.0100323	.0199669
num_PSF4Q_prev#STOPP						
2 1	.0029168	.0035842	0.81	0.416	-.0041081	.0099416
3 1	.0037872	.0035842	1.06	0.291	-.0032376	.0108121
4 1	.0164205	.0035842	4.58	0.000	.0093956	.0234453
5 1	.0936979	.0035842	26.14	0.000	.086673	.1007227
6 1	.0452639	.0036146	12.52	0.000	.0381794	.0523483
7 1	.0405023	.0036443	11.11	0.000	.0333595	.0476451
8 1	.0327703	.0036682	8.93	0.000	.0255808	.0399598
_cons	.2233585	.0014011	159.41	0.000	.2206124	.2261047
/sigma_u	0	(omitted)				
/sigma_e	2.497102	.0002689			2.496575	2.497629
rho	0	(omitted)				

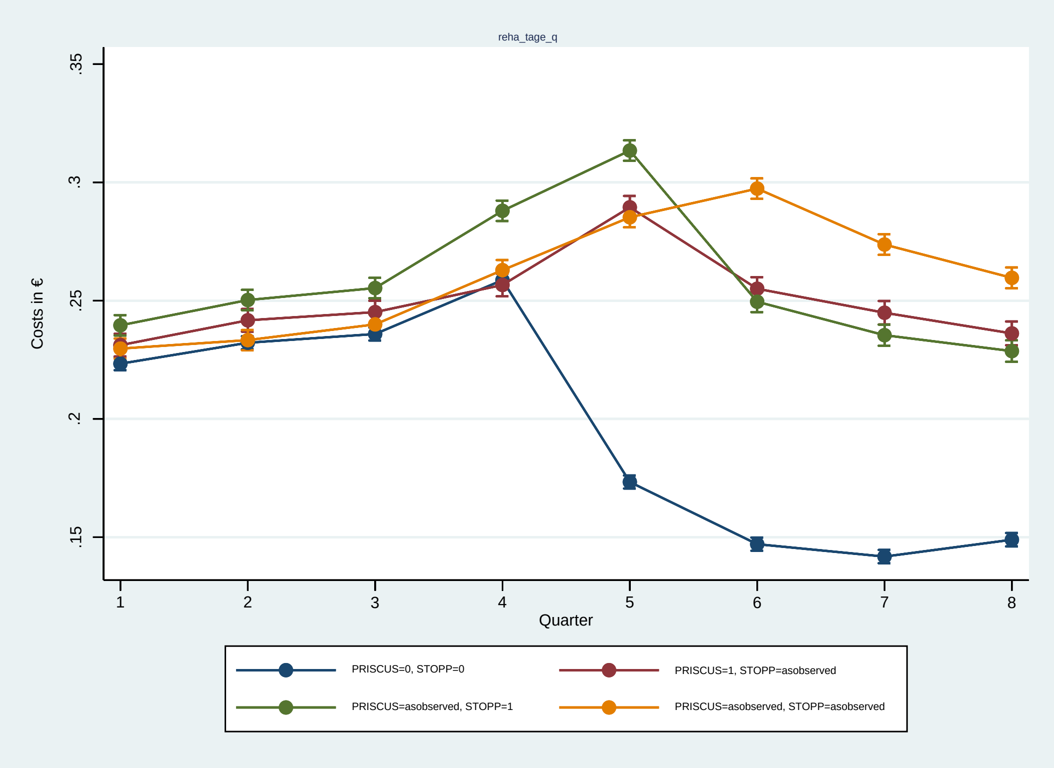
LR test of sigma_u=0: chibar2(01) = 0.00 Prob >= chibar2 = 1.000

Margins

```
Predictive margins                              Number of obs     = 41,723,270
Model VCE    : OIM

Expression   : Linear prediction, predict()

----------------------------------------------------------------------------------------------------
                                   |            Delta-method
                                   |     Margin   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----------------------------------+----------------------------------------------------------------
            num_PSF4Q_prev#PRISCUS |
                               1 1 |   .2311965    .002448    94.44   0.000     .2263986    .2359945
                               2 1 |   .2416932    .002448    98.73   0.000     .2368953    .2464911
                               3 1 |   .2451578    .002448   100.15   0.000     .2403599    .2499558
                               4 1 |   .2566454    .002448   104.84   0.000     .2518474    .2614433
                               5 1 |    .289466    .002448   118.25   0.000      .284668    .2942639
                               6 1 |   .2550392   .0024917   102.36   0.000     .2501556    .2599228
                               7 1 |   .2448912   .0025342    96.64   0.000     .2399243    .2498581
                               8 1 |   .2361648   .0025652    92.06   0.000      .231137    .2411926
                                   |
              num_PSF4Q_prev#STOPP |
                               1 1 |   .2395785   .0021992   108.94   0.000     .2352681    .2438888
                               2 1 |   .2502664   .0021992   113.80   0.000      .245956    .2545768
                               3 1 |   .2553318   .0021992   116.10   0.000     .2510214    .2596422
                               4 1 |   .2879786   .0021992   130.95   0.000     .2836682     .292289
                               5 1 |   .3134554   .0021992   142.53   0.000      .309145    .3177658
                               6 1 |   .2495421   .0022408   111.36   0.000     .2451503    .2539339
                               7 1 |   .2354137   .0022813   103.19   0.000     .2309425    .2398849
                               8 1 |   .2286891    .002313    98.87   0.000     .2241558    .2332225
                                   |
              num_PSF4Q_prev#FORTA |
                               1 1 |   .2297248   .0021776   105.49   0.000     .2254568    .2339928
                               2 1 |   .2333254   .0021776   107.15   0.000     .2290574    .2375934
                               3 1 |   .2399701   .0021776   110.20   0.000     .2357021    .2442381
                               4 1 |   .2629115   .0021776   120.74   0.000     .2586435    .2671795
                               5 1 |   .2852601   .0021776   131.00   0.000     .2809921    .2895281
                               6 1 |   .2973749   .0022009   135.12   0.000     .2930613    .3016885
                               7 1 |    .273732   .0022239   123.08   0.000     .2693732    .2780908
                               8 1 |   .2596377   .0022428   115.76   0.000     .2552419    .2640336
                                   |
num_PSF4Q_prev#PRISCUS#STOPP#FORTA |
                           1 0 0 0 |   .2233585   .0014011   159.41   0.000     .2206124    .2261047
                           2 0 0 0 |   .2322073   .0014011   165.73   0.000     .2294611    .2349534
                           3 0 0 0 |    .235907   .0014011   168.37   0.000     .2331609    .2386532
```

```
                                      4 0 0 0  |   .2586948   .0014011   184.63   0.000     .2559486     .261441
                                      5 0 0 0  |   .1733337   .0014011   123.71   0.000     .1705876    .1760799
                                      6 0 0 0  |   .1470542   .0014197   103.58   0.000     .1442716    .1498368
                                      7 0 0 0  |   .1418119   .0014346    98.85   0.000     .1390002    .1446235
                                      8 0 0 0  |   .1489399   .0014473   102.91   0.000     .1461032    .1517767
----------------------------------------------------------------------------------------------------
```

Grafik



Lincom (IG vs. KG)

PRISCUS

```
( 1)  1bn.num_PSF4Q_prev#1bn.PRISCUS - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |    .007838   .0027436     2.86   0.004     .0024607    .0132153
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.PRISCUS - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0094859   .0027436     3.46   0.001     .0041086    .0148633
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.PRISCUS - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0092508   .0027436     3.37   0.001     .0038735    .0146281
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.PRISCUS - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0020494   .0027436    -0.75   0.455    -.0074268    .0033279
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.PRISCUS - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1161323   .0027436    42.33   0.000     .1107549    .1215096
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.PRISCUS - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .107985   .0027925    38.67   0.000     .1025119    .1134581
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.PRISCUS - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1030793   .0028379    36.32   0.000     .0975172    .1086414
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q_prev#1bn.PRISCUS - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0872249   .0028715    30.38   0.000     .0815968    .0928529
------------------------------------------------------------------------------
```

STOPP

```
( 1)  1bn.num_PSF4Q_prev#1bn.STOPP - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |     .01622    .002517     6.44   0.000     .0112868    .0211531
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.STOPP - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0180591    .002517     7.17   0.000     .0131259    .0229923
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.STOPP - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0194247    .002517     7.72   0.000     .0144915    .0243579
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.STOPP - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
```

```
-------------+----------------------------------------------------------------
         (1) |   .0292838    .002517    11.63   0.000     .0243506     .034217
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.STOPP - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1401217    .002517    55.67   0.000     .1351885    .1450549
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.STOPP - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1024879   .0025627    39.99   0.000     .0974651    .1075106
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.STOPP - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0936019   .0026051    35.93   0.000      .088496    .0987077
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q_prev#1bn.STOPP - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0797492   .0026382    30.23   0.000     .0745784    .0849199
------------------------------------------------------------------------------
```

FORTA

```
( 1)  1bn.num_PSF4Q_prev#1bn.FORTA - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0063663   .0025347     2.51   0.012     .0013985    .0113342
------------------------------------------------------------------------------
```

```
 ( 1)  2.num_PSF4Q_prev#1bn.FORTA - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0011181   .0025347     0.44   0.659    -.0038498     .006086
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.FORTA - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .004063   .0025347     1.60   0.109    -.0009049    .0090309
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.FORTA - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0042167   .0025347     1.66   0.096    -.0007512    .0091846
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.FORTA - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1119264   .0025347    44.16   0.000     .1069585    .1168943
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.FORTA - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1503207    .002566    58.58   0.000     .1452914      .15535
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.FORTA - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
```

```
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1319201   .0025958    50.82   0.000     .1268325    .1370077
------------------------------------------------------------------------------
```

```
 ( 1)  8.num_PSF4Q_prev#1bn.FORTA - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1106978   .0026198    42.25   0.000      .105563    .1158326
------------------------------------------------------------------------------
```

Lincom (IG vs. KG mit Korrektur vor Q4 DiD)

PRISCUS

```
( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 5.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1181817     .00388    30.46   0.000      .110577    .1257864
------------------------------------------------------------------------------
```

```
 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 6.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1100344   .0039147    28.11   0.000     .1023617    .1177072
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 7.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1051288   .0039472    26.63   0.000     .0973923    .1128652
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 8.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0892743   .0039715    22.48   0.000     .0814903    .0970583
------------------------------------------------------------------------------
```

STOPP

```
( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 5.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1108379   .0035595    31.14   0.000     .1038613    .1178145
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 6.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0732041    .003592    20.38   0.000     .0661639    .0802442
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 7.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .064318   .0036224    17.76   0.000     .0572183    .0714178
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 8.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0504654   .0036463    13.84   0.000     .0433188    .0576119
------------------------------------------------------------------------------
```

FORTA

```
( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 5.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1077097   .0035846    30.05   0.000      .100684    .1147353
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 6.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .146104   .0036068    40.51   0.000     .1390348    .1531733
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 7.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1277035    .003628    35.20   0.000     .1205927    .1348143
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 8.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1064811   .0036453    29.21   0.000     .0993365    .1136258
------------------------------------------------------------------------------
```

stat_tage_q

Modell

```
       panel variable:  versid (unbalanced)

Fitting constant-only model:
Iteration 0:   log likelihood = -1.385e+08
Iteration 1:   log likelihood = -1.383e+08
```

```
Iteration 2:   log likelihood = -1.383e+08
Iteration 3:   log likelihood = -1.383e+08
Iteration 4:   log likelihood = -1.383e+08

Fitting full model:
Iteration 0:   log likelihood = -1.384e+08
Iteration 1:   log likelihood = -1.383e+08
Iteration 2:   log likelihood = -1.382e+08
Iteration 3:   log likelihood = -1.382e+08
Iteration 4:   log likelihood = -1.382e+08

Random-effects ML regression                   Number of obs     = 41,723,270
Group variable: versid                         Number of groups  =  5,290,656

Random effects u_i ~ Gaussian                  Obs per group:
                                                             min =          5
                                                             avg =        7.9
                                                             max =          8

                                               LR chi2(31)       =  139494.73
Log likelihood  = -1.382e+08                   Prob > chi2       =     0.0000

-----------------------------------------------------------------------------------------
          stat_tage_q |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
----------------------+------------------------------------------------------------------
        num_PSF4Q_prev |
                    2  |    .052767   .0044855    11.76   0.000     .0439754    .0615585
                    3  |   .1542042   .0044855    34.38   0.000     .1454127    .1629957
                    4  |   .4211679   .0044855    93.89   0.000     .4123764    .4299594
                    5  |   .0548945   .0044855    12.24   0.000     .0461029     .063686
                    6  |  -.0325557   .0045183    -7.21   0.000    -.0414113   -.0237001
                    7  |  -.0535376   .0045445   -11.78   0.000    -.0624446   -.0446306
                    8  |   .0709457    .004567    15.53   0.000     .0619945    .0798969
                       |
             1.PRISCUS |   .0745977   .0066962    11.14   0.000     .0614734     .087722
                       |
num_PSF4Q_prev#PRISCUS |
                  2 1  |    .010927   .0087441     1.25   0.211    -.0062111    .0280651
                  3 1  |   .0184528   .0087441     2.11   0.035     .0013147    .0355909
                  4 1  |   .0335494   .0087441     3.84   0.000     .0164113    .0506875
                  5 1  |    .631988   .0087441    72.28   0.000     .6148499    .6491261
                  6 1  |   .3613776   .0088246    40.95   0.000     .3440817    .3786734
                  7 1  |   .3138255   .0089026    35.25   0.000     .2963767    .3312743
                  8 1  |    .218058   .0089611    24.33   0.000     .2004945    .2356215
```

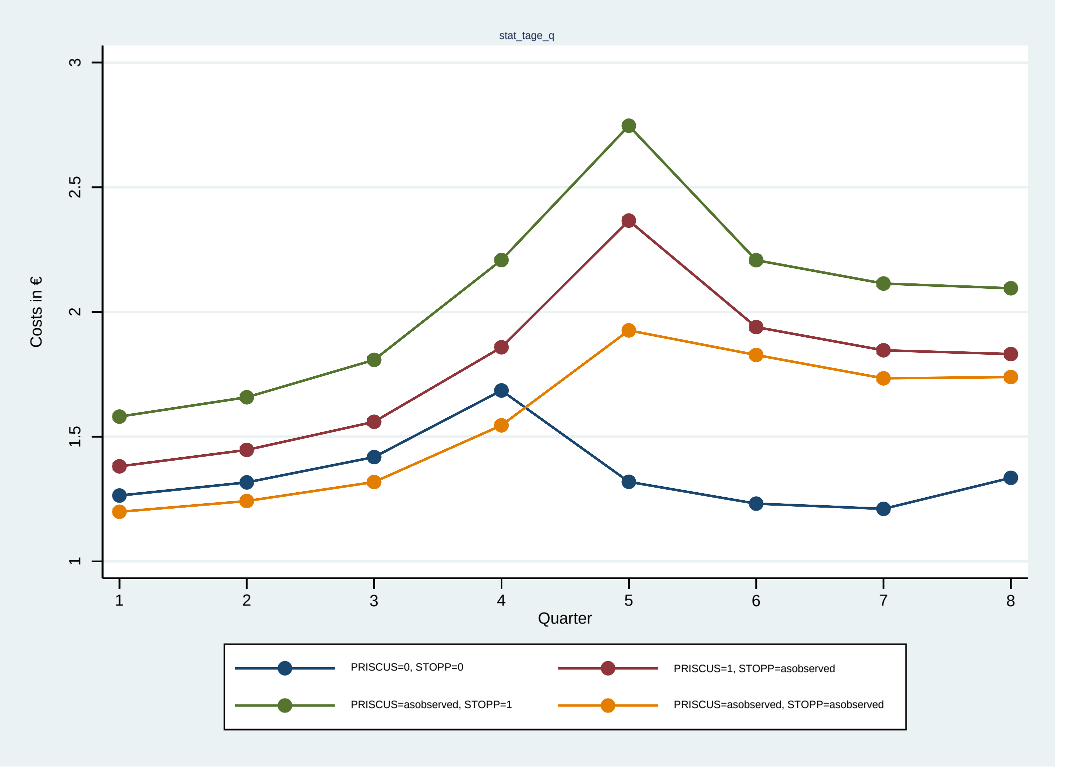
```
                        |
                1.FORTA |  -.1611826   .0061399   -26.25   0.000    -.1732165   -.1491487
                        |
     num_PSF4Q_prev#FORTA |
                    2 1  |  -.0182499   .0080176    -2.28   0.023    -.0339641   -.0025356
                    3 1  |  -.0583973   .0080176    -7.28   0.000    -.0741116   -.0426831
                    4 1  |  -.1367329   .0080176   -17.05   0.000    -.1524471   -.1210186
                    5 1  |   .3337716   .0080176    41.63   0.000     .3180574    .3494859
                    6 1  |    .478528   .0080701    59.30   0.000     .4627109     .494345
                    7 1  |   .4272123   .0081199    52.61   0.000     .4112976    .4431269
                    8 1  |   .3517629   .0081605    43.11   0.000     .3357687    .3677571
                        |
                1.STOPP |   .3411387   .0062133    54.90   0.000     .3289607    .3533166
                        |
     num_PSF4Q_prev#STOPP |
                    2 1  |   .0272723   .0081136     3.36   0.001       .01137    .0431746
                    3 1  |   .0839445   .0081136    10.35   0.000     .0680421    .0998468
                    4 1  |    .233422   .0081136    28.77   0.000     .2175196    .2493243
                    5 1  |   .9091402   .0081136   112.05   0.000     .8932379    .9250425
                    6 1  |   .4741264   .0081887    57.90   0.000     .4580768     .490176
                    7 1  |   .4231313   .0082618    51.22   0.000     .4069384    .4393242
                    8 1  |   .3164772     .00832    38.04   0.000     .3001704     .332784
                        |
                  _cons |   1.264033    .003435   367.99   0.000       1.2573    1.270765
------------------------+----------------------------------------------------------------
               /sigma_u |   2.350378   .0012923                      2.347847    2.352913
               /sigma_e |   5.652757   .0006545                      5.651475     5.65404
                    rho |   .1474008   .0001462                      .1471144    .1476876
-----------------------------------------------------------------------------------------
LR test of sigma_u=0: chibar2(01) = 2.0e+06           Prob >= chibar2 = 0.000
```

Margins

```
Predictive margins                                 Number of obs     = 41,723,270
Model VCE    : OIM

Expression   : Linear prediction, predict()

----------------------------------------------------------------------------------------------------
                                   |            Delta-method
                                   |     Margin   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----------------------------------+----------------------------------------------------------------
            num_PSF4Q_prev#PRISCUS |
                              1 1  |   1.381078   .0060015   230.12   0.000     1.369315     1.39284
                              2 1  |   1.446863   .0060015   241.08   0.000     1.435101    1.458626
```

3 1	1.559633	.0060015	259.87	0.000	1.547871	1.571396
4 1	1.858422	.0060015	309.66	0.000	1.846659	1.870185
5 1	2.366309	.0060015	394.29	0.000	2.354546	2.378072
6 1	1.939372	.0061015	317.85	0.000	1.927413	1.95133
7 1	1.846194	.0061984	297.85	0.000	1.834045	1.858342
8 1	1.831102	.0062689	292.09	0.000	1.818815	1.843389
num_PSF4Q_prev#STOPP						
1 1	1.580385	.0053916	293.12	0.000	1.569818	1.590953
2 1	1.658095	.0053916	307.53	0.000	1.647527	1.668662
3 1	1.807907	.0053916	335.32	0.000	1.79734	1.818475
4 1	2.208239	.0053916	409.57	0.000	2.197671	2.218806
5 1	2.746781	.0053916	509.45	0.000	2.736214	2.757349
6 1	2.207475	.0054868	402.33	0.000	2.196721	2.218228
7 1	2.113913	.0055792	378.89	0.000	2.102978	2.124848
8 1	2.095043	.0056514	370.72	0.000	2.083966	2.106119
num_PSF4Q_prev#FORTA						
1 1	1.198735	.0053386	224.54	0.000	1.188272	1.209199
2 1	1.241871	.0053386	232.62	0.000	1.231408	1.252335
3 1	1.318155	.0053386	246.91	0.000	1.307692	1.328619
4 1	1.54542	.0053386	289.48	0.000	1.534956	1.555883
5 1	1.926127	.0053386	360.79	0.000	1.915664	1.936591
6 1	1.827462	.0053918	338.93	0.000	1.816894	1.83803
7 1	1.73384	.0054444	318.46	0.000	1.723169	1.744511
8 1	1.738984	.0054872	316.91	0.000	1.728229	1.749739
num_PSF4Q_prev#PRISCUS#STOPP#FORTA						
1 0 0 0	1.264033	.003435	367.99	0.000	1.2573	1.270765
2 0 0 0	1.3168	.003435	383.35	0.000	1.310067	1.323532
3 0 0 0	1.418237	.003435	412.88	0.000	1.411504	1.424969
4 0 0 0	1.685201	.003435	490.60	0.000	1.678468	1.691933
5 0 0 0	1.318927	.003435	383.97	0.000	1.312195	1.32566
6 0 0 0	1.231477	.0034776	354.12	0.000	1.224661	1.238293
7 0 0 0	1.210495	.0035116	344.71	0.000	1.203613	1.217378
8 0 0 0	1.334978	.0035408	377.03	0.000	1.328039	1.341918

Grafik



Lincom (IG vs. KG)

PRISCUS

```
( 1)  1bn.num_PSF4Q_prev#1bn.PRISCUS - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1170448   .0067262    17.40   0.000     .1038617    .1302279
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.PRISCUS - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
```

```
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1300636   .0067262    19.34   0.000     .1168805    .1432467
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.PRISCUS - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1413964   .0067262    21.02   0.000     .1282133    .1545796
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.PRISCUS - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1732214   .0067262    25.75   0.000     .1600383    .1864045
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.PRISCUS - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   1.047382   .0067262   155.72   0.000     1.034199    1.060565
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.PRISCUS - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .7078945   .0068379   103.53   0.000     .6944925    .7212966
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.PRISCUS - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .6356985   .0069411    91.59   0.000     .6220942    .6493027
------------------------------------------------------------------------------
```

```
 ( 1)  8.num_PSF4Q_prev#1bn.PRISCUS - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .4961238   .0070172    70.70   0.000     .4823704    .5098772
------------------------------------------------------------------------------
```

STOPP

```
( 1)  1bn.num_PSF4Q_prev#1bn.STOPP - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .3163525   .0061706    51.27   0.000     .3042583    .3284468
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.STOPP - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .3412948   .0061706    55.31   0.000     .3292006    .3533891
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.STOPP - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .3896702   .0061706    63.15   0.000     .3775759    .4017644
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.STOPP - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .5230382   .0061706    84.76   0.000      .510944    .5351325
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.STOPP - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   1.427854   .0061706   231.39   0.000      1.41576    1.439948
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.STOPP - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .9759974   .0062751   155.54   0.000     .9636985    .9882964
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.STOPP - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .9034181   .0063715   141.79   0.000     .8909302     .915906
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q_prev#1bn.STOPP - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .7600641   .0064464   117.91   0.000     .7474295    .7726988
------------------------------------------------------------------------------
```

FORTA

```
( 1)  1bn.num_PSF4Q_prev#1bn.FORTA - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0652974   .0062141   -10.51   0.000    -.0774767    -.053118
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.FORTA - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |  -.0749285   .0062141   -12.06   0.000    -.0871079   -.0627492
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.FORTA - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.1000816   .0062141   -16.11   0.000    -.1122609   -.0879022
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.FORTA - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.1397809   .0062141   -22.49   0.000    -.1519602   -.1276016
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.FORTA - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .6072001   .0062141    97.71   0.000     .5950208    .6193794
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.FORTA - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .5959847   .0062857    94.82   0.000     .5836649    .6083044
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.FORTA - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .523345   .0063532    82.38   0.000      .510893     .535797
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q_prev#1bn.FORTA - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .4040054   .0064076    63.05   0.000     .3914468     .416564
------------------------------------------------------------------------------
```

Lincom (IG vs. KG mit Korrektur vor Q4 DiD)

PRISCUS

```
( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 5.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .8741602   .0087833    99.53   0.000     .8569453    .8913752
------------------------------------------------------------------------------
```

```
 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 6.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .5346731   .0088691    60.28   0.000       .51729    .5520563
------------------------------------------------------------------------------
```

```
 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 7.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .462477   .0089489    51.68   0.000     .4449375    .4800166
------------------------------------------------------------------------------
```

```
 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 8.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .3229024   .0090081    35.85   0.000     .3052469    .3405579
------------------------------------------------------------------------------
```

STOPP

```
( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 5.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .9048157   .0080578   112.29   0.000     .8890227    .9206088
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 6.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .4529592   .0081381    55.66   0.000     .4370088    .4689095
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 7.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .3803799   .0082127    46.32   0.000     .3642834    .3964764
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 8.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .2370259   .0082709    28.66   0.000     .2208153    .2532365
------------------------------------------------------------------------------
```

FORTA

```
( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 5.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |    .746981   .0081145    92.05   0.000     .7310769    .7628852
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 6.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .7357656   .0081695    90.06   0.000     .7197536    .7517775
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 7.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .6631259   .0082215    80.66   0.000      .647012    .6792399
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 8.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .5437863   .0082636    65.80   0.000     .5275898    .5599827
------------------------------------------------------------------------------
```

ddd_q

Modell

```
       panel variable:  versid (unbalanced)

Fitting constant-only model:
Iteration 0:   log likelihood = -3.025e+08
Iteration 1:   log likelihood = -3.024e+08
Iteration 2:   log likelihood = -3.024e+08
Iteration 3:   log likelihood = -3.024e+08

Fitting full model:
Iteration 0:   log likelihood = -3.023e+08
Iteration 1:   log likelihood = -3.023e+08
Iteration 2:   log likelihood = -3.023e+08
```

```
Random-effects ML regression                    Number of obs     = 41,723,270
Group variable: versid                          Number of groups  =  5,290,656

Random effects u_i ~ Gaussian                   Obs per group:
                                                              min =          5
                                                              avg =        7.9
                                                              max =          8

                                                LR chi2(31)       =  166275.75
Log likelihood  = -3.023e+08                    Prob > chi2       =     0.0000

------------------------------------------------------------------------------------
               ddd_q |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
---------------------+--------------------------------------------------------------
       num_PSF4Q_prev |
                  2  |   4.134148    .177434    23.30   0.000     3.786383    4.481912
                  3  |   10.84827    .177434    61.14   0.000      10.5005    11.19603
                  4  |   20.79825    .177434   117.22   0.000     20.45048    21.14601
                  5  |   2.529377    .177434    14.26   0.000     2.181613    2.877141
                  6  |   4.874748   .1788284    27.26   0.000      4.52425    5.225245
                  7  |   5.766937   .1799221    32.05   0.000     5.414296    6.119578
                  8  |   9.763544   .1808509    53.99   0.000     9.409082      10.118
                     |
           1.PRISCUS |   -.118793   .4270278    -0.28   0.781    -.9557521     .718166
                     |
num_PSF4Q_prev#PRISCUS |
                2 1  |  -.2593379   .3458887    -0.75   0.453    -.9372674    .4185916
                3 1  |  -.9725231   .3458887    -2.81   0.005    -1.650453   -.2945937
                4 1  |  -8.688289   .3458887   -25.12   0.000    -9.366219    -8.01036
                5 1  |   37.07951   .3458887   107.20   0.000     36.40158    37.75744
                6 1  |   6.888465   .3493316    19.72   0.000     6.203788    7.573142
                7 1  |   11.84253   .3526114    33.59   0.000     11.15143    12.53364
                8 1  |   11.69634   .3550406    32.94   0.000     11.00048    12.39221
                     |
             1.FORTA |   18.54044   .3915496    47.35   0.000     17.77302    19.30786
                     |
  num_PSF4Q_prev#FORTA |
                2 1  |  -.5264574   .3171518    -1.66   0.097    -1.148063    .0951486
                3 1  |   .2649035   .3171518     0.84   0.404    -.3567026    .8865095
                4 1  |   3.423505   .3171518    10.79   0.000     2.801899    4.045111
                5 1  |   30.56125   .3171518    96.36   0.000     29.93964    31.18286
                6 1  |   14.42997   .3193961    45.18   0.000     13.80397    15.05598
                7 1  |   15.65833   .3214893    48.71   0.000     15.02823    16.28844
```

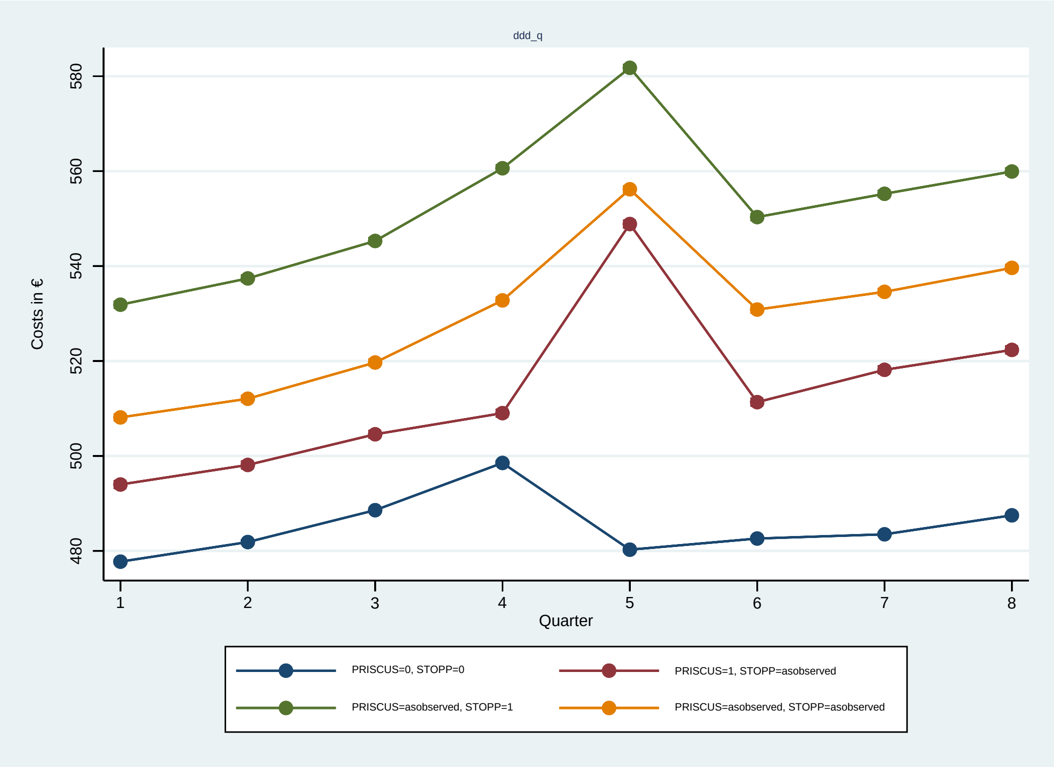
```
                8 1  |   16.61526   .3231757    51.41   0.000     15.98184    17.24867
                     |
             1.STOPP |   49.65558   .3962361   125.34   0.000     48.88897    50.44219
                     |
  num_PSF4Q_prev#STOPP |
                2 1  |    1.57378   .3209478     4.90   0.000     .9447341    2.202826
                3 1  |   2.696268   .3209478     8.40   0.000     2.067222    3.325314
                4 1  |   8.777822   .3209478    27.35   0.000     8.148776    9.406869
                5 1  |   32.83174   .3209478   102.30   0.000     32.20269    33.46079
                6 1  |   8.755219   .3241627    27.01   0.000     8.119872    9.390566
                7 1  |   11.51888   .3272343    35.20   0.000     10.87751    12.16024
                8 1  |   12.01278   .3296456    36.44   0.000     11.36669    12.65888
                     |
               _cons |   477.7311   .2190567  2180.86   0.000     477.3017    478.1604
---------------------+----------------------------------------------------------------
            /sigma_u |   320.0276   .1026496                      319.8265    320.2289
            /sigma_e |   223.6053    .025773                      223.5548    223.6558
                 rho |   .6719571   .0001513                      .6716605    .6722537
--------------------------------------------------------------------------------------
LR test of sigma_u=0: chibar2(01) = 3.2e+07           Prob >= chibar2 = 0.000
```

Margins

```
Predictive margins                                Number of obs     = 41,723,270
Model VCE    : OIM

Expression   : Linear prediction, predict()

----------------------------------------------------------------------------------------------------
                                   |            Delta-method
                                   |      Margin   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----------------------------------+----------------------------------------------------------------
            num_PSF4Q_prev#PRISCUS |
                               1 1 |    493.9853   .3827251  1290.71   0.000     493.2351    494.7354
                               2 1 |    498.1086   .3827251  1301.48   0.000     497.3585    498.8587
                               3 1 |    504.5699   .3827251  1318.36   0.000     503.8198      505.32
                               4 1 |    509.0246   .3827251  1330.00   0.000     508.2744    509.7747
                               5 1 |    548.8595   .3827251  1434.08   0.000     548.1093    549.6096
                               6 1 |    511.3432   .3853902  1326.82   0.000     510.5879    512.0986
                               7 1 |    518.1483    .387945  1335.62   0.000     517.3879    518.9086
                               8 1 |     522.349   .3897966  1340.06   0.000      521.585     523.113
                                   |
              num_PSF4Q_prev#STOPP |
                               1 1 |    531.8728   .3438342  1546.89   0.000     531.1989    532.5467
                               2 1 |    537.4032   .3438342  1562.97   0.000     536.7293    538.0771
```

3 1	545.2949	.3438342	1585.92	0.000	544.621	545.9688
4 1	560.6111	.3438342	1630.47	0.000	559.9372	561.285
5 1	581.7707	.3438342	1692.01	0.000	581.0968	582.4446
6 1	550.3272	.3463678	1588.85	0.000	549.6483	551.0061
7 1	555.2325	.3488052	1591.81	0.000	554.5489	555.9162
8 1	559.9272	.3506988	1596.60	0.000	559.2398	560.6145
num_PSF4Q_prev#FORTA						
1 1	508.1227	.3404526	1492.49	0.000	507.4554	508.79
2 1	512.0569	.3404526	1504.05	0.000	511.3896	512.7241
3 1	519.6937	.3404526	1526.48	0.000	519.0265	520.361
4 1	532.7745	.3404526	1564.90	0.000	532.1073	533.4418
5 1	556.1836	.3404526	1633.66	0.000	555.5163	556.8509
6 1	530.8435	.341868	1552.77	0.000	530.1735	531.5136
7 1	534.5762	.3432469	1557.41	0.000	533.9034	535.2489
8 1	539.6197	.3443624	1567.01	0.000	538.9448	540.2947
num_PSF4Q_prev#PRISCUS#STOPP#FORTA						
1 0 0 0	477.7311	.2190567	2180.86	0.000	477.3017	478.1604
2 0 0 0	481.8652	.2190567	2199.73	0.000	481.4359	482.2946
3 0 0 0	488.5793	.2190567	2230.38	0.000	488.15	489.0087
4 0 0 0	498.5293	.2190567	2275.80	0.000	498.1	498.9587
5 0 0 0	480.2605	.2190567	2192.40	0.000	479.8311	480.6898
6 0 0 0	482.6058	.2201877	2191.79	0.000	482.1743	483.0374
7 0 0 0	483.498	.2210769	2187.01	0.000	483.0647	483.9313
8 0 0 0	487.4946	.2218335	2197.57	0.000	487.0598	487.9294

Grafik



Lincom (IG vs. KG)

PRISCUS

```
( 1)  1bn.num_PSF4Q_prev#1bn.PRISCUS - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    16.2542   .4289425    37.89   0.000     15.41348    17.09491
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.PRISCUS - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
```

```
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   16.24337   .4289425    37.87   0.000     15.40266    17.08408
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.PRISCUS - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   15.99058   .4289425    37.28   0.000     15.14986    16.83129
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.PRISCUS - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   10.49524   .4289425    24.47   0.000     9.654531    11.33595
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.PRISCUS - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   68.59901   .4289425   159.93   0.000      67.7583    69.43972
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.PRISCUS - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   28.73739   .4319216    66.53   0.000     27.89084    29.58394
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.PRISCUS - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   34.65026   .4346514    79.72   0.000     33.79836    35.50216
------------------------------------------------------------------------------
```

```
 ( 1)  8.num_PSF4Q_prev#1bn.PRISCUS - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   34.85436    .436656    79.82   0.000     33.99853    35.71019
------------------------------------------------------------------------------
```

STOPP

```
( 1)  1bn.num_PSF4Q_prev#1bn.STOPP - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   54.14174   .3935135   137.59   0.000     53.37046    54.91301
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.STOPP - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   55.53796   .3935135   141.13   0.000     54.76669    56.30924
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.STOPP - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   56.71552   .3935135   144.13   0.000     55.94425    57.48679
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.STOPP - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   62.08177   .3935135   157.76   0.000      61.3105    62.85304
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.STOPP - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   101.5103   .3935135   257.96   0.000      100.739    102.2815
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.STOPP - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   67.72138   .3962993   170.88   0.000     66.94465    68.49811
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.STOPP - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    71.7345   .3988505   179.85   0.000     70.95277    72.51623
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q_prev#1bn.STOPP - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   72.43254   .4008229   180.71   0.000     71.64694    73.21814
------------------------------------------------------------------------------
```

FORTA

```
( 1)  1bn.num_PSF4Q_prev#1bn.FORTA - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   30.39164   .3962815    76.69   0.000     29.61495    31.16834
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.FORTA - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |   30.19164   .3962815    76.19   0.000     29.41494    30.96834
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.FORTA - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    31.1144   .3962815    78.52   0.000     30.33771     31.8911
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.FORTA - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   34.24522   .3962815    86.42   0.000     33.46852    35.02192
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.FORTA - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   75.92316   .3962815   191.59   0.000     75.14646    76.69986
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.FORTA - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    48.2377   .3981898   121.14   0.000     47.45726    49.01813
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.FORTA - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   51.07818   .3999688   127.71   0.000     50.29426    51.86211
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q_prev#1bn.FORTA - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   52.12512   .4013933   129.86   0.000      51.3384    52.91183
------------------------------------------------------------------------------
```

Lincom (IG vs. KG mit Korrektur vor Q4 DiD)

PRISCUS

```
( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 5.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   58.10377   .3474397   167.23   0.000      57.4228    58.78474
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 6.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   18.24215   .3511109    51.96   0.000     17.55398    18.93031
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 7.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   24.15502   .3544637    68.15   0.000     23.46028    24.84976
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 8.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   24.35912   .3569189    68.25   0.000     23.65957    25.05867
------------------------------------------------------------------------------
```

STOPP

```
( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 5.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   39.42849   .3187425   123.70   0.000     38.80377    40.05321
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 6.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   5.639609   .3221755    17.50   0.000     5.008157    6.271061
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 7.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   9.652731   .3253084    29.67   0.000     9.015139    10.29032
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 8.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   10.35077   .3277238    31.58   0.000     9.708443     10.9931
------------------------------------------------------------------------------
```

FORTA

```
( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 5.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |   41.67794   .3209846   129.84   0.000     41.04883    42.30706
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 6.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   13.99248   .3233375    43.28   0.000     13.35875    14.62621
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 7.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   16.83297   .3255259    51.71   0.000     16.19495    17.47099
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 8.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    17.8799   .3272746    54.63   0.000     17.23845    18.52134
------------------------------------------------------------------------------
```

Kosten

amb_kost_q

Modell

```
       panel variable:  versid (unbalanced)

Fitting constant-only model:
Iteration 0:   log likelihood = -3.164e+08
Iteration 1:   log likelihood = -3.127e+08
Iteration 2:   log likelihood = -3.126e+08
Iteration 3:   log likelihood = -3.126e+08
Iteration 4:   log likelihood = -3.126e+08
Iteration 5:   log likelihood = -3.126e+08
```

```
Fitting full model:
Iteration 0:   log likelihood = -3.165e+08
Iteration 1:   log likelihood = -3.127e+08
Iteration 2:   log likelihood = -3.125e+08
Iteration 3:   log likelihood = -3.125e+08
Iteration 4:   log likelihood = -3.125e+08
Iteration 5:   log likelihood = -3.125e+08

Random-effects ML regression                    Number of obs     = 41,723,270
Group variable: versid                          Number of groups  =  5,290,656

Random effects u_i ~ Gaussian                   Obs per group:
                                                              min =          5
                                                              avg =        7.9
                                                              max =          8

                                                LR chi2(31)       =  106595.03
Log likelihood  = -3.125e+08                    Prob > chi2       =     0.0000

------------------------------------------------------------------------------------
          amb_kost_q |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
---------------------+--------------------------------------------------------------
        num_PSF4Q_prev |
                   2 |   4.300546   .2190253    19.63   0.000     3.871264    4.729828
                   3 |   12.15098   .2190253    55.48   0.000     11.72169    12.58026
                   4 |   22.76772   .2190253   103.95   0.000     22.33844      23.197
                   5 |   7.240194   .2190253    33.06   0.000     6.810912    7.669476
                   6 |   7.365135   .2207551    33.36   0.000     6.932463    7.797807
                   7 |   10.18774   .2221099    45.87   0.000     9.752412    10.62307
                   8 |   14.28727   .2232595    63.99   0.000     13.84969    14.72485
                     |
           1.PRISCUS |  -27.15826   .6155304   -44.12   0.000    -28.36468   -25.95184
                     |
num_PSF4Q_prev#PRISCUS |
                 2 1 |   .3600031   .4269665     0.84   0.399    -.4768359    1.196842
                 3 1 |  -.5022566   .4269665    -1.18   0.239    -1.339096    .3345823
                 4 1 |  -2.494433   .4269665    -5.84   0.000    -3.331272   -1.657594
                 5 1 |   16.37374   .4269665    38.35   0.000      15.5369    17.21058
                 6 1 |   11.42536   .4312374    26.49   0.000     10.58015    12.27057
                 7 1 |   10.39514   .4353004    23.88   0.000     9.541962    11.24831
                 8 1 |   9.114812    .438307    20.80   0.000     8.255746    9.973878
                     |
             1.FORTA |   22.20217   .5643911    39.34   0.000     21.09598    23.30836
                     |
```

num_PSF4Q_prev#FORTA						
2 1	-.6512624	.3914935	-1.66	0.096	-1.418575	.1160507
3 1	-1.222418	.3914935	-3.12	0.002	-1.989731	-.4551053
4 1	-.9236741	.3914935	-2.36	0.018	-1.690987	-.156361
5 1	28.91839	.3914935	73.87	0.000	28.15107	29.6857
6 1	18.52244	.3942776	46.98	0.000	17.74967	19.29521
7 1	16.96782	.3968707	42.75	0.000	16.18997	17.74568
8 1	18.03146	.398958	45.20	0.000	17.24952	18.8134
1.STOPP	41.7593	.5711464	73.11	0.000	40.63987	42.87873
num_PSF4Q_prev#STOPP						
2 1	2.144462	.3961793	5.41	0.000	1.367965	2.920959
3 1	5.495436	.3961793	13.87	0.000	4.718939	6.271934
4 1	9.806579	.3961793	24.75	0.000	9.030082	10.58308
5 1	35.27974	.3961793	89.05	0.000	34.50324	36.05623
6 1	23.65882	.4001674	59.12	0.000	22.87451	24.44313
7 1	23.78422	.4039725	58.88	0.000	22.99245	24.57599
8 1	24.58719	.4069569	60.42	0.000	23.78957	25.38482
_cons	219.519	.3157548	695.22	0.000	218.9001	220.1378
/sigma_u	490.4009	.1542238			490.0987	490.7032
/sigma_e	276.0193	.0318203			275.9569	276.0816
rho	.7594205	.000123			.7591793	.7596615

LR test of sigma_u=0: chibar2(01) = 4.3e+07 Prob >= chibar2 = 0.000

Margins

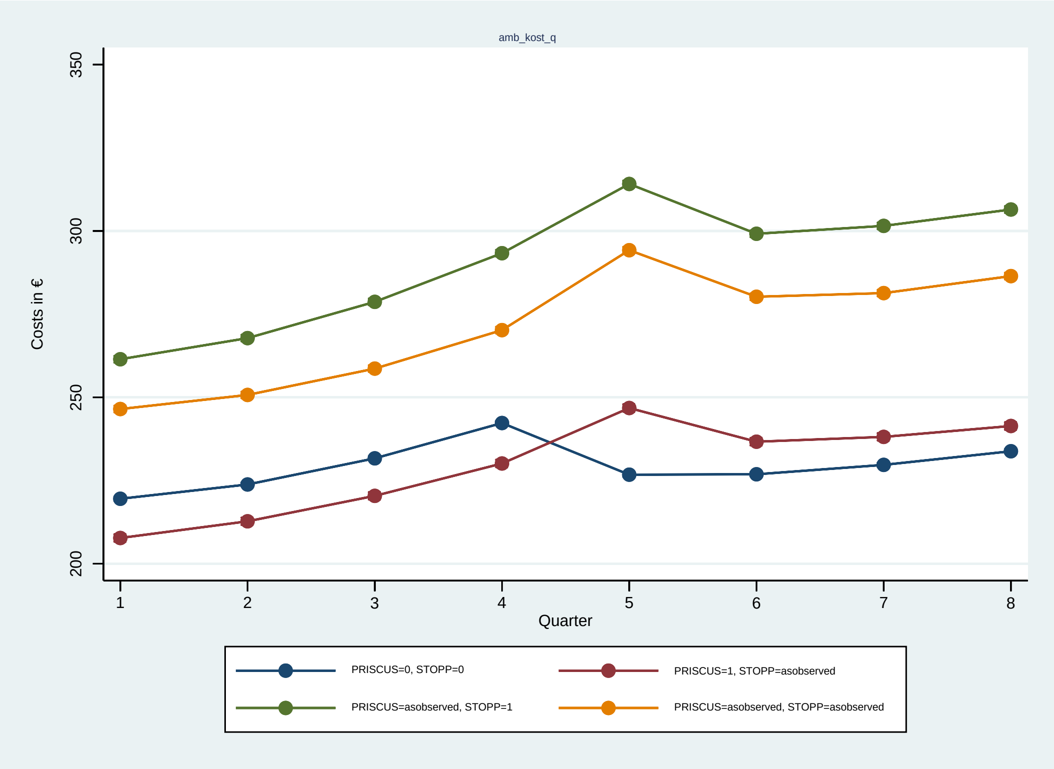
Predictive margins Number of obs = 41,723,270
Model VCE : OIM

Expression : Linear prediction, predict()

	Margin	Delta-method Std. Err.	z	P>|z|	[95% Conf.	Interval]
num_PSF4Q_prev#PRISCUS						
1 1	207.732	.5516711	376.55	0.000	206.6508	208.8133
2 1	212.7472	.5516711	385.64	0.000	211.666	213.8285
3 1	220.3979	.5516711	399.51	0.000	219.3167	221.4792
4 1	230.1257	.5516711	417.14	0.000	229.0445	231.207
5 1	246.7979	.5516711	447.36	0.000	245.7166	247.8791

6 1	236.6735	.5545051	426.82	0.000	235.5866	237.7603
7 1	238.1186	.5572229	427.33	0.000	237.0264	239.2107
8 1	241.3879	.5591938	431.67	0.000	240.2919	242.4839
num_PSF4Q_prev#STOPP						
1 1	261.4502	.4956127	527.53	0.000	260.4788	262.4216
2 1	267.8063	.4956127	540.35	0.000	266.8349	268.7777
3 1	278.7035	.4956127	562.34	0.000	277.7322	279.6749
4 1	293.3213	.4956127	591.84	0.000	292.35	294.2927
5 1	314.1319	.4956127	633.83	0.000	313.1605	315.1033
6 1	299.1629	.4983069	600.36	0.000	298.1863	300.1396
7 1	301.5359	.5009003	601.99	0.000	300.5541	302.5176
8 1	306.4506	.5029165	609.35	0.000	305.4649	307.4363
num_PSF4Q_prev#FORTA						
1 1	246.4894	.4907384	502.28	0.000	245.5275	247.4512
2 1	250.7205	.4907384	510.90	0.000	249.7586	251.6823
3 1	258.6353	.4907384	527.03	0.000	257.6735	259.5971
4 1	270.1989	.4907384	550.60	0.000	269.2371	271.1607
5 1	294.2271	.4907384	599.56	0.000	293.2652	295.1889
6 1	280.2274	.4922428	569.29	0.000	279.2627	281.1922
7 1	281.3276	.4937081	569.83	0.000	280.3599	282.2952
8 1	286.4368	.4948936	578.78	0.000	285.4668	287.4068
num_PSF4Q_prev#PRISCUS#STOPP#FORTA						
1 0 0 0	219.519	.3157548	695.22	0.000	218.9001	220.1378
2 0 0 0	223.8195	.3157548	708.84	0.000	223.2006	224.4384
3 0 0 0	231.6699	.3157548	733.70	0.000	231.0511	232.2888
4 0 0 0	242.2867	.3157548	767.33	0.000	241.6678	242.9056
5 0 0 0	226.7592	.3157548	718.15	0.000	226.1403	227.378
6 0 0 0	226.8841	.3169571	715.82	0.000	226.2629	227.5053
7 0 0 0	229.7067	.3179022	722.57	0.000	229.0836	230.3298
8 0 0 0	233.8062	.3187065	733.61	0.000	233.1816	234.4309

Grafik



Lincom (IG vs. KG)

PRISCUS

```
( 1)  1bn.num_PSF4Q_prev#1bn.PRISCUS - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -11.78695   .6182903   -19.06   0.000    -12.99878   -10.57513
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.PRISCUS - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
```

```
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -11.07229   .6182903   -17.91   0.000    -12.28411    -9.86046
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.PRISCUS - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -11.27199   .6182903   -18.23   0.000    -12.48382   -10.06017
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.PRISCUS - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -12.16097   .6182903   -19.67   0.000     -13.3728   -10.94914
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.PRISCUS - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    20.0387   .6182903    32.41   0.000     18.82688    21.25053
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.PRISCUS - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    9.78935   .6214581    15.75   0.000     8.571314    11.00738
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.PRISCUS - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   8.411865   .6243619    13.47   0.000     7.188138    9.635592
------------------------------------------------------------------------------
```

```
 ( 1)  8.num_PSF4Q_prev#1bn.PRISCUS - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   7.581616   .6264955    12.10   0.000     6.353707    8.809525
------------------------------------------------------------------------------
```

STOPP

```
( 1)  1bn.num_PSF4Q_prev#1bn.STOPP - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   41.93125   .5672219    73.92   0.000     40.81952    43.04299
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.STOPP - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   43.98682   .5672219    77.55   0.000     42.87508    45.09855
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.STOPP - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   47.03361   .5672219    82.92   0.000     45.92187    48.14534
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.STOPP - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   51.03466   .5672219    89.97   0.000     49.92292    52.14639
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.STOPP - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   87.37272   .5672219   154.04   0.000     86.26098    88.48445
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.STOPP - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   72.27884   .5701842   126.76   0.000      71.1613    73.39638
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.STOPP - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   71.82916   .5728981   125.38   0.000      70.7063    72.95202
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q_prev#1bn.STOPP - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   72.64435   .5749977   126.34   0.000     71.51738    73.77133
------------------------------------------------------------------------------
```

FORTA

```
( 1)  1bn.num_PSF4Q_prev#1bn.FORTA - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   26.97039   .5712119    47.22   0.000     25.85084    28.08995
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.FORTA - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |   26.90096   .5712119    47.09   0.000     25.78141    28.02052
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.FORTA - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   26.96537   .5712119    47.21   0.000     25.84581    28.08492
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.FORTA - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   27.91223   .5712119    48.86   0.000     26.79268    29.03179
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.FORTA - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   67.46791   .5712119   118.11   0.000     66.34835    68.58746
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.FORTA - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   53.34334   .5732404    93.06   0.000     52.21981    54.46687
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.FORTA - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   51.62085   .5751313    89.75   0.000     50.49362    52.74809
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q_prev#1bn.FORTA - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   52.63059   .5766457    91.27   0.000     51.50038    53.76079
------------------------------------------------------------------------------
```

Lincom (IG vs. KG mit Korrektur vor Q4 DiD)

PRISCUS

```
( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 5.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   32.19967    .428881    75.08   0.000     31.35908    33.04026
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 6.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   21.95032   .4334352    50.64   0.000      21.1008    22.79984
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 7.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   20.57284   .4375886    47.01   0.000     19.71518    21.43049
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 8.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   19.74259   .4406274    44.81   0.000     18.87897     20.6062
------------------------------------------------------------------------------
```

STOPP

```
( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 5.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   36.33806   .3934571    92.36   0.000      35.5669    37.10922
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 6.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   21.24419   .3977157    53.42   0.000     20.46468    22.02369
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 7.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    20.7945   .4015968    51.78   0.000     20.00738    21.58161
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 8.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    21.6097   .4045863    53.41   0.000     20.81672    22.40267
------------------------------------------------------------------------------
```

FORTA

```
( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 5.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |   39.55568   .3962247    99.83   0.000     38.77909    40.33226
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 6.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   25.43111   .3991435    63.71   0.000      24.6488    26.21341
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 7.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   23.70862   .4018545    59.00   0.000       22.921    24.49624
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 8.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   24.71835   .4040189    61.18   0.000     23.92649    25.51022
------------------------------------------------------------------------------
```

reha_kost_q

Modell

```
       panel variable:  versid (unbalanced)

Fitting constant-only model:
Iteration 0:   log likelihood = -3.174e+08

Fitting full model:
Iteration 0:   log likelihood = -3.174e+08
Iteration 1:   log likelihood = -3.174e+08

Random-effects ML regression                    Number of obs     = 41,723,270
Group variable: versid                          Number of groups  =  5,290,656
```

```
Random effects u_i ~ Gaussian                   Obs per group:
                                                              min =          5
                                                              avg =        7.9
                                                              max =          8

                                                Number of obs         =   12929.67
Log likelihood  = -3.174e+08                    Prob > chi2       =     0.0000
```

reha_kost_q	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
num_PSF4Q_prev						
2	1.757081	.3016952	5.82	0.000	1.16577	2.348393
3	2.637452	.3016952	8.74	0.000	2.04614	3.228764
4	6.418616	.3016952	21.28	0.000	5.827304	7.009927
5	-4.348456	.3016952	-14.41	0.000	-4.939768	-3.757145
6	-8.293368	.3037019	-27.31	0.000	-8.888613	-7.698124
7	-8.905947	.3053157	-29.17	0.000	-9.504355	-8.307539
8	-7.404101	.306712	-24.14	0.000	-8.005246	-6.802957
1.PRISCUS	2.167626	.4158655	5.21	0.000	1.352544	2.982707
num_PSF4Q_prev#PRISCUS						
2 1	.1904093	.5881227	0.32	0.746	-.9622899	1.343109
3 1	.2466613	.5881227	0.42	0.675	-.9060379	1.399361
4 1	-1.151071	.5881227	-1.96	0.050	-2.30377	.0016285
5 1	10.65403	.5881227	18.12	0.000	9.501331	11.80673
6 1	6.974345	.5930781	11.76	0.000	5.811933	8.136757
7 1	7.747448	.5979204	12.96	0.000	6.575546	8.91935
8 1	5.926721	.6015755	9.85	0.000	4.747655	7.105787
1.FORTA	-1.983131	.3813148	-5.20	0.000	-2.730495	-1.235768
num_PSF4Q_prev#FORTA						
2 1	-1.410201	.5392605	-2.62	0.009	-2.467133	-.3532702
3 1	-.6957029	.5392605	-1.29	0.197	-1.752634	.3612283
4 1	-1.709972	.5392605	-3.17	0.002	-2.766903	-.6530409
5 1	7.528448	.5392605	13.96	0.000	6.471517	8.585379
6 1	15.67579	.5424902	28.90	0.000	14.61253	16.73906
7 1	14.12588	.5455787	25.89	0.000	13.05656	15.19519
8 1	11.46442	.5481139	20.92	0.000	10.39014	12.5387
1.STOPP	2.139592	.3858788	5.54	0.000	1.383284	2.895901

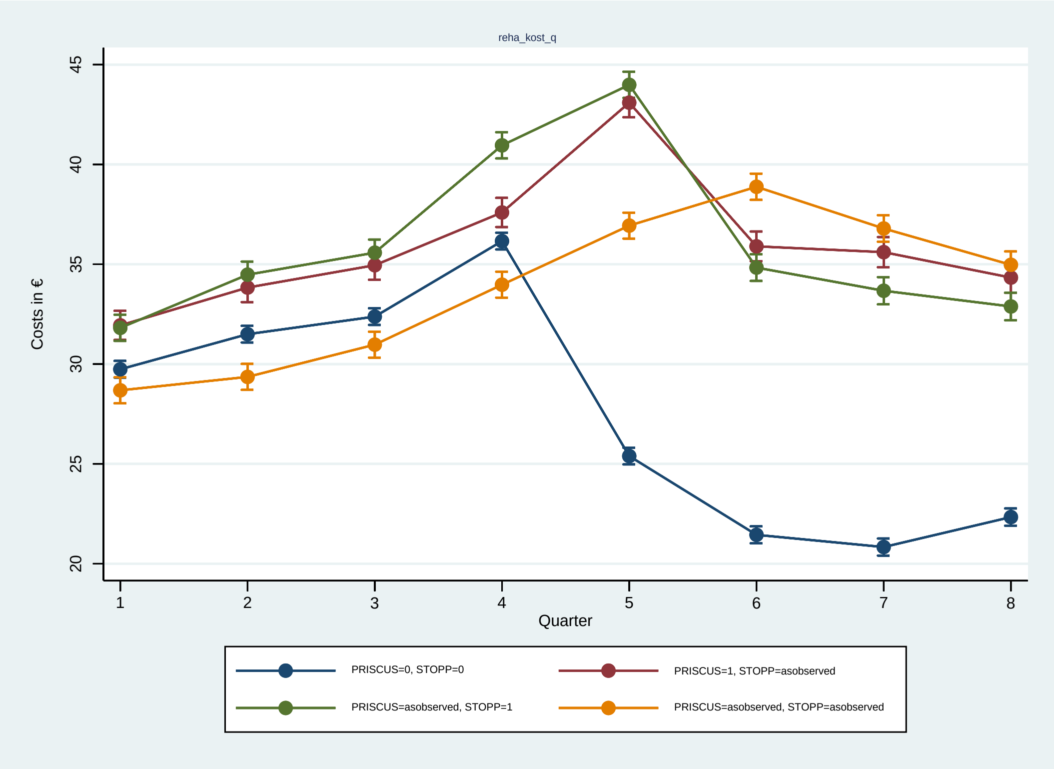
```
  num_PSF4Q_prev#STOPP |
                  2 1  |   1.211685    .545715     2.22   0.026     .1421029    2.281266
                  3 1  |   1.249099    .545715     2.29   0.022     .1795175    2.318681
                  4 1  |   3.358277    .545715     6.15   0.000     2.288695    4.427859
                  5 1  |   12.64819    .545715    23.18   0.000     11.57861    13.71777
                  6 1  |   6.167473   .5503424    11.21   0.000     5.088822    7.246124
                  7 1  |   5.848119   .5548773    10.54   0.000     4.760579    6.935659
                  8 1  |   4.554797   .5585056     8.16   0.000     3.460146    5.649447
                       |
                 _cons |   29.74044   .2133307   139.41   0.000     29.32232    30.15856
-----------------------+----------------------------------------------------------------
              /sigma_u |          0  (omitted)
              /sigma_e |   380.2012   .0409377                       380.121    380.2815
                   rho |          0  (omitted)
----------------------------------------------------------------------------------------
LR test of sigma_u=0: chibar2(01) = 0.00              Prob >= chibar2 = 1.000
```

Margins

```
Predictive margins                                Number of obs     = 41,723,270
Model VCE    : OIM

Expression   : Linear prediction, predict()

----------------------------------------------------------------------------------------------------
                                   |            Delta-method
                                   |     Margin   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----------------------------------+----------------------------------------------------------------
            num_PSF4Q_prev#PRISCUS |
                              1 1  |   31.93837   .3727209    85.69   0.000     31.20786    32.66889
                              2 1  |   33.83336   .3727209    90.77   0.000     33.10284    34.56388
                              3 1  |    34.9523   .3727209    93.78   0.000     34.22179    35.68282
                              4 1  |   37.59388   .3727209   100.86   0.000     36.86336     38.3244
                              5 1  |    43.0947   .3727209   115.62   0.000     42.36418    43.82522
                              6 1  |   35.89771   .3793772    94.62   0.000     35.15415    36.64128
                              7 1  |   35.60579   .3858449    92.28   0.000     34.84955    36.36203
                              8 1  |   34.33188   .3905753    87.90   0.000     33.56636    35.09739
                                   |
              num_PSF4Q_prev#STOPP |
                              1 1  |   31.81509   .3348466    95.01   0.000      31.1588    32.47137
                              2 1  |   34.47822   .3348466   102.97   0.000     33.82194    35.13451
                              3 1  |   35.58019   .3348466   106.26   0.000      34.9239    36.23648
                              4 1  |   40.95599   .3348466   122.31   0.000      40.2997    41.61227
                              5 1  |   43.98769   .3348466   131.37   0.000      43.3314    44.64398
                              6 1  |   34.83241   .3411724   102.10   0.000     34.16373     35.5011
```

7 1	33.67285	.3473372	96.95	0.000	32.99208	34.35362
8 1	32.88589	.3521668	93.38	0.000	32.19566	33.57613
num_PSF4Q_prev#FORTA						
1 1	28.68512	.3315534	86.52	0.000	28.03528	29.33495
2 1	29.35825	.3315534	88.55	0.000	28.70842	30.00809
3 1	30.97287	.3315534	93.42	0.000	30.32304	31.6227
4 1	33.9756	.3315534	102.47	0.000	33.32577	34.62543
5 1	36.93507	.3315534	111.40	0.000	36.28523	37.5849
6 1	38.88144	.3350959	116.03	0.000	38.22466	39.53821
7 1	36.79106	.3386084	108.65	0.000	36.1274	37.45472
8 1	34.97258	.3414848	102.41	0.000	34.30328	35.64188
num_PSF4Q_prev#PRISCUS#STOPP#FORTA						
1 0 0 0	29.74044	.2133307	139.41	0.000	29.32232	30.15856
2 0 0 0	31.49752	.2133307	147.65	0.000	31.0794	31.91564
3 0 0 0	32.37789	.2133307	151.77	0.000	31.95977	32.79601
4 0 0 0	36.15905	.2133307	169.50	0.000	35.74093	36.57717
5 0 0 0	25.39198	.2133307	119.03	0.000	24.97386	25.8101
6 0 0 0	21.44707	.2161593	99.22	0.000	21.02341	21.87073
7 0 0 0	20.83449	.2184208	95.39	0.000	20.40639	21.26259
8 0 0 0	22.33634	.2203684	101.36	0.000	21.90442	22.76825

Grafik



Lincom (IG vs. KG)

PRISCUS

```
( 1)  1bn.num_PSF4Q_prev#1bn.PRISCUS - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   2.197937   .4177302     5.26   0.000     1.379201    3.016673
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.PRISCUS - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
```

```
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    2.33584   .4177302     5.59   0.000     1.517104    3.154576
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.PRISCUS - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   2.574415   .4177302     6.16   0.000     1.755679    3.393151
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.PRISCUS - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   1.434824   .4177302     3.43   0.001      .616088     2.25356
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.PRISCUS - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   17.70272   .4177302    42.38   0.000     16.88399    18.52146
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.PRISCUS - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   14.45064   .4251708    33.99   0.000     13.61732    15.28396
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.PRISCUS - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    14.7713   .4320834    34.19   0.000     13.92443    15.61816
------------------------------------------------------------------------------
```

```
 ( 1)  8.num_PSF4Q_prev#1bn.PRISCUS - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   11.99554    .437208    27.44   0.000     11.13863    12.85245
------------------------------------------------------------------------------
```

STOPP

```
( 1)  1bn.num_PSF4Q_prev#1bn.STOPP - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   2.074649   .3832273     5.41   0.000     1.323538    2.825761
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.STOPP - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   2.980705   .3832273     7.78   0.000     2.229594    3.731817
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.STOPP - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   3.202301   .3832273     8.36   0.000     2.451189    3.953413
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.STOPP - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   4.796934   .3832273    12.52   0.000     4.045822    5.548046
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.STOPP - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   18.59571   .3832273    48.52   0.000      17.8446    19.34682
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.STOPP - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   13.38534   .3901845    34.31   0.000      12.6206    14.15009
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.STOPP - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   12.83836   .3966427    32.37   0.000     12.06096    13.61577
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q_prev#1bn.STOPP - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   10.54956   .4016819    26.26   0.000     9.762276    11.33684
------------------------------------------------------------------------------
```

FORTA

```
( 1)  1bn.num_PSF4Q_prev#1bn.FORTA - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -1.055321    .385923    -2.73   0.006    -1.811716   -.2989255
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.FORTA - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |  -2.139266    .385923    -5.54   0.000    -2.895661   -1.382871
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.FORTA - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   -1.40502    .385923    -3.64   0.000    -2.161415   -.6486249
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.FORTA - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -2.183453    .385923    -5.66   0.000    -2.939848   -1.427058
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.FORTA - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   11.54309    .385923    29.91   0.000     10.78669    12.29948
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.FORTA - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   17.43437   .3906969    44.62   0.000     16.66862    18.20012
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.FORTA - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   15.95657   .3952228    40.37   0.000     15.18194    16.73119
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q_prev#1bn.FORTA - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   12.63624   .3988891    31.68   0.000     11.85444    13.41805
------------------------------------------------------------------------------
```

Lincom (IG vs. KG mit Korrektur vor Q4 DiD)

PRISCUS

```
( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 5.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    16.2679   .5907597    27.54   0.000     15.11003    17.42577
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 6.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   13.01582   .5960442    21.84   0.000     11.84759    14.18404
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 7.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   13.33647   .6009947    22.19   0.000     12.15854     14.5144
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 8.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   10.56072   .6046895    17.46   0.000     9.375547    11.74589
------------------------------------------------------------------------------
```

STOPP

```
( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 5.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   13.79877   .5419653    25.46   0.000     12.73654    14.86101
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 6.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   8.588411   .5469068    15.70   0.000     7.516493    9.660329
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 7.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   8.041427   .5515329    14.58   0.000     6.960442    9.122412
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 8.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   5.752624    .555168    10.36   0.000     4.664515    6.840734
------------------------------------------------------------------------------
```

FORTA

```
( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 5.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |   13.72654   .5457775    25.15   0.000     12.65683    14.79624
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 6.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   19.61782   .5491635    35.72   0.000     18.54148    20.69416
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 7.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   18.14002   .5523926    32.84   0.000     17.05735    19.22269
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 8.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    14.8197   .5550217    26.70   0.000     13.73188    15.90752
------------------------------------------------------------------------------
```

heil_kost_q

Modell

```
       panel variable:  versid (unbalanced)

Fitting constant-only model:
Iteration 0:   log likelihood = -2.613e+08
Iteration 1:   log likelihood = -2.596e+08
Iteration 2:   log likelihood = -2.595e+08
Iteration 3:   log likelihood = -2.595e+08
Iteration 4:   log likelihood = -2.595e+08

Fitting full model:
Iteration 0:   log likelihood = -2.613e+08
Iteration 1:   log likelihood = -2.595e+08
```

```
Iteration 2:   log likelihood = -2.595e+08
Iteration 3:   log likelihood = -2.595e+08
Iteration 4:   log likelihood = -2.595e+08

Random-effects ML regression                    Number of obs     = 41,723,270
Group variable: versid                          Number of groups  =  5,290,656

Random effects u_i ~ Gaussian                   Obs per group:
                                                              min =          5
                                                              avg =        7.9
                                                              max =          8

                                                LR chi2(31)       =   63939.02
Log likelihood  = -2.595e+08                    Prob > chi2       =     0.0000

------------------------------------------------------------------------------------
         heil_kost_q |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
---------------------+--------------------------------------------------------------
       num_PSF4Q_prev |
                   2  |   1.233182   .0659876    18.69   0.000     1.103849    1.362516
                   3  |   2.421456   .0659876    36.70   0.000     2.292123    2.550789
                   4  |   3.992741   .0659876    60.51   0.000     3.863408    4.122074
                   5  |   4.756547   .0659876    72.08   0.000     4.627214    4.885881
                   6  |   5.269069   .0665058    79.23   0.000      5.13872    5.399418
                   7  |    5.56403   .0669123    83.15   0.000     5.432884    5.695175
                   8  |   6.349298   .0672576    94.40   0.000     6.217476    6.481121
                      |
           1.PRISCUS |   8.262901     .15613    52.92   0.000     7.956891     8.56891
                      |
num_PSF4Q_prev#PRISCUS |
                 2 1  |   .4009994   .1286358     3.12   0.002     .1488779    .6531208
                 3 1  |   .3575993   .1286358     2.78   0.005     .1054779    .6097208
                 4 1  |   .8151999   .1286358     6.34   0.000     .5630785    1.067321
                 5 1  |   1.087871   .1286358     8.46   0.000     .8357498    1.339993
                 6 1  |   2.157702   .1299152    16.61   0.000     1.903072    2.412331
                 7 1  |   2.912218   .1311344    22.21   0.000     2.655199    3.169236
                 8 1  |   2.969313   .1320374    22.49   0.000     2.710525    3.228102
                      |
             1.FORTA |  -4.835838   .1431585   -33.78   0.000    -5.116424   -4.555253
                      |
  num_PSF4Q_prev#FORTA |
                 2 1  |  -.3572714   .1179485    -3.03   0.002    -.5884462   -.1260966
                 3 1  |  -.5577324   .1179485    -4.73   0.000    -.7889072   -.3265576
                 4 1  |  -.8530321   .1179485    -7.23   0.000    -1.084207   -.6218573
```

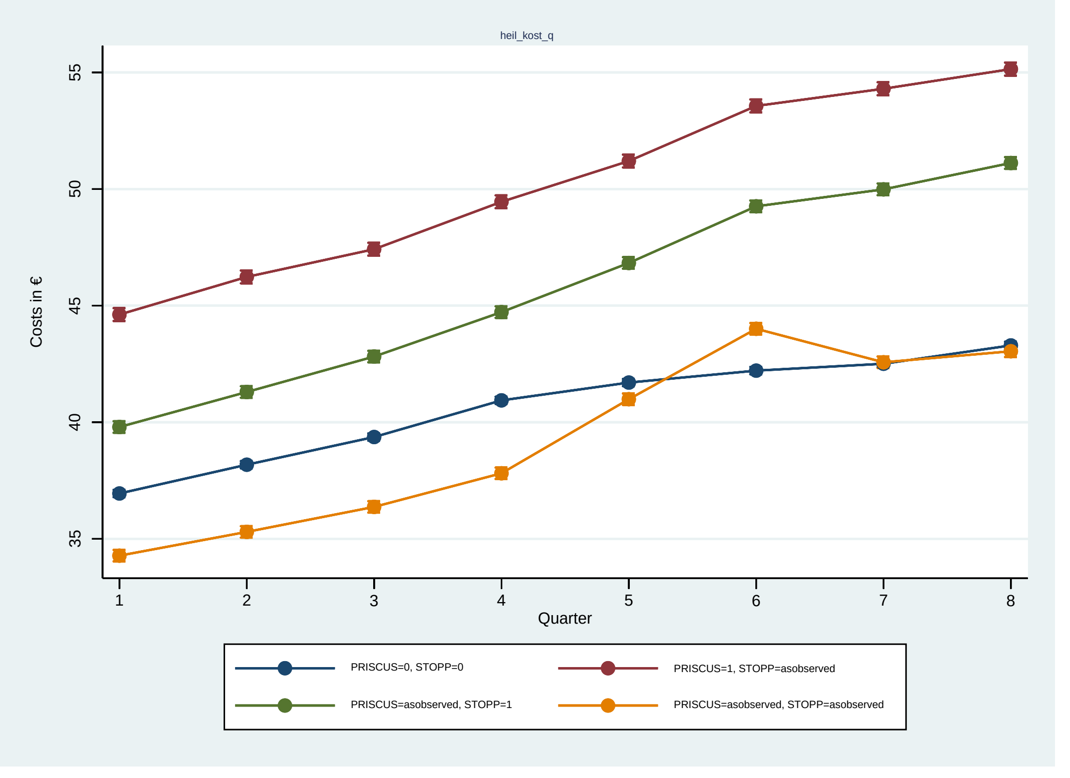
```
                 5 1  |   1.325353   .1179485    11.24   0.000     1.094178    1.556527
                 6 1  |   3.335564   .1187826    28.08   0.000     3.102754    3.568373
                 7 1  |   1.270875   .1195606    10.63   0.000     1.036541     1.50521
                 8 1  |   .8410248   .1201875     7.00   0.000     .6054615    1.076588
                      |
              1.STOPP |   2.437158    .144872    16.82   0.000     2.153214    2.721102
                      |
  num_PSF4Q_prev#STOPP |
                 2 1  |   .2778711   .1193602     2.33   0.020     .0439293    .5118129
                 3 1  |   .6663246   .1193602     5.58   0.000     .4323828    .9002663
                 4 1  |   .9842068   .1193602     8.25   0.000      .750265    1.218149
                 5 1  |   1.747362   .1193602    14.64   0.000      1.51342    1.981304
                 6 1  |   2.971215    .120555    24.65   0.000     2.734932    3.207499
                 7 1  |    3.75908   .1216967    30.89   0.000     3.520558    3.997601
                 8 1  |   4.197959   .1225931    34.24   0.000     3.957681    4.438237
                      |
                _cons |    36.9454   .0800916   461.29   0.000     36.78842    37.10238
----------------------+----------------------------------------------------------------
             /sigma_u |    116.015   .0373598                      115.9418    116.0883
             /sigma_e |   83.15863   .0095861                      83.13984    83.17742
                  rho |   .6605934   .0001546                      .6602904    .6608963
---------------------------------------------------------------------------------------
LR test of sigma_u=0: chibar2(01) = 3.1e+07           Prob >= chibar2 = 0.000
```

Margins

```
Predictive margins                                Number of obs     = 41,723,270
Model VCE    : OIM

Expression   : Linear prediction, predict()

----------------------------------------------------------------------------------------------------
                                   |            Delta-method
                                   |      Margin   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----------------------------------+----------------------------------------------------------------
            num_PSF4Q_prev#PRISCUS |
                               1 1 |    44.61752   .1399321   318.85   0.000     44.34326    44.89178
                               2 1 |    46.23144   .1399321   330.38   0.000     45.95718    46.50571
                               3 1 |    47.42055   .1399321   338.88   0.000     47.14628    47.69481
                               4 1 |    49.45377   .1399321   353.41   0.000     49.17951    49.72803
                               5 1 |    51.20131   .1399321   365.90   0.000     50.92704    51.47557
                               6 1 |    53.56405   .1409394   380.05   0.000     53.28781    53.84028
                               7 1 |    54.30088    .141905   382.66   0.000     54.02275      54.579
                               8 1 |    55.14386   .1426048   386.69   0.000     54.86436    55.42336
                                   |
```

num_PSF4Q_prev#STOPP						
1 1	39.79594	.1257128	316.56	0.000	39.54955	40.04233
2 1	41.29731	.1257128	328.51	0.000	41.05092	41.5437
3 1	42.81706	.1257128	340.59	0.000	42.57067	43.06345
4 1	44.72245	.1257128	355.75	0.000	44.47606	44.96884
5 1	46.83038	.1257128	372.52	0.000	46.58398	47.07677
6 1	49.26	.1266704	388.88	0.000	49.01173	49.50827
7 1	49.98671	.1275916	391.77	0.000	49.73664	50.23679
8 1	51.11752	.1283072	398.40	0.000	50.86604	51.36899
num_PSF4Q_prev#FORTA						
1 1	34.27907	.1244764	275.39	0.000	34.0351	34.52304
2 1	35.29842	.1244764	283.58	0.000	35.05446	35.54239
3 1	36.37077	.1244764	292.19	0.000	36.1268	36.61474
4 1	37.81064	.1244764	303.76	0.000	37.56667	38.05461
5 1	40.98765	.1244764	329.28	0.000	40.74368	41.23162
6 1	44.00843	.1250114	352.04	0.000	43.76341	44.25345
7 1	42.57197	.1255326	339.13	0.000	42.32593	42.81801
8 1	43.04328	.1259542	341.74	0.000	42.79641	43.29014
num_PSF4Q_prev#PRISCUS#STOPP#FORTA						
1 0 0 0	36.9454	.0800916	461.29	0.000	36.78842	37.10238
2 0 0 0	38.17858	.0800916	476.69	0.000	38.0216	38.33556
3 0 0 0	39.36686	.0800916	491.52	0.000	39.20988	39.52383
4 0 0 0	40.93814	.0800916	511.14	0.000	40.78116	41.09512
5 0 0 0	41.70195	.0800916	520.68	0.000	41.54497	41.85892
6 0 0 0	42.21447	.0805191	524.28	0.000	42.05665	42.37228
7 0 0 0	42.50943	.0808552	525.75	0.000	42.35096	42.6679
8 0 0 0	43.2947	.0811412	533.57	0.000	43.13566	43.45373

Grafik



Lincom (IG vs. KG)

PRISCUS

```
( 1)  1bn.num_PSF4Q_prev#1bn.PRISCUS - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   7.672124   .1568301    48.92   0.000     7.364743    7.979505
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.PRISCUS - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
```

```
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   8.052862   .1568301    51.35   0.000     7.745481    8.360243
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.PRISCUS - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    8.05369   .1568301    51.35   0.000     7.746308    8.361071
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.PRISCUS - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   8.515633   .1568301    54.30   0.000     8.208252    8.823014
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.PRISCUS - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    9.49936   .1568301    60.57   0.000     9.191978    9.806741
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.PRISCUS - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   11.34958   .1579561    71.85   0.000     11.03999    11.65917
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.PRISCUS - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   11.79145   .1589879    74.17   0.000     11.47984    12.10306
------------------------------------------------------------------------------
```

```
 ( 1)  8.num_PSF4Q_prev#1bn.PRISCUS - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   11.84916   .1597455    74.18   0.000     11.53607    12.16226
------------------------------------------------------------------------------
```

STOPP

```
( 1)  1bn.num_PSF4Q_prev#1bn.STOPP - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   2.850543   .1438765    19.81   0.000      2.56855    3.132535
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.STOPP - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   3.118728   .1438765    21.68   0.000     2.836736    3.400721
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.STOPP - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   3.450204   .1438765    23.98   0.000     3.168211    3.732197
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.STOPP - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   3.784309   .1438765    26.30   0.000     3.502316    4.066302
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.STOPP - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   5.128429   .1438765    35.64   0.000     4.846437    5.410422
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.STOPP - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   7.045529   .1449295    48.61   0.000     6.761472    7.329586
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.STOPP - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   7.477281   .1458937    51.25   0.000     7.191335    7.763228
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q_prev#1bn.STOPP - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    7.82282   .1466392    53.35   0.000     7.535412    8.110227
------------------------------------------------------------------------------
```

FORTA

```
( 1)  1bn.num_PSF4Q_prev#1bn.FORTA - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -2.666328   .1448886   -18.40   0.000    -2.950305   -2.382352
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.FORTA - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |  -2.880157   .1448886   -19.88   0.000    -3.164134   -2.596181
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.FORTA - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -2.996082   .1448886   -20.68   0.000    -3.280058   -2.712105
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.FORTA - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -3.127503   .1448886   -21.59   0.000    -3.411479   -2.843527
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.FORTA - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   -.714299   .1448886    -4.93   0.000    -.9982754   -.4303226
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.FORTA - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   1.793964   .1456099    12.32   0.000     1.508574    2.079354
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.FORTA - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0625377   .1462823     0.43   0.669    -.2241704    .3492459
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q_prev#1bn.FORTA - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.2514208   .1468208    -1.71   0.087    -.5391843    .0363426
------------------------------------------------------------------------------
```

Lincom (IG vs. KG mit Korrektur vor Q4 DiD)

PRISCUS

```
( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 5.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .9837268   .1292125     7.61   0.000     .7304749    1.236979
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 6.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   2.833948   .1305769    21.70   0.000     2.578022    3.089874
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 7.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   3.275814   .1318232    24.85   0.000     3.017446    3.534183
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 8.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   3.333531   .1327359    25.11   0.000     3.073373    3.593688
------------------------------------------------------------------------------
```

STOPP

```
( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 5.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   1.344121   .1185401    11.34   0.000     1.111786    1.576455
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 6.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    3.26122   .1198159    27.22   0.000     3.026385    3.496055
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 7.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   3.692973   .1209804    30.53   0.000     3.455855     3.93009
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 8.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   4.038511   .1218784    33.14   0.000     3.799634    4.277388
------------------------------------------------------------------------------
```

FORTA

```
( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 5.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |   2.413204   .1193739    20.22   0.000     2.179236    2.647173
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 6.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   4.921467   .1202483    40.93   0.000     4.685785     5.15715
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 7.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   3.190041   .1210618    26.35   0.000     2.952764    3.427318
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 8.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   2.876082   .1217119    23.63   0.000     2.637531    3.114633
------------------------------------------------------------------------------
```

med_kost_q

Modell

```
       panel variable:  versid (unbalanced)

Fitting constant-only model:
Iteration 0:   log likelihood = -3.541e+08
Iteration 1:   log likelihood = -3.520e+08
Iteration 2:   log likelihood = -3.519e+08
Iteration 3:   log likelihood = -3.519e+08
Iteration 4:   log likelihood = -3.519e+08
Iteration 5:   log likelihood = -3.519e+08

Fitting full model:
Iteration 0:   log likelihood = -3.541e+08
```

```
Iteration 1:   log likelihood = -3.519e+08
Iteration 2:   log likelihood = -3.518e+08
Iteration 3:   log likelihood = -3.518e+08
Iteration 4:   log likelihood = -3.518e+08
Iteration 5:   log likelihood = -3.518e+08

Random-effects ML regression                    Number of obs     = 41,723,270
Group variable: versid                          Number of groups  =  5,290,656

Random effects u_i ~ Gaussian                   Obs per group:
                                                              min =          5
                                                              avg =        7.9
                                                              max =          8

                                                LR chi2(31)       =   72023.12
Log likelihood  = -3.518e+08                    Prob > chi2       =     0.0000

------------------------------------------------------------------------------------
            med_kost_q |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----------------------+------------------------------------------------------------
        num_PSF4Q_prev |
                    2  |    11.6548   .5662064    20.58   0.000     10.54505    12.76454
                    3  |   26.23785   .5662064    46.34   0.000      25.1281    27.34759
                    4  |   48.79046   .5662064    86.17   0.000     47.68072     49.9002
                    5  |   41.83201   .5662064    73.88   0.000     40.72227    42.94176
                    6  |   46.01524   .5706429    80.64   0.000      44.8968    47.13368
                    7  |   51.60009   .5741256    89.88   0.000     50.47483    52.72536
                    8  |   58.65596   .5770849   101.64   0.000      57.5249    59.78703
                       |
             1.PRISCUS |   40.68092    1.27693    31.86   0.000     38.17819    43.18366
                       |
num_PSF4Q_prev#PRISCUS |
                  2 1  |     2.0812   1.103759     1.89   0.059    -.0821279    4.244528
                  3 1  |   6.381376   1.103759     5.78   0.000     4.218048    8.544704
                  4 1  |   11.37663   1.103759    10.31   0.000     9.213298    13.53995
                  5 1  |   58.38167   1.103759    52.89   0.000     56.21834      60.545
                  6 1  |   31.67271   1.114713    28.41   0.000     29.48792    33.85751
                  7 1  |   23.88758   1.125157    21.23   0.000     21.68232    26.09285
                  8 1  |   19.09147   1.132896    16.85   0.000     16.87103     21.3119
                       |
               1.FORTA |  -26.80659   1.170841   -22.90   0.000    -29.10139   -24.51178
                       |
  num_PSF4Q_prev#FORTA |
                  2 1  |  -5.340727   1.012057    -5.28   0.000    -7.324322   -3.357132
```

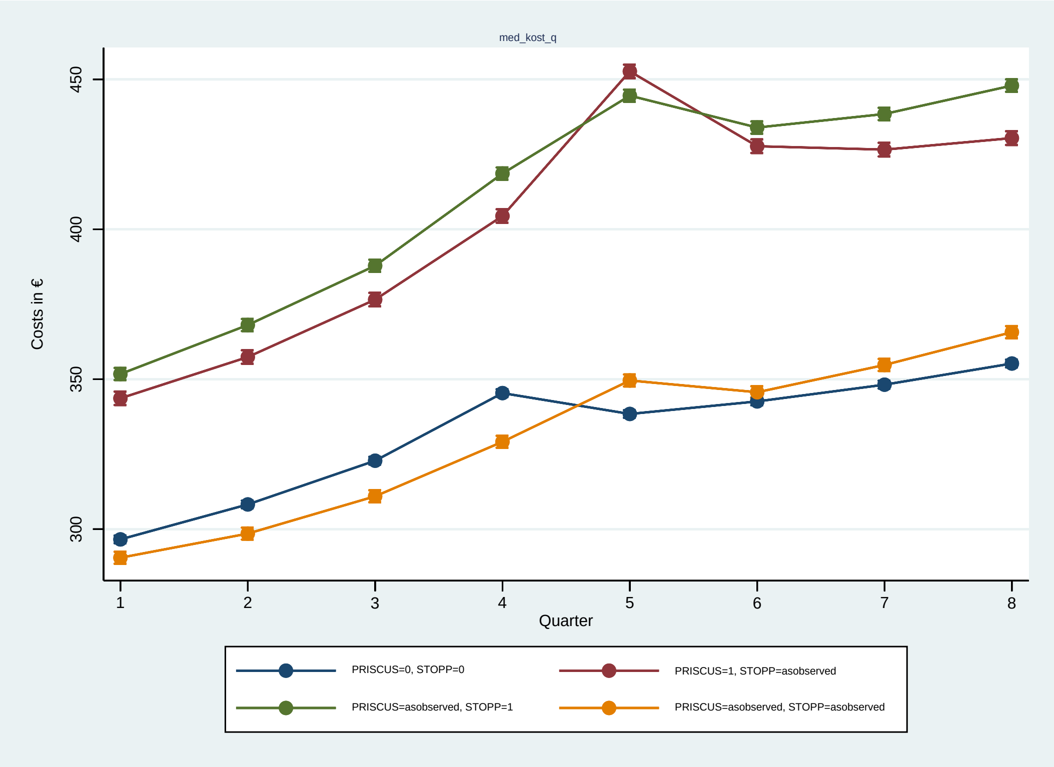
```
                   3 1  |  -9.596352   1.012057    -9.48   0.000    -11.57995   -7.612756
                   4 1  |  -17.09502   1.012057   -16.89   0.000    -19.07862   -15.11143
                   5 1  |    -3.6563   1.012057    -3.61   0.000    -5.639896   -1.672705
                   6 1  |  -4.354519   1.019198    -4.27   0.000     -6.35211   -2.356929
                   7 1  |   .8497868   1.025863     0.83   0.407    -1.160867    2.860441
                   8 1  |   5.105863   1.031235     4.95   0.000     3.084679    7.127047
                        |
                1.STOPP |   53.84731   1.184854    45.45   0.000     51.52504    56.16958
                        |
    num_PSF4Q_prev#STOPP |
                   2 1  |   5.581023    1.02417     5.45   0.000     3.573686     7.58836
                   3 1  |   10.98754    1.02417    10.73   0.000     8.980199    12.99487
                   4 1  |   20.02689    1.02417    19.55   0.000     18.01955    22.03423
                   5 1  |   40.67925    1.02417    39.72   0.000     38.67192    42.68659
                   6 1  |   31.16128   1.034399    30.13   0.000     29.13389    33.18866
                   7 1  |   30.33543    1.04418    29.05   0.000     28.28888    32.38199
                   8 1  |   32.63461   1.051862    31.03   0.000       30.573    34.69622
                        |
                  _cons |   296.5825   .6550396   452.77   0.000     295.2987    297.8664
-----------------------+----------------------------------------------------------------
               /sigma_u |   923.9749   .3009298                      923.3853    924.5649
               /sigma_e |   713.5425   .0822697                      713.3813    713.7038
                    rho |   .6264193   .0001632                      .6260994     .626739
----------------------------------------------------------------------------------------
LR test of sigma_u=0: chibar2(01) = 2.7e+07           Prob >= chibar2 = 0.000
```

Margins

```
Predictive margins                                Number of obs     = 41,723,270
Model VCE    : OIM

Expression   : Linear prediction, predict()

----------------------------------------------------------------------------------------------------
                                   |            Delta-method
                                   |     Margin   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----------------------------------+----------------------------------------------------------------
             num_PSF4Q_prev#PRISCUS |
                               1 1  |   343.6324   1.144453   300.26   0.000     341.3893    345.8755
                               2 1  |   357.4068   1.144453   312.29   0.000     355.1637    359.6498
                               3 1  |   376.5499   1.144453   329.02   0.000     374.3068     378.793
                               4 1  |   404.4393   1.144453   353.39   0.000     402.1962    406.6824
                               5 1  |   452.6845   1.144453   395.55   0.000     450.4414    454.9275
                               6 1  |   427.7137   1.153498   370.80   0.000     425.4529    429.9746
                               7 1  |   426.5789   1.162168   367.05   0.000     424.3011    428.8567
```

8 1	430.4211	1.16845	368.37	0.000	428.131	432.7112
num_PSF4Q_prev#STOPP						
1 1	351.7375	1.028158	342.10	0.000	349.7224	353.7527
2 1	368.0771	1.028158	358.00	0.000	366.0619	370.0922
3 1	387.8598	1.028158	377.24	0.000	385.8446	389.8749
4 1	418.5915	1.028158	407.13	0.000	416.5763	420.6066
5 1	444.5734	1.028158	432.40	0.000	442.5582	446.5885
6 1	433.9399	1.036756	418.56	0.000	431.9079	435.9719
7 1	438.4667	1.045027	419.57	0.000	436.4185	440.5149
8 1	447.9335	1.051451	426.01	0.000	445.8727	449.9943
num_PSF4Q_prev#FORTA						
1 1	290.4622	1.018047	285.31	0.000	288.4669	292.4576
2 1	298.5103	1.018047	293.22	0.000	296.515	300.5056
3 1	310.9561	1.018047	305.44	0.000	308.9608	312.9515
4 1	329.1305	1.018047	323.30	0.000	327.1352	331.1258
5 1	349.5753	1.018047	343.38	0.000	347.58	351.5707
6 1	345.6555	1.022851	337.93	0.000	343.6508	347.6603
7 1	354.7521	1.027532	345.25	0.000	352.7382	356.7661
8 1	365.6927	1.03132	354.59	0.000	363.6714	367.7141
num_PSF4Q_prev#PRISCUS#STOPP#FORTA						
1 0 0 0	296.5825	.6550396	452.77	0.000	295.2987	297.8664
2 0 0 0	308.2373	.6550396	470.56	0.000	306.9535	309.5212
3 0 0 0	322.8204	.6550396	492.83	0.000	321.5365	324.1042
4 0 0 0	345.373	.6550396	527.26	0.000	344.0891	346.6568
5 0 0 0	338.4145	.6550396	516.63	0.000	337.1307	339.6984
6 0 0 0	342.5978	.6588782	519.97	0.000	341.3064	343.8891
7 0 0 0	348.1826	.6618968	526.04	0.000	346.8853	349.4799
8 0 0 0	355.2385	.6644653	534.62	0.000	353.9362	356.5408

Grafik



Lincom (IG vs. KG)

PRISCUS

```
( 1)  1bn.num_PSF4Q_prev#1bn.PRISCUS - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    47.0499   1.282655    36.68   0.000     44.53594    49.56385
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.PRISCUS - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
```

```
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   49.16944   1.282655    38.33   0.000     46.65548     51.6834
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.PRISCUS - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   53.72954   1.282655    41.89   0.000     51.21558     56.2435
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.PRISCUS - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   59.06631   1.282655    46.05   0.000     56.55235    61.58027
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.PRISCUS - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   114.2699   1.282655    89.09   0.000      111.756    116.7839
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.PRISCUS - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   85.11597   1.292765    65.84   0.000      82.5822    87.64975
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.PRISCUS - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   78.39626   1.302029    60.21   0.000     75.84433    80.94819
------------------------------------------------------------------------------
```

```
 ( 1)  8.num_PSF4Q_prev#1bn.PRISCUS - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    75.1826    1.30883    57.44   0.000     72.61734    77.74786
------------------------------------------------------------------------------
```

STOPP

```
( 1)  1bn.num_PSF4Q_prev#1bn.STOPP - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |     55.155   1.176713    46.87   0.000     52.84869    57.46132
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.STOPP - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   59.83974   1.176713    50.85   0.000     57.53342    62.14605
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.STOPP - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   65.03941   1.176713    55.27   0.000      62.7331    67.34573
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.STOPP - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   73.21847   1.176713    62.22   0.000     70.91215    75.52478
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.STOPP - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   106.1588   1.176713    90.22   0.000     103.8525    108.4652
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.STOPP - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   91.34216   1.186167    77.01   0.000     89.01732    93.66701
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.STOPP - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    90.2841   1.194824    75.56   0.000     87.94228    92.62591
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q_prev#1bn.STOPP - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   92.69498   1.201515    77.15   0.000     90.34005    95.04991
------------------------------------------------------------------------------
```

FORTA

```
( 1)  1bn.num_PSF4Q_prev#1bn.FORTA - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -6.120299    1.18499    -5.16   0.000    -8.442837   -3.797761
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.FORTA - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |  -9.727038    1.18499    -8.21   0.000    -12.04958     -7.4045
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.FORTA - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -11.86426    1.18499   -10.01   0.000    -14.18679   -9.541718
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.FORTA - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   -16.2425    1.18499   -13.71   0.000    -18.56504   -13.91996
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.FORTA - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   11.16079    1.18499     9.42   0.000     8.838249    13.48332
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.FORTA - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   3.057737   1.191467     2.57   0.010     .7225046     5.39297
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.FORTA - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   6.569518   1.197506     5.49   0.000     4.222449    8.916587
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q_prev#1bn.FORTA - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   10.45422   1.202342     8.69   0.000     8.097671    12.81077
------------------------------------------------------------------------------
```

Lincom (IG vs. KG mit Korrektur vor Q4 DiD)

PRISCUS

```
( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 5.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    55.2036   1.108708    49.79   0.000     53.03058    57.37663
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 6.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   26.04967   1.120389    23.25   0.000     23.85374    28.24559
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 7.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   19.32996   1.131065    17.09   0.000     17.11311     21.5468
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 8.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   16.11629   1.138888    14.15   0.000     13.88412    18.34847
------------------------------------------------------------------------------
```

STOPP

```
( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 5.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   32.94037   1.017133    32.39   0.000     30.94683    34.93392
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 6.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   18.12369   1.028056    17.63   0.000     16.10874    20.13865
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 7.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   17.06563   1.038032    16.44   0.000     15.03112    19.10013
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 8.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   19.47651   1.045727    18.62   0.000     17.42692     21.5261
------------------------------------------------------------------------------
```

FORTA

```
( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 5.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |   27.40329   1.024288    26.75   0.000     25.39572    29.41085
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 6.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   19.30024   1.031774    18.71   0.000       17.278    21.32248
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 7.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   22.81202   1.038742    21.96   0.000     20.77612    24.84792
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 8.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   26.69672   1.044313    25.56   0.000      24.6499    28.74353
------------------------------------------------------------------------------
```

stat_kost_q

Modell

```
       panel variable:  versid (unbalanced)

Fitting constant-only model:
Iteration 0:   log likelihood = -4.120e+08
Iteration 1:   log likelihood = -4.119e+08
Iteration 2:   log likelihood = -4.119e+08
Iteration 3:   log likelihood = -4.119e+08
Iteration 4:   log likelihood = -4.119e+08
Iteration 5:   log likelihood = -4.119e+08

Fitting full model:
Iteration 0:   log likelihood = -4.120e+08
```

```
Iteration 1:   log likelihood = -4.119e+08
Iteration 2:   log likelihood = -4.119e+08
Iteration 3:   log likelihood = -4.119e+08
Iteration 4:   log likelihood = -4.119e+08

Random-effects ML regression                    Number of obs     = 41,723,270
Group variable: versid                          Number of groups  =  5,290,656

Random effects u_i ~ Gaussian                   Obs per group:
                                                              min =          5
                                                              avg =        7.9
                                                              max =          8

                                                LR chi2(31)       =   96752.18
Log likelihood  = -4.119e+08                    Prob > chi2       =     0.0000

------------------------------------------------------------------------------------------
           stat_kost_q |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----------------------+------------------------------------------------------------------
        num_PSF4Q_prev |
                    2  |   31.00155   2.588583    11.98   0.000     25.92802    36.07508
                    3  |   84.64186   2.588583    32.70   0.000     79.56833    89.71539
                    4  |   209.7335   2.588583    81.02   0.000       204.66    214.8071
                    5  |   81.61788   2.588583    31.53   0.000     76.54435    86.69141
                    6  |   30.72873   2.607145    11.79   0.000     25.61882    35.83864
                    7  |   27.09665   2.622066    10.33   0.000      21.9575    32.23581
                    8  |   80.28074   2.634951    30.47   0.000     75.11633    85.44515
                       |
             1.PRISCUS |   18.37735   3.771037     4.87   0.000     10.98625    25.76844
                       |
num_PSF4Q_prev#PRISCUS |
                  2 1  |   7.484227   5.046167     1.48   0.138    -2.406079    17.37453
                  3 1  |    9.19112   5.046167     1.82   0.069    -.6991865    19.08143
                  4 1  |   12.73638   5.046167     2.52   0.012     2.846077    22.62669
                  5 1  |   250.0118   5.046167    49.54   0.000     240.1215    259.9021
                  6 1  |   159.3404   5.091811    31.29   0.000     149.3607    169.3202
                  7 1  |   133.9053   5.136183    26.07   0.000     123.8386    143.9721
                  8 1  |   90.86031   5.169522    17.58   0.000     80.72823    100.9924
                       |
               1.FORTA |  -60.28423   3.457733   -17.43   0.000    -67.06126    -53.5072
                       |
  num_PSF4Q_prev#FORTA |
                  2 1  |  -9.630593   4.626924    -2.08   0.037     -18.6992   -.5619886
                  3 1  |  -27.64631   4.626924    -5.98   0.000    -36.71492   -18.57771
```

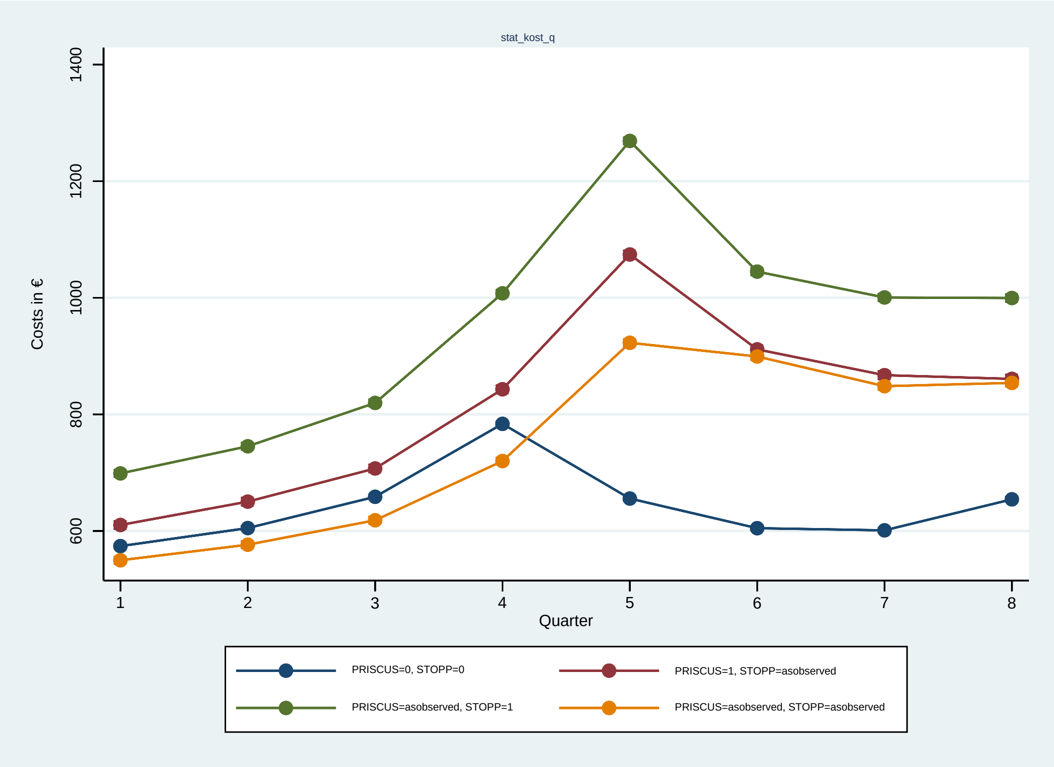
```
                    4 1  |  -69.10527   4.626924   -14.94   0.000    -78.17388   -60.03667
                    5 1  |   146.5832   4.626924    31.68   0.000     137.5146    155.6518
                    6 1  |   233.7049   4.656678    50.19   0.000      224.578    242.8318
                    7 1  |   197.7628   4.684981    42.21   0.000     188.5804    206.9452
                    8 1  |   167.7301    4.70811    35.63   0.000     158.5024    176.9578
                         |
                 1.STOPP |   135.8383   3.499119    38.82   0.000     128.9801    142.6964
                         |
    num_PSF4Q_prev#STOPP |
                    2 1  |   16.42811   4.682304     3.51   0.000     7.250965    25.60526
                    3 1  |    41.1885   4.682304     8.80   0.000     32.01136    50.36565
                    4 1  |   113.4781   4.682304    24.24   0.000      104.301    122.6553
                    5 1  |   405.1199   4.682304    86.52   0.000     395.9427     414.297
                    6 1  |   228.0886   4.724927    48.27   0.000     218.8279    237.3493
                    7 1  |   201.0189   4.766491    42.17   0.000     191.6768    210.3611
                    8 1  |   162.4598     4.7996    33.85   0.000     153.0528    171.8669
                         |
                   _cons |   574.0173   1.934467   296.73   0.000     570.2258    577.8088
-------------------------+----------------------------------------------------------------
                /sigma_u |   1115.529   .7583513                      1114.044    1117.017
                /sigma_e |   3262.175   .3788265                      3261.433    3262.917
                     rho |   .1046934    .000134                       .104431    .1049562
------------------------------------------------------------------------------------------
LR test of sigma_u=0: chibar2(01) = 1.0e+06            Prob >= chibar2 = 0.000
```

Margins

```
Predictive margins                                 Number of obs     = 41,723,270
Model VCE    : OIM

Expression   : Linear prediction, predict()

----------------------------------------------------------------------------------------------------
                                   |            Delta-method
                                   |      Margin   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----------------------------------+----------------------------------------------------------------
             num_PSF4Q_prev#PRISCUS |
                               1 1 |    610.2424   3.379804   180.56   0.000     603.6181    616.8667
                               2 1 |    650.3189   3.379804   192.41   0.000     643.6946    656.9432
                               3 1 |    707.2141   3.379804   209.25   0.000     700.5898    713.8384
                               4 1 |    843.0737   3.379804   249.44   0.000     836.4494     849.698
                               5 1 |    1074.297   3.379804   317.86   0.000     1067.673    1080.922
                               6 1 |     911.553   3.437935   265.15   0.000     904.8148    918.2913
                               7 1 |    867.2925    3.49432   248.20   0.000     860.4437    874.1412
                               8 1 |    860.9252   3.535465   243.51   0.000     853.9958    867.8546
```

num_PSF4Q_prev#STOPP						
1 1	698.7564	3.036363	230.13	0.000	692.8053	704.7076
2 1	745.2865	3.036363	245.45	0.000	739.3353	751.2376
3 1	819.6433	3.036363	269.94	0.000	813.6921	825.5945
4 1	1007.645	3.036363	331.86	0.000	1001.694	1013.596
5 1	1269.077	3.036363	417.96	0.000	1263.126	1275.028
6 1	1044.884	3.091626	337.97	0.000	1038.825	1050.944
7 1	1000.576	3.14543	318.10	0.000	994.4113	1006.741
8 1	999.6471	3.187521	313.61	0.000	993.3996	1005.894
num_PSF4Q_prev#FORTA						
1 1	549.7385	3.006501	182.85	0.000	543.8458	555.6311
2 1	576.4743	3.006501	191.74	0.000	570.5817	582.367
3 1	618.3464	3.006501	205.67	0.000	612.4538	624.2391
4 1	719.9429	3.006501	239.46	0.000	714.0503	725.8356
5 1	922.8085	3.006501	306.94	0.000	916.9158	928.7011
6 1	899.3037	3.037429	296.07	0.000	893.3504	905.2569
7 1	848.373	3.068048	276.52	0.000	842.3598	854.3863
8 1	854.0393	3.093072	276.11	0.000	847.9769	860.1016
num_PSF4Q_prev#PRISCUS#STOPP#FORTA						
1 0 0 0	574.0173	1.934467	296.73	0.000	570.2258	577.8088
2 0 0 0	605.0189	1.934467	312.76	0.000	601.2274	608.8104
3 0 0 0	658.6592	1.934467	340.49	0.000	654.8677	662.4507
4 0 0 0	783.7508	1.934467	405.15	0.000	779.9594	787.5423
5 0 0 0	655.6352	1.934467	338.92	0.000	651.8437	659.4267
6 0 0 0	604.7461	1.959236	308.66	0.000	600.906	608.5861
7 0 0 0	601.114	1.979047	303.74	0.000	597.2351	604.9928
8 0 0 0	654.2981	1.996087	327.79	0.000	650.3858	658.2103

Grafik



Lincom (IG vs. KG)

PRISCUS

```
( 1)  1bn.num_PSF4Q_prev#1bn.PRISCUS - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   36.22507   3.787946     9.56   0.000     28.80084    43.64931
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.PRISCUS - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
```

```
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   45.29999   3.787946    11.96   0.000     37.87576    52.72423
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.PRISCUS - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   48.55494   3.787946    12.82   0.000      41.1307    55.97918
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.PRISCUS - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   59.32284   3.787946    15.66   0.000     51.89861    66.74708
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.PRISCUS - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   418.6622   3.787946   110.52   0.000      411.238    426.0864
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.PRISCUS - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    306.807   3.852833    79.63   0.000     299.2556    314.3584
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.PRISCUS - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   266.1785   3.912888    68.03   0.000     258.5094    273.8476
------------------------------------------------------------------------------
```

```
 ( 1)  8.num_PSF4Q_prev#1bn.PRISCUS - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   206.6271   3.957252    52.21   0.000      198.871    214.3832
------------------------------------------------------------------------------
```

STOPP

```
( 1)  1bn.num_PSF4Q_prev#1bn.STOPP - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   124.7391   3.475076    35.90   0.000     117.9281    131.5501
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.STOPP - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   140.2676   3.475076    40.36   0.000     133.4566    147.0786
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.STOPP - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   160.9841   3.475076    46.33   0.000     154.1731    167.7951
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.STOPP - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   223.8943   3.475076    64.43   0.000     217.0832    230.7053
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.STOPP - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   613.4416   3.475076   176.53   0.000     606.6305    620.2526
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.STOPP - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   440.1382   3.535749   124.48   0.000     433.2082    447.0681
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.STOPP - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   399.4623   3.591866   111.21   0.000     392.4223    406.5022
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q_prev#1bn.STOPP - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    345.349   3.635511    94.99   0.000     338.2235    352.4745
------------------------------------------------------------------------------
```

FORTA

```
( 1)  1bn.num_PSF4Q_prev#1bn.FORTA - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -24.27885    3.49952    -6.94   0.000    -31.13778   -17.41992
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.FORTA - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |  -28.54452    3.49952    -8.16   0.000    -35.40346   -21.68559
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.FORTA - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -40.31275    3.49952   -11.52   0.000    -47.17168   -33.45381
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.FORTA - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   -63.8079    3.49952   -18.23   0.000    -70.66683   -56.94897
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.FORTA - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   267.1733    3.49952    76.35   0.000     260.3143    274.0322
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.FORTA - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   294.5576    3.54115    83.18   0.000     287.6171    301.4981
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.FORTA - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   247.2591   3.580444    69.06   0.000     240.2415    254.2766
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q_prev#1bn.FORTA - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   199.7412    3.61216    55.30   0.000     192.6615    206.8209
------------------------------------------------------------------------------
```

Lincom (IG vs. KG mit Korrektur vor Q4 DiD)

PRISCUS

```
( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 5.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   359.3394   5.068794    70.89   0.000     349.4047     369.274
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 6.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   247.4841   5.117467    48.36   0.000     237.4541    257.5142
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 7.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   206.8556   5.162832    40.07   0.000     196.7367    216.9746
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 8.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   147.3043   5.196536    28.35   0.000     137.1192    157.4893
------------------------------------------------------------------------------
```

STOPP

```
( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 5.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   389.5473   4.650131    83.77   0.000     380.4332    398.6614
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 6.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   216.2439   4.695646    46.05   0.000     207.0406    225.4472
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 7.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    175.568   4.738045    37.05   0.000     166.2816    184.8544
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 8.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   121.4547   4.771216    25.46   0.000     112.1033    130.8061
------------------------------------------------------------------------------
```

FORTA

```
( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 5.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
        (1) |   330.9812   4.682841    70.68   0.000      321.803    340.1594
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 6.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   358.3655   4.714032    76.02   0.000     349.1262    367.6048
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 7.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    311.067    4.74362    65.58   0.000     301.7697    320.3643
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 8.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   263.5491   4.767605    55.28   0.000     254.2048    272.8934
------------------------------------------------------------------------------
```

kosten_ges_q

Modell

```
       panel variable:  versid (unbalanced)

Fitting constant-only model:
Iteration 0:   log likelihood = -4.158e+08
Iteration 1:   log likelihood = -4.156e+08
Iteration 2:   log likelihood = -4.156e+08
Iteration 3:   log likelihood = -4.156e+08

Fitting full model:
Iteration 0:   log likelihood = -4.157e+08
Iteration 1:   log likelihood = -4.155e+08
Iteration 2:   log likelihood = -4.155e+08
```

```
Iteration 3:   log likelihood = -4.155e+08
Iteration 4:   log likelihood = -4.155e+08

Random-effects ML regression                    Number of obs     = 41,723,270
Group variable: versid                          Number of groups  =  5,290,656

Random effects u_i ~ Gaussian                   Obs per group:
                                                              min =          5
                                                              avg =        7.9
                                                              max =          8

                                                LR chi2(31)       =  142084.95
Log likelihood  = -4.155e+08                    Prob > chi2       =     0.0000

------------------------------------------------------------------------------------
          kosten_ges_q |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----------------------+------------------------------------------------------------
        num_PSF4Q_prev |
                    2  |   49.94716   2.719529    18.37   0.000     44.61698    55.27734
                    3  |   128.0896   2.719529    47.10   0.000     122.7594    133.4198
                    4  |   291.7031   2.719529   107.26   0.000     286.3729    297.0332
                    5  |   131.0982   2.719529    48.21   0.000      125.768    136.4284
                    6  |   91.53948   2.739807    33.41   0.000     86.16956     96.9094
                    7  |   102.4421   2.755959    37.17   0.000     97.04054    107.8437
                    8  |   173.7219   2.769814    62.72   0.000     168.2932    179.1506
                       |
             1.PRISCUS |   42.33054   4.260908     9.93   0.000     33.97931    50.68177
                       |
num_PSF4Q_prev#PRISCUS |
                  2 1  |   10.51684   5.301432     1.98   0.047     .1262233    20.90745
                  3 1  |    15.6745   5.301432     2.96   0.003     5.283885    26.06512
                  4 1  |    21.2827   5.301432     4.01   0.000     10.89209    31.67332
                  5 1  |   336.5091   5.301432    63.48   0.000     326.1185    346.8998
                  6 1  |   211.0537   5.351381    39.44   0.000     200.5652    221.5422
                  7 1  |   179.5066   5.399603    33.24   0.000     168.9236    190.0897
                  8 1  |   128.6463   5.435642    23.67   0.000     117.9926    139.2999
                       |
               1.FORTA |  -71.70762   3.906905   -18.35   0.000    -79.36501   -64.05022
                       |
  num_PSF4Q_prev#FORTA |
                  2 1  |  -17.39006   4.860981    -3.58   0.000     -26.9174   -7.862708
                  3 1  |  -39.71852   4.860981    -8.17   0.000    -49.24587   -30.19117
                  4 1  |  -89.68697   4.860981   -18.45   0.000    -99.21432   -80.15963
                  5 1  |   180.6991   4.860981    37.17   0.000     171.1717    190.2264
```

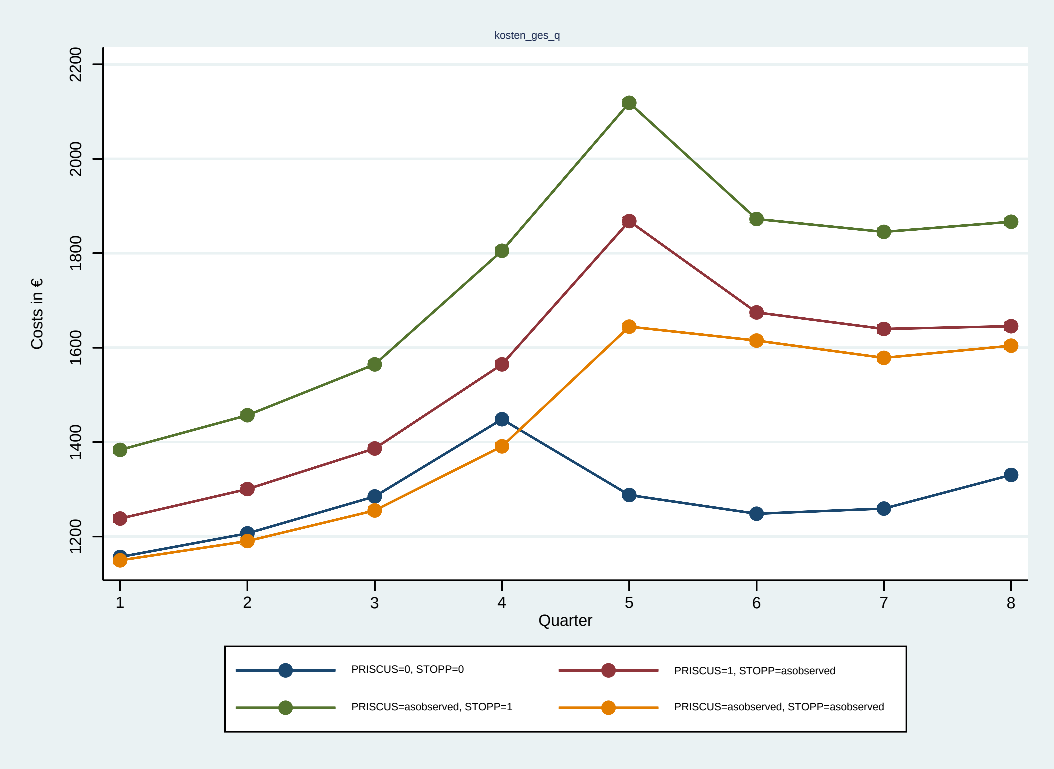
```
                 6 1  |   263.2782   4.893541    53.80   0.000     253.687    272.8693
                 7 1  |   227.3783   4.924304    46.17   0.000    217.7268    237.0297
                 8 1  |   199.6647   4.949311    40.34   0.000    189.9642    209.3652
                      |
              1.STOPP |   236.0216   3.953667    59.70   0.000    228.2726    243.7707
                      |
  num_PSF4Q_prev#STOPP |
                 2 1  |   25.64315   4.919162     5.21   0.000    16.00177    35.28453
                 3 1  |    59.5869   4.919162    12.11   0.000    49.94552    69.22828
                 4 1  |   147.6541   4.919162    30.02   0.000    138.0127    157.2955
                 5 1  |   495.4744   4.919162   100.72   0.000     485.833    505.1158
                 6 1  |   292.9335   4.965805    58.99   0.000    283.2007    302.6663
                 7 1  |   269.6351   5.010968    53.81   0.000    259.8138    279.4564
                 8 1  |   236.2552   5.046746    46.81   0.000    226.3638    246.1467
                      |
                _cons |   1156.805   2.185761   529.25   0.000    1152.521    1161.089
----------------------+----------------------------------------------------------------
             /sigma_u |   1851.816    .830636                      1850.189    1853.445
             /sigma_e |   3427.195   .3964623                      3426.418    3427.972
                  rho |   .2259801   .0001671                      .2256527    .2263078
---------------------------------------------------------------------------------------
LR test of sigma_u=0: chibar2(01) = 4.1e+06           Prob >= chibar2 = 0.000
```

Margins

```
Predictive margins                               Number of obs     = 41,723,270
Model VCE    : OIM

Expression   : Linear prediction, predict()

----------------------------------------------------------------------------------------------------
                                   |            Delta-method
                                   |      Margin   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----------------------------------+----------------------------------------------------------------
            num_PSF4Q_prev#PRISCUS |
                               1 1 |    1238.163   3.818853   324.22   0.000     1230.678    1245.648
                               2 1 |    1300.538   3.818853   340.56   0.000     1293.053    1308.022
                               3 1 |    1386.535   3.818853   363.08   0.000      1379.05     1394.02
                               4 1 |    1564.686   3.818853   409.73   0.000     1557.202    1572.171
                               5 1 |    1868.076   3.818853   489.17   0.000     1860.591    1875.561
                               6 1 |    1674.677   3.878038   431.84   0.000     1667.076    1682.277
                               7 1 |    1639.751   3.935111   416.70   0.000     1632.038    1647.463
                               8 1 |    1645.465   3.976577   413.79   0.000     1637.671    1653.259
                                   |
              num_PSF4Q_prev#STOPP |
```

1 1	1383.555	3.430797	403.28	0.000	1376.831	1390.279
2 1	1456.945	3.430797	424.67	0.000	1450.221	1463.67
3 1	1564.604	3.430797	456.05	0.000	1557.88	1571.328
4 1	1805.236	3.430797	526.19	0.000	1798.512	1811.961
5 1	2118.6	3.430797	617.52	0.000	2111.876	2125.324
6 1	1872.446	3.487055	536.97	0.000	1865.611	1879.28
7 1	1845.28	3.541485	521.05	0.000	1838.339	1852.222
8 1	1866.688	3.583862	520.86	0.000	1859.664	1873.712
num_PSF4Q_prev#FORTA						
1 1	1149.654	3.397056	338.43	0.000	1142.996	1156.312
2 1	1190.362	3.397056	350.41	0.000	1183.704	1197.02
3 1	1255.282	3.397056	369.52	0.000	1248.623	1261.94
4 1	1391.059	3.397056	409.49	0.000	1384.4	1397.717
5 1	1644.534	3.397056	484.11	0.000	1637.875	1651.192
6 1	1615.038	3.428533	471.06	0.000	1608.318	1621.758
7 1	1578.412	3.459482	456.26	0.000	1571.631	1585.192
8 1	1604.23	3.484647	460.37	0.000	1597.4	1611.06
num_PSF4Q_prev#PRISCUS#STOPP#FORTA						
1 0 0 0	1156.805	2.185761	529.25	0.000	1152.521	1161.089
2 0 0 0	1206.752	2.185761	552.10	0.000	1202.468	1211.036
3 0 0 0	1284.894	2.185761	587.85	0.000	1280.61	1289.178
4 0 0 0	1448.508	2.185761	662.70	0.000	1444.224	1452.792
5 0 0 0	1287.903	2.185761	589.22	0.000	1283.619	1292.187
6 0 0 0	1248.344	2.21094	564.62	0.000	1244.011	1252.677
7 0 0 0	1259.247	2.230924	564.45	0.000	1254.874	1263.619
8 0 0 0	1330.527	2.248017	591.87	0.000	1326.121	1334.933

Grafik



Lincom (IG vs. KG)

PRISCUS

```
( 1)  1bn.num_PSF4Q_prev#1bn.PRISCUS - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   81.35808   4.280013    19.01   0.000     72.96941    89.74675
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.PRISCUS - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
```

```
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   93.78584   4.280013    21.91   0.000     85.39717    102.1745
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.PRISCUS - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   101.6406   4.280013    23.75   0.000     93.25192    110.0293
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.PRISCUS - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   116.1786   4.280013    27.14   0.000       107.79    124.5673
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.PRISCUS - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   580.1729   4.280013   135.55   0.000     571.7842    588.5616
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.PRISCUS - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   426.3325   4.346105    98.10   0.000     417.8143    434.8507
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.PRISCUS - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   380.5039   4.406968    86.34   0.000     371.8664    389.1414
------------------------------------------------------------------------------
```

```
 ( 1)  8.num_PSF4Q_prev#1bn.PRISCUS - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   314.9382    4.45176    70.74   0.000     306.2129    323.6635
------------------------------------------------------------------------------
```

STOPP

```
( 1)  1bn.num_PSF4Q_prev#1bn.STOPP - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   226.7506   3.926501    57.75   0.000     219.0548    234.4464
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.STOPP - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   250.1936   3.926501    63.72   0.000     242.4978    257.8894
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.STOPP - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   279.7096   3.926501    71.24   0.000     272.0138    287.4054
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.STOPP - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   356.7286   3.926501    90.85   0.000     349.0328    364.4244
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.STOPP - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   830.6972   3.926501   211.56   0.000     823.0014     838.393
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.STOPP - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   624.1018     3.9883   156.48   0.000     616.2849    631.9188
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.STOPP - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   586.0337   4.045167   144.87   0.000     578.1053    593.9621
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q_prev#1bn.STOPP - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   536.1615   4.089225   131.12   0.000     528.1468    544.1763
------------------------------------------------------------------------------
```

FORTA

```
( 1)  1bn.num_PSF4Q_prev#1bn.FORTA - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -7.150403    3.95412    -1.81   0.071    -14.90034    .5995296
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.FORTA - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |  -16.39002    3.95412    -4.15   0.000    -24.13995   -8.640087
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.FORTA - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -29.61274    3.95412    -7.49   0.000    -37.36267    -21.8628
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.FORTA - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -57.44913    3.95412   -14.53   0.000    -65.19906   -49.69919
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.FORTA - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   356.6308    3.95412    90.19   0.000     348.8808    364.3807
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.FORTA - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   366.6936   3.996509    91.75   0.000     358.8606    374.5266
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.FORTA - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   319.1651   4.036306    79.07   0.000     311.2541    327.0761
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q_prev#1bn.FORTA - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   273.7037   4.068296    67.28   0.000       265.73    281.6774
------------------------------------------------------------------------------
```

Lincom (IG vs. KG mit Korrektur vor Q4 DiD)

PRISCUS

```
( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 5.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   463.9943   5.325203    87.13   0.000      453.557    474.4315
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 6.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   310.1538   5.378466    57.67   0.000     299.6122    320.6954
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 7.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   264.3253   5.427766    48.70   0.000      253.687    274.9635
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 8.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   198.7596   5.464196    36.37   0.000     188.0499    209.4692
------------------------------------------------------------------------------
```

STOPP

```
( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 5.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   473.9686   4.885362    97.02   0.000     464.3935    483.5437
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 6.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   267.3732   4.935168    54.18   0.000     257.7005     277.046
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 7.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   229.3051   4.981238    46.03   0.000      219.542    239.0681
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 8.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   179.4329   5.017082    35.76   0.000     169.5996    189.2662
------------------------------------------------------------------------------
```

FORTA

```
( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 5.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |   414.0799   4.919726    84.17   0.000     404.4374    423.7224
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 6.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   424.1427   4.953859    85.62   0.000     414.4333    433.8521
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 7.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   376.6143   4.986021    75.53   0.000     366.8418    386.3867
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 8.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   331.1528   5.011953    66.07   0.000     321.3296    340.9761
------------------------------------------------------------------------------
```

Komorbidität (Elixhauser Score)

elix_score_amb_q

Modell

```
       panel variable:  versid (unbalanced)

Fitting constant-only model:
Iteration 0:   log likelihood =  -33973869
Iteration 1:   log likelihood =  -33766307
Iteration 2:   log likelihood =  -33745802
Iteration 3:   log likelihood =  -33745477
Iteration 4:   log likelihood =  -33745477

Fitting full model:
```

```
Iteration 0:   log likelihood =  -33972672
Iteration 1:   log likelihood =  -33765019
Iteration 2:   log likelihood =  -33744506
Iteration 3:   log likelihood =  -33744181
Iteration 4:   log likelihood =  -33744181

Random-effects ML regression                    Number of obs     = 41,723,270
Group variable: versid                          Number of groups  =  5,290,656

Random effects u_i ~ Gaussian                   Obs per group:
                                                              min =          5
                                                              avg =        7.9
                                                              max =          8

                                                LR chi2(31)       =    2592.16
Log likelihood  =  -33744181                    Prob > chi2       =     0.0000

------------------------------------------------------------------------------------
      elix_score_amb_q |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----------------------+------------------------------------------------------------
        num_PSF4Q_prev |
                    2  |   .0024122   .0004927     4.90   0.000     .0014466    .0033779
                    3  |   .0044168   .0004927     8.96   0.000     .0034512    .0053825
                    4  |   .0064028   .0004927    13.00   0.000     .0054371    .0073684
                    5  |    .006772   .0004927    13.75   0.000     .0058064    .0077377
                    6  |   .0077653   .0004966    15.64   0.000      .006792    .0087385
                    7  |   .0085381   .0004996    17.09   0.000     .0075589    .0095173
                    8  |   .0099745   .0005022    19.86   0.000     .0089903    .0109588
                       |
             1.PRISCUS |  -.0158117   .0011975   -13.20   0.000    -.0181588   -.0134646
                       |
num_PSF4Q_prev#PRISCUS |
                  2 1  |  -.0000429   .0009604    -0.04   0.964    -.0019253    .0018395
                  3 1  |  -.0012259   .0009604    -1.28   0.202    -.0031083    .0006565
                  4 1  |  -.0019599   .0009604    -2.04   0.041    -.0038423   -.0000775
                  5 1  |  -.0019297   .0009604    -2.01   0.045    -.0038121   -.0000473
                  6 1  |  -.0017186     .00097    -1.77   0.076    -.0036197    .0001826
                  7 1  |  -.0019855   .0009791    -2.03   0.043    -.0039045   -.0000665
                  8 1  |  -.0026377   .0009859    -2.68   0.007    -.0045699   -.0007054
                       |
               1.FORTA |  -.0006568    .001098    -0.60   0.550    -.0028089    .0014952
                       |
  num_PSF4Q_prev#FORTA |
                  2 1  |   -.000604   .0008806    -0.69   0.493      -.00233     .001122
```

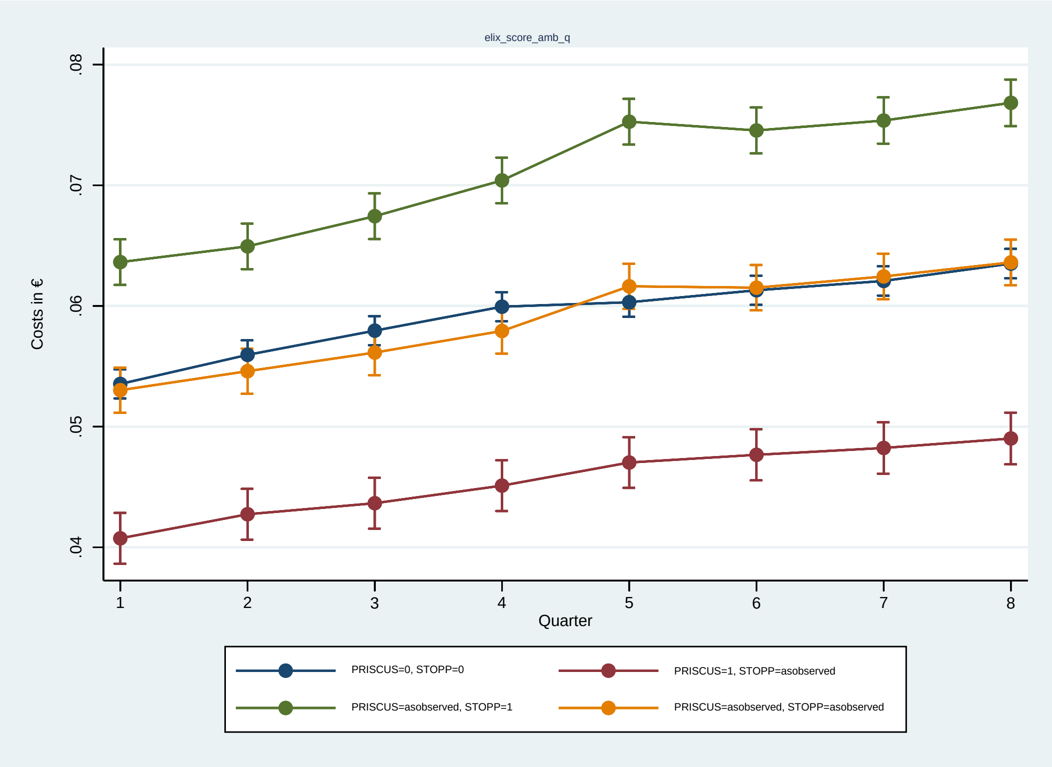
```
                  3 1  |  -.0010357   .0008806    -1.18   0.240    -.0027617    .0006904
                  4 1  |  -.0013797   .0008806    -1.57   0.117    -.0031057    .0003463
                  5 1  |   .0010131   .0008806     1.15   0.250    -.0007129    .0027392
                  6 1  |   .0002415   .0008869     0.27   0.785    -.0014968    .0019797
                  7 1  |   .0004369   .0008927     0.49   0.625    -.0013128    .0021865
                  8 1  |   .0002439   .0008974     0.27   0.786    -.0015149    .0020027
                       |
               1.STOPP |    .013292   .0011112    11.96   0.000     .0111142    .0154699
                       |
   num_PSF4Q_prev#STOPP |
                  2 1  |  -.0009497   .0008912    -1.07   0.287    -.0026964     .000797
                  3 1  |  -.0001254   .0008912    -0.14   0.888    -.0018721    .0016213
                  4 1  |   .0010809   .0008912     1.21   0.225    -.0006657    .0028276
                  5 1  |   .0049893   .0008912     5.60   0.000     .0032426     .006736
                  6 1  |   .0034189   .0009001     3.80   0.000     .0016547    .0051831
                  7 1  |   .0034716   .0009086     3.82   0.000     .0016907    .0052525
                  8 1  |   .0036751   .0009153     4.02   0.000     .0018811    .0054692
                       |
                 _cons |   .0535366   .0006143    87.15   0.000     .0523326    .0547406
-----------------------+----------------------------------------------------------------
              /sigma_u |   .9017341    .000289                       .9011679    .9023006
              /sigma_e |   .6208915          .                              .           .
                   rho |   .6783778          .                              .           .
----------------------------------------------------------------------------------------
LR test of sigma_u=0: chibar2(01) = 5.2e+07           Prob >= chibar2 = 0.000
```

Margins

```
Predictive margins                                Number of obs     = 41,723,270
Model VCE    : OIM

Expression   : Linear prediction, predict()

----------------------------------------------------------------------------------------------------
                                   |            Delta-method
                                   |      Margin   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----------------------------------+----------------------------------------------------------------
             num_PSF4Q_prev#PRISCUS |
                               1 1 |    .0407433   .0010733    37.96   0.000     .0386397    .0428469
                               2 1 |     .042739   .0010733    39.82   0.000     .0406354    .0448426
                               3 1 |     .043653   .0010733    40.67   0.000     .0415494    .0457566
                               4 1 |    .0451098   .0010733    42.03   0.000     .0430062    .0472134
                               5 1 |    .0470243   .0010733    43.81   0.000     .0449207    .0491279
                               6 1 |     .047666   .0010806    44.11   0.000     .0455481     .049784
                               7 1 |    .0482319   .0010876    44.35   0.000     .0461002    .0503637
```

8 1	.049018	.0010927	44.86	0.000	.0468763	.0511597
num_PSF4Q_prev#STOPP						
1 1	.0636327	.0009642	65.99	0.000	.0617428	.0655225
2 1	.0649404	.0009642	67.35	0.000	.0630506	.0668302
3 1	.0674374	.0009642	69.94	0.000	.0655475	.0693272
4 1	.0704052	.0009642	73.02	0.000	.0685154	.072295
5 1	.0752693	.0009642	78.06	0.000	.0733794	.0771591
6 1	.0745454	.0009712	76.76	0.000	.0726419	.0764489
7 1	.0753671	.0009779	77.07	0.000	.0734504	.0772837
8 1	.076835	.0009831	78.16	0.000	.0749081	.0787618
num_PSF4Q_prev#FORTA						
1 1	.053021	.0009547	55.53	0.000	.0511498	.0548923
2 1	.0545939	.0009547	57.18	0.000	.0527227	.0564652
3 1	.0561368	.0009547	58.80	0.000	.0542656	.058008
4 1	.0579261	.0009547	60.67	0.000	.0560549	.0597974
5 1	.0616285	.0009547	64.55	0.000	.0597572	.0634997
6 1	.0615152	.0009586	64.17	0.000	.0596363	.063394
7 1	.0624447	.0009624	64.88	0.000	.0605584	.064331
8 1	.0636116	.0009655	65.89	0.000	.0617192	.0655039
num_PSF4Q_prev#PRISCUS#STOPP#FORTA						
1 0 0 0	.0535366	.0006143	87.15	0.000	.0523326	.0547406
2 0 0 0	.0559488	.0006143	91.08	0.000	.0547448	.0571528
3 0 0 0	.0579534	.0006143	94.34	0.000	.0567494	.0591574
4 0 0 0	.0599393	.0006143	97.57	0.000	.0587353	.0611433
5 0 0 0	.0603086	.0006143	98.17	0.000	.0591046	.0615126
6 0 0 0	.0613018	.0006174	99.29	0.000	.0600917	.0625119
7 0 0 0	.0620747	.0006199	100.14	0.000	.0608598	.0632896
8 0 0 0	.0635111	.0006219	102.12	0.000	.0622921	.0647301

Grafik



Lincom (IG vs. KG)

PRISCUS

```
( 1)  1bn.num_PSF4Q_prev#1bn.PRISCUS - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0127932   .0012029   -10.64   0.000    -.0151509   -.0104356
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.PRISCUS - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
```

```
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0132098   .0012029   -10.98   0.000    -.0155674   -.0108521
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.PRISCUS - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0143004   .0012029   -11.89   0.000     -.016658   -.0119428
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.PRISCUS - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0148295   .0012029   -12.33   0.000    -.0171871   -.0124719
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.PRISCUS - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0132843   .0012029   -11.04   0.000    -.0156419   -.0109266
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.PRISCUS - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0136358   .0012111   -11.26   0.000    -.0160095   -.0112621
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.PRISCUS - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0138428   .0012186   -11.36   0.000    -.0162312   -.0114544
------------------------------------------------------------------------------
```

```
 ( 1)  8.num_PSF4Q_prev#1bn.PRISCUS - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0144931   .0012241   -11.84   0.000    -.0168923   -.0120939
------------------------------------------------------------------------------
```

STOPP

```
( 1)  1bn.num_PSF4Q_prev#1bn.STOPP - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0100961   .0011035     9.15   0.000     .0079332     .012259
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.STOPP - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0089916   .0011035     8.15   0.000     .0068287    .0111545
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.STOPP - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .009484   .0011035     8.59   0.000     .0073211    .0116469
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.STOPP - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0104659   .0011035     9.48   0.000      .008303    .0126287
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.STOPP - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0149607   .0011035    13.56   0.000     .0127978    .0171236
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.STOPP - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0132435   .0011112    11.92   0.000     .0110656    .0154215
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.STOPP - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0132924   .0011182    11.89   0.000     .0111007     .015484
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q_prev#1bn.STOPP - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0133239   .0011236    11.86   0.000     .0111216    .0155261
------------------------------------------------------------------------------
```

FORTA

```
( 1)  1bn.num_PSF4Q_prev#1bn.FORTA - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0005155   .0011113    -0.46   0.643    -.0026936    .0016626
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.FORTA - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |  -.0013548   .0011113    -1.22   0.223    -.0035329    .0008233
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.FORTA - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0018166   .0011113    -1.63   0.102    -.0039947    .0003615
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.FORTA - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0020132   .0011113    -1.81   0.070    -.0041913    .0001649
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.FORTA - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0013199   .0011113     1.19   0.235    -.0008582     .003498
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.FORTA - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0002133   .0011165     0.19   0.848    -.0019751    .0024017
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.FORTA - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |     .00037   .0011214     0.33   0.741    -.0018279     .002568
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q_prev#1bn.FORTA - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0001005   .0011254     0.09   0.929    -.0021052    .0023061
------------------------------------------------------------------------------
```

Lincom (IG vs. KG mit Korrektur vor Q4 DiD)

PRISCUS

```
( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 5.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0015452   .0009647     1.60   0.109    -.0003456    .0034361
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 6.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0011937   .0009749     1.22   0.221    -.0007172    .0031045
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 7.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0009867   .0009843     1.00   0.316    -.0009424    .0029158
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 8.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0003364   .0009911     0.34   0.734    -.0016061    .0022789
------------------------------------------------------------------------------
```

STOPP

```
( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 5.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0044948   .0008851     5.08   0.000     .0027601    .0062295
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 6.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0027777   .0008946     3.10   0.002     .0010243    .0045311
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 7.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0028265   .0009033     3.13   0.002     .0010561    .0045969
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 8.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .002858     .00091     3.14   0.002     .0010744    .0046416
------------------------------------------------------------------------------
```

FORTA

```
( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 5.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |   .0033331   .0008913     3.74   0.000     .0015862    .0050799
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 6.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0022265   .0008978     2.48   0.013     .0004668    .0039862
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 7.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0023832   .0009039     2.64   0.008     .0006116    .0041548
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 8.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0021136   .0009088     2.33   0.020     .0003325    .0038948
------------------------------------------------------------------------------
```

elix_score_stat_q

Modell

```
       panel variable:  versid (unbalanced)

Fitting constant-only model:
Iteration 0:   log likelihood =  -65904898
Iteration 1:   log likelihood =  -65755655
Iteration 2:   log likelihood =  -65748890
Iteration 3:   log likelihood =  -65748885
Iteration 4:   log likelihood =  -65748885

Fitting full model:
Iteration 0:   log likelihood =  -65876560
Iteration 1:   log likelihood =  -65715911
```

```
Iteration 2:   log likelihood =  -65706521
Iteration 3:   log likelihood =  -65706511
Iteration 4:   log likelihood =  -65706511

Random-effects ML regression                    Number of obs     = 41,723,270
Group variable: versid                          Number of groups  =  5,290,656

Random effects u_i ~ Gaussian                   Obs per group:
                                                              min =          5
                                                              avg =        7.9
                                                              max =          8

                                                LR chi2(31)       =   84747.65
Log likelihood  =  -65706511                    Prob > chi2       =     0.0000

------------------------------------------------------------------------------------
     elix_score_stat_q |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----------------------+------------------------------------------------------------
        num_PSF4Q_prev |
                    2  |    .010112   .0008346    12.12   0.000     .0084762    .0117478
                    3  |   .0248272   .0008346    29.75   0.000     .0231914     .026463
                    4  |   .0646327   .0008346    77.44   0.000     .0629969    .0662685
                    5  |   .0393938   .0008346    47.20   0.000      .037758    .0410296
                    6  |   .0290587   .0008407    34.57   0.000      .027411    .0307065
                    7  |   .0292167   .0008456    34.55   0.000     .0275594    .0308739
                    8  |   .0457246   .0008497    53.81   0.000     .0440592    .0473901
                       |
             1.PRISCUS |   .0018885   .0012449     1.52   0.129    -.0005514    .0043285
                       |
num_PSF4Q_prev#PRISCUS |
                  2 1  |   .0009005    .001627     0.55   0.580    -.0022883    .0040893
                  3 1  |   .0035817    .001627     2.20   0.028     .0003929    .0067705
                  4 1  |   .0094988    .001627     5.84   0.000       .00631    .0126876
                  5 1  |   .0794011    .001627    48.80   0.000     .0762123    .0825899
                  6 1  |   .0409343   .0016419    24.93   0.000     .0377161    .0441524
                  7 1  |   .0278629   .0016565    16.82   0.000     .0246163    .0311095
                  8 1  |   .0181964   .0016673    10.91   0.000     .0149284    .0214643
                       |
               1.FORTA |  -.0116698   .0011415   -10.22   0.000     -.013907   -.0094325
                       |
  num_PSF4Q_prev#FORTA |
                  2 1  |  -.0040823   .0014918    -2.74   0.006    -.0070062   -.0011585
                  3 1  |  -.0052043   .0014918    -3.49   0.000    -.0081282   -.0022804
                  4 1  |  -.0150885   .0014918   -10.11   0.000    -.0180124   -.0121646
```

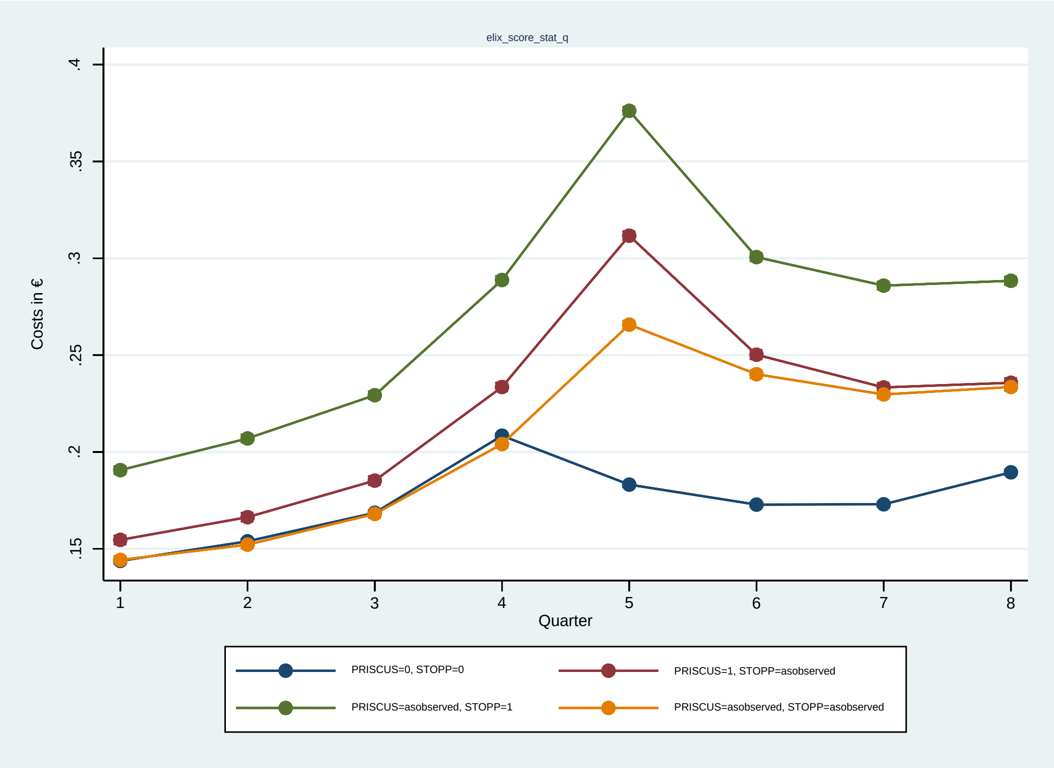
```
                  5 1  |   .0377378   .0014918    25.30   0.000     .0348139    .0406617
                  6 1  |   .0440537   .0015016    29.34   0.000     .0411107    .0469966
                  7 1  |   .0386022   .0015108    25.55   0.000     .0356411    .0415633
                  8 1  |   .0302241   .0015184    19.91   0.000     .0272482       .0332
                       |
               1.STOPP |   .0493333   .0011551    42.71   0.000     .0470693    .0515973
                       |
  num_PSF4Q_prev#STOPP |
                  2 1  |    .007068   .0015097     4.68   0.000     .0041092    .0100269
                  3 1  |   .0144235   .0015097     9.55   0.000     .0114647    .0173824
                  4 1  |   .0353657   .0015097    23.43   0.000     .0324068    .0383246
                  5 1  |   .1217235   .0015097    80.63   0.000     .1187647    .1246824
                  6 1  |   .0623807   .0015236    40.94   0.000     .0593945     .065367
                  7 1  |   .0513325   .0015372    33.39   0.000     .0483196    .0543454
                  8 1  |   .0412194    .001548    26.63   0.000     .0381853    .0442535
                       |
                 _cons |   .1437691   .0006386   225.13   0.000     .1425175    .1450208
-----------------------+----------------------------------------------------------------
              /sigma_u |    .434866   .0002427                      .4343906    .4353419
              /sigma_e |   1.051781    .000122                      1.051542     1.05202
                   rho |   .1459899   .0001473                      .1457015    .1462788
----------------------------------------------------------------------------------------
LR test of sigma_u=0: chibar2(01) = 1.9e+06           Prob >= chibar2 = 0.000
```

Margins

```
Predictive margins                                Number of obs     = 41,723,270
Model VCE    : OIM

Expression   : Linear prediction, predict()

----------------------------------------------------------------------------------------------------
                                   |            Delta-method
                                   |     Margin   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----------------------------------+----------------------------------------------------------------
             num_PSF4Q_prev#PRISCUS |
                               1 1 |   .1546205   .0011157   138.58   0.000     .1524337    .1568073
                               2 1 |   .1663322   .0011157   149.08   0.000     .1641454     .168519
                               3 1 |   .1852149   .0011157   166.00   0.000     .1830281    .1874017
                               4 1 |   .2335459   .0011157   209.32   0.000     .2313591    .2357327
                               5 1 |   .3116743   .0011157   279.34   0.000     .3094875    .3138611
                               6 1 |   .2502174   .0011344   220.58   0.000     .2479941    .2524408
                               7 1 |   .2333397   .0011524   202.48   0.000      .231081    .2355984
                               8 1 |   .2357303   .0011656   202.25   0.000     .2334459    .2380147
                                   |
```

num_PSF4Q_prev#STOPP						
1 1	.1906334	.0010024	190.18	0.000	.1886688	.192598
2 1	.2069957	.0010024	206.51	0.000	.2050311	.2089603
3 1	.2293091	.0010024	228.77	0.000	.2273445	.2312737
4 1	.2887946	.0010024	288.11	0.000	.28683	.2907592
5 1	.3761566	.0010024	375.27	0.000	.374192	.3781212
6 1	.300624	.0010201	294.71	0.000	.2986247	.3026233
7 1	.2859005	.0010373	275.62	0.000	.2838675	.2879335
8 1	.288406	.0010507	274.49	0.000	.2863467	.2904654
num_PSF4Q_prev#FORTA						
1 1	.1442566	.0009925	145.35	0.000	.1423114	.1462019
2 1	.152149	.0009925	153.30	0.000	.1502037	.1540943
3 1	.1680157	.0009925	169.28	0.000	.1660705	.169961
4 1	.2040802	.0009925	205.62	0.000	.2021349	.2060255
5 1	.2657383	.0009925	267.74	0.000	.263793	.2676836
6 1	.2401441	.0010024	239.57	0.000	.2381794	.2421088
7 1	.2296989	.0010122	226.93	0.000	.227715	.2316828
8 1	.2335546	.0010202	228.94	0.000	.2315551	.2355541
num_PSF4Q_prev#PRISCUS#STOPP#FORTA						
1 0 0 0	.1437691	.0006386	225.13	0.000	.1425175	.1450208
2 0 0 0	.1538811	.0006386	240.96	0.000	.1526295	.1551328
3 0 0 0	.1685963	.0006386	264.01	0.000	.1673447	.169848
4 0 0 0	.2084018	.0006386	326.34	0.000	.2071502	.2096535
5 0 0 0	.183163	.0006386	286.82	0.000	.1819113	.1844146
6 0 0 0	.1728279	.0006465	267.32	0.000	.1715607	.1740951
7 0 0 0	.1729858	.0006528	264.97	0.000	.1717062	.1742653
8 0 0 0	.1894938	.0006583	287.87	0.000	.1882036	.1907839

Grafik



Lincom (IG vs. KG)

PRISCUS

```
( 1)  1bn.num_PSF4Q_prev#1bn.PRISCUS - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0108514   .0012505     8.68   0.000     .0084005    .0133022
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.PRISCUS - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
```

```
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0124511   .0012505     9.96   0.000     .0100002     .014902
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.PRISCUS - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0166185   .0012505    13.29   0.000     .0141676    .0190694
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.PRISCUS - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0251441   .0012505    20.11   0.000     .0226932     .027595
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.PRISCUS - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1285114   .0012505   102.77   0.000     .1260605    .1309623
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.PRISCUS - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0773895   .0012713    60.88   0.000     .0748979    .0798812
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.PRISCUS - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0603539   .0012905    46.77   0.000     .0578246    .0628832
------------------------------------------------------------------------------
```

```
 ( 1)  8.num_PSF4Q_prev#1bn.PRISCUS - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0462365   .0013047    35.44   0.000     .0436795    .0487936
------------------------------------------------------------------------------
```

STOPP

```
( 1)  1bn.num_PSF4Q_prev#1bn.STOPP - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0468643   .0011472    40.85   0.000     .0446158    .0491127
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.STOPP - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0531146   .0011472    46.30   0.000     .0508662    .0553631
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.STOPP - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0607128   .0011472    52.92   0.000     .0584643    .0629612
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.STOPP - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0803928   .0011472    70.08   0.000     .0781443    .0826412
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.STOPP - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1929936   .0011472   168.23   0.000     .1907451    .1952421
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.STOPP - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1277961   .0011666   109.54   0.000     .1255095    .1300827
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.STOPP - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1129147   .0011846    95.32   0.000      .110593    .1152365
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q_prev#1bn.STOPP - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0989123   .0011985    82.53   0.000     .0965632    .1012613
------------------------------------------------------------------------------
```

FORTA

```
( 1)  1bn.num_PSF4Q_prev#1bn.FORTA - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0004875   .0011553     0.42   0.673    -.0017768    .0027518
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.FORTA - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |  -.0017321   .0011553    -1.50   0.134    -.0039964    .0005322
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.FORTA - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0005806   .0011553    -0.50   0.615    -.0028449    .0016837
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.FORTA - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0043216   .0011553    -3.74   0.000    -.0065859   -.0020574
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.FORTA - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0825754   .0011553    71.48   0.000     .0803111    .0848396
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.FORTA - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0673163   .0011686    57.60   0.000     .0650259    .0696067
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.FORTA - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0567131   .0011812    48.01   0.000     .0543981    .0590282
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q_prev#1bn.FORTA - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0440608   .0011913    36.99   0.000     .0417259    .0463957
------------------------------------------------------------------------------
```

Lincom (IG vs. KG mit Korrektur vor Q4 DiD)

PRISCUS

```
( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 5.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1033673   .0016343    63.25   0.000     .1001642    .1065704
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 6.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0522455   .0016502    31.66   0.000     .0490111    .0554799
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 7.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0352098   .0016651    21.15   0.000     .0319463    .0384733
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 8.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0210925   .0016761    12.58   0.000     .0178074    .0243775
------------------------------------------------------------------------------
```

STOPP

```
( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 5.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1126008   .0014993    75.10   0.000     .1096623    .1155394
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 6.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0474033   .0015142    31.31   0.000     .0444355    .0503711
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 7.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0325219   .0015281    21.28   0.000     .0295269    .0355169
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 8.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0185195   .0015389    12.03   0.000     .0155033    .0215357
------------------------------------------------------------------------------
```

FORTA

```
( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 5.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |    .086897   .0015098    57.55   0.000     .0839378    .0898562
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 6.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0716379   .0015201    47.13   0.000     .0686586    .0746171
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 7.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0610348   .0015297    39.90   0.000     .0580365     .064033
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 8.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0483824   .0015376    31.47   0.000     .0453689     .051396
------------------------------------------------------------------------------
```

elix_score_reha_q

Modell

```
       panel variable:  versid (unbalanced)

Fitting constant-only model:
Iteration 0:   log likelihood =   20039161

Fitting full model:
Iteration 0:   log likelihood =   20039603
Iteration 1:   log likelihood =   20039603

Random-effects ML regression                    Number of obs     = 41,723,270
Group variable: versid                          Number of groups  =  5,290,656
```

```
Random effects u_i ~ Gaussian                   Obs per group:
                                                              min =          5
                                                              avg =        7.9
                                                              max =          8

                                                LR chi2(31)       =     885.37
Log likelihood  =   20039603                    Prob > chi2       =     0.0000

------------------------------------------------------------------------------------------
     elix_score_reha_q |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
----------------------+-------------------------------------------------------------------
        num_PSF4Q_prev |
                    2  |  -.0000755   .0001206    -0.63   0.531     -.000312    .0001609
                    3  |   .0003212   .0001206     2.66   0.008     .0000847    .0005577
                    4  |   .0006419   .0001206     5.32   0.000     .0004054    .0008784
                    5  |  -.0000764   .0001206    -0.63   0.526    -.0003129      .00016
                    6  |  -.0008401   .0001214    -6.92   0.000    -.0010781   -.0006021
                    7  |  -.0009173   .0001221    -7.51   0.000    -.0011566    -.000678
                    8  |  -.0005437   .0001227    -4.43   0.000    -.0007841   -.0003033
                       |
             1.PRISCUS |  -.0002645   .0001663    -1.59   0.112    -.0005904    .0000615
                       |
num_PSF4Q_prev#PRISCUS |
                  2 1  |    .000307   .0002352     1.31   0.192    -.0001539     .000768
                  3 1  |    .000139   .0002352     0.59   0.554     -.000322       .0006
                  4 1  |   .0002535   .0002352     1.08   0.281    -.0002075    .0007145
                  5 1  |   .0014439   .0002352     6.14   0.000     .0009829    .0019049
                  6 1  |    .001243   .0002372     5.24   0.000     .0007781    .0017078
                  7 1  |   .0010915   .0002391     4.56   0.000     .0006229    .0015601
                  8 1  |    .000941   .0002406     3.91   0.000     .0004695    .0014125
                       |
               1.FORTA |   -.000477   .0001525    -3.13   0.002    -.0007758   -.0001781
                       |
  num_PSF4Q_prev#FORTA |
                  2 1  |  -.0000323   .0002156    -0.15   0.881     -.000455    .0003903
                  3 1  |  -.0003214   .0002156    -1.49   0.136    -.0007441    .0001012
                  4 1  |  -.0000959   .0002156    -0.44   0.657    -.0005185    .0003268
                  5 1  |   .0004045   .0002156     1.88   0.061    -.0000181    .0008272
                  6 1  |   .0014083   .0002169     6.49   0.000     .0009831    .0018335
                  7 1  |   .0015556   .0002182     7.13   0.000      .001128    .0019833
                  8 1  |   .0010472   .0002192     4.78   0.000     .0006176    .0014768
                       |
               1.STOPP |   .0005413   .0001543     3.51   0.000     .0002389    .0008438
                       |
```

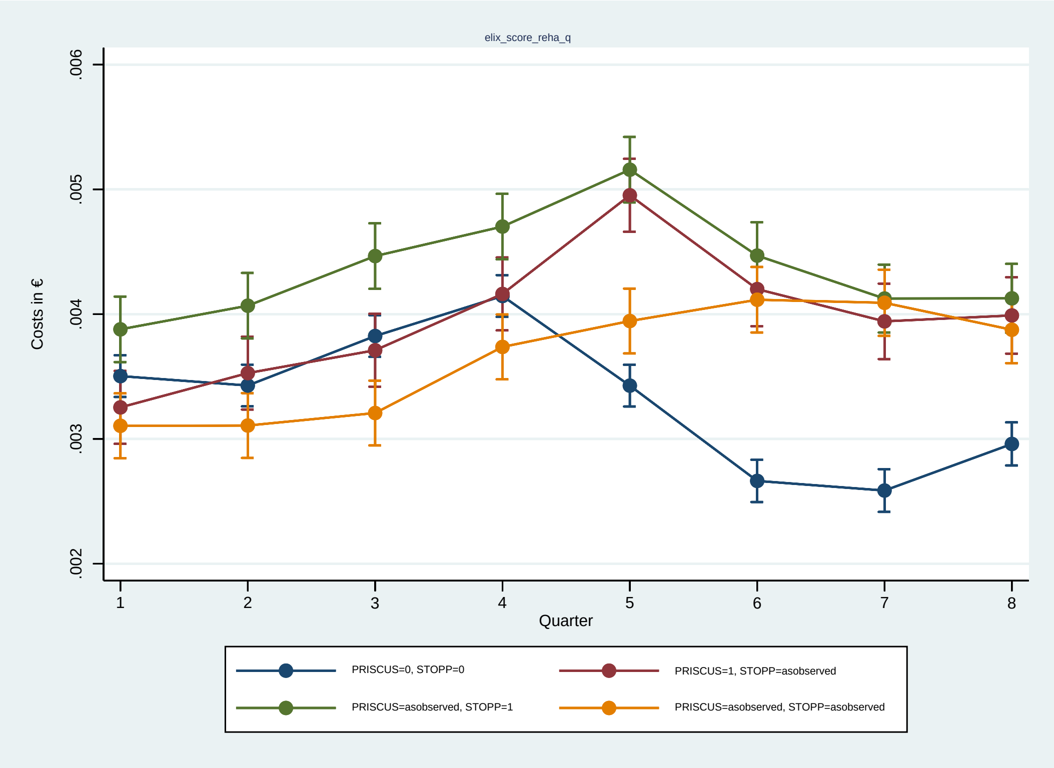
```
  num_PSF4Q_prev#STOPP |
                  2 1  |   .0002137   .0002182     0.98   0.327     -.000214    .0006415
                  3 1  |   .0003173   .0002182     1.45   0.146    -.0001105     .000745
                  4 1  |   .0001563   .0002182     0.72   0.474    -.0002714     .000584
                  5 1  |   .0009803   .0002182     4.49   0.000     .0005526     .001408
                  6 1  |   .0008505   .0002201     3.86   0.000     .0004192    .0012819
                  7 1  |   .0005768   .0002219     2.60   0.009     .0001419    .0010118
                  8 1  |   .0003573   .0002233     1.60   0.110    -.0000805     .000795
                       |
                 _cons |   .0035037   .0000853    41.07   0.000     .0033365    .0036709
-----------------------+----------------------------------------------------------------
              /sigma_u |          0  (omitted)
              /sigma_e |   .1520415   .0000164                      .1520095    .1520736
                   rho |          0  (omitted)
----------------------------------------------------------------------------------------
LR test of sigma_u=0: chibar2(01) = 0.00              Prob >= chibar2 = 1.000
```

Margins

```
Predictive margins                               Number of obs     = 41,723,270
Model VCE    : OIM

Expression   : Linear prediction, predict()

----------------------------------------------------------------------------------------------------
                                   |            Delta-method
                                   |     Margin   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----------------------------------+----------------------------------------------------------------
            num_PSF4Q_prev#PRISCUS |
                              1 1  |   .0032528   .0001491    21.82   0.000     .0029607     .003545
                              2 1  |   .0035276   .0001491    23.67   0.000     .0032355    .0038197
                              3 1  |   .0037109   .0001491    24.90   0.000     .0034188     .004003
                              4 1  |   .0041623   .0001491    27.93   0.000     .0038702    .0044545
                              5 1  |   .0049528   .0001491    33.23   0.000     .0046607     .005245
                              6 1  |   .0042008   .0001517    27.69   0.000     .0039035    .0044982
                              7 1  |   .0039424   .0001543    25.55   0.000       .00364    .0042448
                              8 1  |   .0039897   .0001562    25.54   0.000     .0036836    .0042958
                                   |
              num_PSF4Q_prev#STOPP |
                              1 1  |   .0038784   .0001339    28.96   0.000      .003616    .0041409
                              2 1  |   .0040678   .0001339    30.38   0.000     .0038053    .0043302
                              3 1  |   .0044656   .0001339    33.35   0.000     .0042031     .004728
                              4 1  |   .0047021   .0001339    35.12   0.000     .0044396    .0049645
                              5 1  |   .0051577   .0001339    38.52   0.000     .0048953    .0054202
                              6 1  |   .0044693   .0001364    32.76   0.000     .0042019    .0047367
```

7 1	.0041251	.0001389	29.70	0.000	.0038528	.0043973
8 1	.0041269	.0001408	29.30	0.000	.0038508	.0044029
num_PSF4Q_prev#FORTA						
1 1	.0031053	.0001326	23.42	0.000	.0028454	.0033652
2 1	.0031075	.0001326	23.44	0.000	.0028477	.0033674
3 1	.0032076	.0001326	24.19	0.000	.0029477	.0034675
4 1	.0037374	.0001326	28.19	0.000	.0034775	.0039973
5 1	.0039451	.0001326	29.75	0.000	.0036852	.004205
6 1	.0041156	.000134	30.71	0.000	.003853	.0043783
7 1	.0040912	.0001354	30.21	0.000	.0038258	.0043566
8 1	.003875	.0001366	28.38	0.000	.0036073	.0041426
num_PSF4Q_prev#PRISCUS#STOPP#FORTA						
1 0 0 0	.0035037	.0000853	41.07	0.000	.0033365	.0036709
2 0 0 0	.0034281	.0000853	40.18	0.000	.0032609	.0035953
3 0 0 0	.0038249	.0000853	44.83	0.000	.0036576	.0039921
4 0 0 0	.0041455	.0000853	48.59	0.000	.0039783	.0043128
5 0 0 0	.0034272	.0000853	40.17	0.000	.00326	.0035944
6 0 0 0	.0026636	.0000864	30.81	0.000	.0024941	.002833
7 0 0 0	.0025863	.0000873	29.61	0.000	.0024151	.0027575
8 0 0 0	.00296	.0000881	33.59	0.000	.0027873	.0031327

Grafik



Lincom (IG vs. KG)

PRISCUS

```
( 1)  1bn.num_PSF4Q_prev#1bn.PRISCUS - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0002508    .000167    -1.50   0.133    -.0005782    .0000766
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.PRISCUS - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
```

```
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0000995    .000167     0.60   0.552    -.0002279    .0004269
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.PRISCUS - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   -.000114    .000167    -0.68   0.495    -.0004414    .0002134
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.PRISCUS - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0000168    .000167     0.10   0.920    -.0003106    .0003442
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.PRISCUS - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0015256    .000167     9.13   0.000     .0011982     .001853
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.PRISCUS - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0015373     .00017     9.04   0.000      .001204    .0018705
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.PRISCUS - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0013561   .0001728     7.85   0.000     .0010174    .0016947
------------------------------------------------------------------------------
```

```
 ( 1)  8.num_PSF4Q_prev#1bn.PRISCUS - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0010297   .0001748     5.89   0.000      .000687    .0013724
------------------------------------------------------------------------------
```

STOPP

```
( 1)  1bn.num_PSF4Q_prev#1bn.STOPP - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0003748   .0001533     2.45   0.014     .0000744    .0006751
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.STOPP - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0006396   .0001533     4.17   0.000     .0003393      .00094
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.STOPP - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0006407   .0001533     4.18   0.000     .0003404    .0009411
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.STOPP - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0005565   .0001533     3.63   0.000     .0002561    .0008569
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.STOPP - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0017305   .0001533    11.29   0.000     .0014302    .0020309
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.STOPP - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0018058    .000156    11.57   0.000     .0014999    .0021116
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.STOPP - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0015387   .0001586     9.70   0.000     .0012278    .0018496
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q_prev#1bn.STOPP - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0011669   .0001606     7.26   0.000     .0008521    .0014817
------------------------------------------------------------------------------
```

FORTA

```
( 1)  1bn.num_PSF4Q_prev#1bn.FORTA - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0003983   .0001543    -2.58   0.010    -.0007008   -.0000959
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.FORTA - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |  -.0003206   .0001543    -2.08   0.038    -.0006231   -.0000181
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.FORTA - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0006172   .0001543    -4.00   0.000    -.0009197   -.0003148
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.FORTA - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0004082   .0001543    -2.64   0.008    -.0007106   -.0001057
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.FORTA - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0005179   .0001543     3.36   0.001     .0002154    .0008203
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.FORTA - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .001452   .0001562     9.29   0.000     .0011458    .0017583
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.FORTA - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0015048    .000158     9.52   0.000     .0011951    .0018146
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q_prev#1bn.FORTA - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .000915   .0001595     5.74   0.000     .0006024    .0012276
------------------------------------------------------------------------------
```

Lincom (IG vs. KG mit Korrektur vor Q4 DiD)

PRISCUS

```
( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 5.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0015088   .0002362     6.39   0.000     .0010458    .0019718
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 6.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0015205   .0002384     6.38   0.000     .0010533    .0019876
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 7.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0013393   .0002403     5.57   0.000     .0008682    .0018103
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 8.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0010129   .0002418     4.19   0.000      .000539    .0014869
------------------------------------------------------------------------------
```

STOPP

```
( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 5.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .001174   .0002167     5.42   0.000     .0007492    .0015988
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 6.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0012492   .0002187     5.71   0.000     .0008206    .0016779
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 7.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0009822   .0002206     4.45   0.000     .0005499    .0014145
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 8.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0006104    .000222     2.75   0.006     .0001752    .0010455
------------------------------------------------------------------------------
```

FORTA

```
( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 5.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |    .000926   .0002183     4.24   0.000     .0004982    .0013538
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 6.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0018602   .0002196     8.47   0.000     .0014298    .0022906
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 7.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .001913   .0002209     8.66   0.000       .00148    .0023459
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 8.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0013232    .000222     5.96   0.000     .0008881    .0017582
------------------------------------------------------------------------------
```

elix_score_ges_q

Modell

```
       panel variable:  versid (unbalanced)

Fitting constant-only model:
Iteration 0:   log likelihood =  -71516230
Iteration 1:   log likelihood =  -70911880
Iteration 2:   log likelihood =  -70659890
Iteration 3:   log likelihood =  -70653037
Iteration 4:   log likelihood =  -70653030
Iteration 5:   log likelihood =  -70653030

Fitting full model:
Iteration 0:   log likelihood =  -71501202
```

```
Iteration 1:   log likelihood =  -70892290
Iteration 2:   log likelihood =  -70622079
Iteration 3:   log likelihood =  -70614290
Iteration 4:   log likelihood =  -70614281
Iteration 5:   log likelihood =  -70614281

Random-effects ML regression                    Number of obs     = 41,723,270
Group variable: versid                          Number of groups  =  5,290,656

Random effects u_i ~ Gaussian                   Obs per group:
                                                              min =          5
                                                              avg =        7.9
                                                              max =          8

                                                LR chi2(31)       =   77498.04
Log likelihood  =  -70614281                    Prob > chi2       =     0.0000

------------------------------------------------------------------------------------
      elix_score_ges_q |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----------------------+------------------------------------------------------------
        num_PSF4Q_prev |
                    2  |   .0121017   .0008656    13.98   0.000     .0104052    .0137983
                    3  |    .029523   .0008656    34.11   0.000     .0278264    .0312196
                    4  |   .0709714   .0008656    81.99   0.000     .0692748     .072668
                    5  |    .045922   .0008656    53.05   0.000     .0442255    .0476186
                    6  |   .0427523   .0008723    49.01   0.000     .0410426     .044462
                    7  |   .0478998   .0008776    54.58   0.000     .0461797    .0496198
                    8  |   .0685694   .0008821    77.74   0.000     .0668406    .0702983
                       |
             1.PRISCUS |  -.0138531   .0016355    -8.47   0.000    -.0170587   -.0106475
                       |
num_PSF4Q_prev#PRISCUS |
                  2 1  |   .0012006   .0016874     0.71   0.477    -.0021067    .0045079
                  3 1  |   .0021124   .0016874     1.25   0.211    -.0011949    .0054197
                  4 1  |   .0073956   .0016874     4.38   0.000     .0040883    .0107029
                  5 1  |   .0777914   .0016874    46.10   0.000     .0744841    .0810988
                  6 1  |   .0437348    .001704    25.67   0.000     .0403951    .0470745
                  7 1  |   .0336143   .0017198    19.55   0.000     .0302437     .036985
                  8 1  |   .0246558   .0017315    14.24   0.000     .0212621    .0280495
                       |
               1.FORTA |  -.0126535   .0014997    -8.44   0.000    -.0155928   -.0097142
                       |
  num_PSF4Q_prev#FORTA |
                  2 1  |  -.0042901   .0015472    -2.77   0.006    -.0073226   -.0012576
```

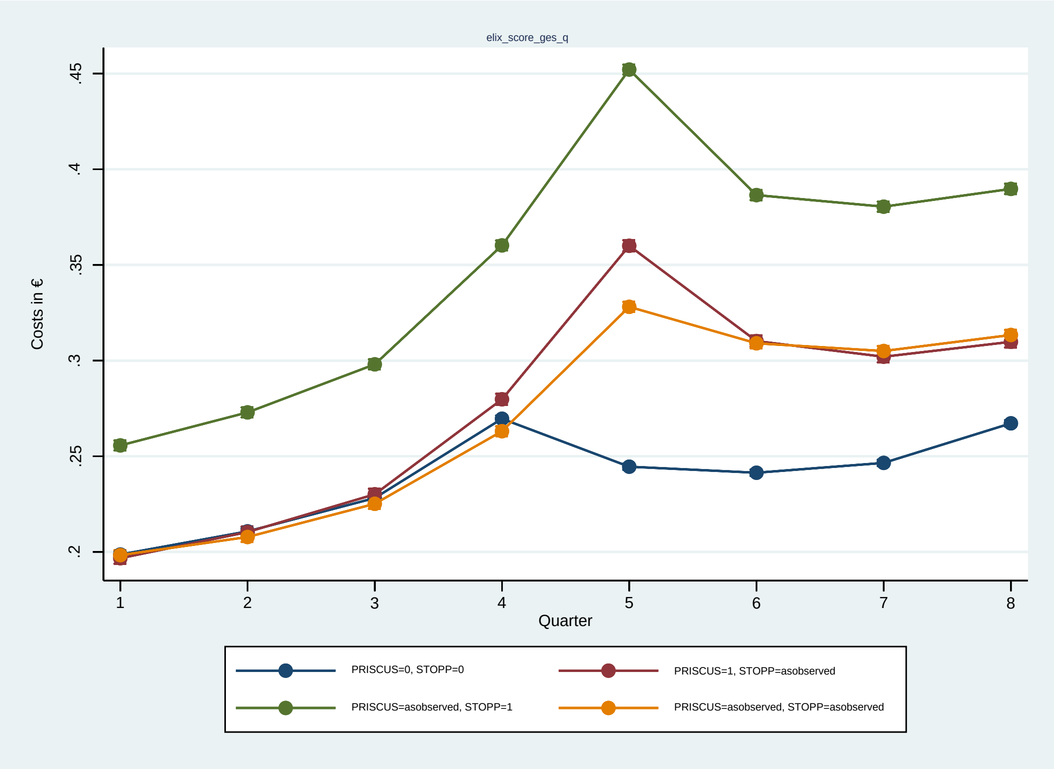
```
                3 1  |  -.0064523   .0015472    -4.17   0.000    -.0094849   -.0034198
                4 1  |  -.0162468   .0015472   -10.50   0.000    -.0192793   -.0132142
                5 1  |   .0387491   .0015472    25.04   0.000     .0357165    .0417816
                6 1  |   .0430069    .001558    27.60   0.000     .0399533    .0460606
                7 1  |   .0376646   .0015681    24.02   0.000     .0345911     .040738
                8 1  |   .0289042   .0015763    18.34   0.000     .0258148    .0319935
                     |
             1.STOPP |   .0627454   .0015176    41.34   0.000     .0597709    .0657198
                     |
  num_PSF4Q_prev#STOPP |
                2 1  |   .0059804   .0015658     3.82   0.000     .0029116    .0090493
                3 1  |    .014014   .0015658     8.95   0.000     .0109452    .0170828
                4 1  |   .0360956   .0015658    23.05   0.000     .0330268    .0391645
                5 1  |   .1261881   .0015658    80.59   0.000     .1231193     .129257
                6 1  |   .0692516   .0015812    43.80   0.000     .0661526    .0723507
                7 1  |    .061293    .001596    38.40   0.000     .0581649    .0644211
                8 1  |   .0537727   .0016077    33.45   0.000     .0506218    .0569237
                     |
               _cons |   .1986375    .000839   236.76   0.000     .1969931     .200282
---------------------+----------------------------------------------------------------
            /sigma_u |   1.022674   .0003562                      1.021976    1.023372
            /sigma_e |   1.090869   .0001258                      1.090623    1.091116
                 rho |   .4677675   .0001855                      .4674038    .4681312
--------------------------------------------------------------------------------------
LR test of sigma_u=0: chibar2(01) = 1.5e+07           Prob >= chibar2 = 0.000
```

Margins

```
Predictive margins                                 Number of obs     = 41,723,270
Model VCE    : OIM

Expression   : Linear prediction, predict()

----------------------------------------------------------------------------------------------------
                                   |            Delta-method
                                   |     Margin   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----------------------------------+----------------------------------------------------------------
           num_PSF4Q_prev#PRISCUS |
                              1 1  |   .1967151   .0014659   134.20   0.000     .1938421    .1995882
                              2 1  |   .2104062   .0014659   143.54   0.000     .2075332    .2132793
                              3 1  |   .2301352   .0014659   157.00   0.000     .2272622    .2330082
                              4 1  |   .2797695   .0014659   190.86   0.000     .2768965    .2826425
                              5 1  |   .3600003   .0014659   245.59   0.000     .3571273    .3628734
                              6 1  |   .3101947   .0014821   209.29   0.000     .3072898    .3130996
                              7 1  |   .3020227   .0014977   201.66   0.000     .2990872    .3049582
```

8 1	.3098101	.001509	205.31	0.000	.3068524	.3127677
num_PSF4Q_prev#STOPP						
1 1	.2556521	.0013169	194.13	0.000	.253071	.2582331
2 1	.2729238	.0013169	207.25	0.000	.2703427	.2755049
3 1	.298029	.0013169	226.31	0.000	.2954479	.3006101
4 1	.360197	.0013169	273.52	0.000	.3576159	.3627781
5 1	.4521043	.0013169	343.31	0.000	.4495232	.4546854
6 1	.3864909	.0013324	290.08	0.000	.3838795	.3891023
7 1	.3804398	.0013472	282.38	0.000	.3777993	.3830804
8 1	.389743	.0013588	286.83	0.000	.3870798	.3924062
num_PSF4Q_prev#FORTA						
1 1	.1983248	.001304	152.09	0.000	.1957691	.2008805
2 1	.2077968	.001304	159.36	0.000	.2052411	.2103525
3 1	.2251515	.001304	172.67	0.000	.2225958	.2277072
4 1	.2630994	.001304	201.77	0.000	.2605437	.2656551
5 1	.3281042	.001304	251.62	0.000	.3255485	.3306599
6 1	.3090396	.0013126	235.44	0.000	.3064669	.3116122
7 1	.3049984	.001321	230.88	0.000	.3024092	.3075876
8 1	.3133893	.0013279	236.01	0.000	.3107867	.3159918
num_PSF4Q_prev#PRISCUS#STOPP#FORTA						
1 0 0 0	.1986375	.000839	236.76	0.000	.1969931	.200282
2 0 0 0	.2107393	.000839	251.18	0.000	.2090949	.2123837
3 0 0 0	.2281605	.000839	271.94	0.000	.2265161	.2298049
4 0 0 0	.269609	.000839	321.35	0.000	.2679646	.2712534
5 0 0 0	.2445596	.000839	291.49	0.000	.2429152	.246204
6 0 0 0	.2413898	.0008459	285.36	0.000	.2397319	.2430478
7 0 0 0	.2465373	.0008513	289.59	0.000	.2448687	.2482059
8 0 0 0	.267207	.000856	312.17	0.000	.2655293	.2688847

Grafik



Lincom (IG vs. KG)

PRISCUS

```
( 1)  1bn.num_PSF4Q_prev#1bn.PRISCUS - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0019224   .0016429    -1.17   0.242    -.0051424    .0012976
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.PRISCUS - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
```

```
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0003331   .0016429    -0.20   0.839     -.003553    .0028869
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.PRISCUS - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0019747   .0016429     1.20   0.229    -.0012453    .0051947
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.PRISCUS - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0101605   .0016429     6.18   0.000     .0069405    .0133805
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.PRISCUS - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1154407   .0016429    70.27   0.000     .1122208    .1186607
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.PRISCUS - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0688049    .001661    41.42   0.000     .0655493    .0720605
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.PRISCUS - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0554854   .0016777    33.07   0.000     .0521971    .0587736
------------------------------------------------------------------------------
```

```
 ( 1)  8.num_PSF4Q_prev#1bn.PRISCUS - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0426031   .0016899    25.21   0.000     .0392909    .0459153
------------------------------------------------------------------------------
```

STOPP

```
( 1)  1bn.num_PSF4Q_prev#1bn.STOPP - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0570145   .0015072    37.83   0.000     .0540605    .0599685
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.STOPP - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0621845   .0015072    41.26   0.000     .0592305    .0651385
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.STOPP - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0698685   .0015072    46.36   0.000     .0669144    .0728225
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.STOPP - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .090588   .0015072    60.10   0.000      .087634     .093542
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.STOPP - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .2075447   .0015072   137.70   0.000     .2045907    .2104987
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.STOPP - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1451011   .0015242    95.20   0.000     .1421137    .1480884
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.STOPP - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1339025   .0015397    86.96   0.000     .1308846    .1369203
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q_prev#1bn.STOPP - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .122536   .0015518    78.97   0.000     .1194946    .1255774
------------------------------------------------------------------------------
```

FORTA

```
( 1)  1bn.num_PSF4Q_prev#1bn.FORTA - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0003128   .0015178    -0.21   0.837    -.0032876     .002662
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.FORTA - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |  -.0029425   .0015178    -1.94   0.053    -.0059173    .0000323
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.FORTA - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   -.003009   .0015178    -1.98   0.047    -.0059838   -.0000342
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.FORTA - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0065096   .0015178    -4.29   0.000    -.0094844   -.0035348
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.FORTA - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0835446   .0015178    55.04   0.000     .0805698    .0865194
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.FORTA - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0676498   .0015294    44.23   0.000     .0646521    .0706474
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.FORTA - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0584611   .0015403    37.95   0.000     .0554421      .06148
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q_prev#1bn.FORTA - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0461823    .001549    29.81   0.000     .0431463    .0492183
------------------------------------------------------------------------------
```

Lincom (IG vs. KG mit Korrektur vor Q4 DiD)

PRISCUS

```
( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 5.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1052802    .001695    62.11   0.000     .1019581    .1086024
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 6.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0586444   .0017126    34.24   0.000     .0552877    .0620011
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 7.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0453249   .0017288    26.22   0.000     .0419365    .0487132
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 8.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0324426   .0017407    18.64   0.000     .0290309    .0358542
------------------------------------------------------------------------------
```

STOPP

```
( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 5.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .1169567    .001555    75.21   0.000     .1139089    .1200044
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 6.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .054513   .0015715    34.69   0.000      .051433    .0575931
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 7.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0433145   .0015866    27.30   0.000     .0402048    .0464241
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 8.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .031948   .0015983    19.99   0.000     .0288155    .0350805
------------------------------------------------------------------------------
```

FORTA

```
( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 5.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |   .0900542   .0015659    57.51   0.000      .086985    .0931234
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 6.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0741593   .0015772    47.02   0.000      .071068    .0772506
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 7.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0649706   .0015878    40.92   0.000     .0618586    .0680826
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 8.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0526919   .0015962    33.01   0.000     .0495633    .0558204
------------------------------------------------------------------------------
```

Logistische Regressionen

uaw_einw_q

Modell

```
       panel variable:  versid (unbalanced)
        time variable:  num_PSF4Q_p~v, 1 to 8, but with gaps
                delta:  1 unit

Iteration 1: tolerance = .03182248
Iteration 2: tolerance = .00038956
Iteration 3: tolerance = 2.320e-06
Iteration 4: tolerance = 1.680e-08

GEE population-averaged model                   Number of obs     = 41,723,270
```

```
Group and time vars:   versid num_PSF4Q_~v      Number of groups  =  5,490,700
Link:                                logit      Obs per group:
Family:                           binomial                    min =          5
Correlation:                  unstructured                    avg =        7.9
                                                              max =          8
                                                Wald chi2(31)     =   77346.21
Scale parameter:                         1      Prob > chi2       =     0.0000

------------------------------------------------------------------------------------
            uaw_einw_q | Odds Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----------------------+------------------------------------------------------------
        num_PSF4Q_prev |
                    2  |   1.043518   .0048081     9.25   0.000     1.034137    1.052985
                    3  |   1.117672   .0051399    24.19   0.000     1.107643    1.127791
                    4  |   1.307022   .0058263    60.07   0.000     1.295653    1.318492
                    5  |   1.093639   .0049994    19.58   0.000     1.083884    1.103482
                    6  |   .9814453   .0046563    -3.95   0.000     .9723613    .9906141
                    7  |   .9873723   .0047209    -2.66   0.008     .9781627    .9966686
                    8  |   1.046068    .004969     9.48   0.000     1.036374    1.055852
                       |
             1.PRISCUS |   1.038512   .0067075     5.85   0.000     1.025448    1.051742
                       |
num_PSF4Q_prev#PRISCUS |
                  2 1  |   1.005776   .0087522     0.66   0.508     .9887671    1.023077
                  3 1  |   1.005231   .0087255     0.60   0.548     .9882738    1.022479
                  4 1  |   .9753349   .0082281    -2.96   0.003     .9593408    .9915957
                  5 1  |   1.250223   .0101536    27.50   0.000      1.23048    1.270283
                  6 1  |   1.237321   .0105212    25.04   0.000     1.216871    1.258115
                  7 1  |    1.18474    .010273    19.55   0.000     1.164775    1.205046
                  8 1  |    1.12674   .0098387    13.67   0.000      1.10762    1.146189
                       |
               1.FORTA |   .8129992    .005139   -32.75   0.000     .8029891    .8231341
                       |
  num_PSF4Q_prev#FORTA |
                  2 1  |   .9900049   .0084477    -1.18   0.239     .9735854    1.006701
                  3 1  |   .9684721   .0082644    -3.75   0.000     .9524089    .9848062
                  4 1  |   .9579304   .0079237    -5.20   0.000     .9425255    .9735872
                  5 1  |   1.225656   .0097738    25.52   0.000     1.206649    1.244963
                  6 1  |   1.314672   .0108713    33.09   0.000     1.293537    1.336153
                  7 1  |   1.292041   .0108376    30.55   0.000     1.270973    1.313458
                  8 1  |   1.260866   .0105996    27.57   0.000     1.240261    1.281813
                       |
               1.STOPP |   1.314518   .0075978    47.31   0.000      1.29971    1.329494
                       |
```

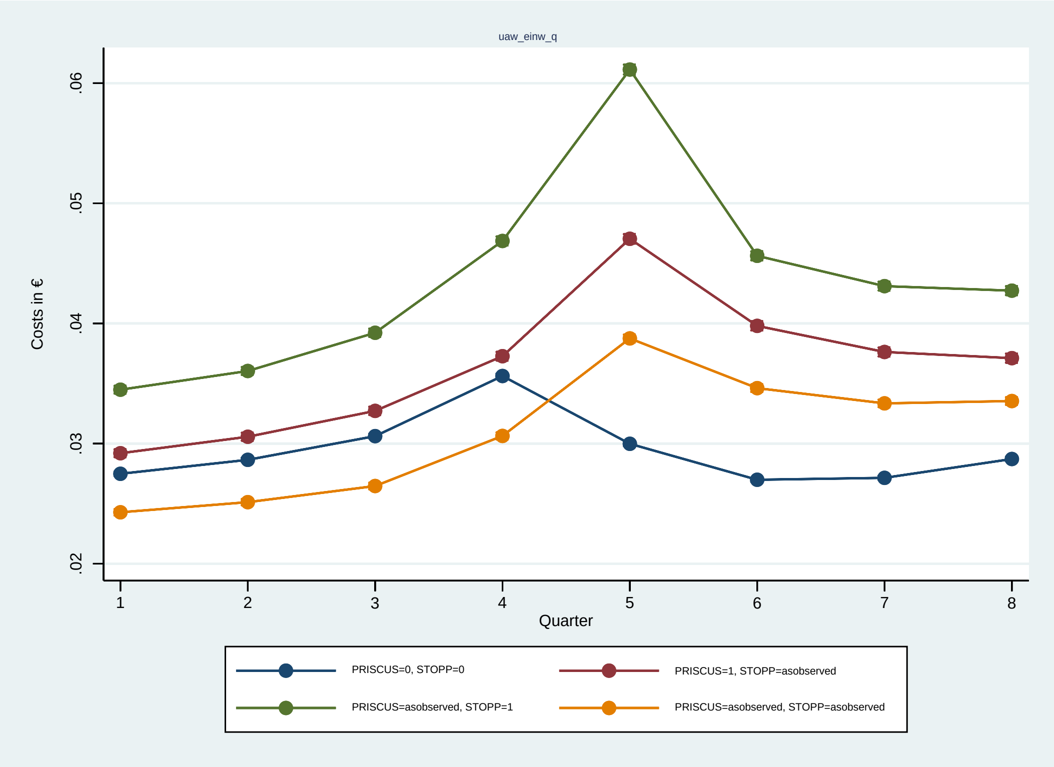
```
  num_PSF4Q_prev#STOPP |
                  2 1  |   1.004159   .0078233     0.53   0.594     .9889425    1.019611
                  3 1  |   1.028459   .0079796     3.62   0.000     1.012938    1.044218
                  4 1  |   1.067924   .0080109     8.76   0.000     1.052337    1.083741
                  5 1  |   1.518144   .0110641    57.28   0.000     1.496613    1.539985
                  6 1  |   1.223285   .0094008    26.23   0.000     1.204998     1.24185
                  7 1  |   1.162049   .0090914    19.20   0.000     1.144366    1.180005
                  8 1  |   1.105653   .0086918    12.78   0.000     1.088748    1.122821
                       |
                 _cons |   .0282629   .0000966 -1043.63   0.000     .0280742    .0284528
------------------------------------------------------------------------------------------
```

Margins

```
Predictive margins                                Number of obs     = 41,723,270
Model VCE    : Conventional

Expression   : Pr(uaw_einw_q != 0), predict()

----------------------------------------------------------------------------------------------------
                                    |            Delta-method
                                    |     Margin   Std. Err.      z    P>|z|     [95% Conf. Interval]
------------------------------------+---------------------------------------------------------------
              num_PSF4Q_prev#PRISCUS |
                                1 1 |    .029196   .0001628   179.29   0.000     .0288768    .0295152
                                2 1 |   .0305691   .0001665   183.60   0.000     .0302428    .0308954
                                3 1 |   .0327222   .0001719   190.38   0.000     .0323853    .0330591
                                4 1 |   .0372717   .0001826   204.16   0.000     .0369139    .0376296
                                5 1 |    .047046   .0001987   236.78   0.000     .0466565    .0474354
                                6 1 |   .0397981   .0001896   209.95   0.000     .0394266    .0401697
                                7 1 |   .0376246   .0001884   199.68   0.000     .0372553    .0379939
                                8 1 |   .0371116   .0001902   195.15   0.000     .0367388    .0374843
                                    |
                num_PSF4Q_prev#STOPP |
                                1 1 |   .0344857   .0001619   213.06   0.000     .0341685     .034803
                                2 1 |   .0360428   .0001653   217.99   0.000     .0357187    .0363668
                                3 1 |   .0392242   .0001723   227.60   0.000     .0388864     .039562
                                4 1 |    .046866    .000188   249.35   0.000     .0464976    .0472344
                                5 1 |   .0611323   .0002099   291.31   0.000      .060721    .0615436
                                6 1 |   .0456293   .0001855   245.98   0.000     .0452657    .0459929
                                7 1 |   .0431043   .0001842   234.02   0.000     .0427432    .0434653
                                8 1 |   .0427294   .0001865   229.16   0.000      .042364    .0430949
                                    |
                num_PSF4Q_prev#FORTA |
                                1 1 |    .024281   .0001326   183.17   0.000     .0240212    .0245408
```

2 1	.0251224	.0001347	186.46	0.000	.0248583	.0253865
3 1	.0264676	.000138	191.72	0.000	.026197	.0267381
4 1	.0306359	.000148	206.94	0.000	.0303457	.030926
5 1	.0387537	.0001623	238.72	0.000	.0384355	.0390719
6 1	.0346135	.0001573	219.99	0.000	.0343051	.0349218
7 1	.0333471	.0001568	212.69	0.000	.0330398	.0336543
8 1	.0335386	.0001591	210.80	0.000	.0332268	.0338505
num_PSF4Q_prev#PRISCUS#STOPP#FORTA						
1 0 0 0	.027486	.0000913	300.91	0.000	.027307	.027665
2 0 0 0	.0286479	.0000932	307.39	0.000	.0284652	.0288306
3 0 0 0	.0306213	.0000962	318.15	0.000	.0304327	.03081
4 0 0 0	.0356242	.0001036	344.01	0.000	.0354212	.0358272
5 0 0 0	.0299826	.000092	325.74	0.000	.0298022	.030163
6 0 0 0	.0269898	.0000892	302.53	0.000	.0268149	.0271646
7 0 0 0	.0271484	.0000909	298.76	0.000	.0269703	.0273265
8 0 0 0	.0287159	.0000947	303.14	0.000	.0285302	.0289015

Grafik



Lincom (IG vs.KG)

PRISCUS

```
( 1)  1bn.num_PSF4Q_prev#1bn.PRISCUS - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |     .00171    .000181     9.45   0.000     .0013553    .0020647
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.PRISCUS - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
```

```
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0019212   .0001849    10.39   0.000     .0015587    .0022837
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.PRISCUS - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0021009   .0001909    11.01   0.000     .0017268     .002475
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.PRISCUS - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0016475   .0002033     8.10   0.000     .0012491    .0020459
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.PRISCUS - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0170633    .000211    80.87   0.000     .0166498    .0174769
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.PRISCUS - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0128084   .0002027    63.20   0.000     .0124112    .0132056
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.PRISCUS - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0104762   .0002027    51.69   0.000      .010079    .0108735
------------------------------------------------------------------------------
```

```
 ( 1)  8.num_PSF4Q_prev#1bn.PRISCUS - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0083957   .0002061    40.74   0.000     .0079918    .0087996
------------------------------------------------------------------------------
```

STOPP

```
( 1)  1bn.num_PSF4Q_prev#1bn.STOPP - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0069997   .0001798    38.93   0.000     .0066473    .0073521
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.STOPP - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0073949   .0001836    40.27   0.000      .007035    .0077547
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.STOPP - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0086029    .000191    45.04   0.000     .0082285    .0089773
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.STOPP - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0112418   .0002078    54.10   0.000     .0108345     .011649
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.STOPP - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0311497   .0002214   140.70   0.000     .0307158    .0315836
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.STOPP - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0186395   .0001985    93.88   0.000     .0182504    .0190286
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.STOPP - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0159559   .0001983    80.47   0.000     .0155673    .0163445
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q_prev#1bn.STOPP - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0140135   .0002021    69.35   0.000     .0136175    .0144096
------------------------------------------------------------------------------
```

FORTA

```
( 1)  1bn.num_PSF4Q_prev#1bn.FORTA - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   -.003205    .000157   -20.41   0.000    -.0035128   -.0028972
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.FORTA - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |  -.0035255   .0001598   -22.06   0.000    -.0038387   -.0032123
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.FORTA - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0041537   .0001641   -25.31   0.000    -.0044754   -.0038321
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.FORTA - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0049883   .0001761   -28.32   0.000    -.0053336   -.0046431
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.FORTA - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0087711    .000181    48.47   0.000     .0084164    .0091258
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.FORTA - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0076237    .000176    43.31   0.000     .0072787    .0079687
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.FORTA - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0061987   .0001767    35.07   0.000     .0058523    .0065451
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q_prev#1bn.FORTA - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0048228   .0001809    26.67   0.000     .0044683    .0051772
------------------------------------------------------------------------------
```

Lincom IG vs. KG mit Korrektur vor Q4 DiD)

PRISCUS

```
( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 5.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0154158   .0002808    54.91   0.000     .0148655    .0159661
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 6.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0111608   .0002803    39.81   0.000     .0106114    .0117103
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 7.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0088287   .0002815    31.36   0.000     .0082769    .0093805
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 8.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0067482   .0002843    23.73   0.000     .0061909    .0073055
------------------------------------------------------------------------------
```

STOPP

```
( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 5.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0199079    .000291    68.42   0.000     .0193376    .0204782
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 6.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0073978   .0002807    26.36   0.000     .0068476    .0079479
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 7.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0047141   .0002817    16.73   0.000      .004162    .0052663
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 8.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0027718   .0002847     9.74   0.000     .0022138    .0033298
------------------------------------------------------------------------------
```

FORTA

```
( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 5.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |   .0137594    .000242    56.86   0.000     .0132851    .0142337
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 6.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .012612   .0002432    51.87   0.000     .0121354    .0130886
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 7.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .011187   .0002447    45.72   0.000     .0107075    .0116666
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 8.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0098111   .0002479    39.57   0.000     .0093252     .010297
------------------------------------------------------------------------------
```

uaw_entl_q

Modell

```
       panel variable:  versid (unbalanced)
        time variable:  num_PSF4Q_p~v, 1 to 8, but with gaps
                delta:  1 unit

Iteration 1: tolerance = .03374205
Iteration 2: tolerance = .00046709
Iteration 3: tolerance = 2.774e-06
Iteration 4: tolerance = 1.616e-08

GEE population-averaged model                   Number of obs     = 41,723,270
Group and time vars:   versid num_PSF4Q_~v      Number of groups  =  5,490,700
Link:                                logit      Obs per group:
```

```
Family:                          binomial                   min =          5
Correlation:                 unstructured                   avg =        7.9
                                                            max =          8
                                            Wald chi2(31)     =   75326.47
Scale parameter:                        1   Prob > chi2       =     0.0000

------------------------------------------------------------------------------------
           uaw_entl_q | Odds Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----------------------+------------------------------------------------------------
        num_PSF4Q_prev |
                    2  |   1.046858   .0049773     9.63   0.000     1.037148    1.056659
                    3  |   1.120261   .0053284    23.88   0.000     1.109866    1.130753
                    4  |   1.323278   .0060983    60.78   0.000      1.31138    1.335285
                    5  |   1.083411   .0051368    16.90   0.000      1.07339    1.093526
                    6  |   .9834309   .0048304    -3.40   0.001     .9740089    .9929439
                    7  |   .9805087   .0048628    -3.97   0.000     .9710239    .9900861
                    8  |    1.05672   .0051876    11.24   0.000     1.046602    1.066937
                       |
             1.PRISCUS |   1.034241   .0069206     5.03   0.000     1.020766    1.047895
                       |
num_PSF4Q_prev#PRISCUS |
                  2 1  |    1.00679   .0090438     0.75   0.451     .9892198    1.024673
                  3 1  |   .9950634   .0089503    -0.55   0.582     .9776749    1.012761
                  4 1  |   .9627883   .0084103    -4.34   0.000     .9464447    .9794142
                  5 1  |   1.251398   .0105209    26.67   0.000     1.230947     1.27219
                  6 1  |   1.237153   .0108975    24.16   0.000     1.215978    1.258698
                  7 1  |   1.187013   .0106701    19.07   0.000     1.166283    1.208111
                  8 1  |   1.121097   .0101363    12.64   0.000     1.101405    1.141141
                       |
               1.FORTA |   .8040353   .0052772   -33.23   0.000     .7937585    .8144452
                       |
  num_PSF4Q_prev#FORTA |
                  2 1  |   .9866478   .0087151    -1.52   0.128     .9697135    1.003878
                  3 1  |   .9738143    .008614    -3.00   0.003     .9570767    .9908446
                  4 1  |   .9625056   .0082462    -4.46   0.000     .9464782    .9788043
                  5 1  |   1.247979   .0103103    26.81   0.000     1.227934    1.268352
                  6 1  |   1.333454   .0114305    33.57   0.000     1.311237    1.356046
                  7 1  |   1.316646   .0114538    31.62   0.000     1.294387    1.339288
                  8 1  |   1.266531   .0110351    27.12   0.000     1.245086    1.288345
                       |
               1.STOPP |   1.329329   .0079378    47.67   0.000     1.313862    1.344979
                       |
  num_PSF4Q_prev#STOPP |
                  2 1  |   1.004996   .0080603     0.62   0.534     .9893213    1.020919
```

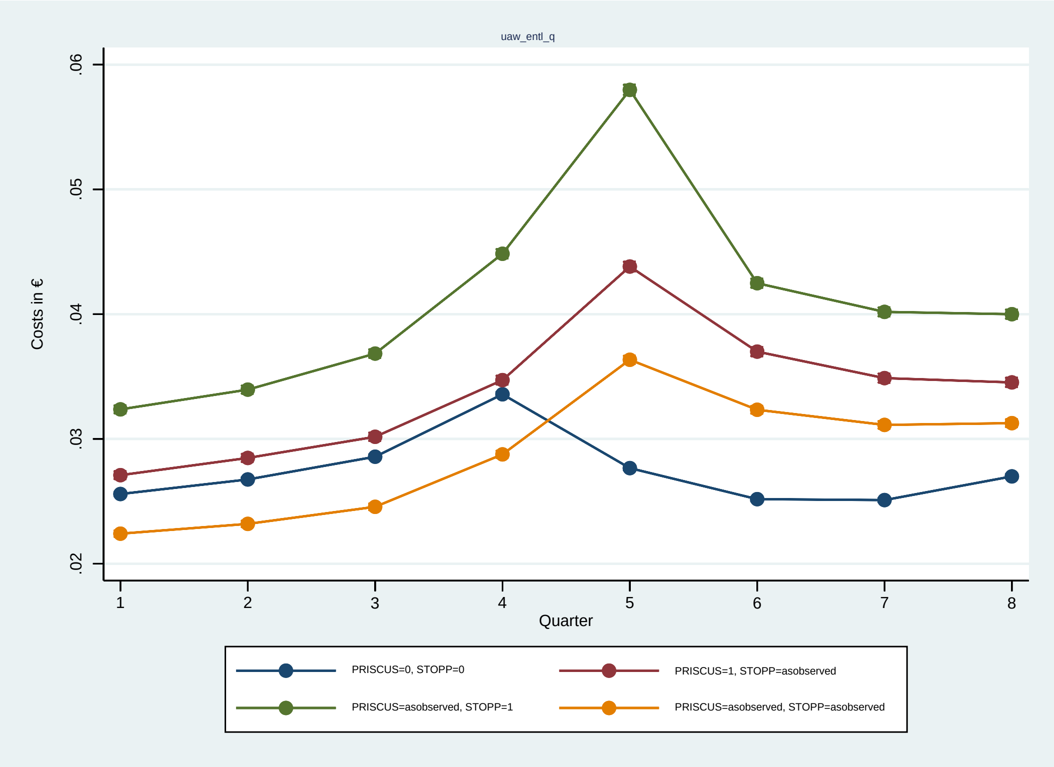
```
            3 1  |   1.027233   .0082265     3.36   0.001     1.011235    1.043483
            4 1  |   1.076781   .0083251     9.57   0.000     1.060587    1.093222
            5 1  |   1.540124   .0115895    57.39   0.000     1.517575    1.563007
            6 1  |   1.205974   .0095832    23.57   0.000     1.187337    1.224904
            7 1  |   1.155776   .0093544    17.89   0.000     1.137587    1.174257
            8 1  |   1.091313   .0088615    10.76   0.000     1.074083    1.108821
                 |
           _cons |   .0262582   .0000929 -1028.59   0.000     .0260767     .026441
------------------------------------------------------------------------------
```

Margins

```
Predictive margins                              Number of obs     = 41,723,270
Model VCE    : Conventional

Expression   : Pr(uaw_entl_q != 0), predict()

------------------------------------------------------------------------------------
                                |            Delta-method
                                |     Margin   Std. Err.      z    P>|z|     [95% Conf. Interval]
--------------------------------+---------------------------------------------------
         num_PSF4Q_prev#PRISCUS |
                            1 1 |   .0270961   .0001569   172.65   0.000     .0267885    .0274037
                            2 1 |   .0284769   .0001608   177.12   0.000     .0281618    .0287921
                            3 1 |    .030173   .0001651   182.71   0.000     .0298493    .0304967
                            4 1 |   .0347147   .0001762   197.04   0.000     .0343694    .0350601
                            5 1 |   .0438172   .0001916   228.65   0.000     .0434416    .0441928
                            6 1 |   .0369991    .000183   202.15   0.000     .0366404    .0373578
                            7 1 |   .0348743   .0001815   192.10   0.000     .0345185    .0352301
                            8 1 |   .0345311   .0001837   187.98   0.000      .034171    .0348911
                                |
           num_PSF4Q_prev#STOPP |
                            1 1 |   .0323712   .0001571   206.07   0.000     .0320633    .0326791
                            2 1 |   .0339521   .0001608   211.19   0.000      .033637    .0342672
                            3 1 |   .0368412   .0001674   220.11   0.000     .0365131    .0371692
                            4 1 |   .0448422   .0001842   243.39   0.000     .0444811    .0452033
                            5 1 |   .0579755   .0002047   283.17   0.000     .0575742    .0583768
                            6 1 |   .0424828   .0001793   236.96   0.000     .0421314    .0428342
                            7 1 |    .040182   .0001781   225.64   0.000      .039833    .0405311
                            8 1 |   .0399993   .0001808   221.28   0.000      .039645    .0403536
                                |
           num_PSF4Q_prev#FORTA |
                            1 1 |   .0224079   .0001274   175.89   0.000     .0221582    .0226576
                            2 1 |   .0231917   .0001295   179.07   0.000     .0229379    .0234456
                            3 1 |   .0245598   .0001331   184.55   0.000      .024299    .0248206
```

4 1	.0287629	.0001435	200.45	0.000	.0284817	.0290441
5 1	.0363447	.0001572	231.21	0.000	.0360366	.0366528
6 1	.0323382	.0001523	212.35	0.000	.0320397	.0326367
7 1	.031124	.0001516	205.29	0.000	.0308269	.0314211
8 1	.0312637	.0001538	203.26	0.000	.0309622	.0315652
num_PSF4Q_prev#PRISCUS#STOPP#FORTA						
1 0 0 0	.0255864	.0000882	290.02	0.000	.0254134	.0257593
2 0 0 0	.0267532	.0000902	296.72	0.000	.0265765	.0269299
3 0 0 0	.0285755	.0000931	306.92	0.000	.028393	.028758
4 0 0 0	.0335801	.0001007	333.61	0.000	.0333828	.0337774
5 0 0 0	.0276615	.0000884	313.02	0.000	.0274883	.0278347
6 0 0 0	.0251731	.0000862	291.91	0.000	.0250041	.0253421
7 0 0 0	.0251002	.0000874	287.16	0.000	.0249288	.0252715
8 0 0 0	.0269985	.000092	293.50	0.000	.0268182	.0271787

Grafik



Lincom (IG vs.KG)

PRISCUS

```
( 1)  1bn.num_PSF4Q_prev#1bn.PRISCUS - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0015098   .0001745     8.65   0.000     .0011678    .0018517
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.PRISCUS - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
```

```
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0017237   .0001786     9.65   0.000     .0013736    .0020739
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.PRISCUS - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0015975   .0001837     8.70   0.000     .0012375    .0019575
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.PRISCUS - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0011346   .0001965     5.78   0.000     .0007496    .0015197
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.PRISCUS - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0161556   .0002033    79.48   0.000     .0157573     .016554
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.PRISCUS - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .011826   .0001957    60.43   0.000     .0114424    .0122096
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.PRISCUS - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0097741   .0001952    50.07   0.000     .0093915    .0101567
------------------------------------------------------------------------------
```

```
 ( 1)  8.num_PSF4Q_prev#1bn.PRISCUS - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0075326   .0001993    37.80   0.000      .007142    .0079232
------------------------------------------------------------------------------
```

STOPP

```
( 1)  1bn.num_PSF4Q_prev#1bn.STOPP - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0067849   .0001743    38.92   0.000     .0064432    .0071265
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.STOPP - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0071989   .0001784    40.36   0.000     .0068493    .0075484
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.STOPP - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0082657   .0001854    44.58   0.000     .0079023    .0086291
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.STOPP - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0112621   .0002034    55.38   0.000     .0108635    .0116607
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.STOPP - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .030314   .0002155   140.67   0.000     .0298916    .0307364
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.STOPP - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0173097   .0001919    90.21   0.000     .0169336    .0176858
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.STOPP - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0150819   .0001915    78.75   0.000     .0147065    .0154572
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q_prev#1bn.STOPP - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0130009    .000196    66.34   0.000     .0126167     .013385
------------------------------------------------------------------------------
```

FORTA

```
( 1)  1bn.num_PSF4Q_prev#1bn.FORTA - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0031785   .0001512   -21.03   0.000    -.0034747   -.0028822
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.FORTA - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |  -.0035615   .0001539   -23.14   0.000    -.0038631   -.0032598
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.FORTA - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0040156   .0001584   -25.35   0.000    -.0043261   -.0037052
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.FORTA - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0048172   .0001709   -28.19   0.000    -.0051521   -.0044823
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.FORTA - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0086832   .0001748    49.67   0.000     .0083406    .0090259
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.FORTA - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0071651   .0001703    42.07   0.000     .0068313    .0074989
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.FORTA - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0060238   .0001707    35.30   0.000     .0056894    .0063583
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q_prev#1bn.FORTA - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0042653   .0001751    24.36   0.000     .0039221    .0046084
------------------------------------------------------------------------------
```

Lincom IG vs. KG mit Korrektur vor Q4 DiD)

PRISCUS

```
( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 5.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .015021   .0002697    55.70   0.000     .0144925    .0155496
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 6.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0106914   .0002708    39.48   0.000     .0101607    .0112221
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 7.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0086395   .0002717    31.79   0.000     .0081069    .0091721
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 8.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .006398   .0002746    23.30   0.000     .0058598    .0069362
------------------------------------------------------------------------------
```

STOPP

```
( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 5.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0190519   .0002827    67.40   0.000     .0184979    .0196059
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 6.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0060476    .000273    22.15   0.000     .0055125    .0065827
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 7.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0038198   .0002741    13.94   0.000     .0032825     .004357
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 8.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0017388   .0002771     6.27   0.000     .0011956    .0022819
------------------------------------------------------------------------------
```

FORTA

```
( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 5.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |   .0135004   .0002332    57.89   0.000     .0130433    .0139575
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 6.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0119823   .0002355    50.87   0.000     .0115207     .012444
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 7.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .010841   .0002369    45.76   0.000     .0103767    .0113054
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 8.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0090825     .00024    37.85   0.000     .0086121    .0095528
------------------------------------------------------------------------------
```

uaw_q

Modell

```
       panel variable:  versid (unbalanced)
        time variable:  num_PSF4Q_p~v, 1 to 8, but with gaps
                delta:  1 unit

Iteration 1: tolerance = .03966878
Iteration 2: tolerance = .00060217
Iteration 3: tolerance = 4.313e-06
Iteration 4: tolerance = 3.966e-08

GEE population-averaged model                   Number of obs     = 41,723,270
Group and time vars:   versid num_PSF4Q_~v      Number of groups  =  5,490,700
Link:                                logit      Obs per group:
```

```
Family:                          binomial                   min =          5
Correlation:                 unstructured                   avg =        7.9
                                                            max =          8
                                               Wald chi2(31)     =   98075.19
Scale parameter:                        1      Prob > chi2       =     0.0000

------------------------------------------------------------------------------------
               uaw_q | Odds Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
---------------------+--------------------------------------------------------------
       num_PSF4Q_prev |
                  2  |   1.037429   .0041673     9.15   0.000     1.029293    1.045629
                  3  |   1.105179   .0044704    24.72   0.000     1.096452    1.113975
                  4  |   1.295845   .0050879    66.01   0.000     1.285911    1.305856
                  5  |   1.093226    .004378    22.26   0.000     1.084679    1.101841
                  6  |   .9837464   .0041046    -3.93   0.000     .9757344    .9918243
                  7  |   .9878331   .0041553    -2.91   0.004     .9797223    .9960109
                  8  |   1.055633   .0044039    12.98   0.000     1.047036      1.0643
                     |
           1.PRISCUS |   1.034238   .0059014     5.90   0.000     1.022736     1.04587
                     |
num_PSF4Q_prev#PRISCUS |
                2 1  |   1.012242   .0076702     1.61   0.108     .9973196    1.027387
                3 1  |   1.007801   .0076872     1.02   0.308     .9928462    1.022981
                4 1  |   .9793661   .0072691    -2.81   0.005      .965222    .9937175
                5 1  |   1.257473   .0089573    32.16   0.000     1.240039    1.275152
                6 1  |   1.244475   .0093132    29.23   0.000     1.226354    1.262863
                7 1  |   1.192447   .0090974    23.07   0.000      1.17475    1.210412
                8 1  |   1.126538   .0086526    15.51   0.000     1.109707    1.143626
                     |
             1.FORTA |   .8185363   .0045536   -35.99   0.000     .8096599    .8275101
                     |
  num_PSF4Q_prev#FORTA |
                2 1  |   .9935528   .0073568    -0.87   0.382     .9792377    1.008077
                3 1  |    .980914   .0073181    -2.58   0.010     .9666751    .9953627
                4 1  |   .9677389   .0070106    -4.53   0.000     .9540954    .9815774
                5 1  |    1.23325   .0085925    30.09   0.000     1.216523    1.250206
                6 1  |   1.318327   .0095631    38.10   0.000     1.299716    1.337204
                7 1  |   1.295007   .0095282    35.14   0.000     1.276466    1.313817
                8 1  |   1.253947   .0092443    30.70   0.000     1.235959    1.272197
                     |
             1.STOPP |   1.325871   .0067589    55.33   0.000      1.31269    1.339184
                     |
  num_PSF4Q_prev#STOPP |
                2 1  |   1.010718   .0068474     1.57   0.116     .9973862    1.024229
```

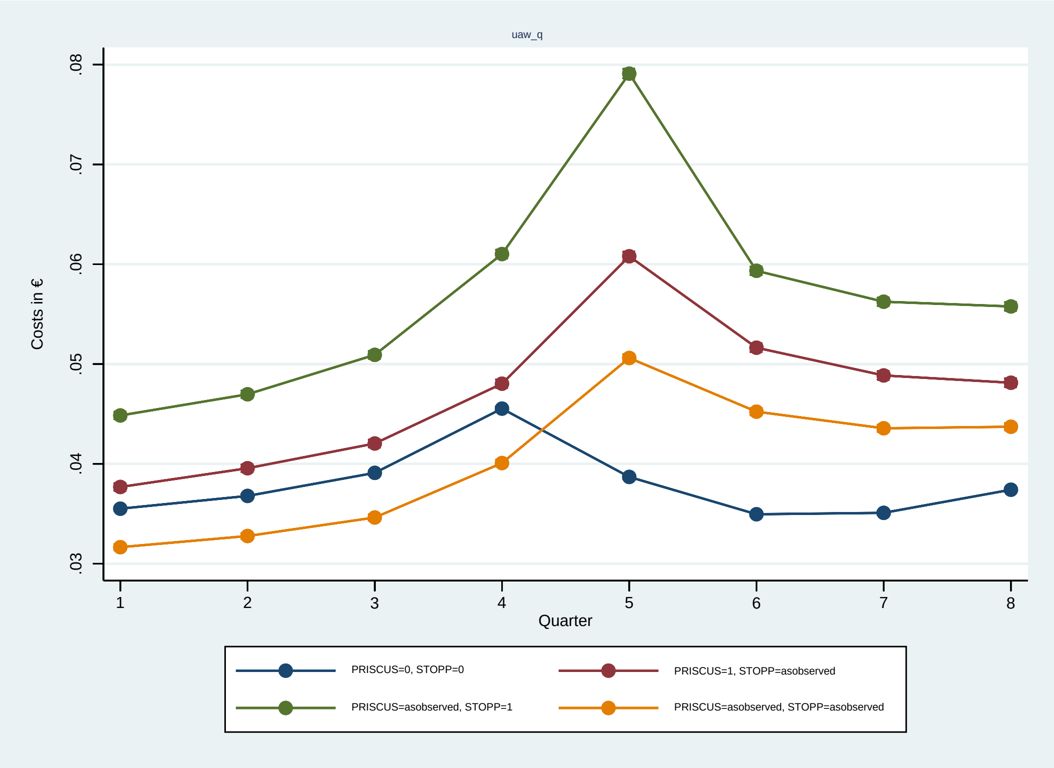
```
         3 1  |   1.036575   .0070544     5.28   0.000      1.02284    1.050494
         4 1  |   1.079795   .0071151    11.65   0.000     1.065939    1.093831
         5 1  |   1.519589   .0097013    65.54   0.000     1.500693    1.538723
         6 1  |    1.22235   .0082572    29.72   0.000     1.206273    1.238641
         7 1  |   1.166372   .0080181    22.39   0.000     1.150762    1.182193
         8 1  |   1.104137   .0076221    14.35   0.000     1.089298    1.119177
              |
        _cons |   .0368193   .0001111 -1094.09   0.000     .0366022    .0370377
------------------------------------------------------------------------------
Note: _cons estimates baseline odds (conditional on zero random effects).
```

Margins

```
Predictive margins                              Number of obs     = 41,723,270
Model VCE    : Conventional

Expression   : Pr(uaw_q != 0), predict()

----------------------------------------------------------------------------------------------
                                   |            Delta-method
                                   |     Margin   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----------------------------------+----------------------------------------------------------
            num_PSF4Q_prev#PRISCUS |
                               1 1 |    .0376875   .0001841   204.70   0.000     .0373267    .0380484
                               2 1 |    .0395637   .0001884   210.04   0.000     .0391945    .0399329
                               3 1 |    .0420432   .0001937   217.10   0.000     .0416636    .0424227
                               4 1 |    .0480352   .0002058   233.37   0.000     .0476317    .0484386
                               5 1 |    .0607989   .0002242   271.16   0.000     .0603595    .0612384
                               6 1 |    .0516412   .0002145   240.70   0.000     .0512207    .0520617
                               7 1 |    .0488628   .0002133   229.03   0.000     .0484446    .0492809
                               8 1 |    .0481296   .0002153   223.58   0.000     .0477077    .0485516
                                   |
              num_PSF4Q_prev#STOPP |
                               1 1 |    .0448521   .0001836   244.33   0.000     .0444923    .0452119
                               2 1 |    .0469727   .0001876   250.39   0.000      .046605    .0473404
                               3 1 |    .0509253   .0001951   261.08   0.000     .0505429    .0513076
                               4 1 |    .0610209   .0002127   286.84   0.000      .060604    .0614379
                               5 1 |    .0790992   .0002364   334.64   0.000     .0786359    .0795625
                               6 1 |    .0593458     .00021   282.62   0.000     .0589343    .0597574
                               7 1 |    .0562475   .0002089   269.25   0.000     .0558381    .0566569
                               8 1 |    .0557741   .0002116   263.58   0.000     .0553594    .0561888
                                   |
              num_PSF4Q_prev#FORTA |
                               1 1 |    .0316552   .0001508   209.97   0.000     .0313598    .0319507
                               2 1 |    .0327734   .0001532   213.91   0.000     .0324731    .0330737
```

```
                      3 1  |   .0346284   .0001572   220.32   0.000     .0343204    .0349365
                      4 1  |   .0400826   .0001684   238.01   0.000     .0397526    .0404127
                      5 1  |   .0506105   .0001844   274.52   0.000     .0502492    .0509719
                      6 1  |   .0452321   .0001789   252.90   0.000     .0448816    .0455827
                      7 1  |   .0435685   .0001782   244.50   0.000     .0432193    .0439178
                      8 1  |   .0437221   .0001807   241.99   0.000     .0433679    .0440762
                           |
num_PSF4Q_prev#PRISCUS#STOPP#FORTA |
                  1 0 0 0  |   .0355118   .0001034   343.57   0.000     .0353092    .0357144
                  2 0 0 0  |   .0367921   .0001051   350.14   0.000     .0365861     .036998
                  3 0 0 0  |   .0391008   .0001082   361.50   0.000     .0388888    .0393128
                  4 0 0 0  |   .0455394   .0001163   391.42   0.000     .0453113    .0457674
                  5 0 0 0  |   .0386943   .0001041   371.66   0.000     .0384903    .0388984
                  6 0 0 0  |   .0349548   .0001011   345.73   0.000     .0347566    .0351529
                  7 0 0 0  |   .0350949   .0001029   341.22   0.000     .0348933    .0352965
                  8 0 0 0  |   .0374135   .0001077   347.49   0.000     .0372025    .0376245
--------------------------------------------------------------------------------------------------
```

Grafik



Lincom (IG vs.KG)

PRISCUS

```
( 1)  1bn.num_PSF4Q_prev#1bn.PRISCUS - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0021757   .0002046    10.63   0.000     .0017747    .0025768
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.PRISCUS - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
```

```
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0027716    .000209    13.26   0.000      .002362    .0031813
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.PRISCUS - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0029423   .0002149    13.69   0.000     .0025212    .0033635
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.PRISCUS - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0024958   .0002289    10.90   0.000     .0020471    .0029445
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.PRISCUS - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0221046   .0002382    92.79   0.000     .0216377    .0225715
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.PRISCUS - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0166864   .0002294    72.73   0.000     .0162367    .0171361
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.PRISCUS - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0137679   .0002295    60.00   0.000     .0133182    .0142176
------------------------------------------------------------------------------
```

```
 ( 1)  8.num_PSF4Q_prev#1bn.PRISCUS - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0107161   .0002335    45.90   0.000     .0102585    .0111737
------------------------------------------------------------------------------
```

STOPP

```
( 1)  1bn.num_PSF4Q_prev#1bn.STOPP - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0093403   .0002038    45.83   0.000     .0089409    .0097397
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.STOPP - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0101806    .000208    48.95   0.000      .009773    .0105883
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.STOPP - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0118244   .0002158    54.79   0.000     .0114014    .0122474
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.STOPP - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0154816   .0002348    65.95   0.000     .0150215    .0159417
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.STOPP - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0404049   .0002495   161.94   0.000     .0399159    .0408939
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.STOPP - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0243911   .0002248   108.51   0.000     .0239505    .0248316
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.STOPP - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0211526   .0002248    94.09   0.000      .020712    .0215932
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q_prev#1bn.STOPP - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0183606   .0002294    80.04   0.000      .017911    .0188102
------------------------------------------------------------------------------
```

FORTA

```
( 1)  1bn.num_PSF4Q_prev#1bn.FORTA - 1bn.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0038565   .0001783   -21.63   0.000     -.004206   -.0035071
------------------------------------------------------------------------------

 ( 1)  2.num_PSF4Q_prev#1bn.FORTA - 2.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |  -.0040187   .0001812   -22.18   0.000    -.0043738   -.0036636
------------------------------------------------------------------------------

 ( 1)  3.num_PSF4Q_prev#1bn.FORTA - 3.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0044724    .000186   -24.04   0.000     -.004837   -.0041078
------------------------------------------------------------------------------

 ( 1)  4.num_PSF4Q_prev#1bn.FORTA - 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0054567   .0001995   -27.35   0.000    -.0058478   -.0050656
------------------------------------------------------------------------------

 ( 1)  5.num_PSF4Q_prev#1bn.FORTA - 5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0119162   .0002053    58.03   0.000     .0115137    .0123187
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q_prev#1bn.FORTA - 6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0102774      .0002    51.40   0.000     .0098854    .0106693
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q_prev#1bn.FORTA - 7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0084736   .0002007    42.23   0.000     .0080804    .0088669
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q_prev#1bn.FORTA - 8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0
```

```
------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0063086   .0002054    30.71   0.000     .0059059    .0067112
------------------------------------------------------------------------------
```

Lincom IG vs. KG mit Korrektur vor Q4 DiD)

PRISCUS

```
( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 5.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0196088   .0003124    62.78   0.000     .0189966     .020221
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 6.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0141906   .0003144    45.14   0.000     .0135745    .0148067
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 7.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0112721   .0003164    35.62   0.000     .0106519    .0118923
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.PRISCUS + 8.num_PSF4Q_prev#1bn.PRISCUS + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0082203   .0003195    25.73   0.000     .0075942    .0088465
------------------------------------------------------------------------------
```

STOPP

```
( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 5.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0249233   .0003239    76.96   0.000     .0242885     .025558
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 6.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0089095   .0003152    28.26   0.000     .0082916    .0095273
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 7.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .005671   .0003173    17.87   0.000     .0050491     .006293
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.STOPP + 8.num_PSF4Q_prev#1bn.STOPP + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .002879   .0003207     8.98   0.000     .0022505    .0035075
------------------------------------------------------------------------------
```

FORTA

```
( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 5.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       5.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
```

```
         (1) |   .0173729   .0002707    64.18   0.000     .0168424    .0179035
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 6.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       6.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0157341   .0002739    57.44   0.000     .0151972     .016271
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 7.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       7.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0139304   .0002762    50.44   0.000      .013389    .0144717
------------------------------------------------------------------------------

 ( 1)  - 4.num_PSF4Q_prev#1bn.FORTA + 8.num_PSF4Q_prev#1bn.FORTA + 4.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA -
       8.num_PSF4Q_prev#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0117653   .0002797    42.06   0.000      .011217    .0123135
------------------------------------------------------------------------------
```

tod_q

Modell

```
       panel variable:  versid (unbalanced)
        time variable:  num_PSF4Q, 5 to 8, but with a gap
                delta:  1 unit

. xtlogit tod_q i.num_PSF4Q##PRISCUS  i.num_PSF4Q##FORTA i.num_PSF4Q##STOPP [iw=balance_PSF4Q_atc_uaw_ed_prev], pa corr(uns) or

Iteration 1: tolerance = 4.854e-06
Iteration 2: tolerance = 1.896e-07

GEE population-averaged model                   Number of obs     = 12,568,863
Group and time vars:      versid num_PSF4Q      Number of groups  =  3,431,088
Link:                                logit      Obs per group:
```

```
Family:                        binomial                    min =          1
Correlation:                unstructured                    avg =        3.8
                                                            max =          4
                                             Wald chi2(15)     =   31506.84
Scale parameter:                      1      Prob > chi2       =     0.0000

------------------------------------------------------------------------------------
            tod_q | Odds Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
------------------+-----------------------------------------------------------------
        num_PSF4Q |
               6  |   .8098653   .0047967   -35.61   0.000     .8005183    .8193216
               7  |   .7220586   .0044628   -52.69   0.000     .7133644    .7308587
               8  |   .6217906   .0041028   -72.01   0.000     .6138009    .6298842
                  |
        1.PRISCUS |   2.023685   .0224047    63.67   0.000     1.980246    2.068078
                  |
num_PSF4Q#PRISCUS |
             6 1  |   .9633266   .0157152    -2.29   0.022     .9330127    .9946255
             7 1  |   .7305395   .0133729   -17.15   0.000     .7047938    .7572257
             8 1  |   .6944613   .0135764   -18.65   0.000     .6683554    .7215869
                  |
          1.FORTA |   .3546726   .0064346   -57.13   0.000     .3422826    .3675111
                  |
  num_PSF4Q#FORTA |
             6 1  |   1.650737   .0395362    20.93   0.000     1.575038    1.730074
             7 1  |   1.731481   .0430656    22.07   0.000     1.649098    1.817979
             8 1  |   1.723947   .0446042    21.05   0.000     1.638704    1.813624
                  |
          1.STOPP |   1.427791   .0162698    31.25   0.000     1.396256    1.460038
                  |
  num_PSF4Q#STOPP |
             6 1  |   1.288636     .02076    15.74   0.000     1.248583    1.329975
             7 1  |   1.152085   .0200238     8.15   0.000       1.1135    1.192007
             8 1  |   1.206937   .0218944    10.37   0.000     1.164779    1.250621
                  |
            _cons |   .0235134   .0000931  -947.27   0.000     .0233317    .0236966
------------------------------------------------------------------------------------
Note: _cons estimates baseline odds (conditional on zero random effects).
```

Margins

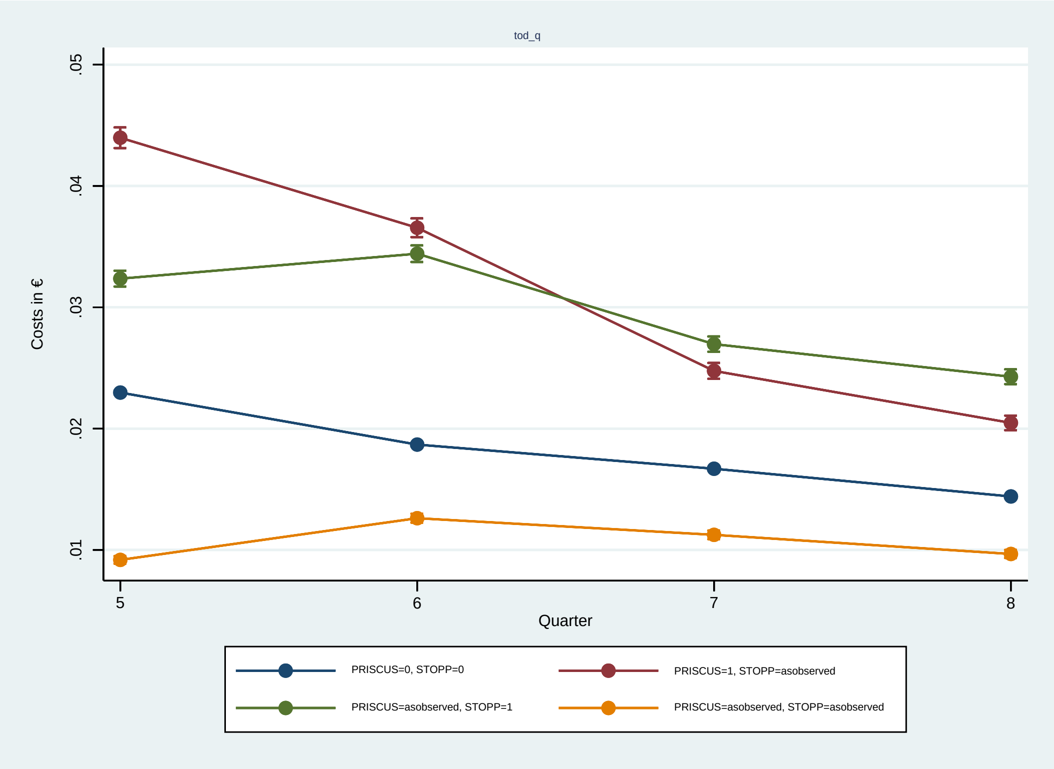
```
. margins i.num_PSF4Q#1.PRISCUS i.num_PSF4Q#1.STOPP i.num_PSF4Q#1.FORTA i.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA,
saving($path_res/tod_q_uaw_ed_prev) post

Predictive margins                           Number of obs     = 12,568,863
```

Model VCE : Conventional

Expression : Pr(tod_q != 0), predict()

	Margin	Delta-method Std. Err.	z	P>|z|	[95% Conf.	Interval]
num_PSF4Q#PRISCUS						
5 1	.0439743	.0004343	101.25	0.000	.043123	.0448255
6 1	.0365554	.0003931	92.98	0.000	.0357848	.0373259
7 1	.0247591	.0003334	74.26	0.000	.0241056	.0254125
8 1	.0204724	.0003063	66.83	0.000	.019872	.0210728
num_PSF4Q#STOPP						
5 1	.0323623	.0003336	97.01	0.000	.0317084	.0330161
6 1	.0344164	.0003485	98.75	0.000	.0337333	.0350995
7 1	.0269654	.0003209	84.03	0.000	.0263364	.0275944
8 1	.0242782	.0003106	78.16	0.000	.0236693	.024887
num_PSF4Q#FORTA						
5 1	.0091841	.0001614	56.90	0.000	.0088677	.0095004
6 1	.0126195	.0001875	67.31	0.000	.0122521	.012987
7 1	.0112469	.0001822	61.72	0.000	.0108897	.011604
8 1	.0096711	.00017	56.89	0.000	.0093379	.0100043
num_PSF4Q#PRISCUS#STOPP#FORTA						
5 0 0 0	.0229733	.0000889	258.53	0.000	.0227991	.0231474
6 0 0 0	.0186869	.0000808	231.32	0.000	.0185285	.0188452
7 0 0 0	.0166946	.0000779	214.27	0.000	.0165419	.0168473
8 0 0 0	.0144098	.000075	192.21	0.000	.0142628	.0145567

Grafik



Lincom (IG vs.KG)

PRISCUS

```
( 1)  5bn.num_PSF4Q#1bn.PRISCUS - 5bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .021001   .0004373    48.02   0.000     .0201439    .0218581
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.PRISCUS - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
```

```
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0178685   .0003949    45.25   0.000     .0170946    .0186424
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.PRISCUS - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0080644    .000337    23.93   0.000     .0074039     .008725
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q#1bn.PRISCUS - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0060627   .0003101    19.55   0.000     .0054549    .0066704
------------------------------------------------------------------------------
```

STOPP

```
( 1)  5bn.num_PSF4Q#1bn.STOPP - 5bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |    .009389   .0003385    27.74   0.000     .0087255    .0100525
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.STOPP - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0157295   .0003511    44.80   0.000     .0150413    .0164178
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.STOPP - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0102708   .0003249    31.61   0.000      .009634    .0109075
```

```
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q#1bn.STOPP - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |   .0098684   .0003144    31.39   0.000     .0092522    .0104846
------------------------------------------------------------------------------
```

FORTA

```
( 1)  5bn.num_PSF4Q#1bn.FORTA - 5bn.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0137892   .0001811   -76.13   0.000    -.0141442   -.0134342
------------------------------------------------------------------------------

 ( 1)  6.num_PSF4Q#1bn.FORTA - 6.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0060673   .0002001   -30.32   0.000    -.0064596   -.0056751
------------------------------------------------------------------------------

 ( 1)  7.num_PSF4Q#1bn.FORTA - 7.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0054478   .0001948   -27.96   0.000    -.0058296   -.0050659
------------------------------------------------------------------------------

 ( 1)  8.num_PSF4Q#1bn.FORTA - 8.num_PSF4Q#0.PRISCUS#0.STOPP#0.FORTA = 0

------------------------------------------------------------------------------
             |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         (1) |  -.0047387   .0001825   -25.97   0.000    -.0050963    -.004381
------------------------------------------------------------------------------
```

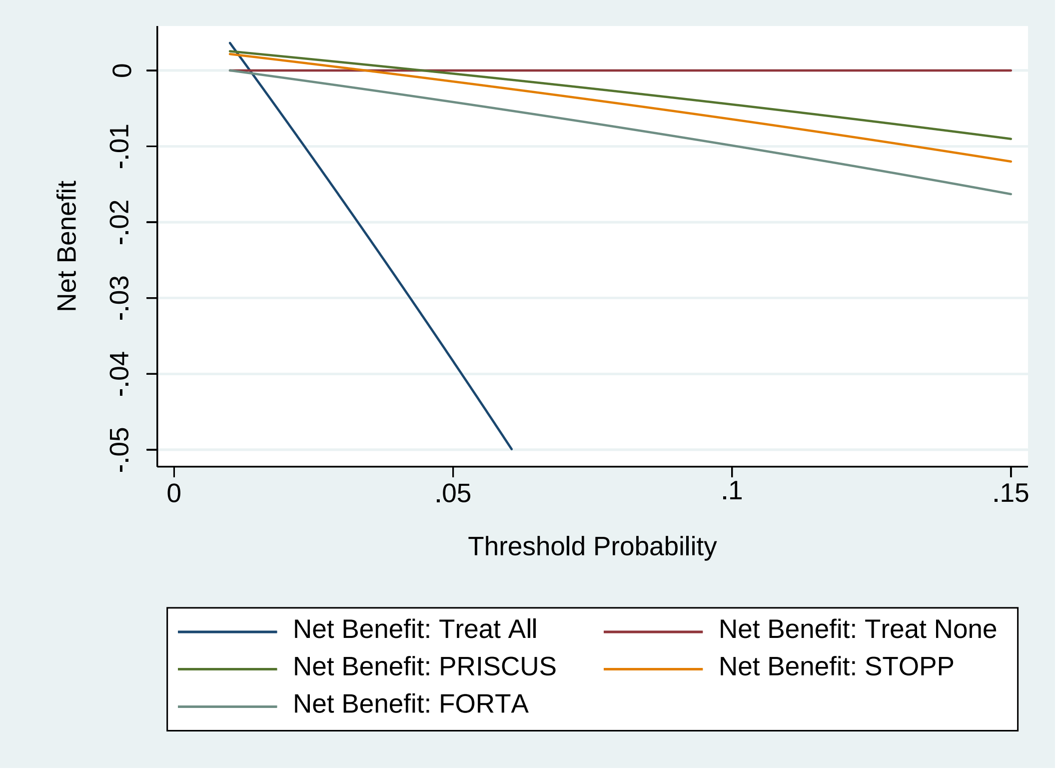
Decision Curve Analyse

Inzident

tod_q

Quartal 5

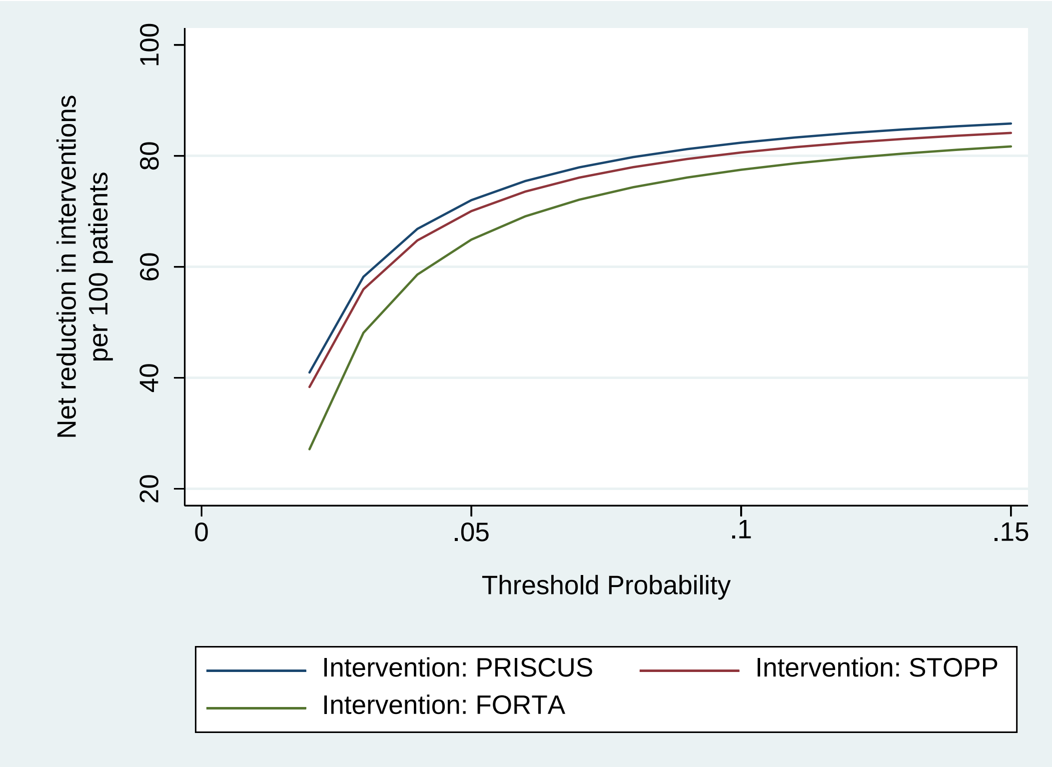
DCA



Schnittpunkte

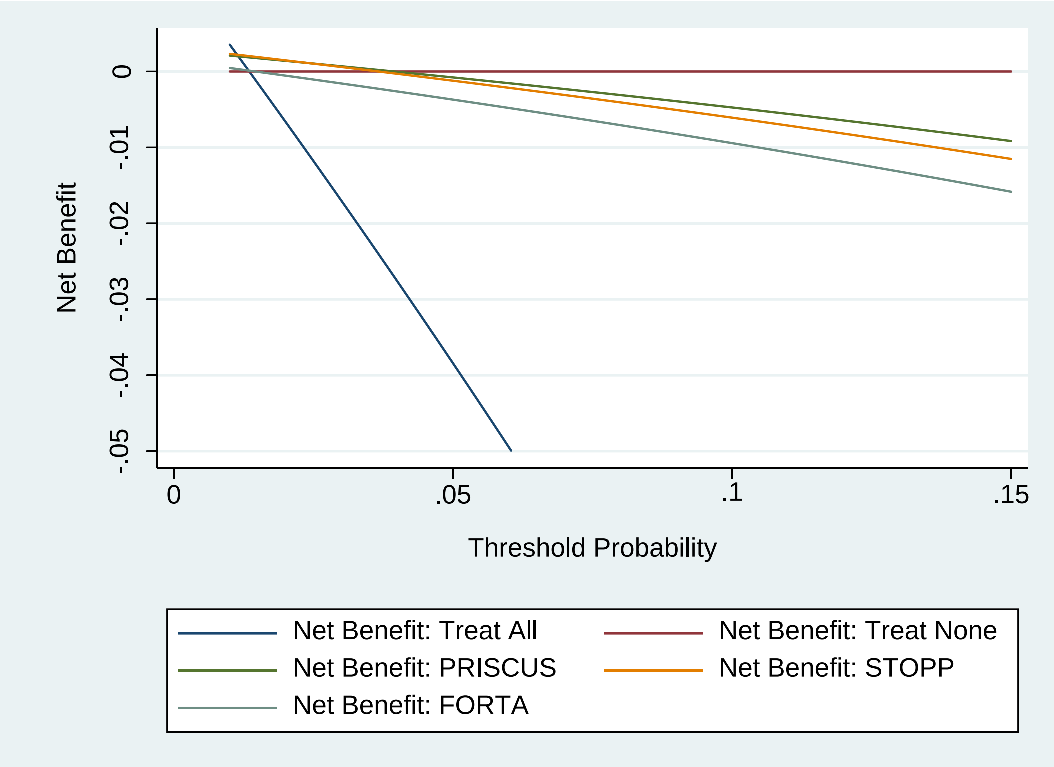
	Treat All	Treat None
PRISCUS	0.0024238	0.0446
STOPP	0.0020201	0.0344
FORTA	-0.0004091	0.0101

Net Reduction in Interventions



Quartal 6

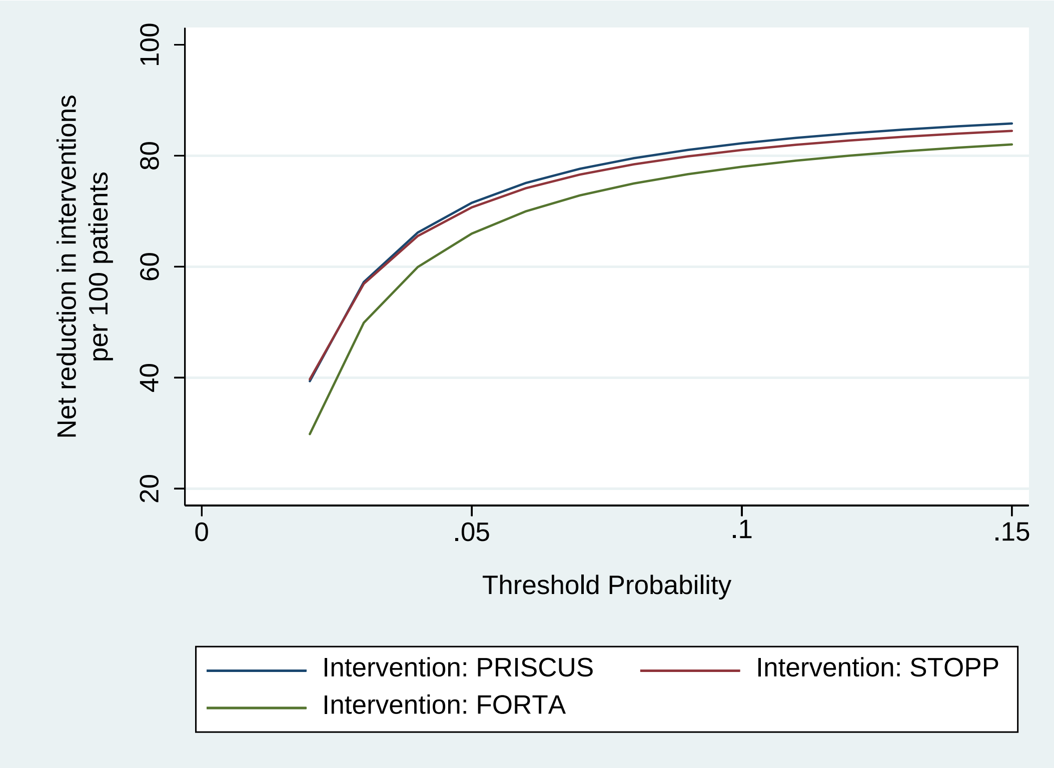
DCA



Schnittpunkte

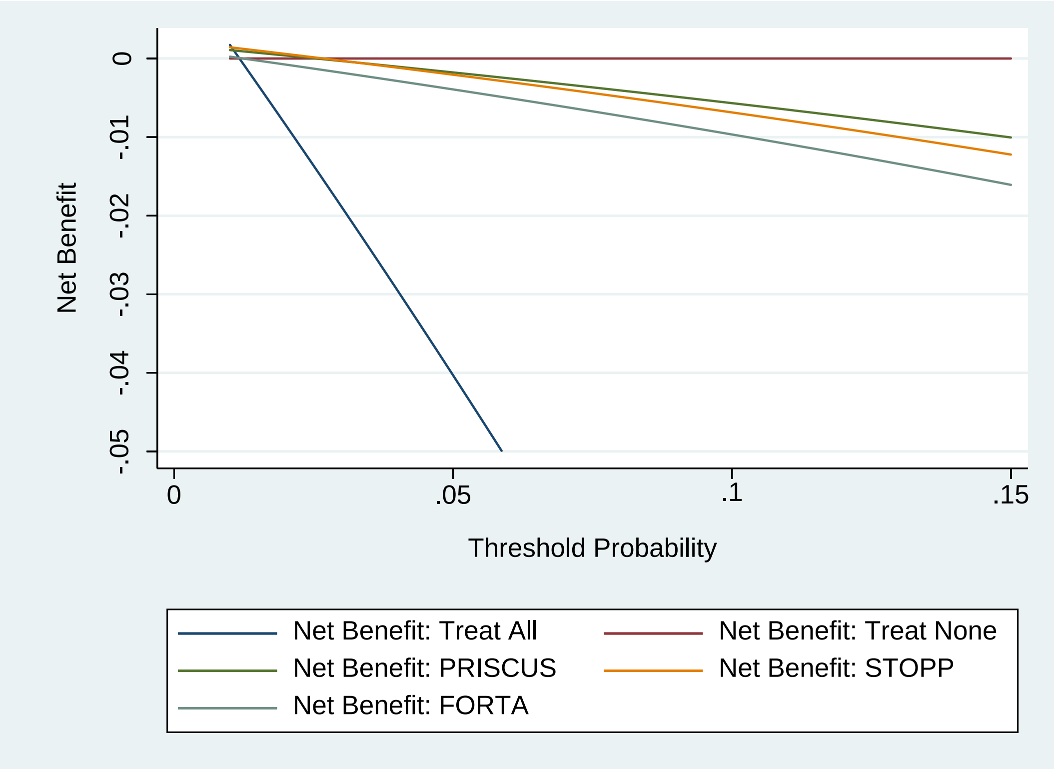
	Treat All	**Treat None**
PRISCUS	0.0020193	0.0394
STOPP	0.0022212	0.0366
FORTA	0.0000974	0.0146

Net Reduction in Interventions



Quartal 7

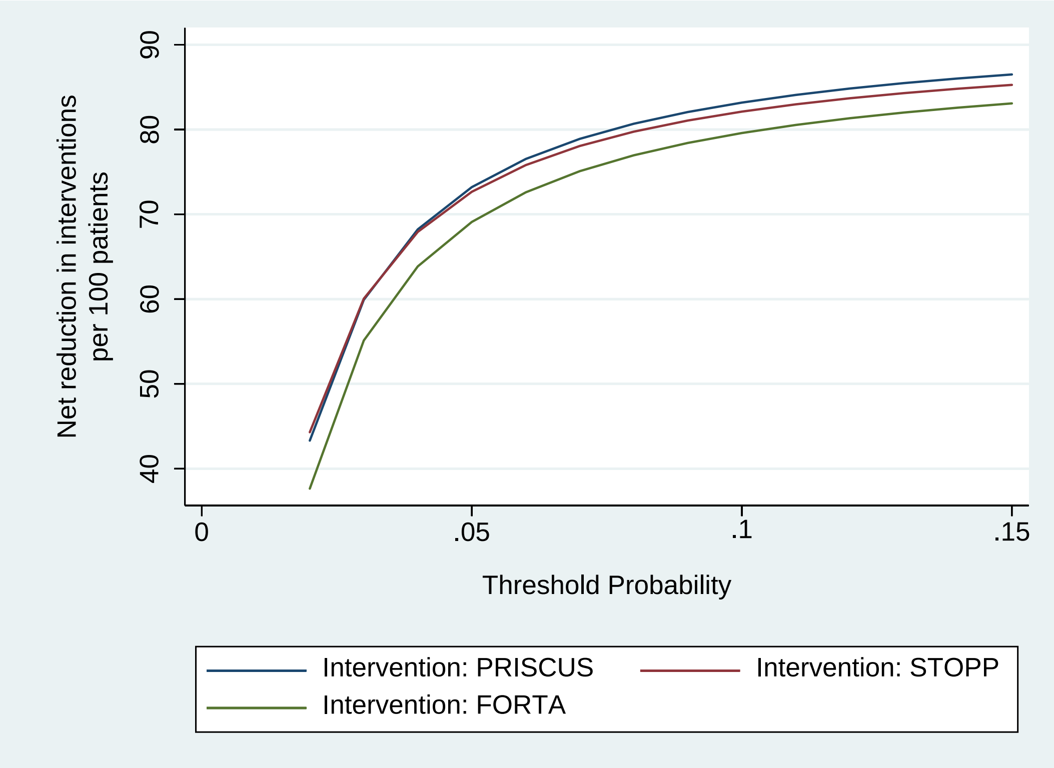
DCA



Schnittpunkte

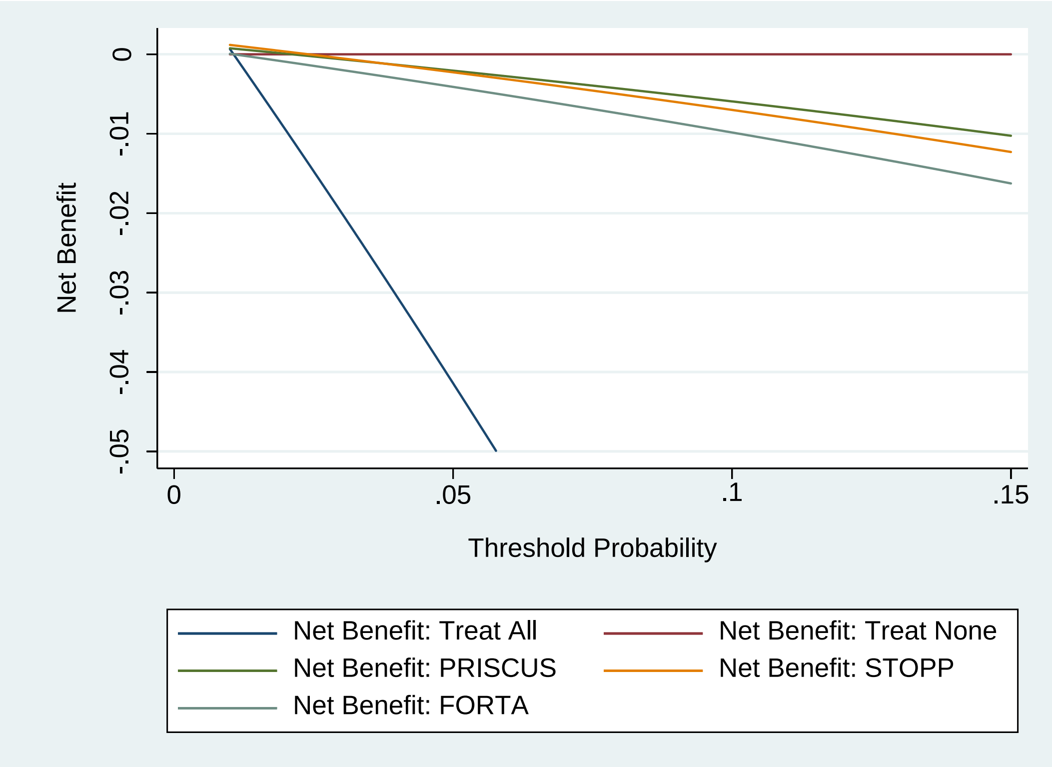
	Treat All	**Treat None**
PRISCUS	.001022	.0254
STOPP	.0014257	.0268
FORTA	.0001123	.0123

Net Reduction in Interventions



Quartal 8

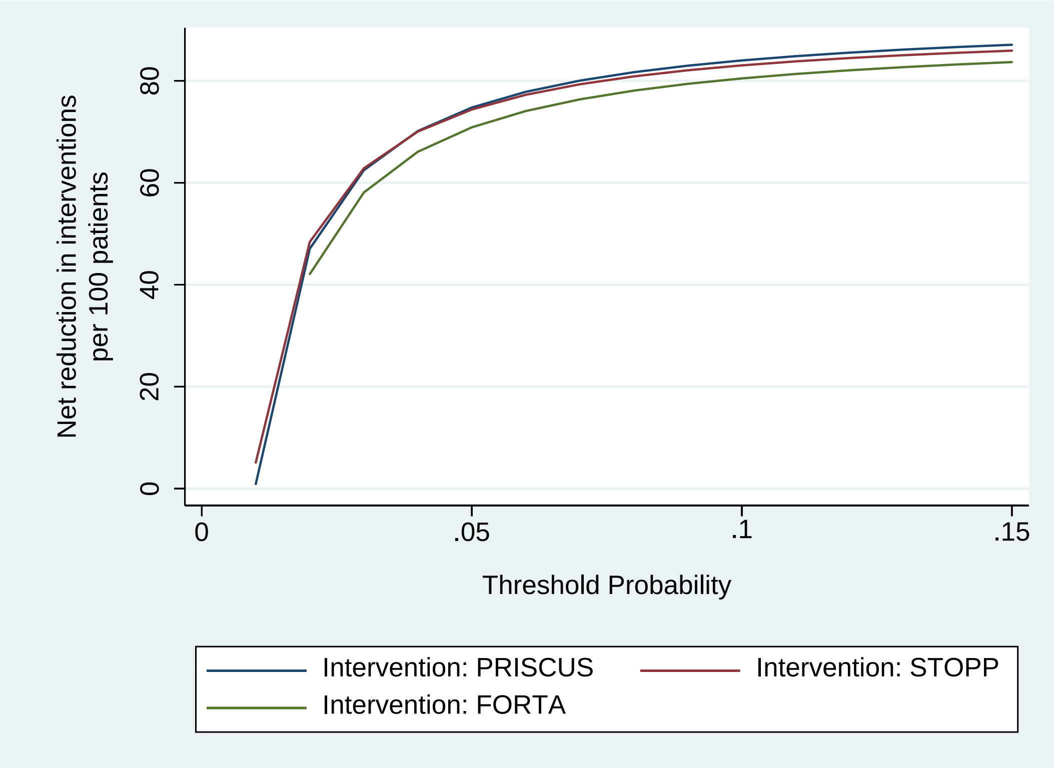
DCA



Schnittpunkte

	Treat All	**Treat None**
PRISCUS	0.0006691	0.0211
STOPP	0.0006691	0.0241
FORTA	-0.000038	0.0107

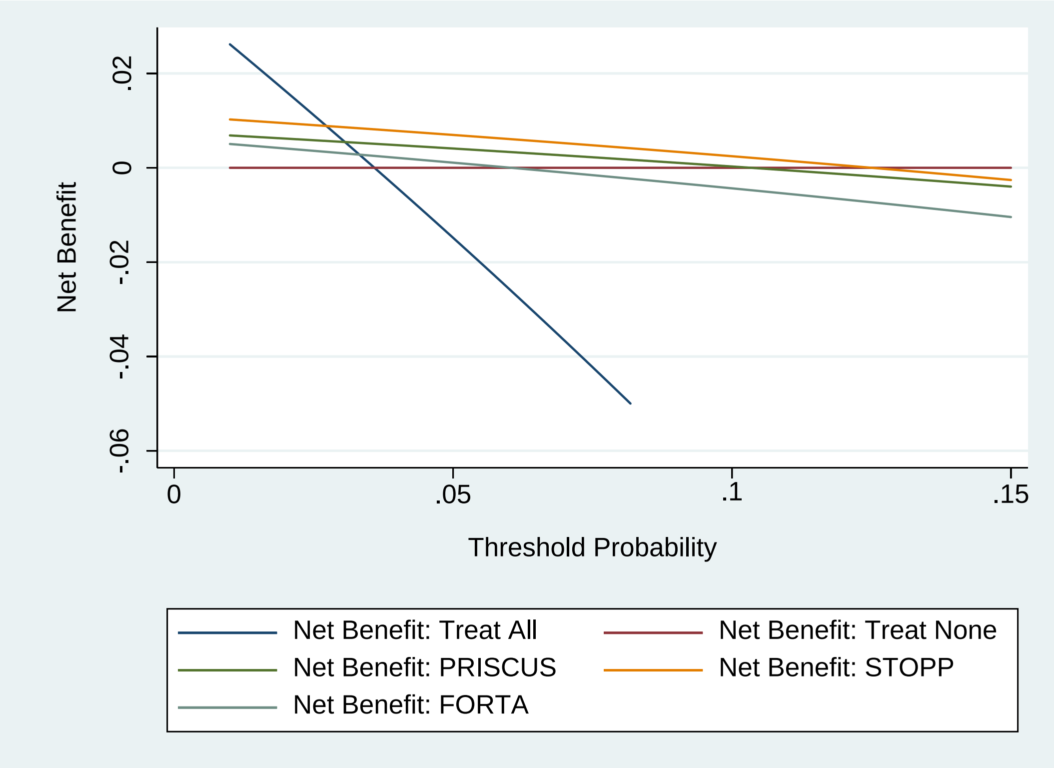
Net Reduction in Interventions



uaw_q (kombiniert Einweisung/Entlassung)

Quartal 5

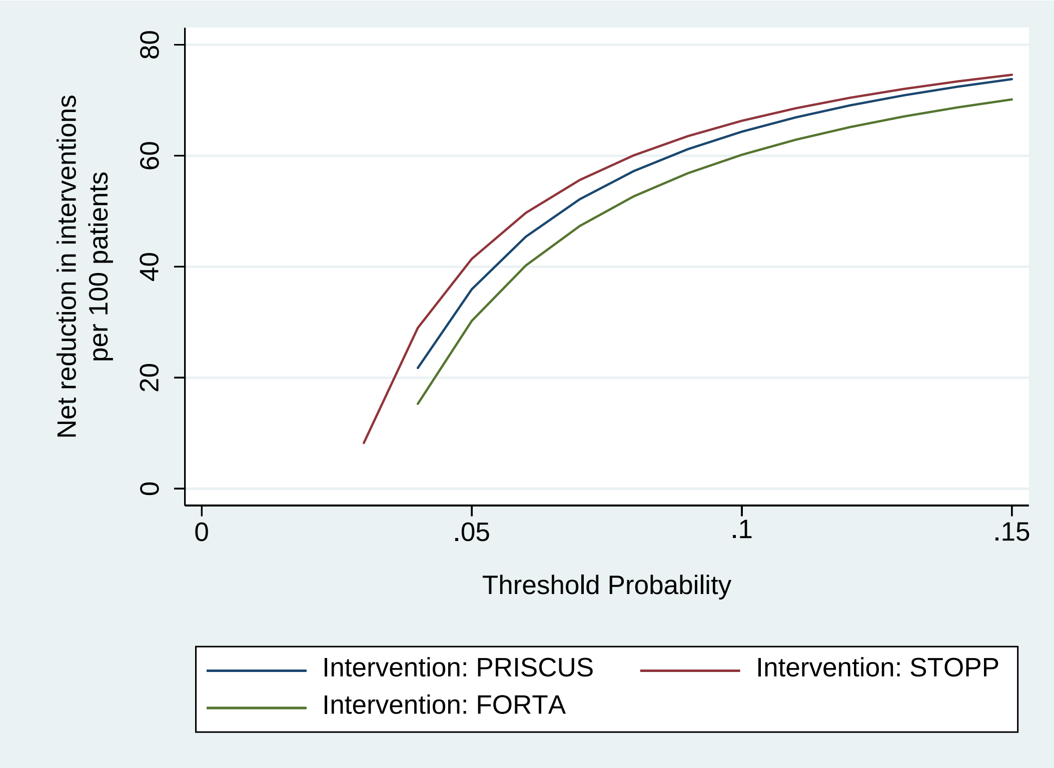
DCA



Schnittpunkte

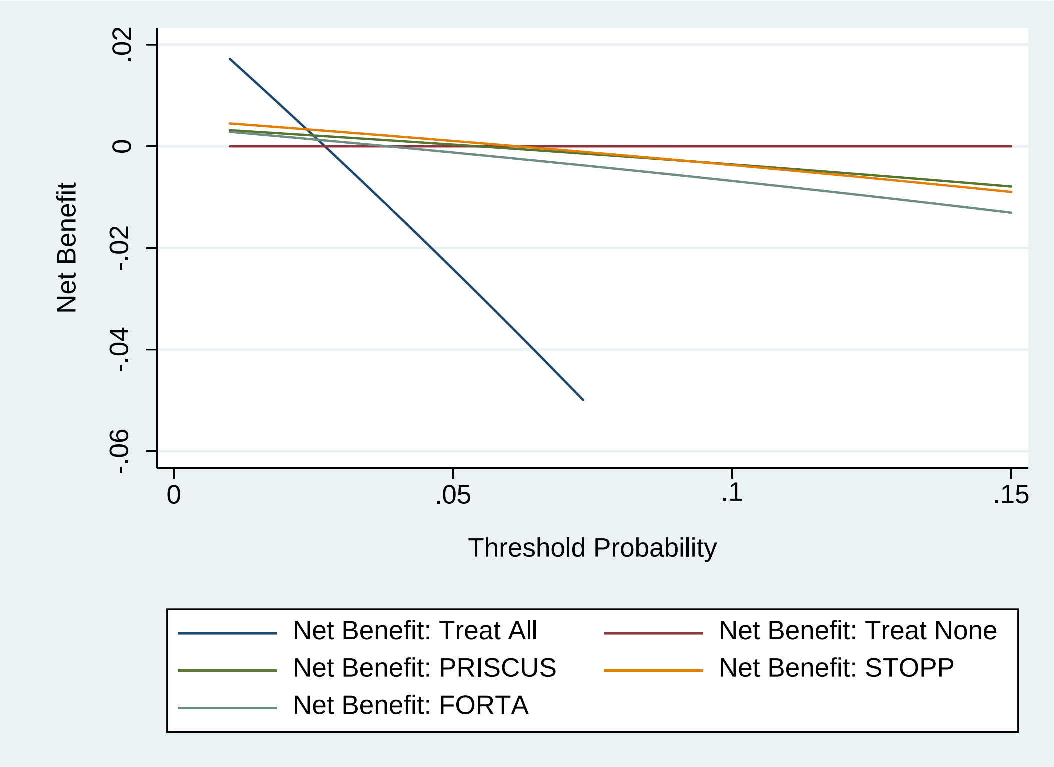
	Treat All	**Treat None**
PRISCUS	0.0054838	0.1035
STOPP	0.0088578	0.1251
FORTA	0.0028092	0.0605

Net Reduction in Interventions



Quartal 6

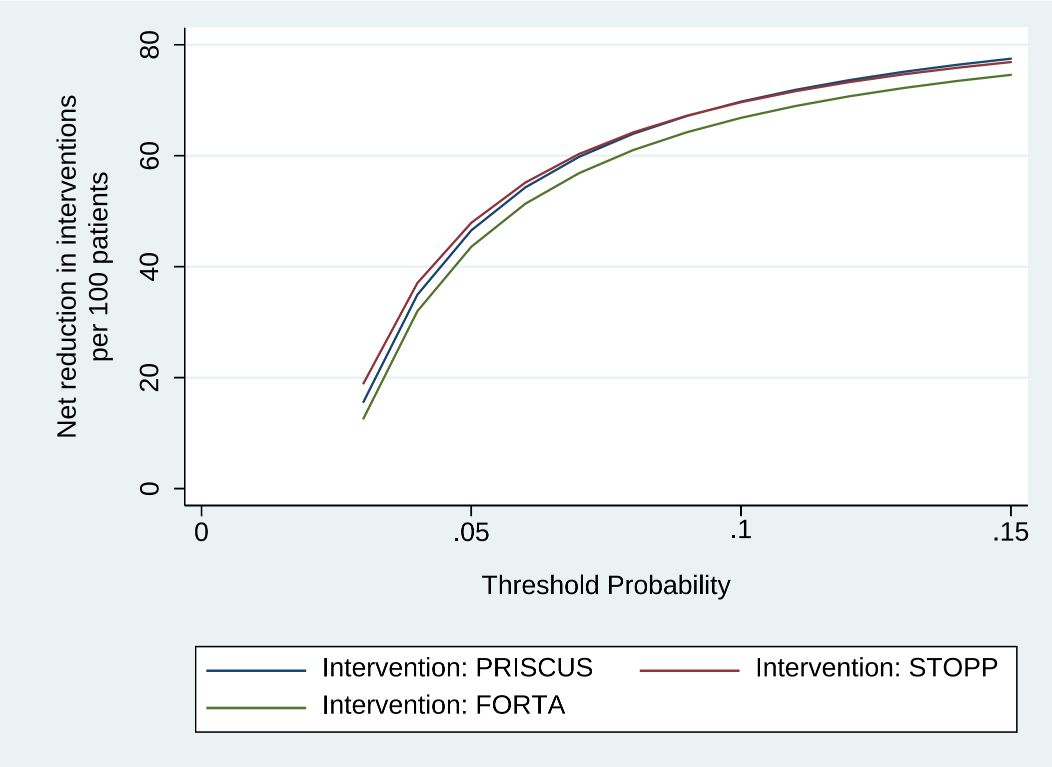
DCA



Schnittpunkte

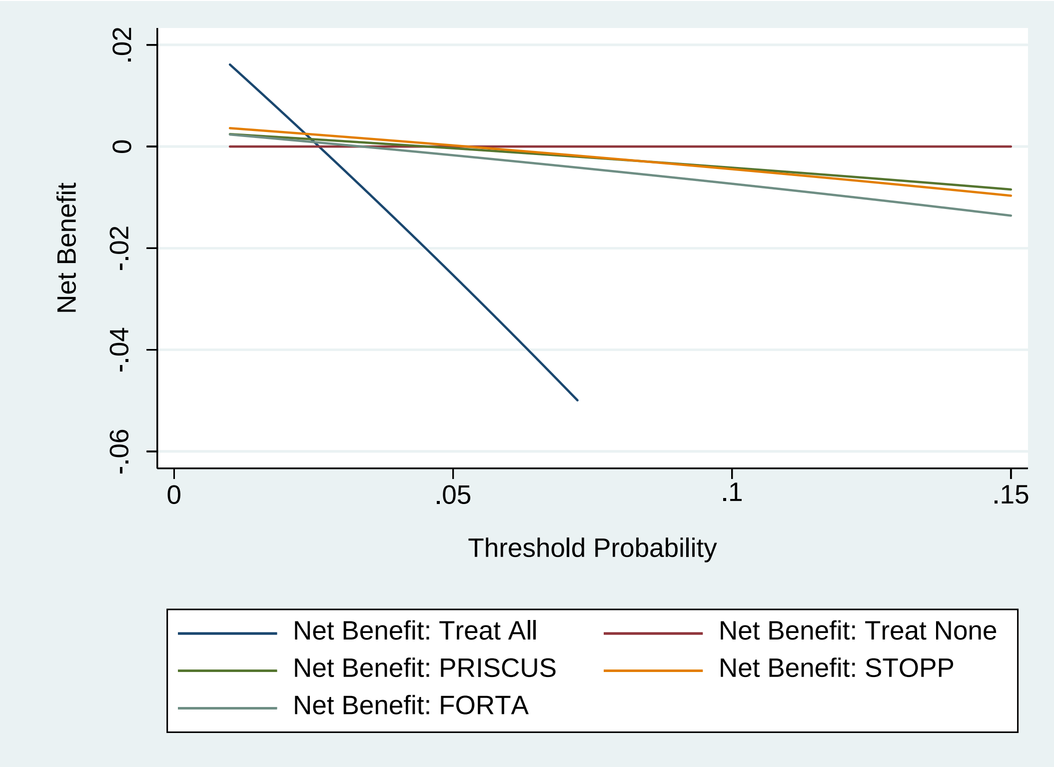
	Treat All	**Treat None**
PRISCUS	0.0020918	0.0545
STOPP	0.0033185	0.0616
FORTA	0.0012723	0.0383

Net Reduction in Interventions



Quartal 7

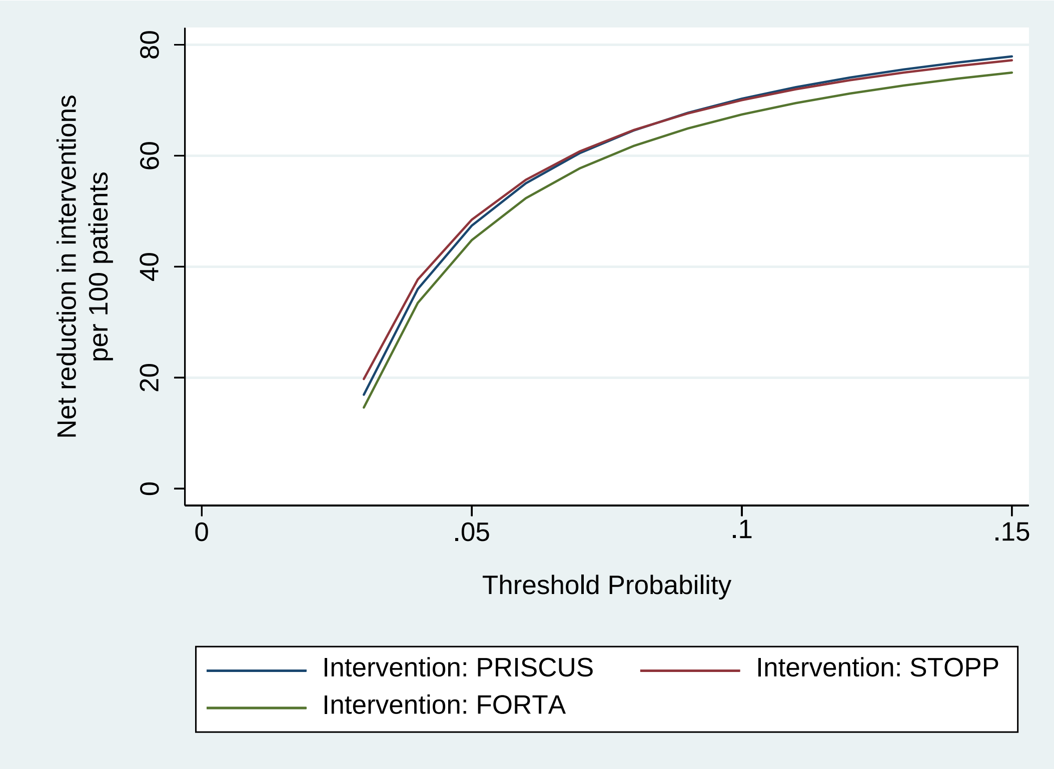
DCA



Schnittpunkte

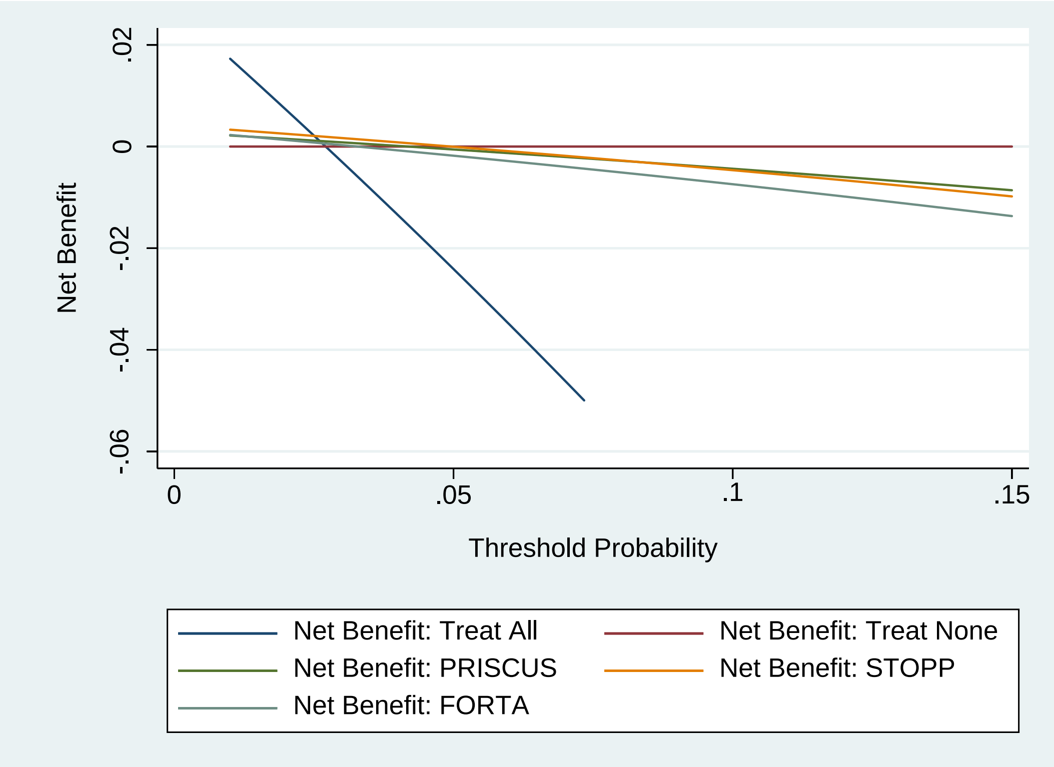
	Treat All	**Treat None**
PRISCUS	0.0014082	0.0453
STOPP	0.0025331	0.0525
FORTA	0.000896	0.0336

Net Reduction in Interventions



Quartal 8

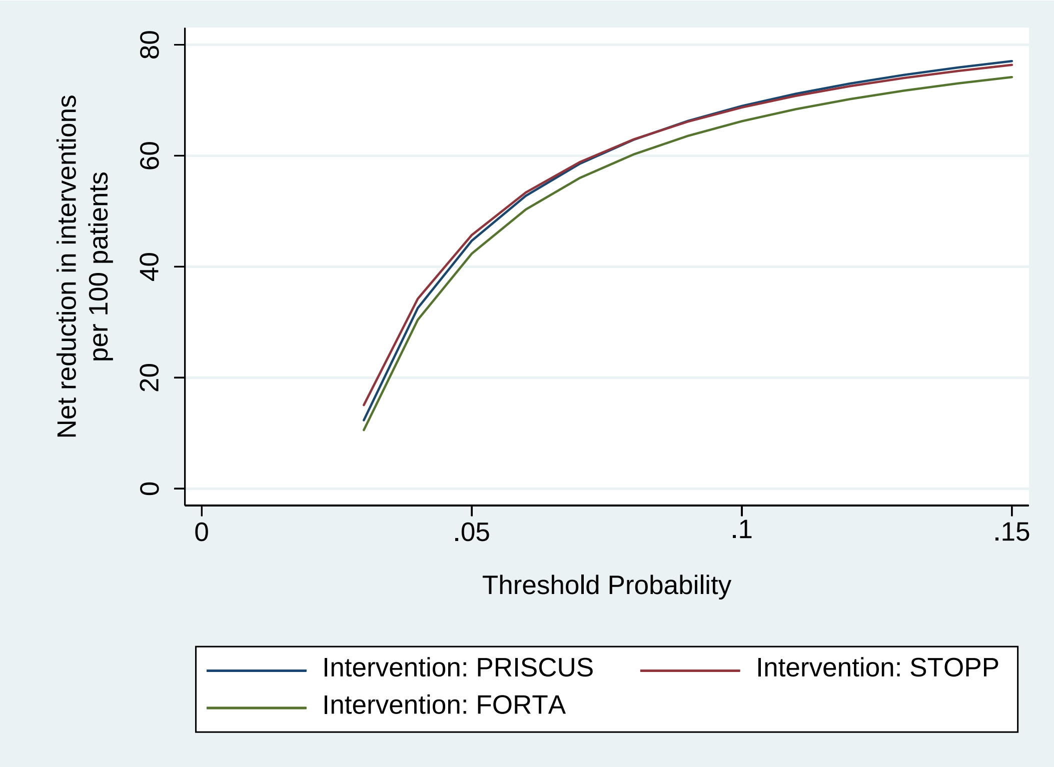
DCA



Schnittpunkte

	Treat All	**Treat None**
PRISCUS	0.0011368	0.0419
STOPP	0.0020589	0.0496
FORTA	0.0006238	0.0328

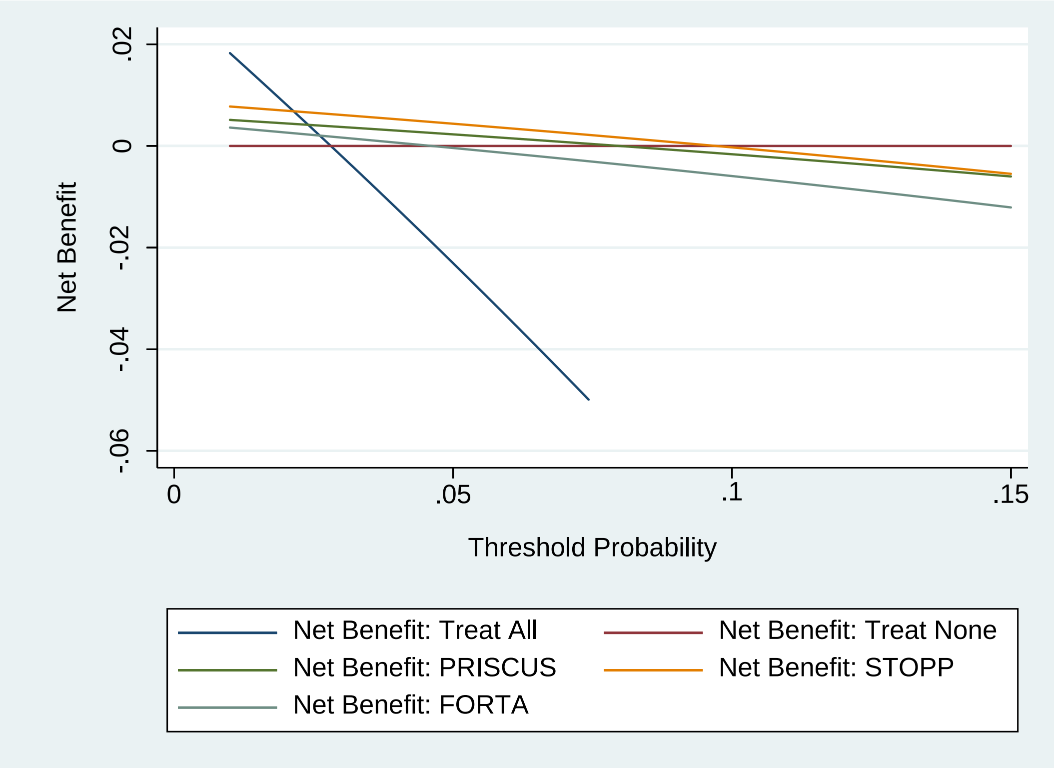
Net Reduction in Interventions



uaw_einw

Quartal 5

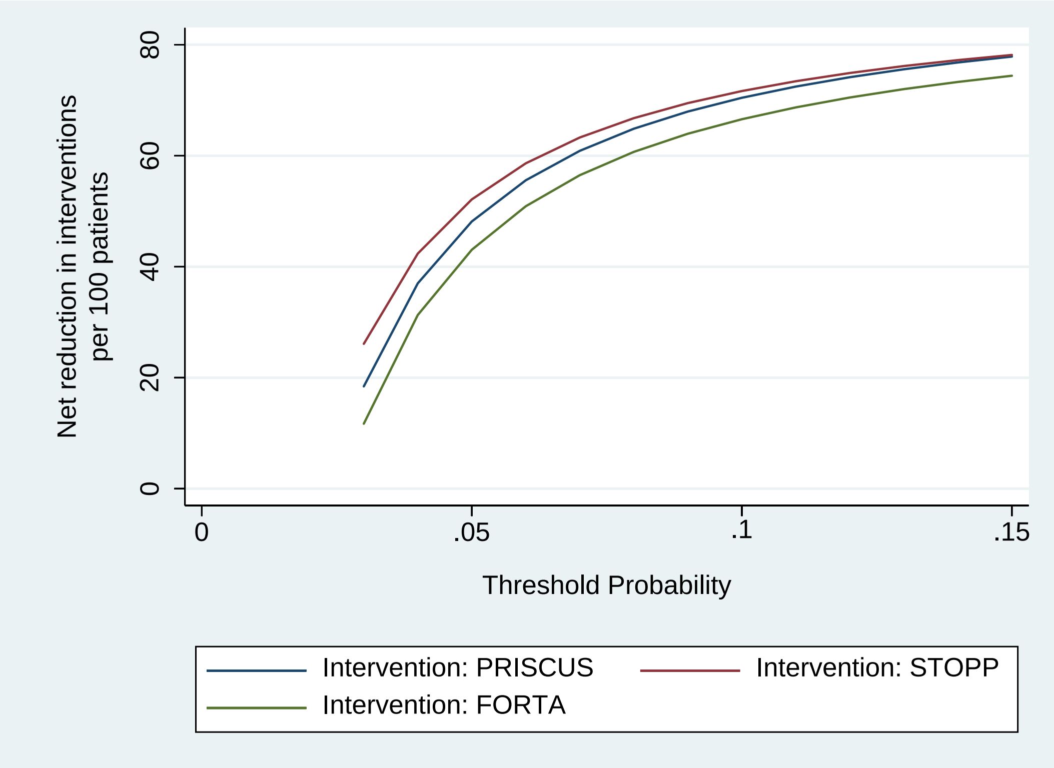
DCA



Schnittpunkte

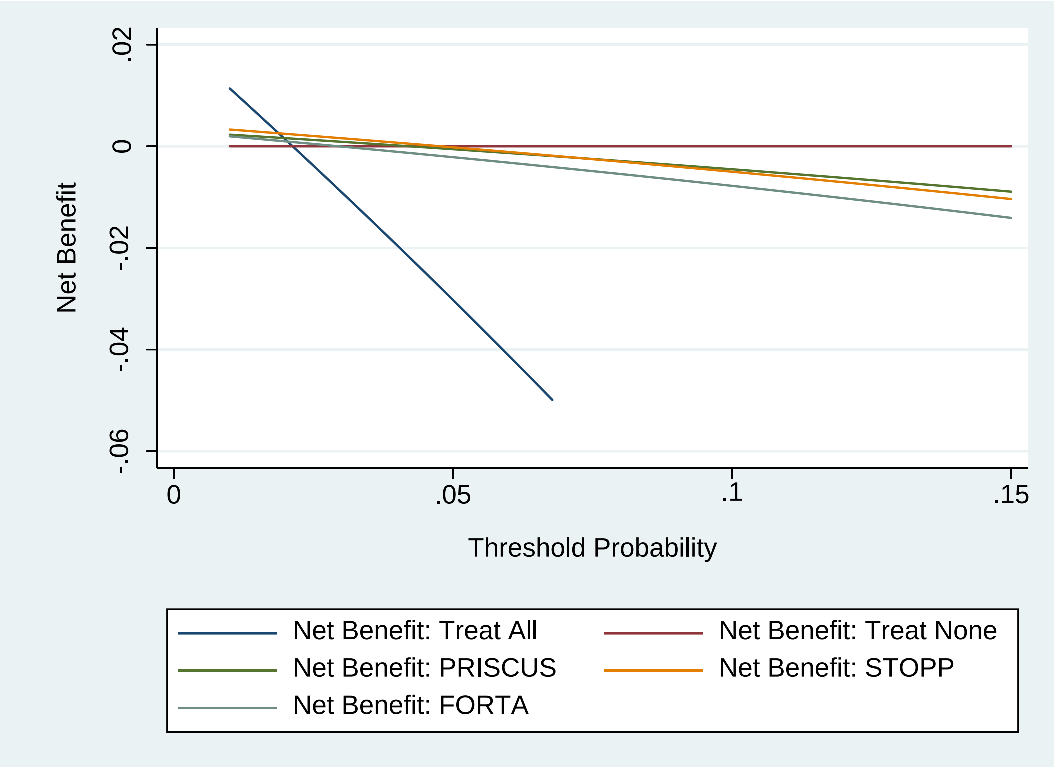
	Treat All	**Treat None**
PRISCUS	0.0041932	0.0798
STOPP	0.0068389	0.0971
FORTA	0.002046	0.0462

Net Reduction in Interventions



Quartal 6

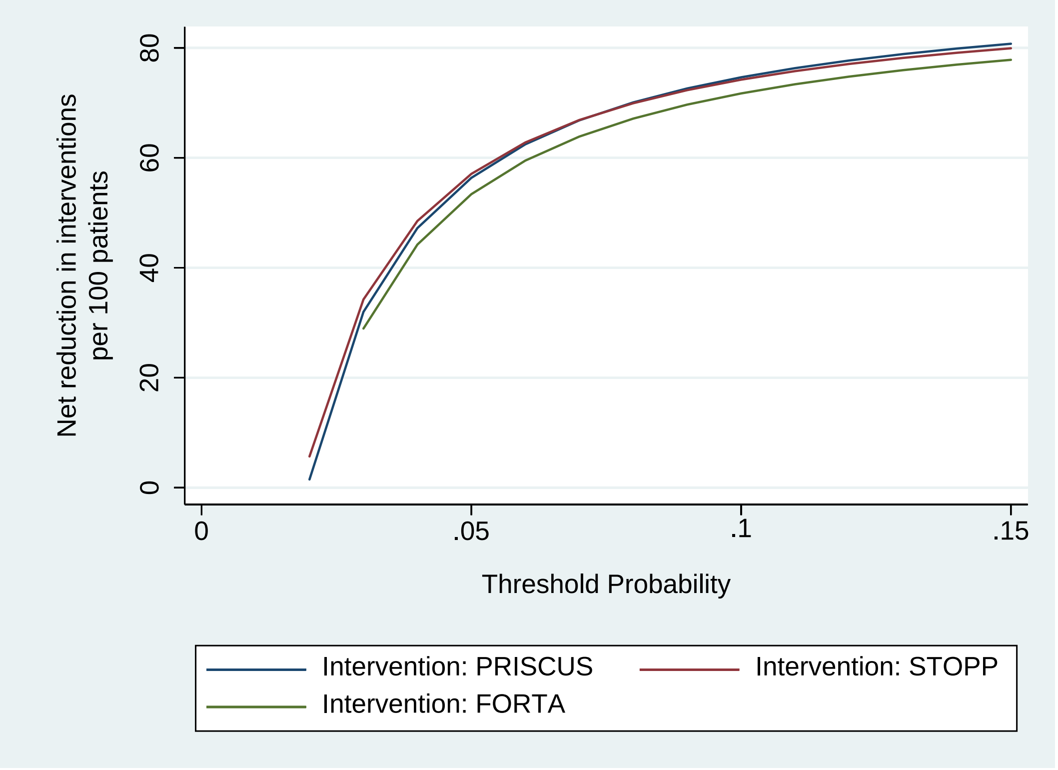
DCA



Schnittpunkte

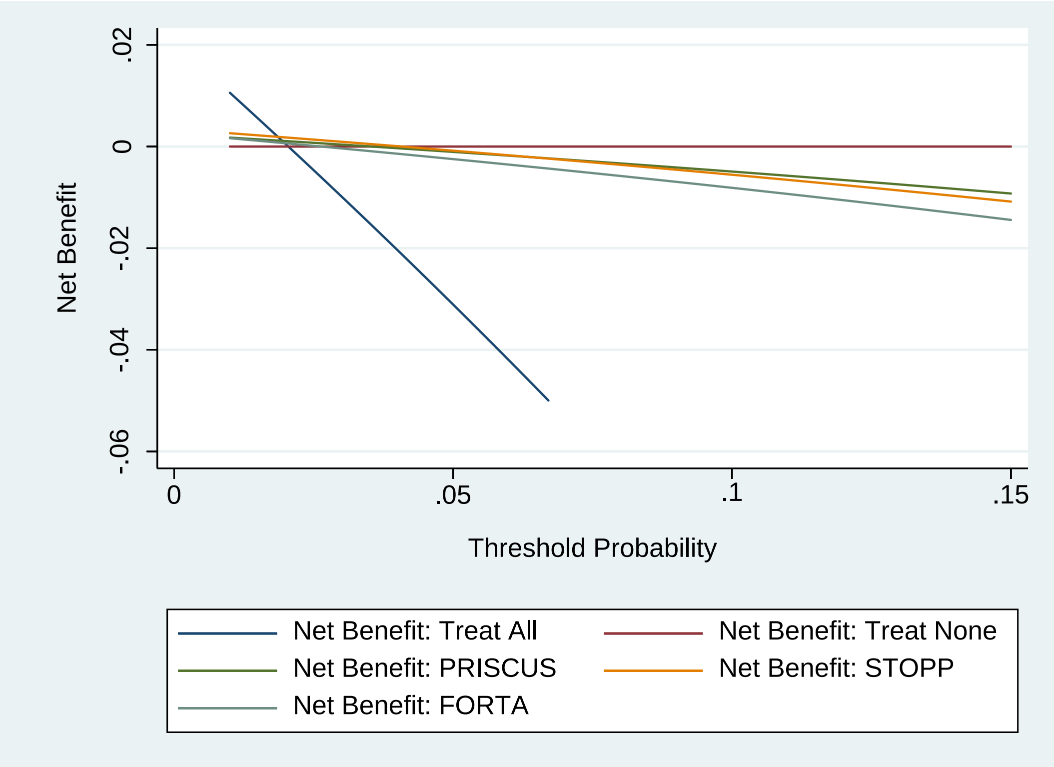
	Treat All	**Treat None**
PRISCUS	0.0016006	0.0422
STOPP	0.0025164	0.0478
FORTA	0.0008872	0.0295

Net Reduction in Interventions



Quartal 7

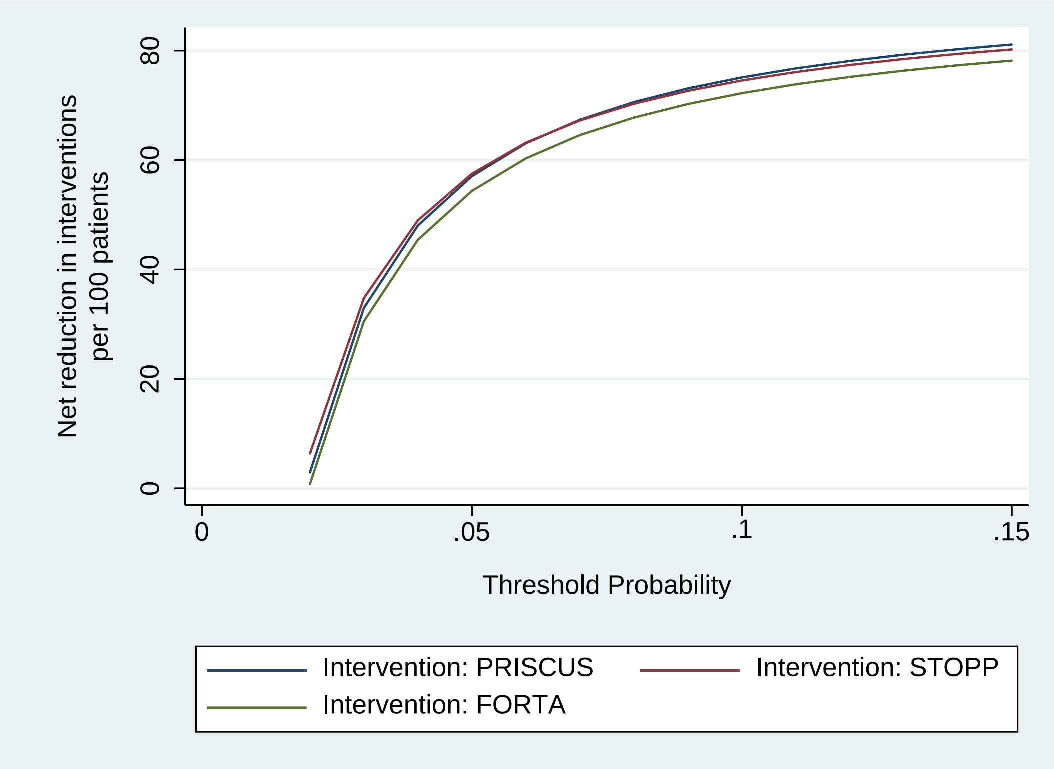
DCA



Schnittpunkte

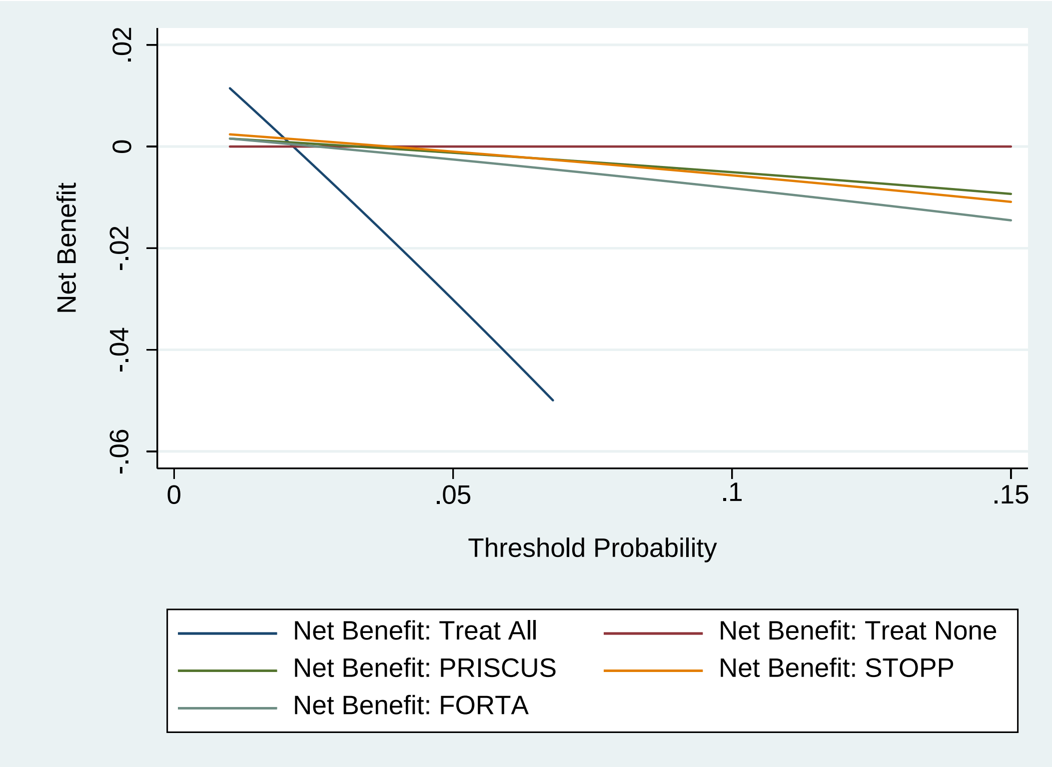
	Treat All	**Treat None**
PRISCUS	0.0010968	0.0354
STOPP	0.001911	0.0408
FORTA	0.0006891	0.0264

Net Reduction in Interventions



Quartal 8

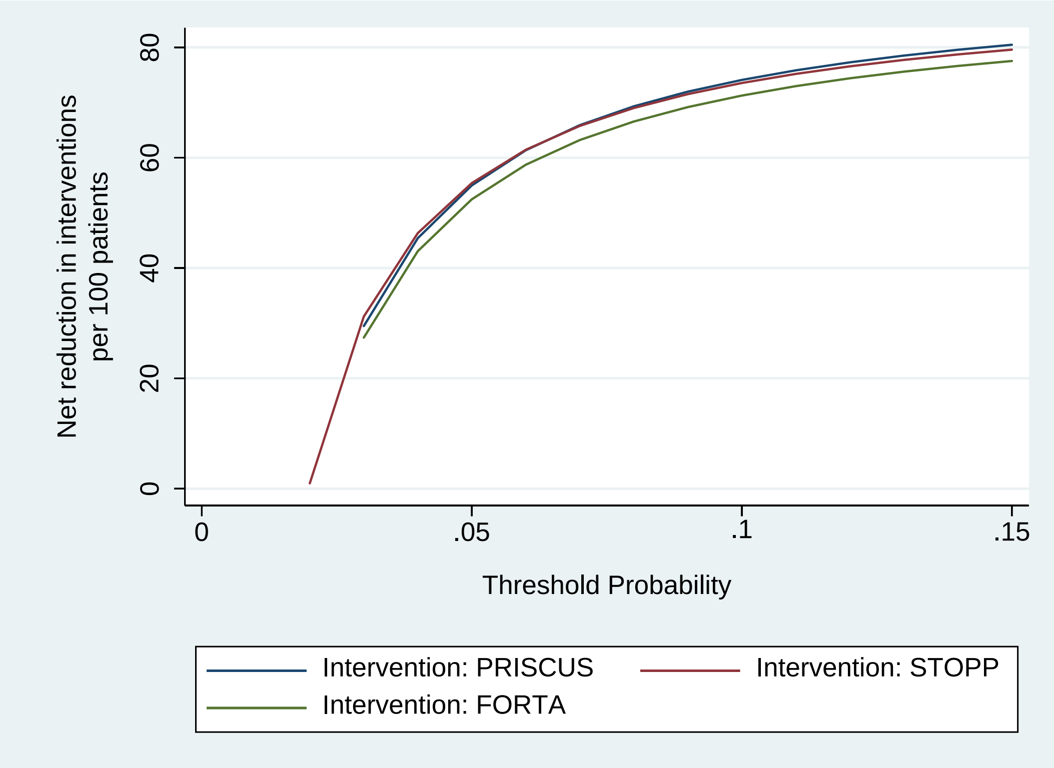
DCA



Schnittpunkte

	Treat All	**Treat None**
PRISCUS	0.0008687	0.0329
STOPP	0.0015822	0.0386
FORTA	0.0004605	0.0256

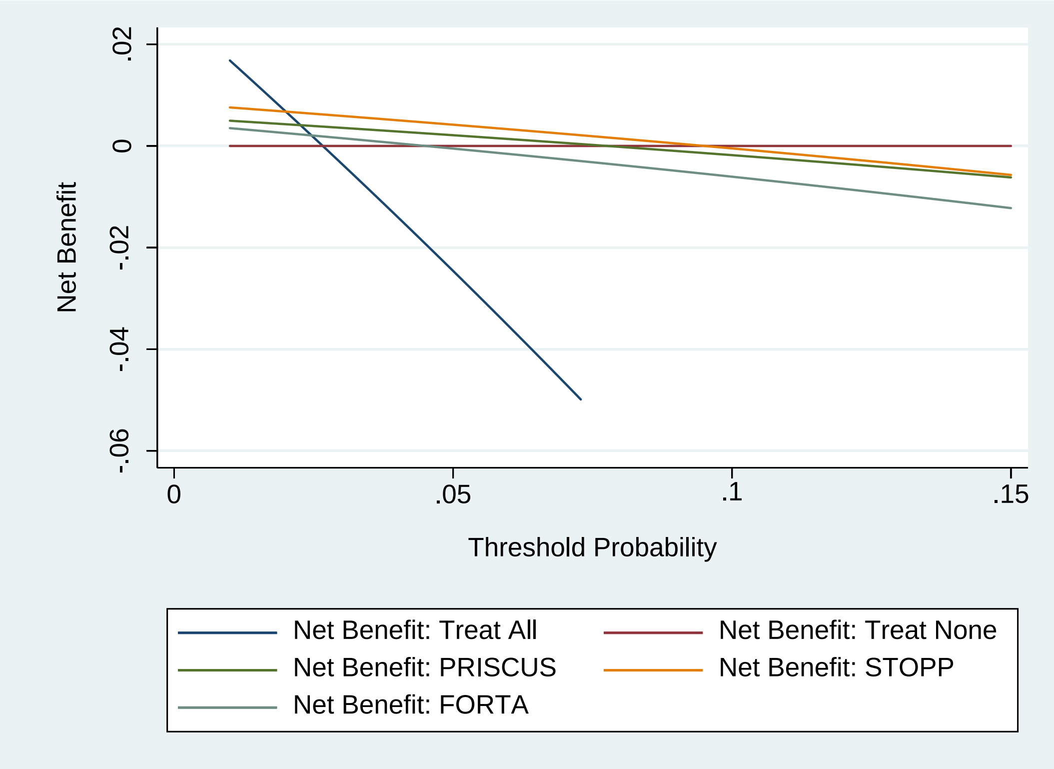
Net Reduction in Interventions



uaw_entl

Quartal 5

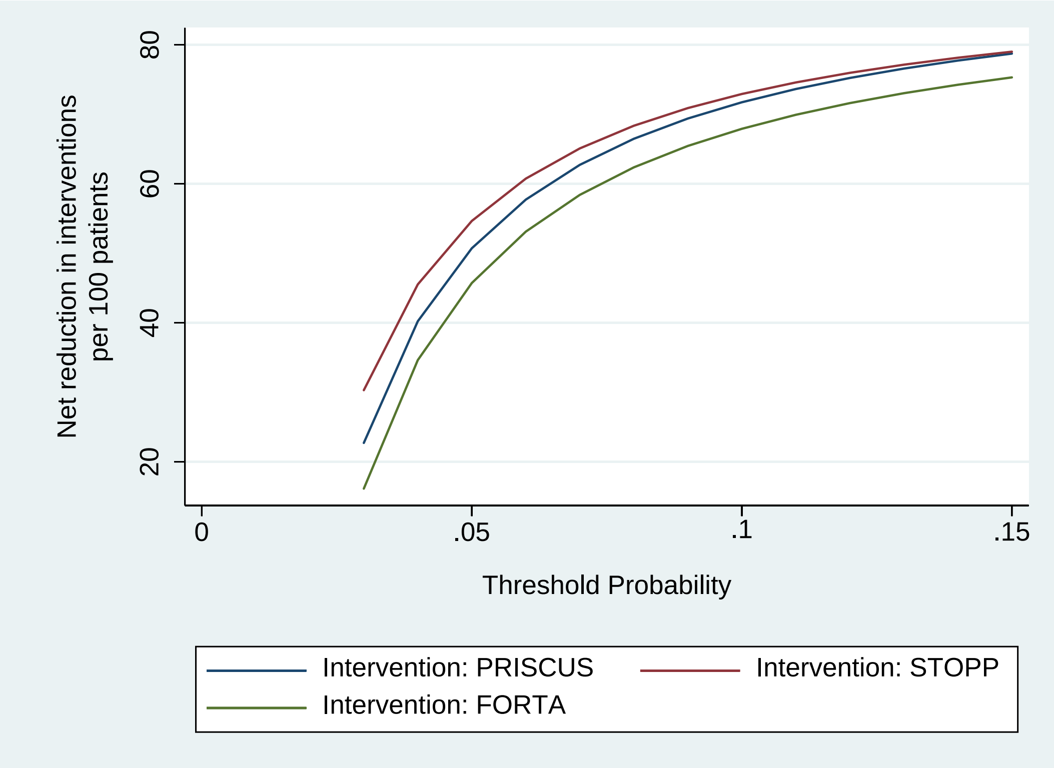
DCA



Schnittpunkte

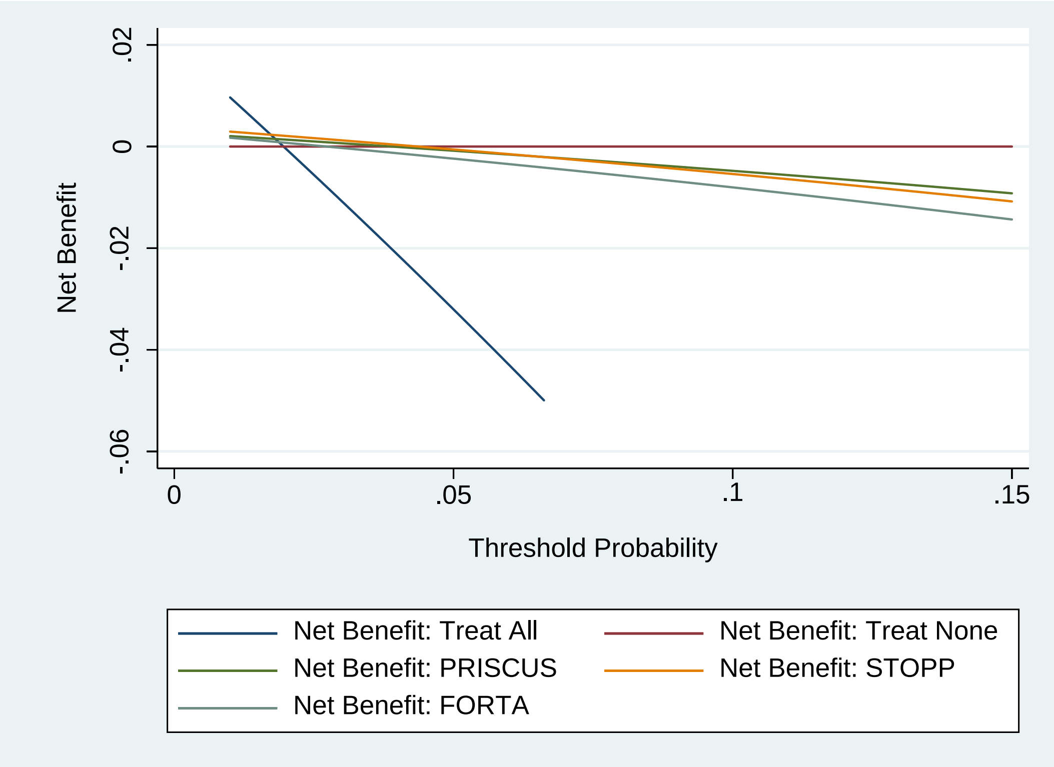
	Treat All	**Treat None**
PRISCUS	0.0040392	0.0776
STOPP	0.0067831	0.0951
FORTA	0.0020991	0.045

Net Reduction in Interventions



Quartal 6

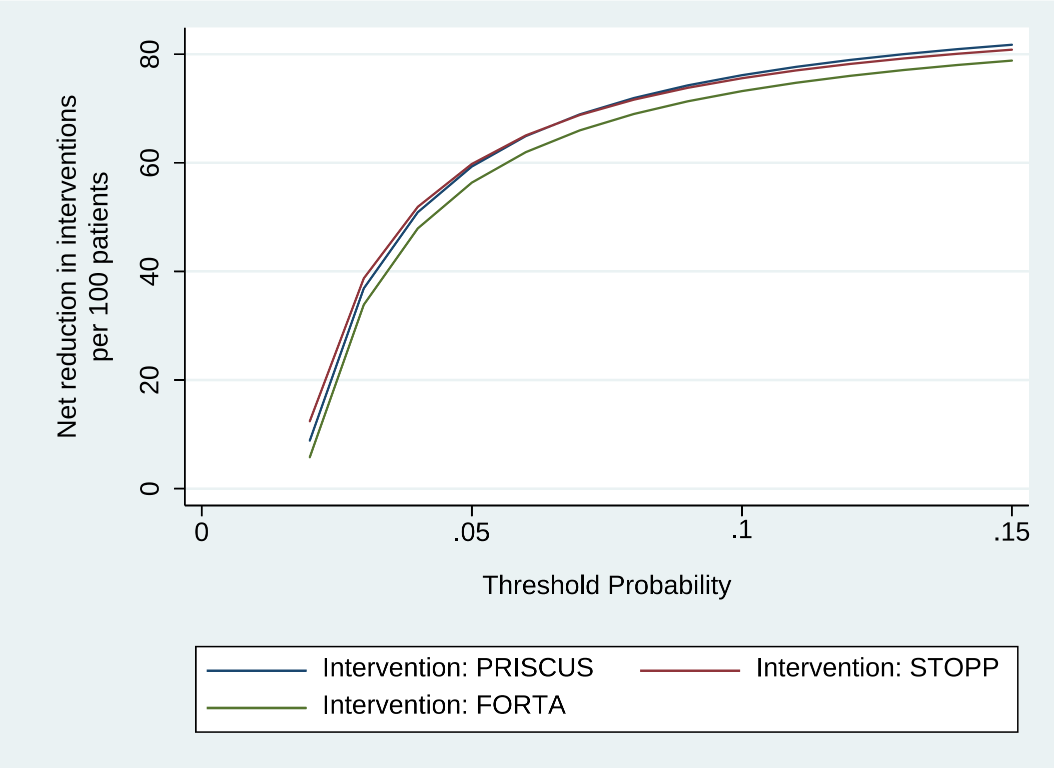
DCA



Schnittpunkte

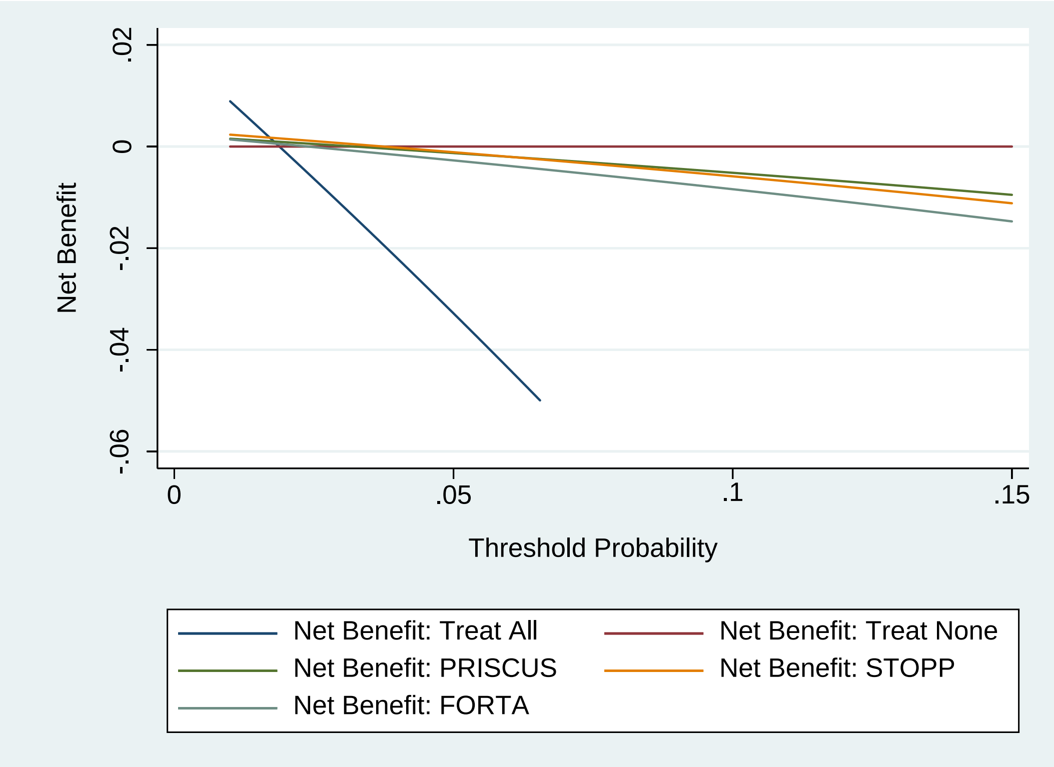
	Treat All	**Treat None**
PRISCUS	0.0014905	0.0389
STOPP	0.0023033	0.0437
FORTA	0.0008799	0.0272

Net Reduction in Interventions



Quartal 7

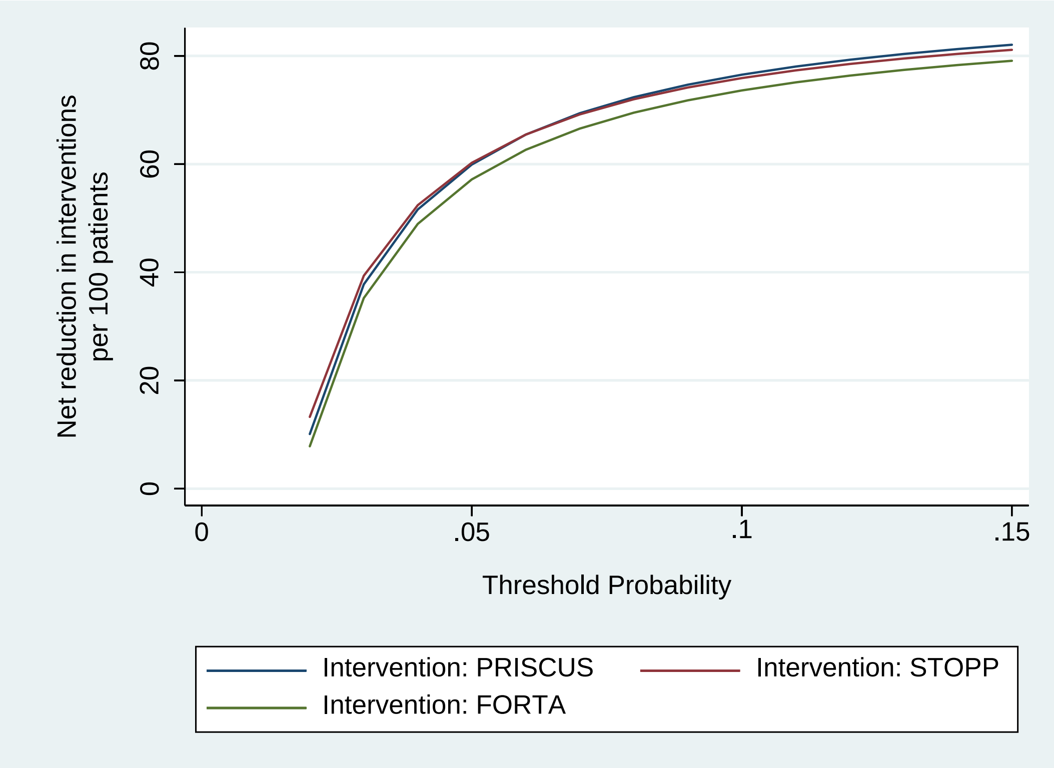
DCA



Schnittpunkte

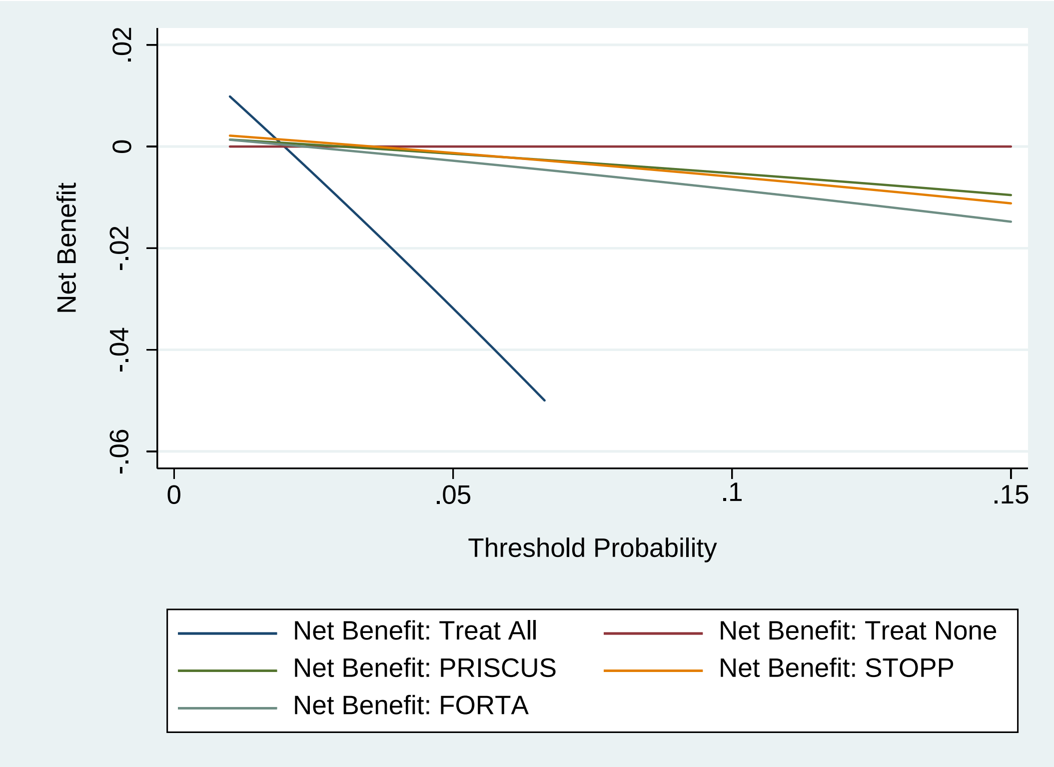
	Treat All	**Treat None**
PRISCUS	0.001039	0.0322
STOPP	0.0017505	0.0375
FORTA	0.0005302	0.0239

Net Reduction in Interventions



Quartal 8

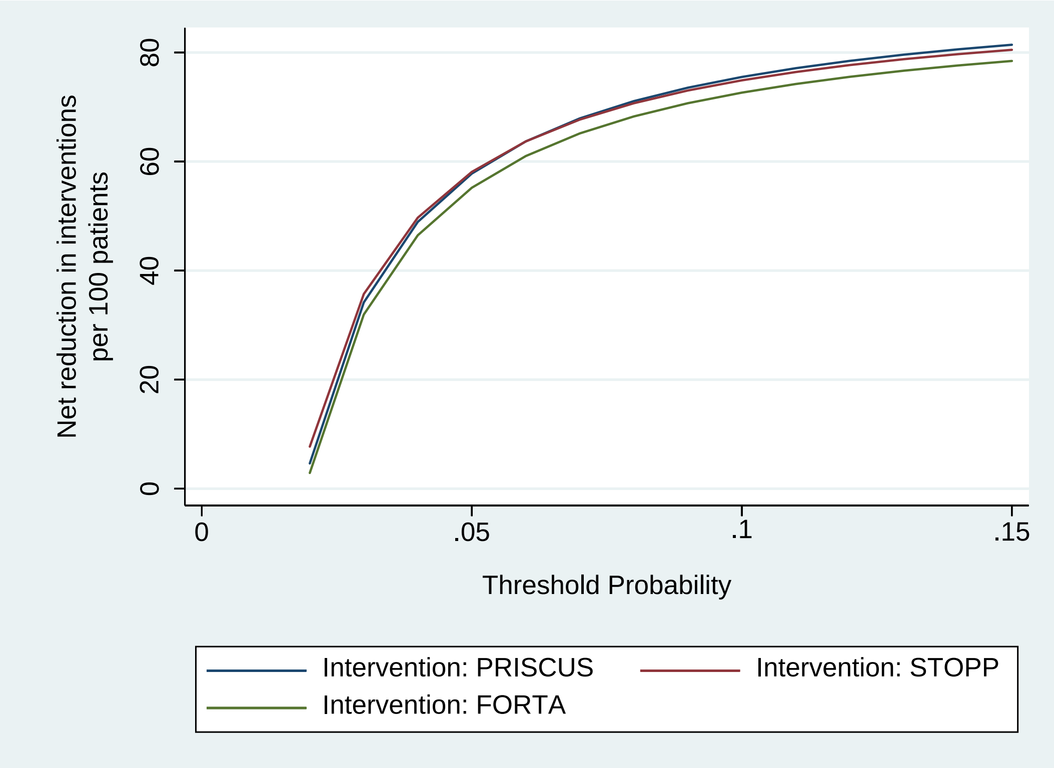
DCA



Schnittpunkte

	Treat All	**Treat None**
PRISCUS	0.0007671	0.03
STOPP	0.0014796	0.0356
FORTA	0.0003595	0.0233

Net Reduction in Interventions

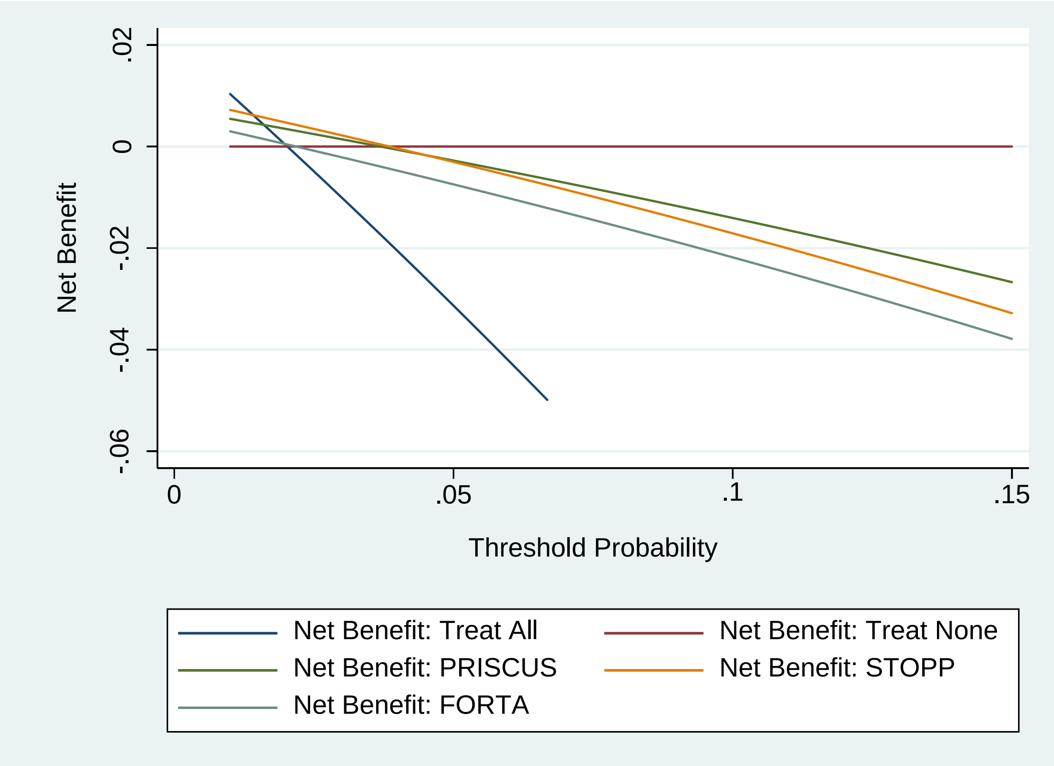


Prävalent

tod_q

Quartal 5

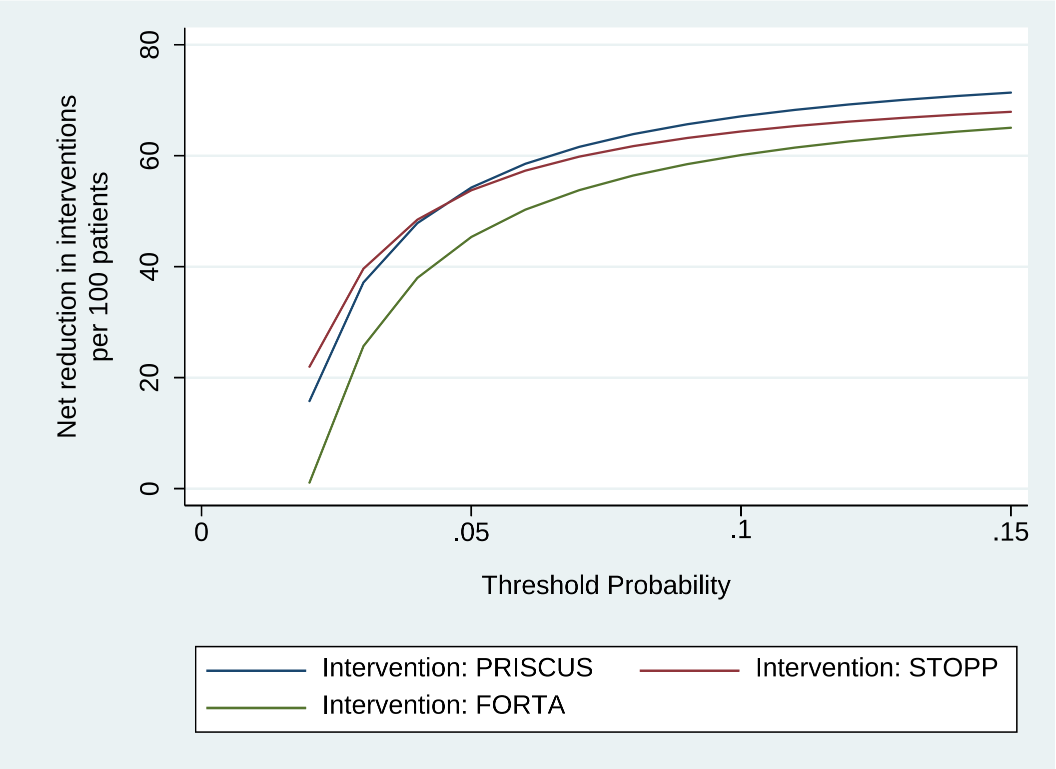
DCA



Schnittpunkte

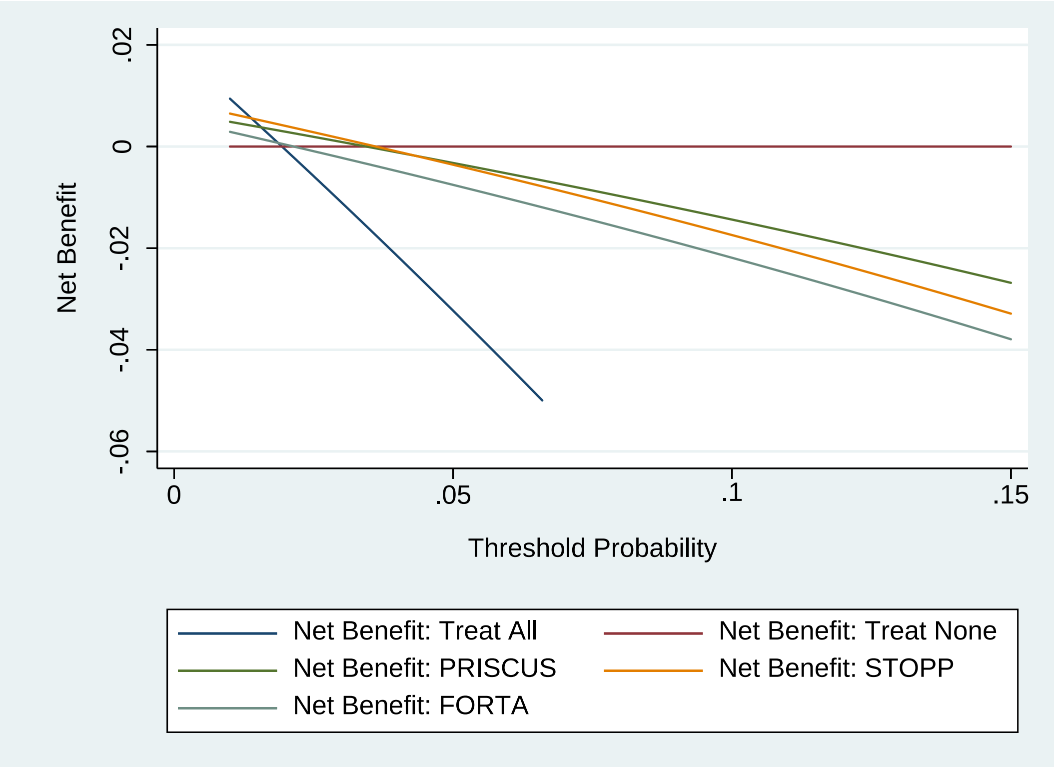
	Treat All	Treat None
PRISCUS	0.0042047	0.0369
STOPP	0.0062248	0.0385
FORTA	0.0005478	0.0218

Net Reduction in Interventions



Quartal 6

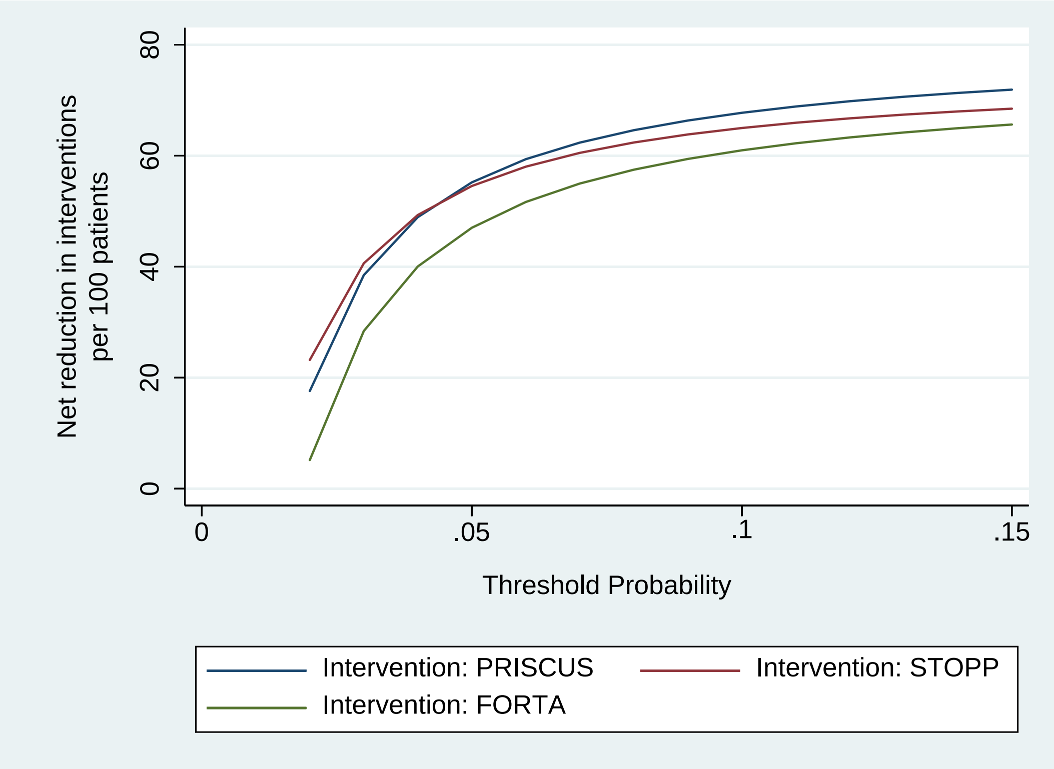
DCA



Schnittpunkte

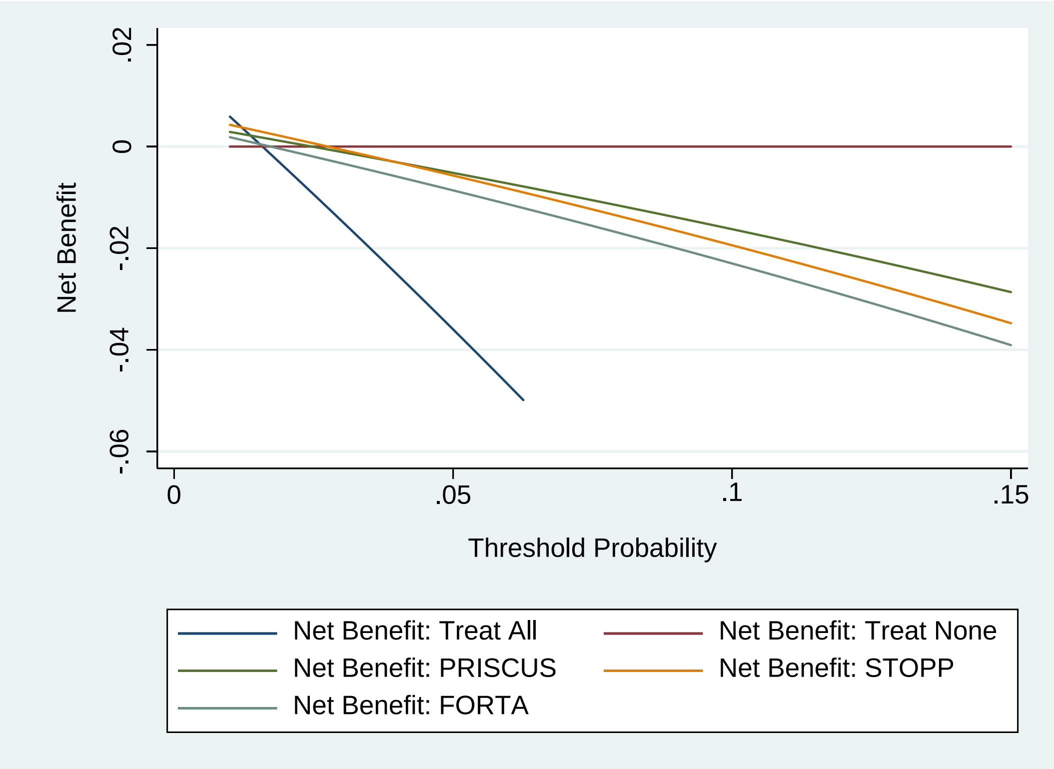
	Treat All	**Treat None**
PRISCUS	0.0037908	0.0344
STOPP	0.0055082	0.0362
FORTA	0.0007455	0.0214

Net Reduction in Interventions



Quartal 7

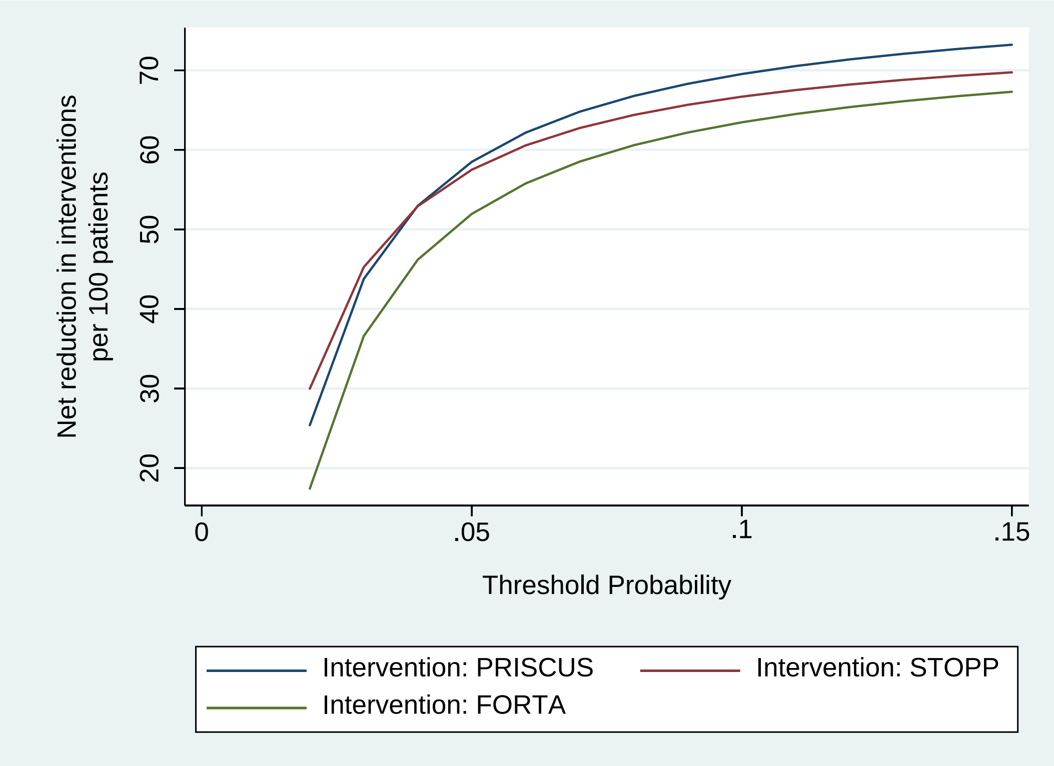
DCA



Schnittpunkte

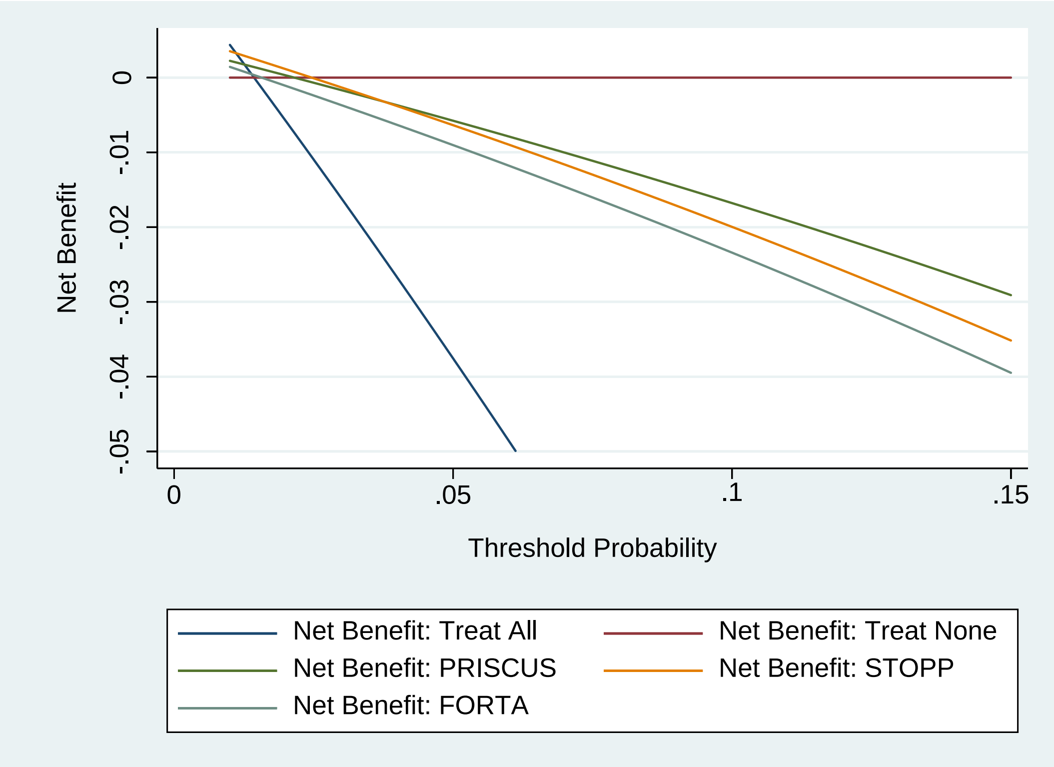
	Treat All	Treat None
PRISCUS	0.0021593	0.0247
STOPP	0.0037754	0.0276
FORTA	0.0004364	0.0173

Net Reduction in Interventions



Quartal 8

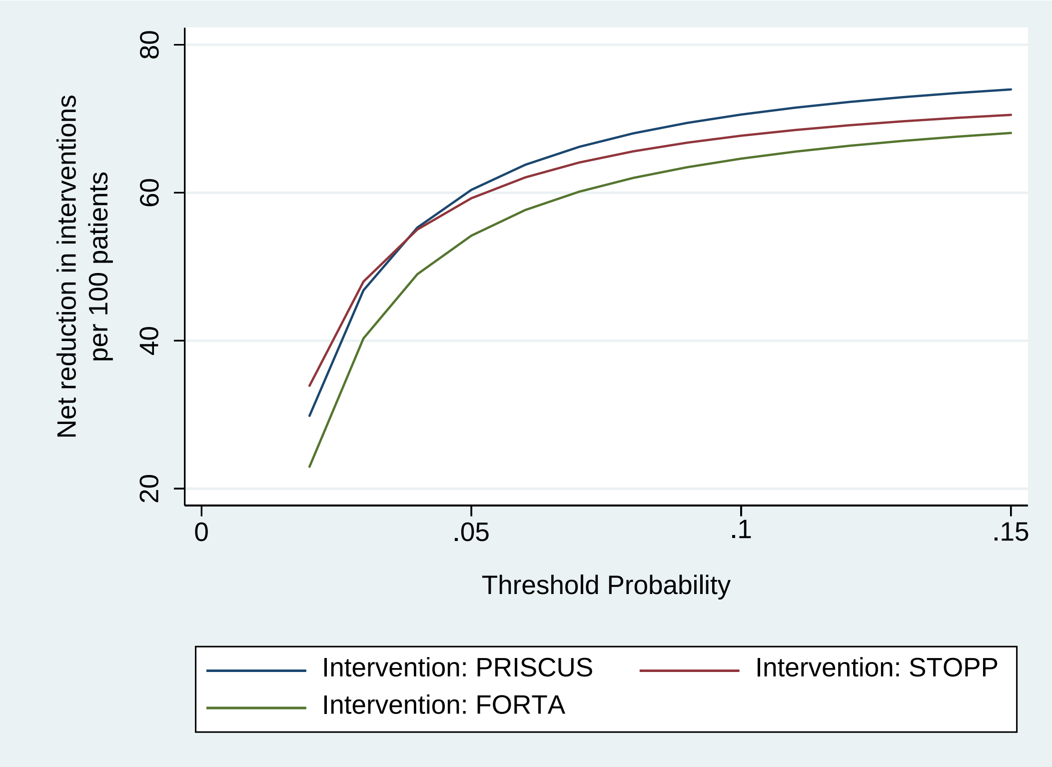
DCA



Schnittpunkte

	Treat All	**Treat None**
PRISCUS	0.0017502	0.0215
STOPP	0.0032644	0.0246
FORTA	0.0004342	0.0157

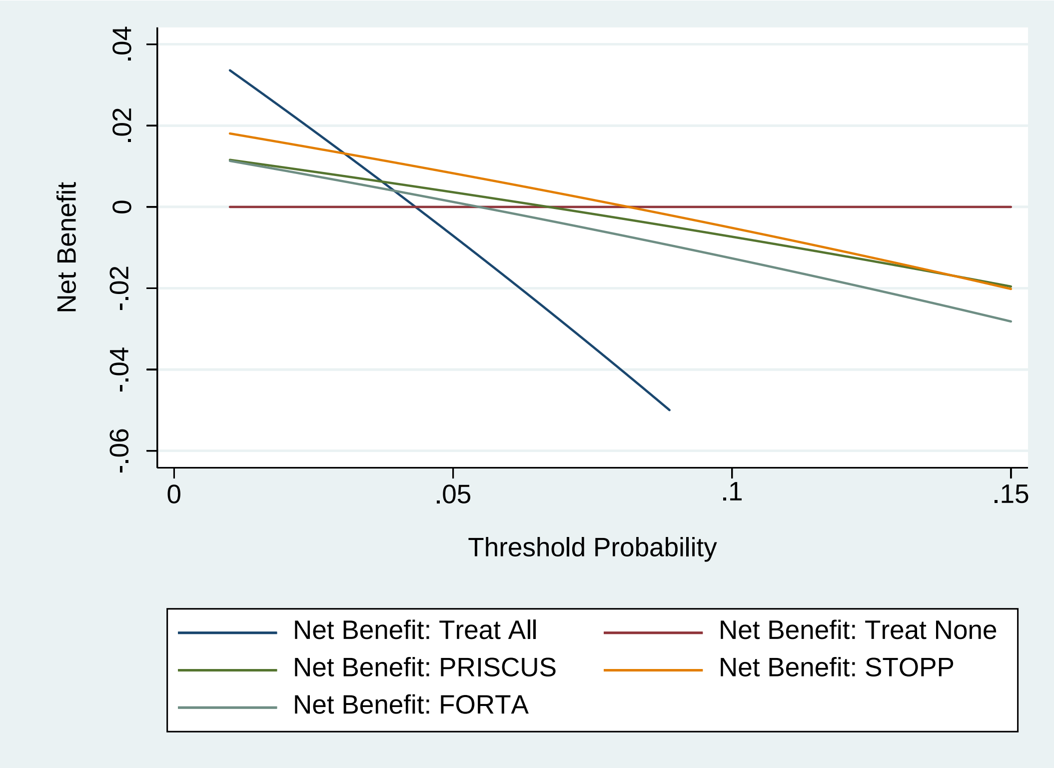
Net Reduction in Interventions



uaw_q (kombiniert Einweisung/Entlassung)

Quartal 5

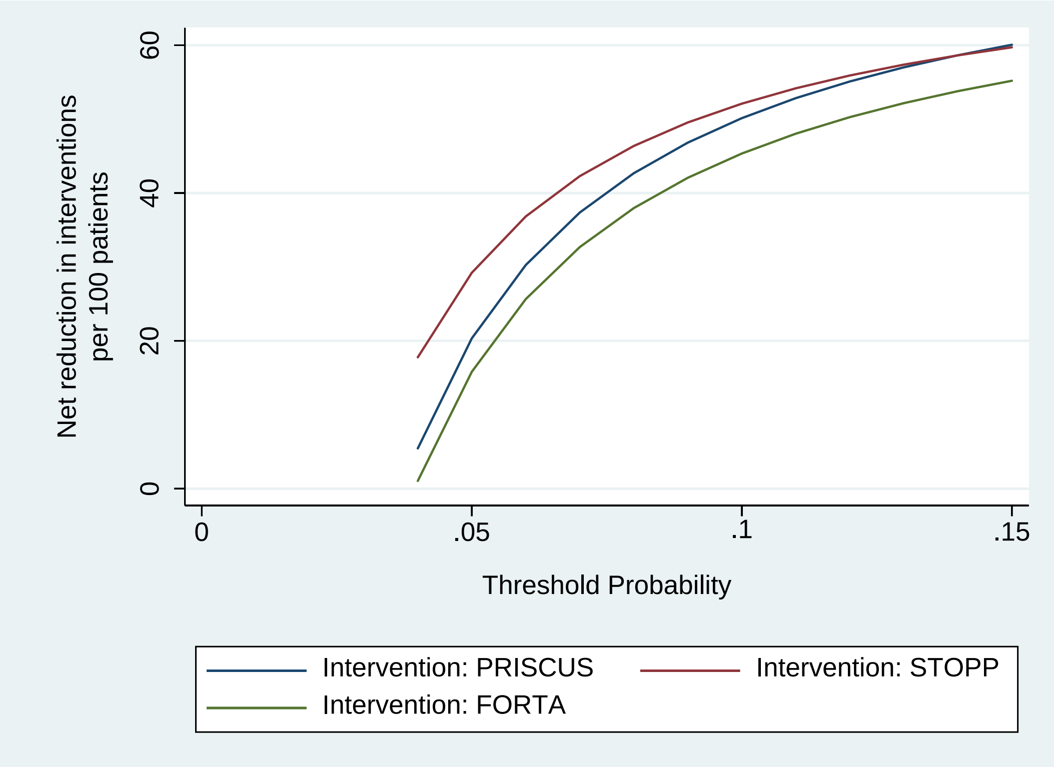
DCA



Schnittpunkte

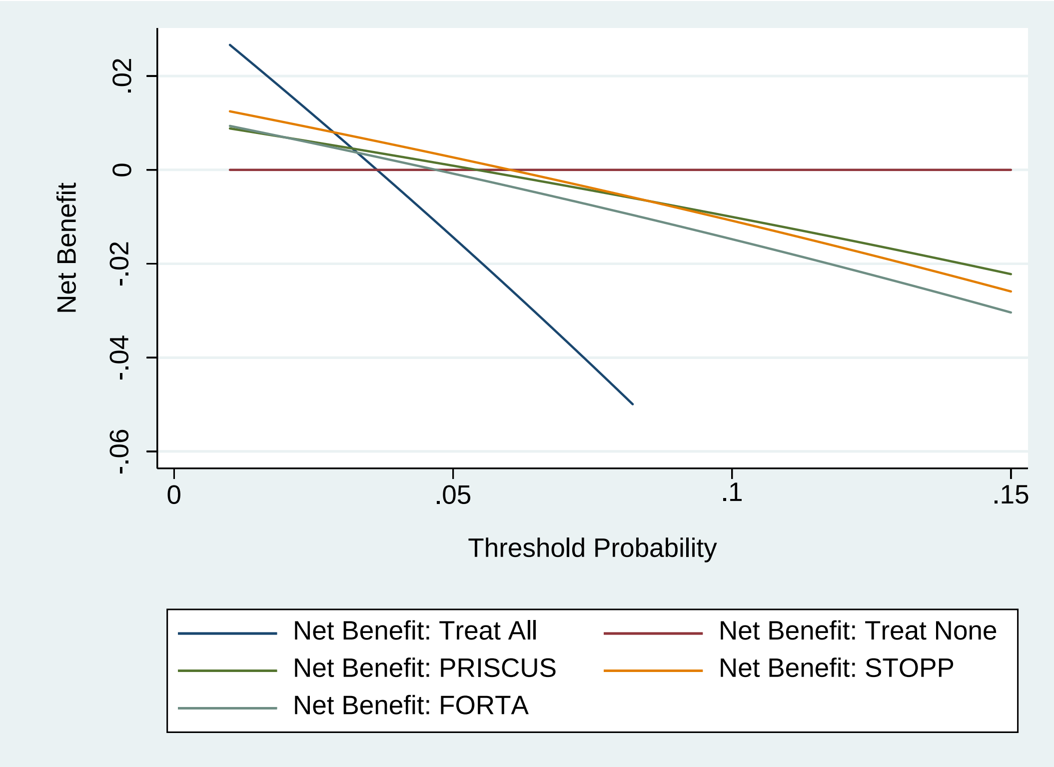
	Treat All	**Treat None**
PRISCUS	0.0061965	0.0671
STOPP	0.0131669	0.0815
FORTA	0.0040239	0.0547

Net Reduction in Interventions



Quartal 6

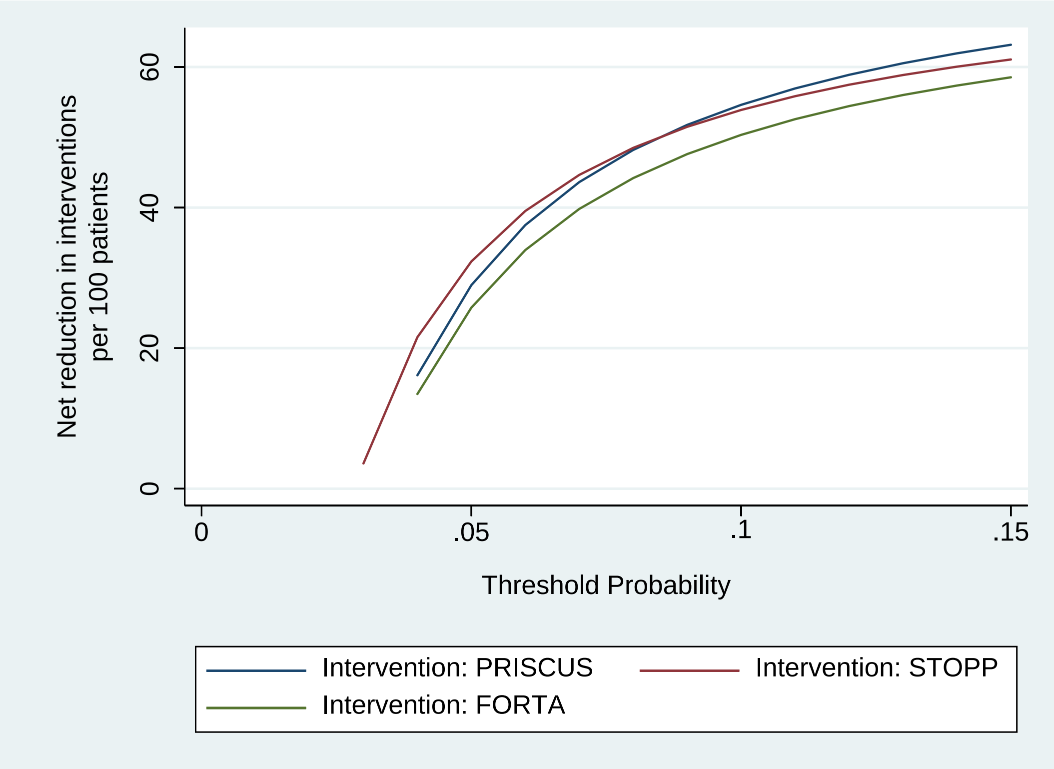
DCA



Schnittpunkte

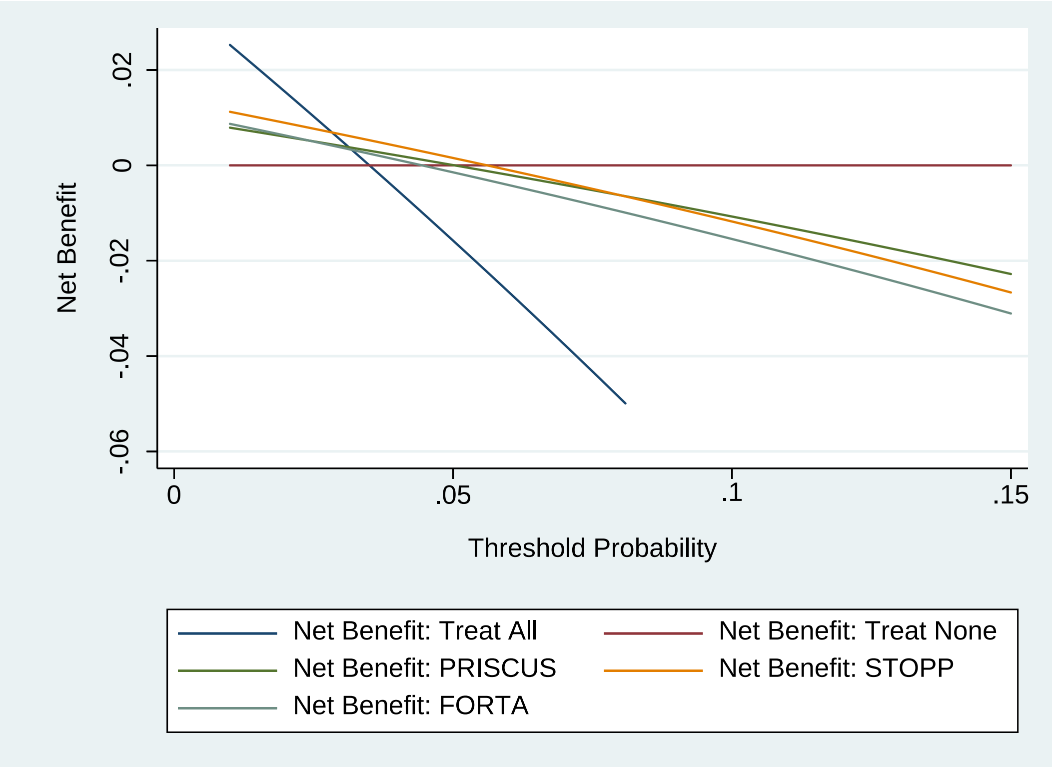
	Treat All	**Treat None**
PRISCUS	0.004513	0.0543
STOPP	0.0079973	0.0603
FORTA	0.0036896	0.047

Net Reduction in Interventions



Quartal 7

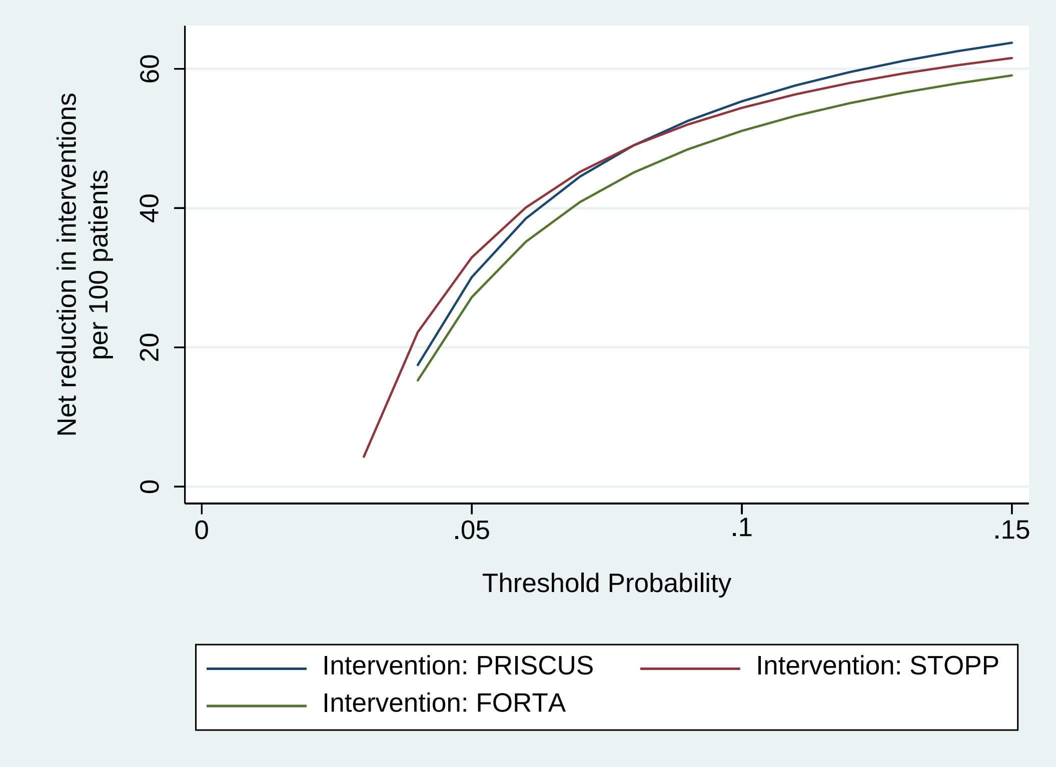
DCA



Schnittpunkte

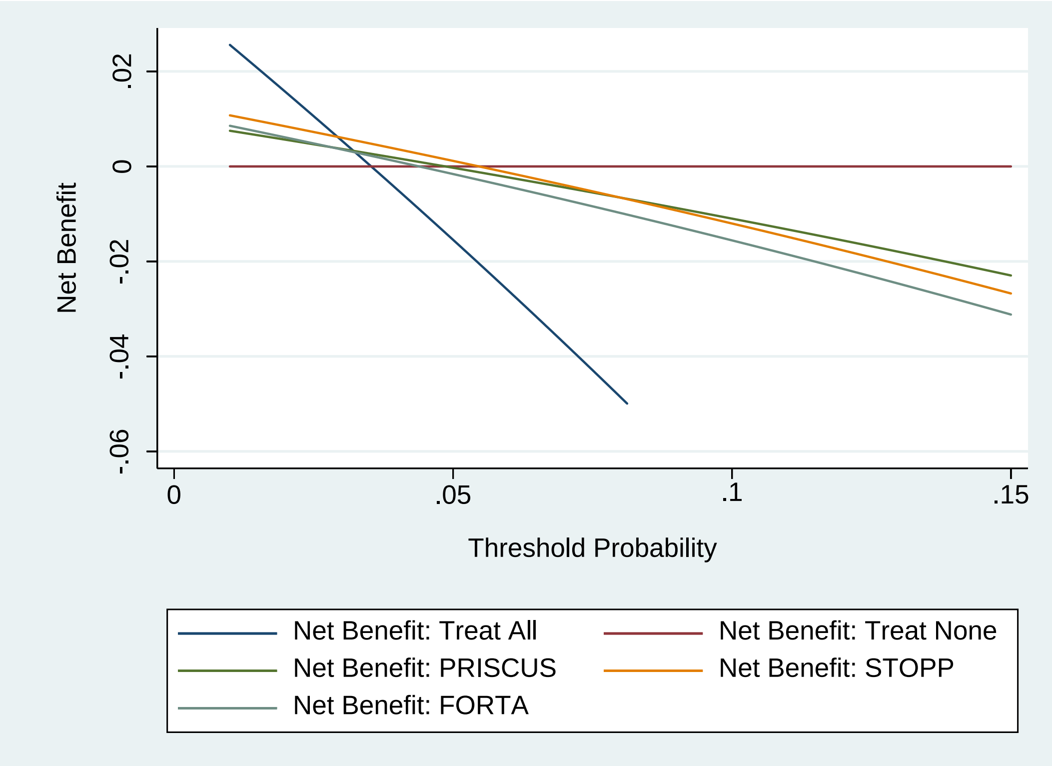
	Treat All	**Treat None**
PRISCUS	0.0038307	0.0503
STOPP	0.0069063	0.0561
FORTA	0.0032133	0.0445

Net Reduction in Interventions



Quartal 8

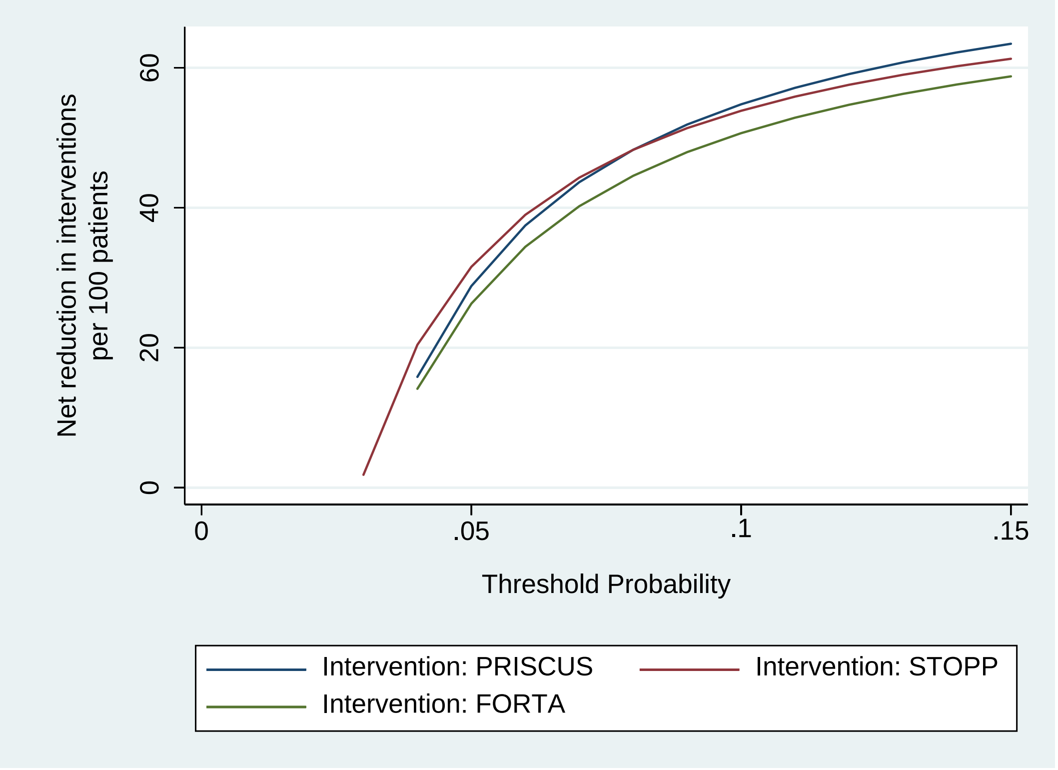
DCA



Schnittpunkte

	Treat All	**Treat None**
PRISCUS	0.0032387	0.0487
STOPP	0.0062166	0.0547
FORTA	0.0029297	0.0439

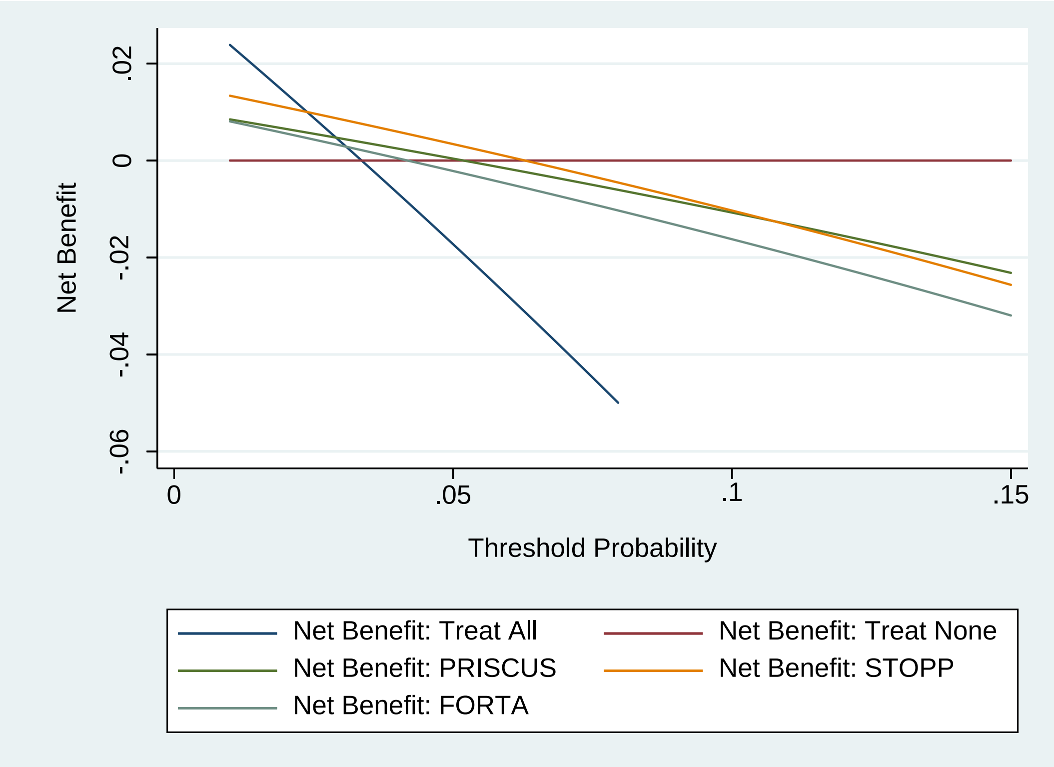
Net Reduction in Interventions



uaw_einw

Quartal 5

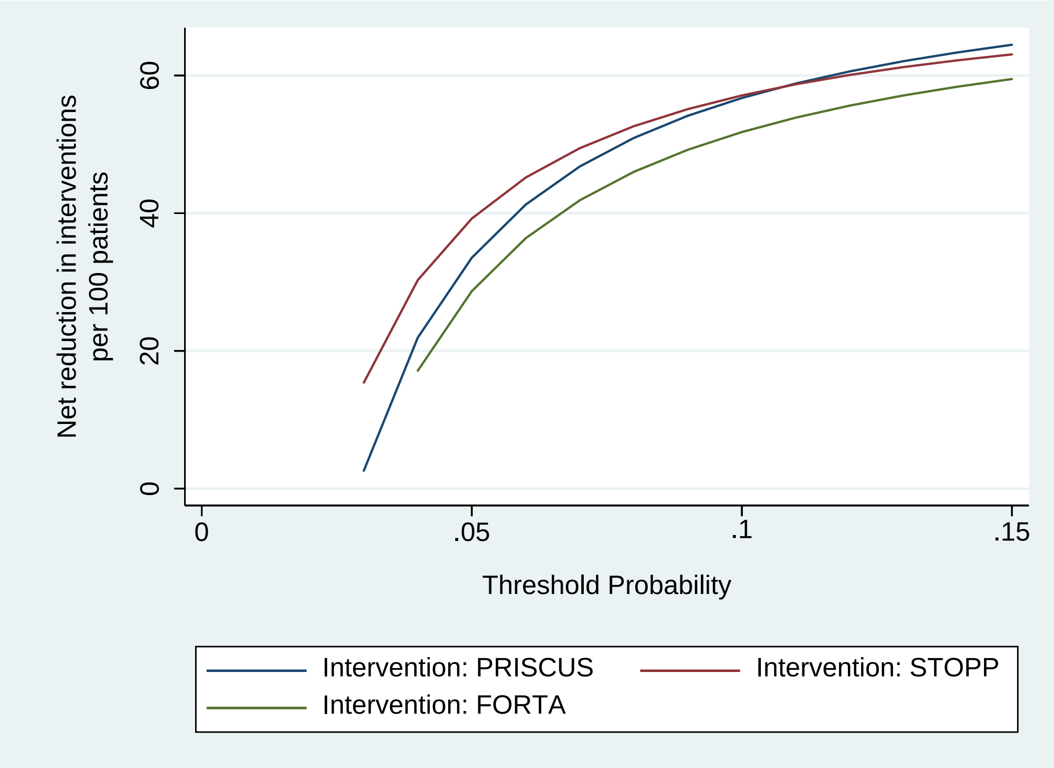
DCA



Schnittpunkte

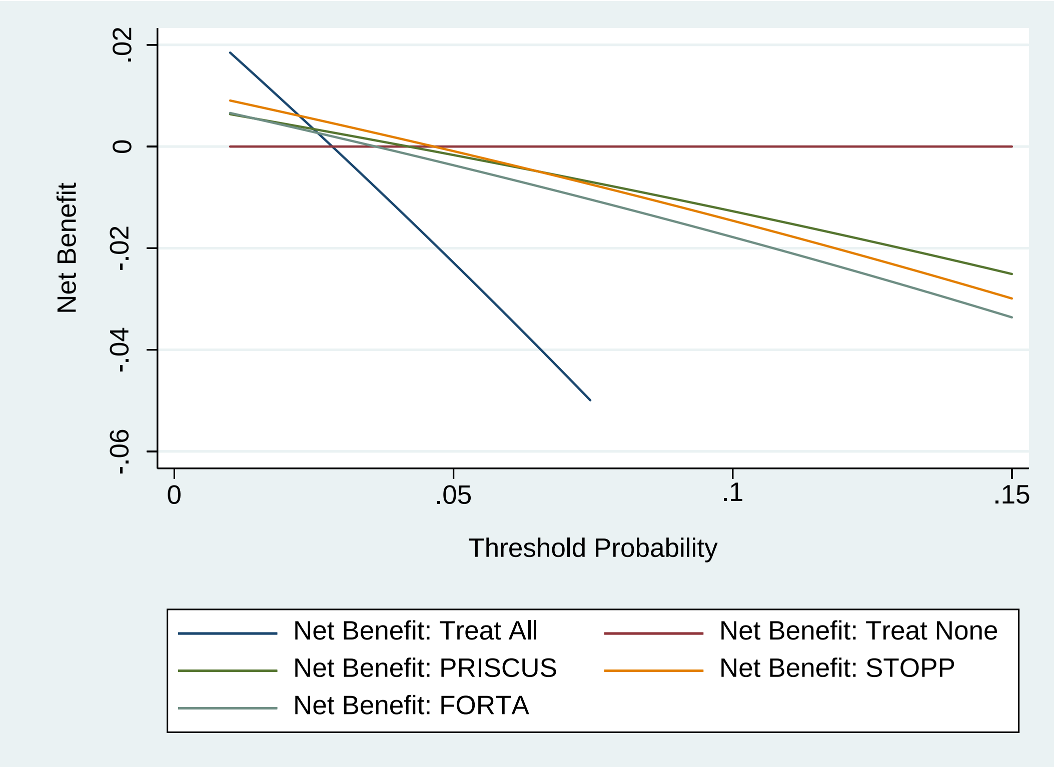
	Treat All	**Treat None**
PRISCUS	.0047531	.0519
STOPP	.0100546	.0629
FORTA	.0028019	.0419

Net Reduction in Interventions



Quartal 6

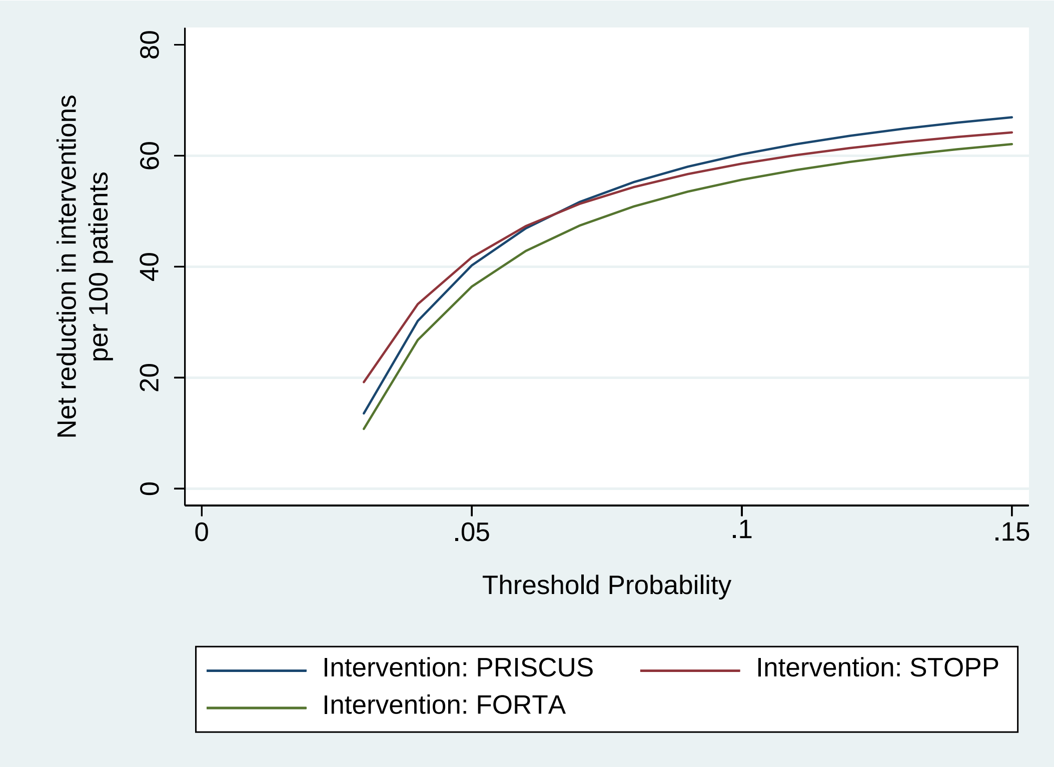
DCA



Schnittpunkte

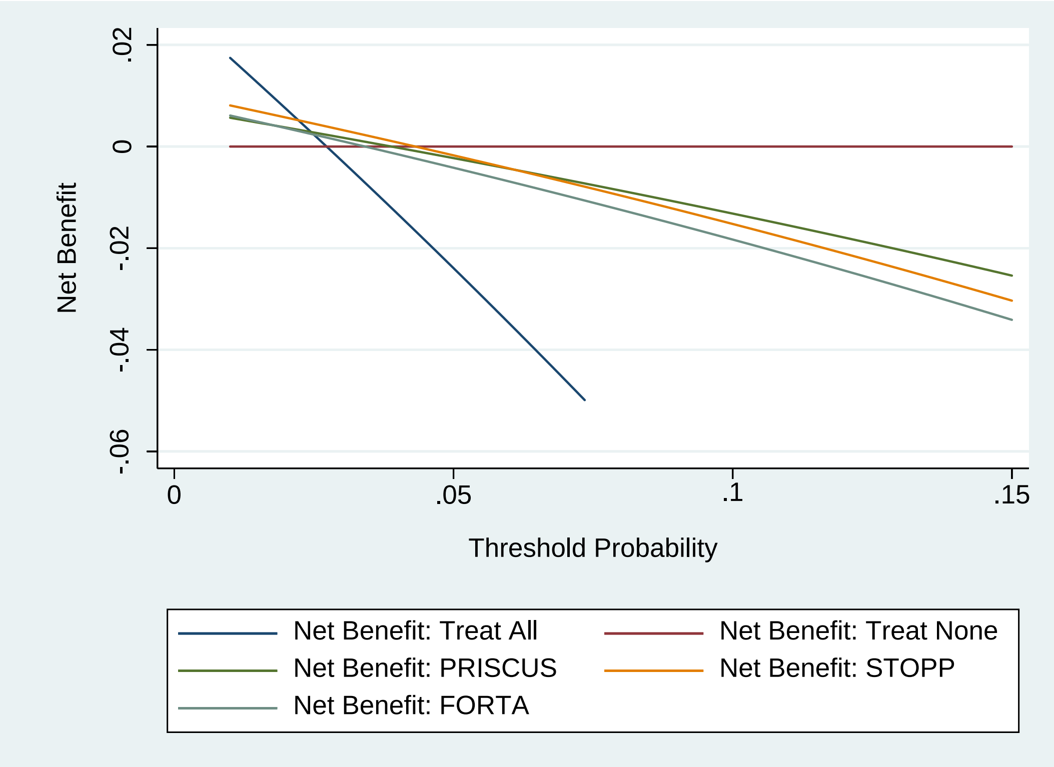
	Treat All	**Treat None**
PRISCUS	0.0034796	0.042
STOPP	0.006028	0.0465
FORTA	0.0026613	0.0361

Net Reduction in Interventions



Quartal 7

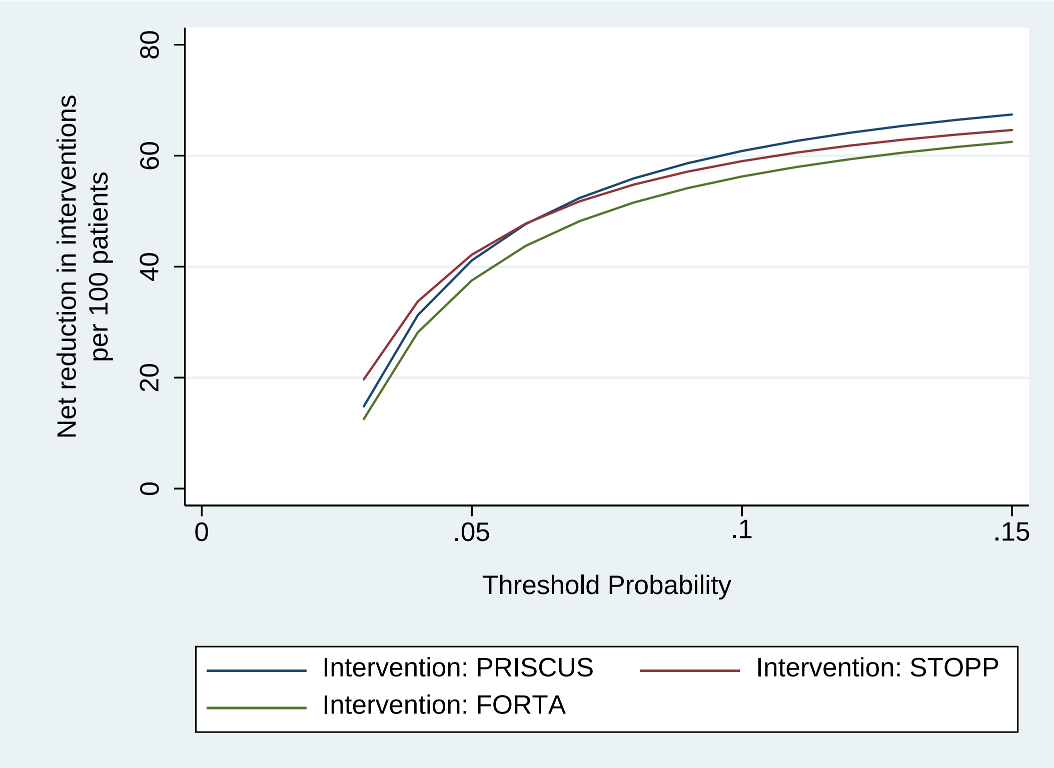
DCA



Schnittpunkte

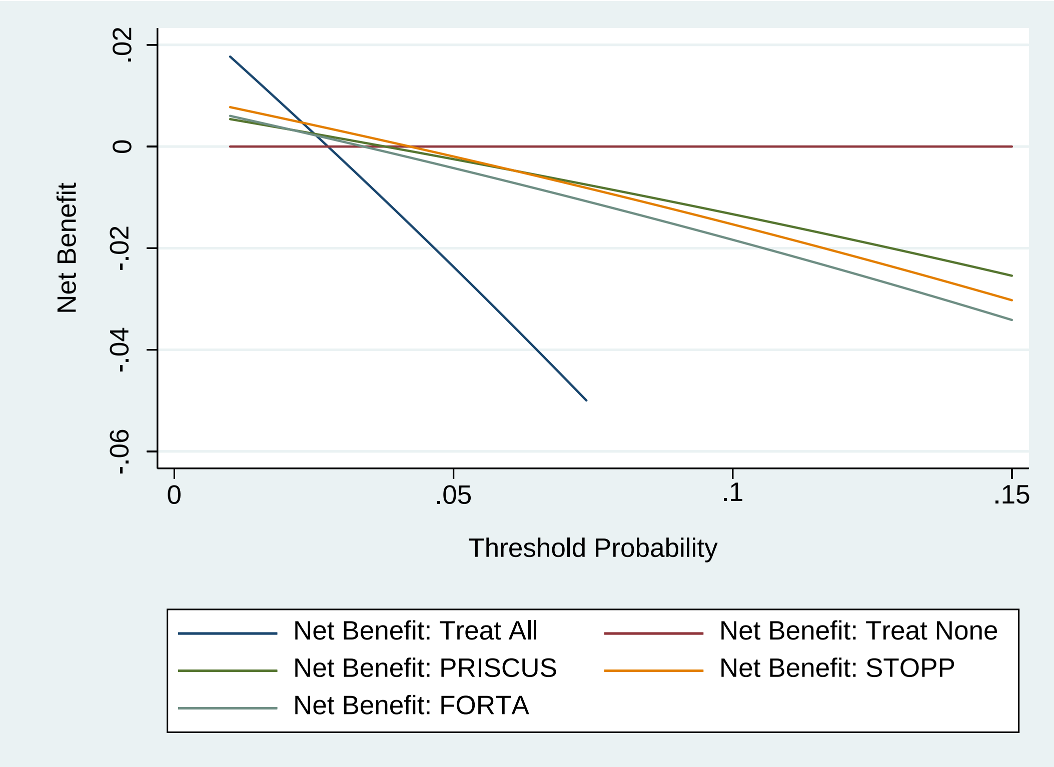
	Treat All	**Treat None**
PRISCUS	0.002846	0.0389
STOPP	0.0051915	0.0432
FORTA	0.0023347	0.0342

Net Reduction in Interventions



Quartal 8

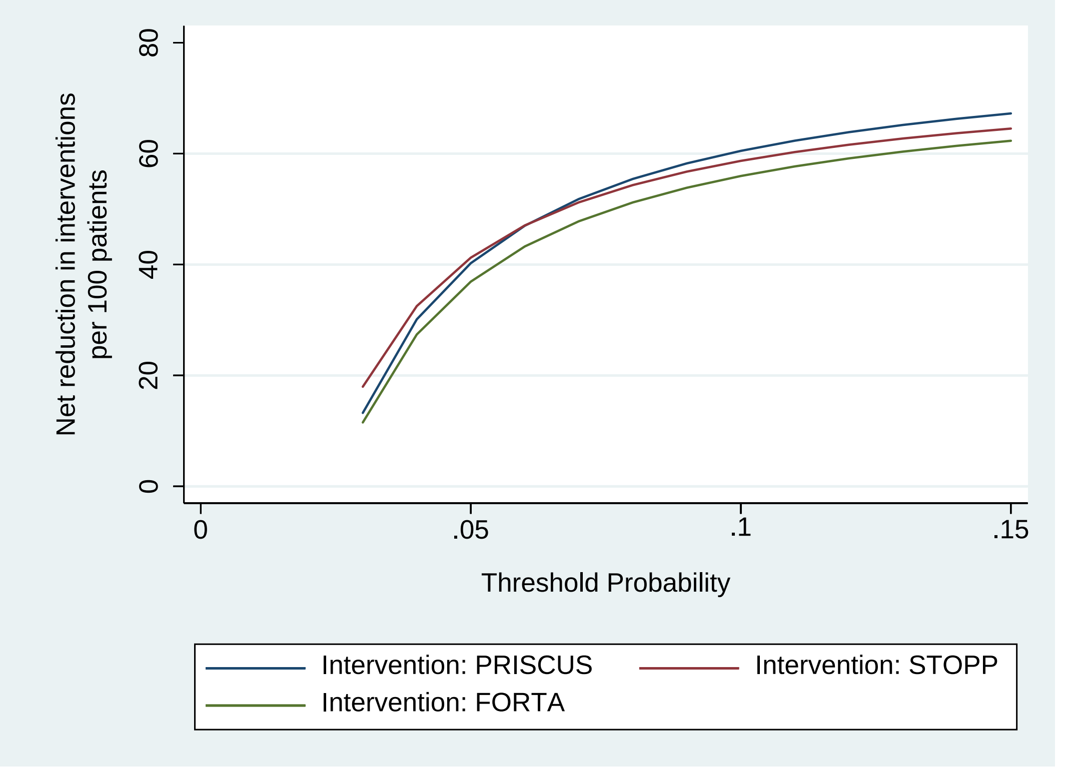
DCA



Schnittpunkte

	Treat All	**Treat None**
PRISCUS	0.0024832	0.0378
STOPP	0.0047291	0.0422
FORTA	0.0021761	0.0339

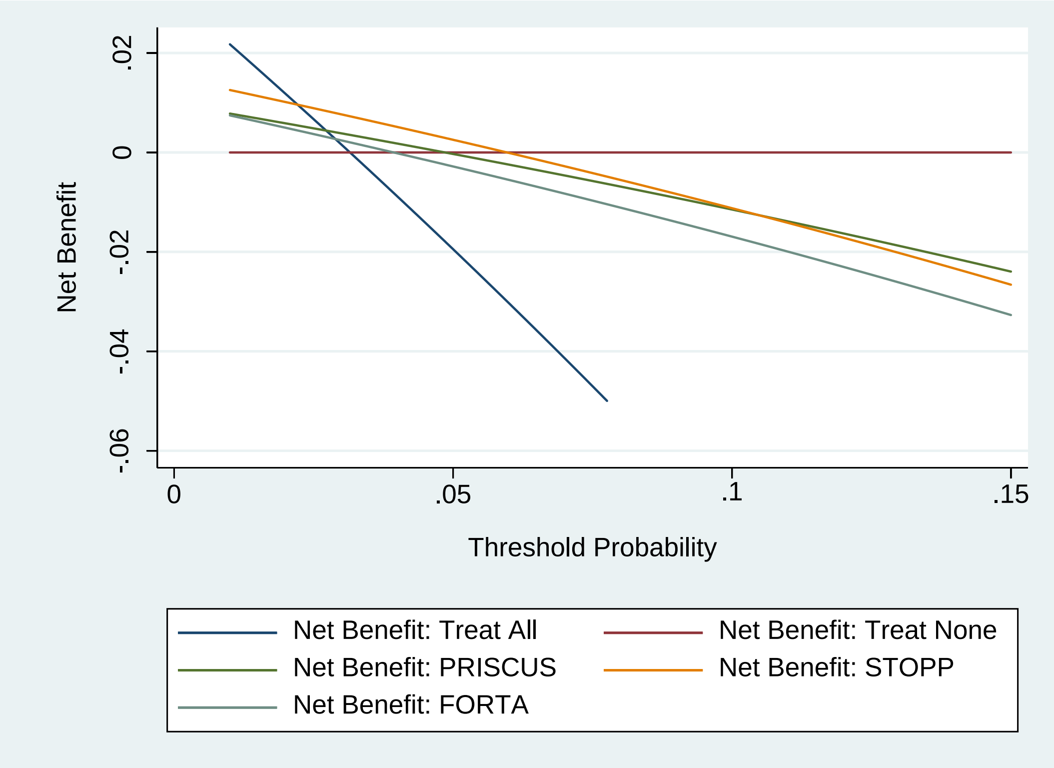
Net Reduction in Interventions



uaw_entl

Quartal 5

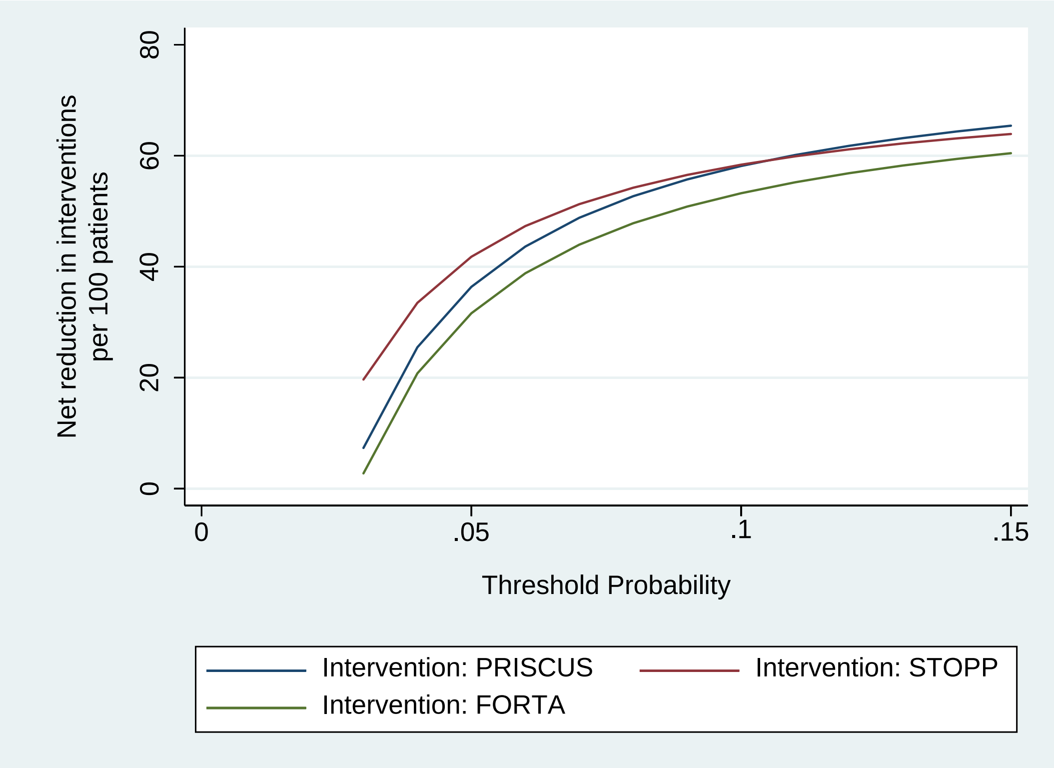
DCA



Schnittpunkte

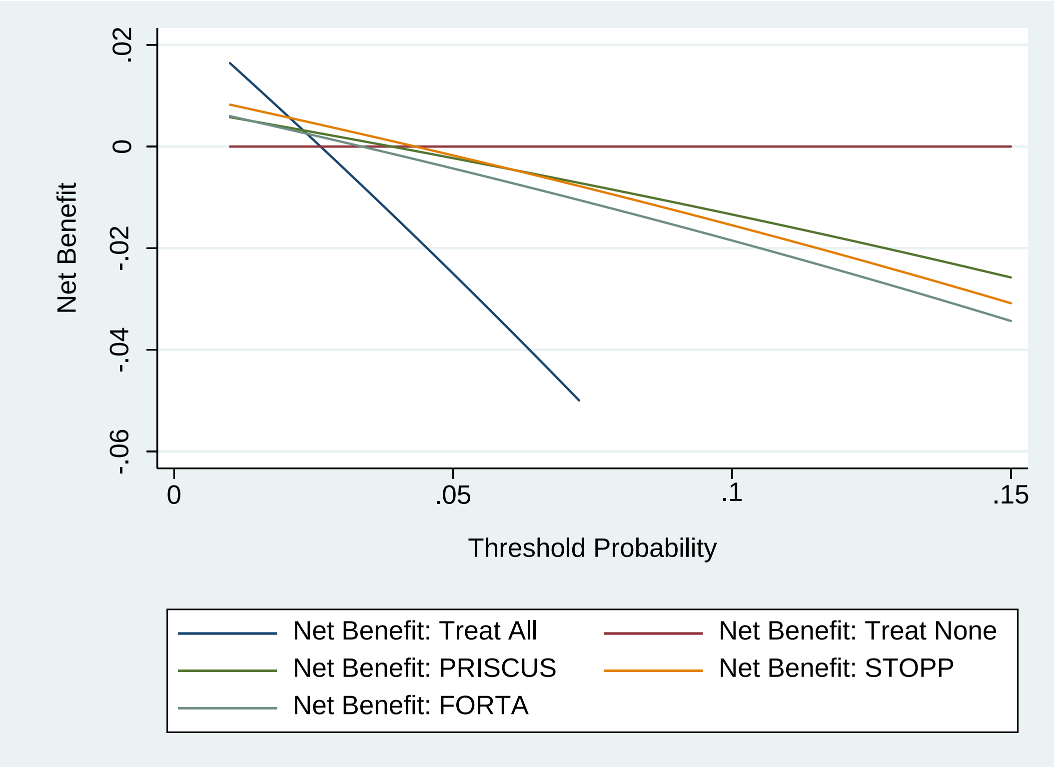
	Treat All	**Treat None**
PRISCUS	0.0044489	0.0486
STOPP	0.0096409	0.0597
FORTA	0.0027061	0.0394

Net Reduction in Interventions



Quartal 6

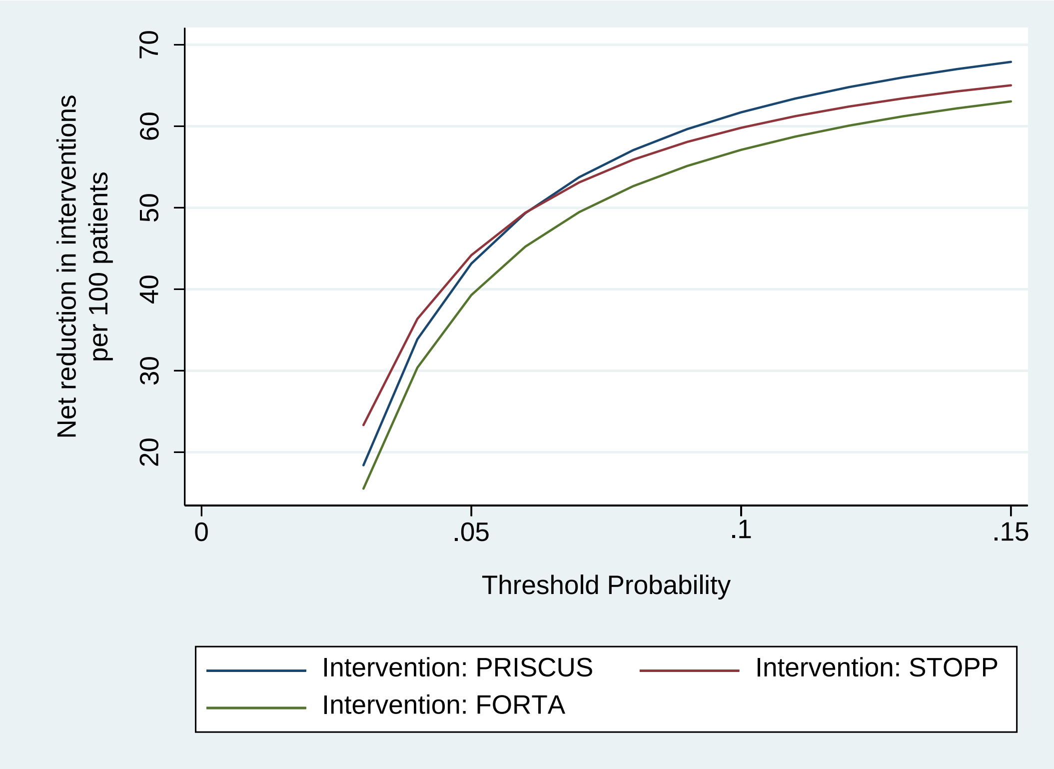
DCA



Schnittpunkte

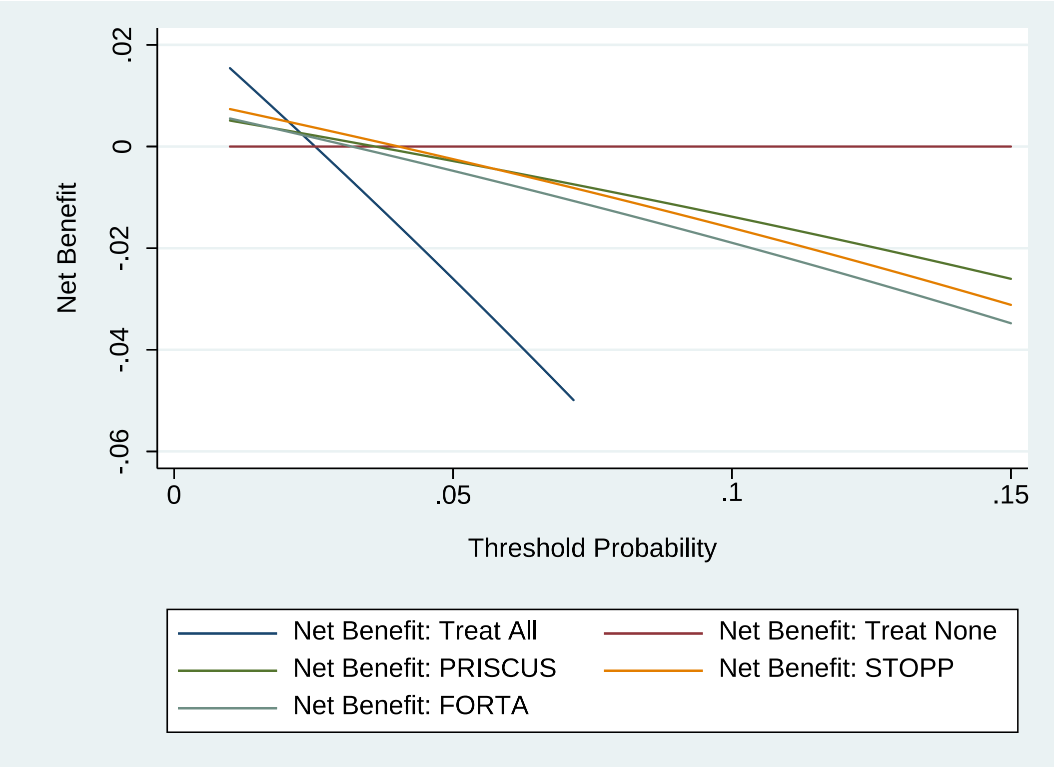
	Treat All	**Treat None**
PRISCUS	0.003229	0.039
STOPP	0.0056718	0.0433
FORTA	0.0025142	0.0336

Net Reduction in Interventions



Quartal 7

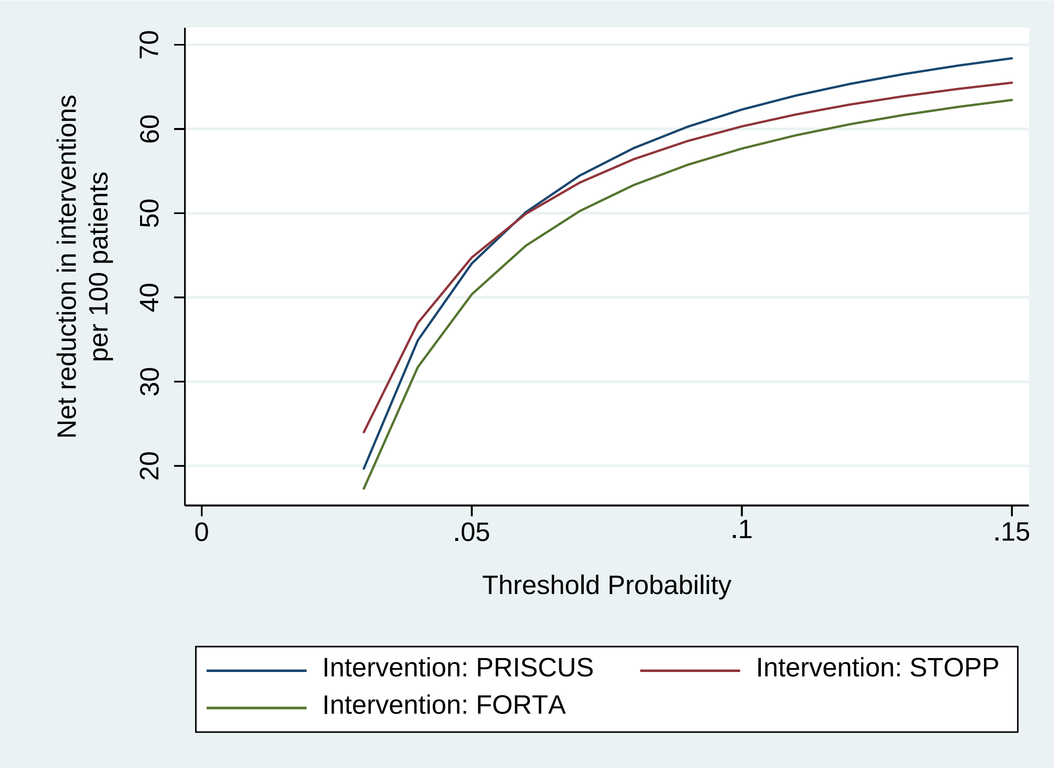
DCA



Schnittpunkte

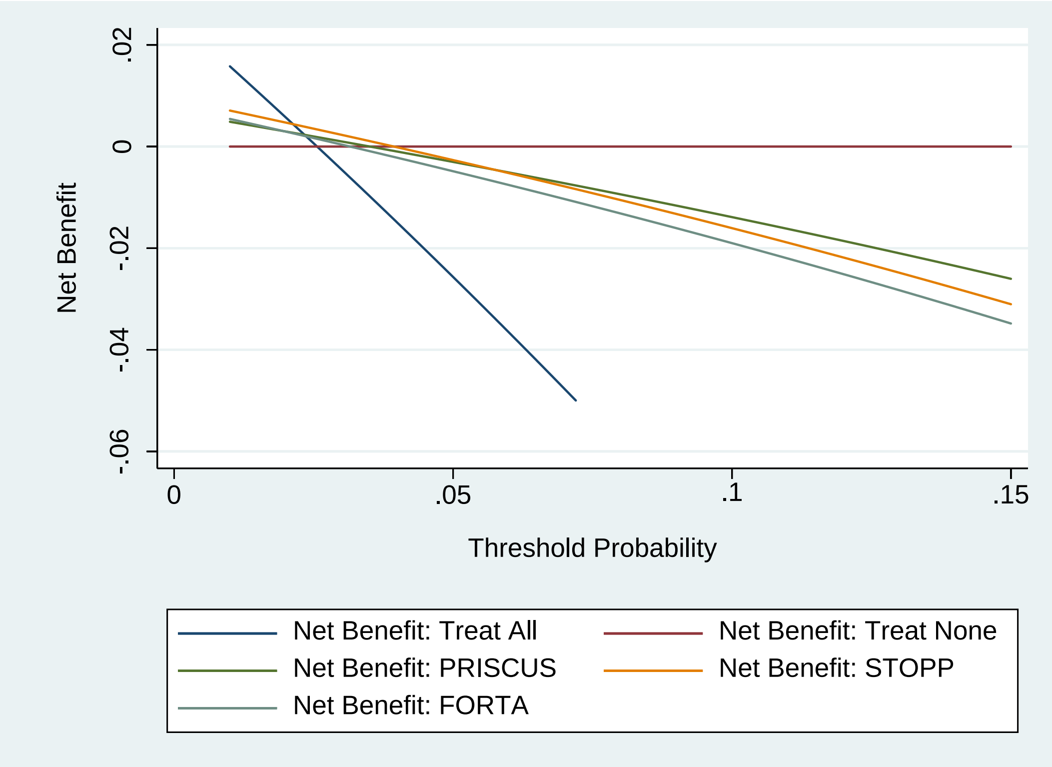
	Treat All	**Treat None**
PRISCUS	0.0026367	0.0361
STOPP	0.0048768	0.0403
FORTA	0.0022283	0.0319

Net Reduction in Interventions



Quartal 8

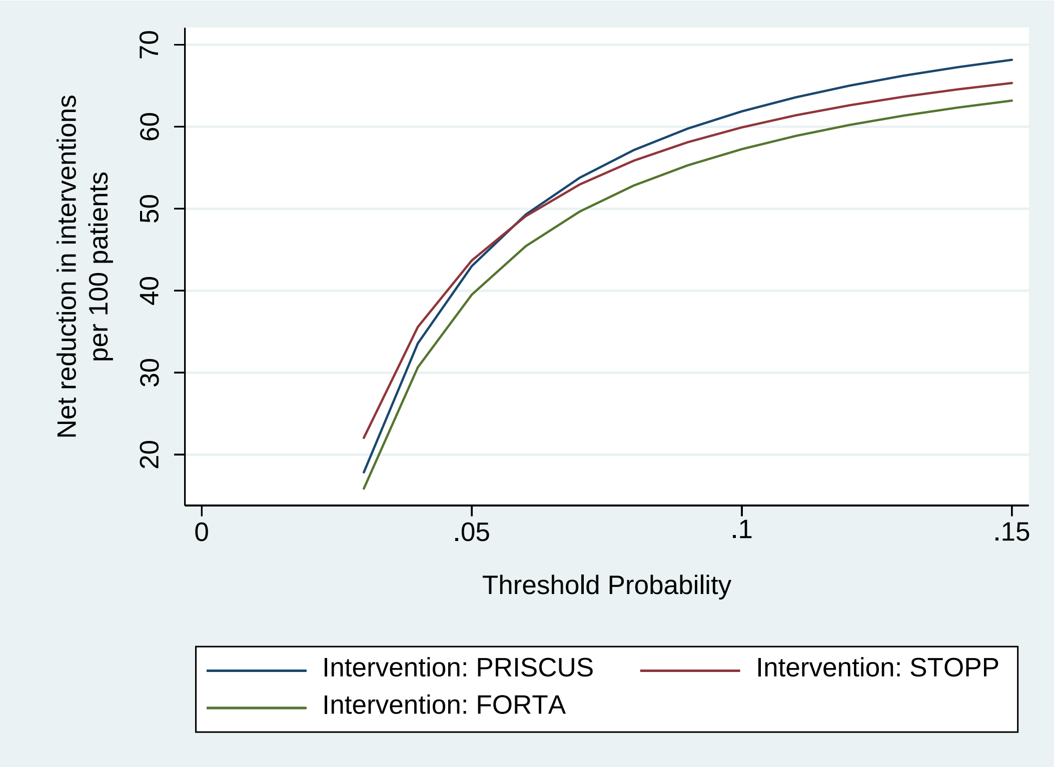
DCA



Schnittpunkte

	Treat All	**Treat None**
PRISCUS	0.0022811	0.0351
STOPP	0.0044219	0.0394
FORTA	0.0019745	0.0315

Net Reduction in Interventions



Area under the curve (AUC)

Inzident

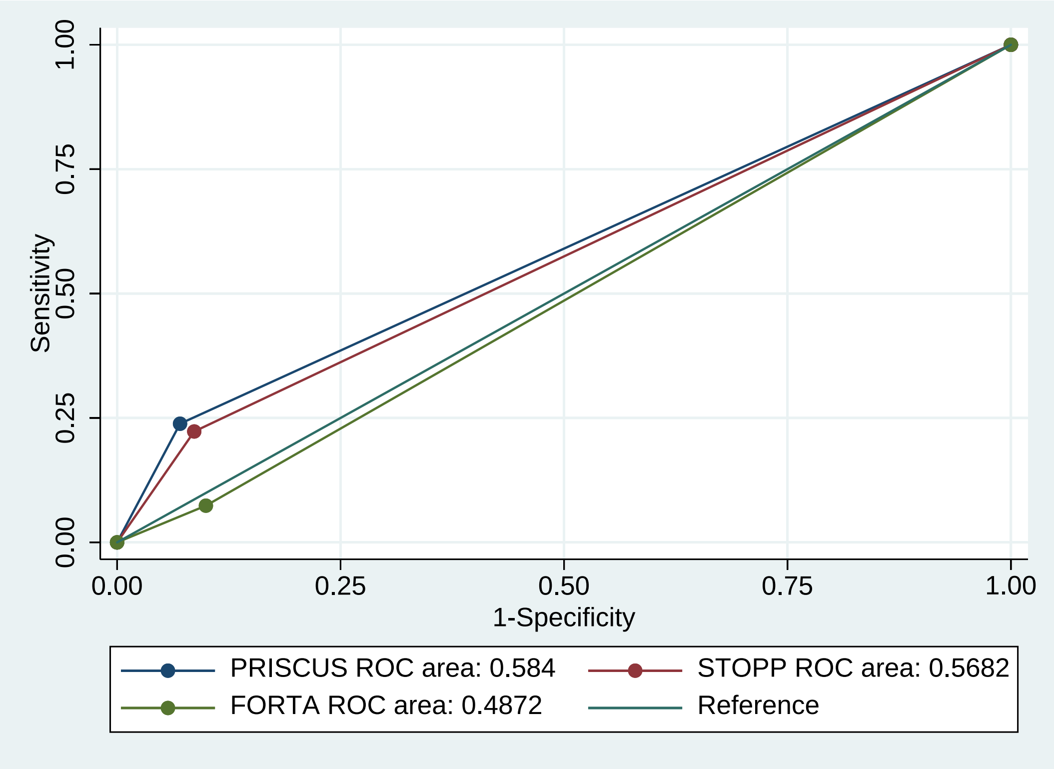
tod_q

Quartal 5

Tabelle

```
. roccomp tod_q PRISCUS STOPP FORTA if num_PSF4Q==5, graph sum

                              ROC                    -Asymptotic Normal--
                   Obs       Area     Std. Err.      [95% Conf. Interval]
-------------------------------------------------------------------------
PRISCUS        3235804     0.5840       0.0010        0.58201     0.58600
STOPP          3235804     0.5682       0.0010        0.56630     0.57020
FORTA          3235804     0.4872       0.0006        0.48595     0.48842
-------------------------------------------------------------------------
Ho: area(PRISCUS) = area(STOPP) = area(FORTA)
    chi2(2) =  7917.58       Prob>chi2 =   0.0000
```

Graph

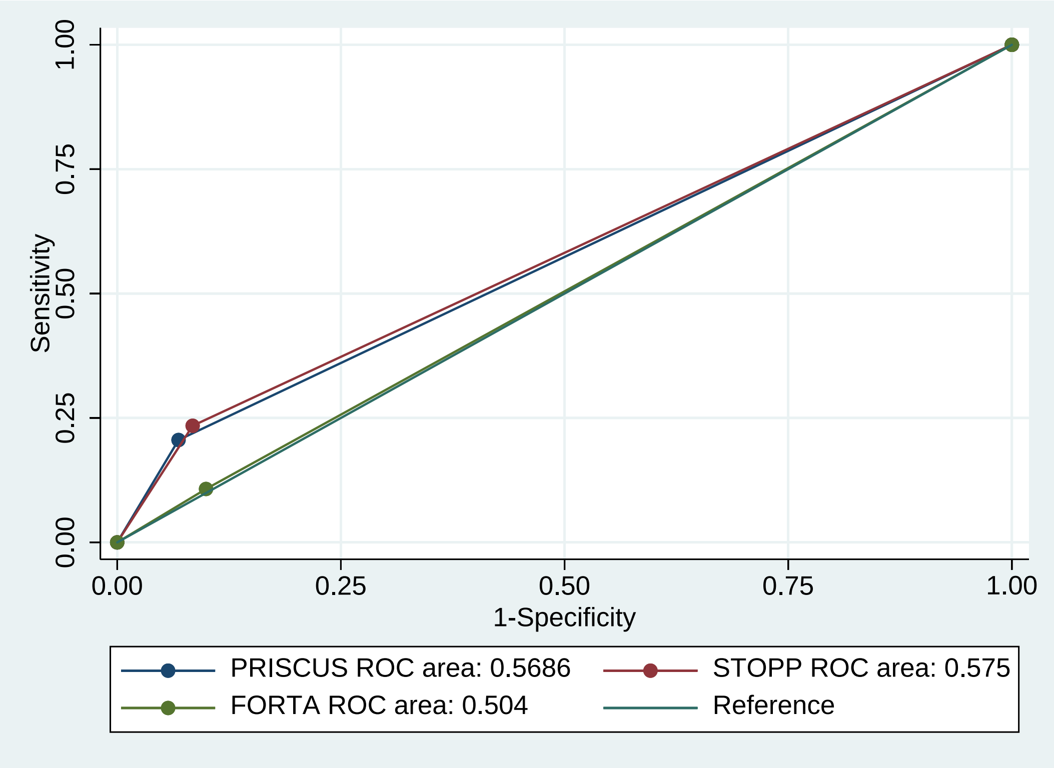


Quartal 6

Tabelle

```
. roccomp tod_q PRISCUS STOPP FORTA if num_PSF4Q==6, graph sum

                              ROC                    -Asymptotic Normal--
                    Obs       Area     Std. Err.      [95% Conf. Interval]
-------------------------------------------------------------------------
PRISCUS        3191814      0.5686       0.0010        0.56668     0.57051
STOPP          3191814      0.5750       0.0010        0.57300     0.57701
FORTA          3191814      0.5040       0.0008        0.50256     0.50550
-------------------------------------------------------------------------
Ho: area(PRISCUS) = area(STOPP) = area(FORTA)
    chi2(2) =  4342.50       Prob>chi2 =   0.0000
```

Graph

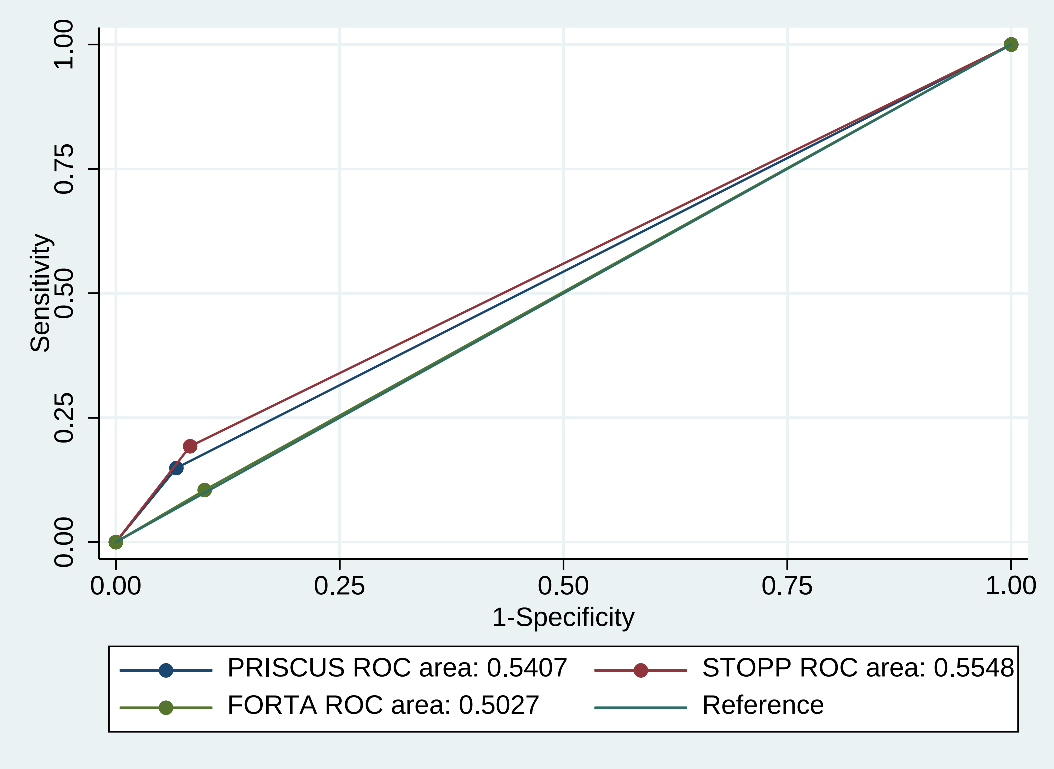


Quartal 7

Tabelle

```
. roccomp tod_q PRISCUS STOPP FORTA if num_PSF4Q==7, graph sum

                              ROC                    -Asymptotic Normal--
                 Obs         Area     Std. Err.      [95% Conf. Interval]
-------------------------------------------------------------------------
PRISCUS      3148741       0.5407       0.0009        0.53883     0.54248
STOPP        3148741       0.5548       0.0010        0.55279     0.55683
FORTA        3148741       0.5027       0.0008        0.50115     0.50429
-------------------------------------------------------------------------
Ho: area(PRISCUS) = area(STOPP) = area(FORTA)
    chi2(2) =  1917.52       Prob>chi2 =   0.0000
```

Graph

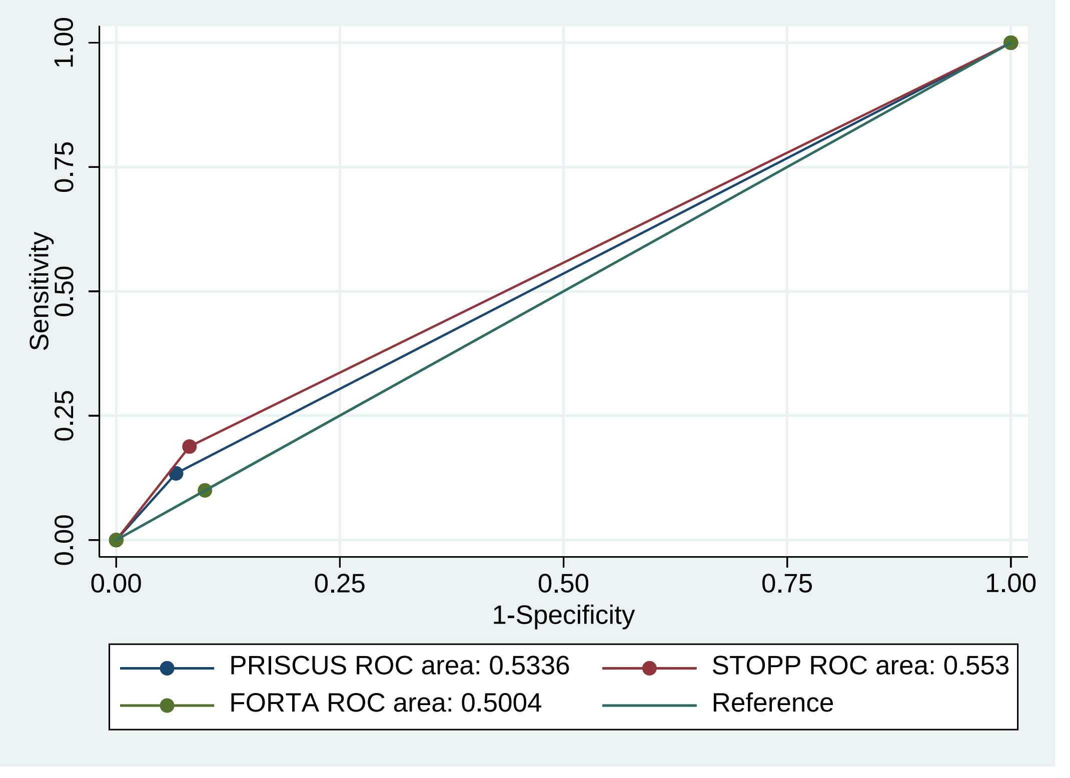


Quartal 8

Tabelle

```
. roccomp tod_q PRISCUS STOPP FORTA if num_PSF4Q==8, graph sum

                              ROC                    -Asymptotic Normal--
                 Obs         Area     Std. Err.      [95% Conf. Interval]
-------------------------------------------------------------------------
PRISCUS        3111862      0.5336       0.0009       0.53174     0.53541
STOPP          3111862      0.5530       0.0011       0.55093     0.55514
FORTA          3111862      0.5004       0.0008       0.49874     0.50199
-------------------------------------------------------------------------
Ho: area(PRISCUS) = area(STOPP) = area(FORTA)
    chi2(2) =  1732.25       Prob>chi2 =   0.0000
```

Graph



uaw_q (kombiniert Einweisung/Entlassung)

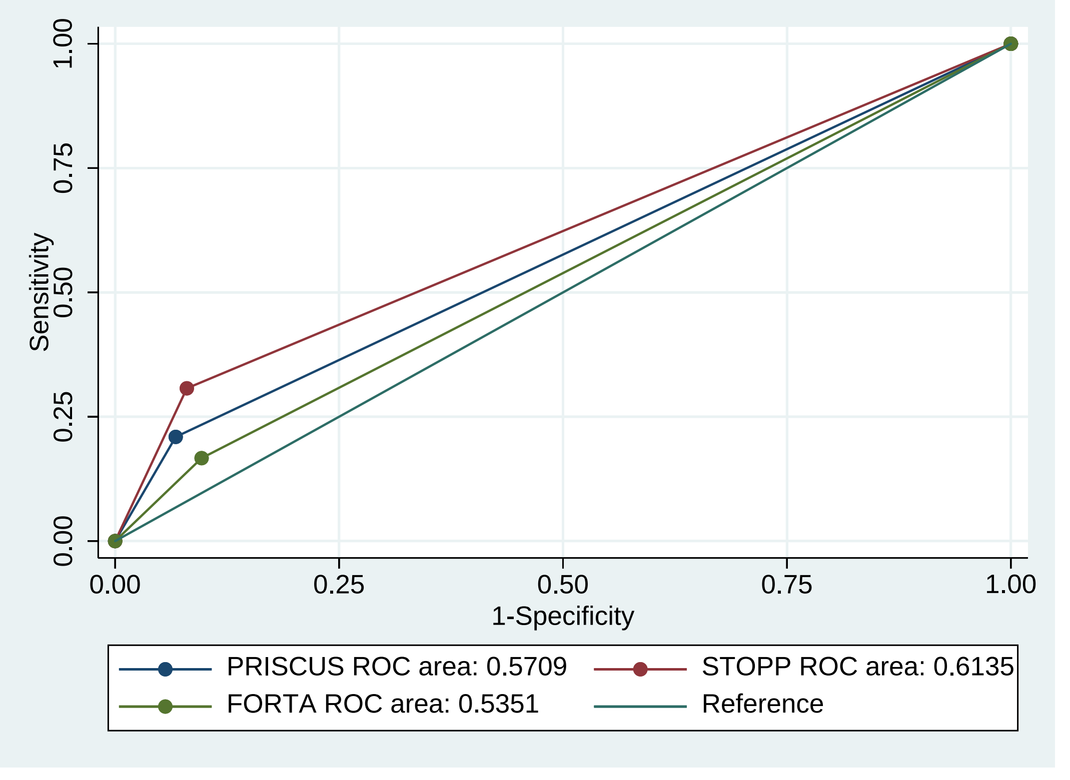
Quartal 5

Tabelle

```
. roccomp uaw_q PRISCUS STOPP FORTA if num_PSF4Q==5, graph sum

                              ROC                      -Asymptotic Normal--
                  Obs        Area      Std. Err.      [95% Conf. Interval]
---------------------------------------------------------------------------
PRISCUS       3235804      0.5709         0.0006        0.56973     0.57209
STOPP         3235804      0.6135         0.0007        0.61221     0.61488
FORTA         3235804      0.5351         0.0006        0.53403     0.53619
---------------------------------------------------------------------------
Ho: area(PRISCUS) = area(STOPP) = area(FORTA)
```

```
    chi2(2) =  8108.69        Prob>chi2 =   0.0000
```

Graph



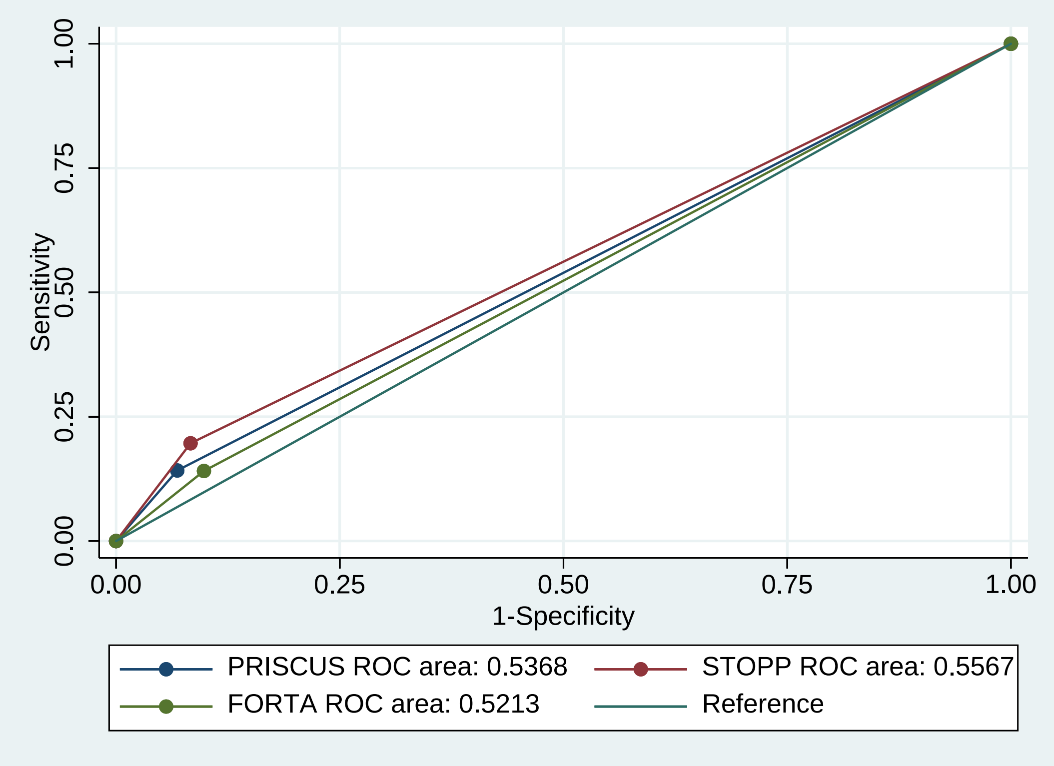
Quartal 6

Tabelle

```
. roccomp uaw_q PRISCUS STOPP FORTA if num_PSF4Q==6, graph sum

                              ROC                    -Asymptotic Normal--
                  Obs         Area     Std. Err.      [95% Conf. Interval]
-------------------------------------------------------------------------
PRISCUS        3191814       0.5368       0.0006        0.53558     0.53793
STOPP          3191814       0.5567       0.0007        0.55533     0.55800
FORTA          3191814       0.5213       0.0006        0.52015     0.52249
-------------------------------------------------------------------------
Ho: area(PRISCUS) = area(STOPP) = area(FORTA)
```

```
    chi2(2) =  1661.46       Prob>chi2 =   0.0000
```

Graph



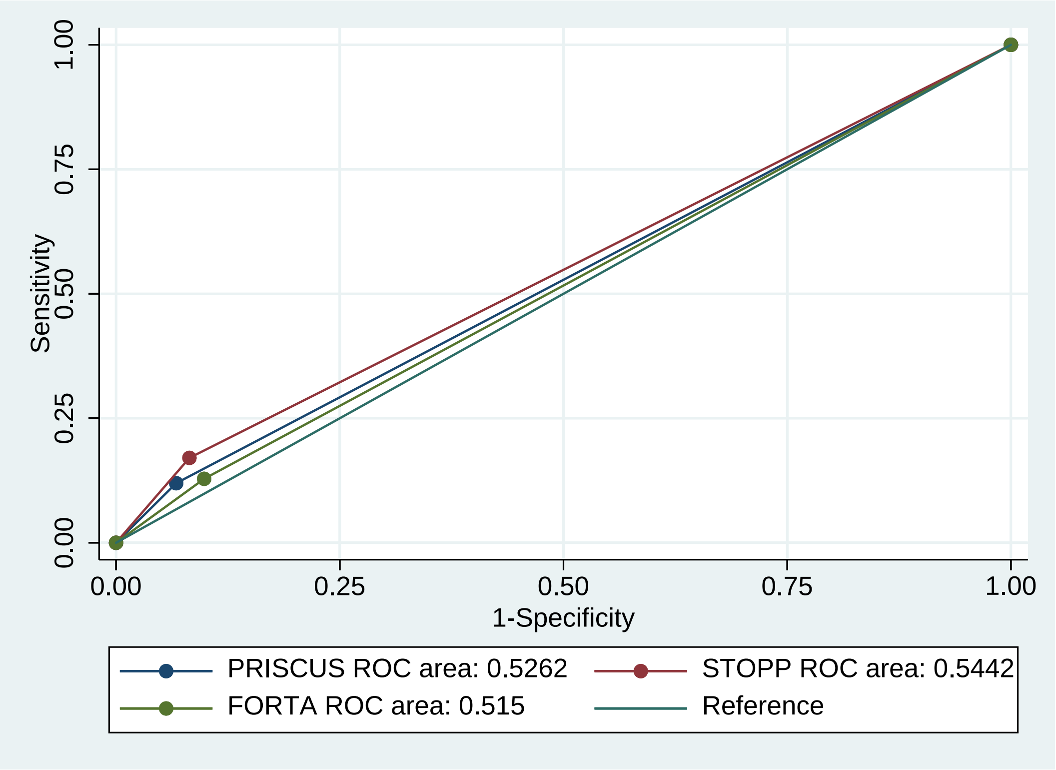
Quartal 7

Tabelle

```
. roccomp uaw_q PRISCUS STOPP FORTA if num_PSF4Q==7, graph sum

                              ROC                    -Asymptotic Normal--
                  Obs        Area     Std. Err.      [95% Conf. Interval]
-------------------------------------------------------------------------
PRISCUS       3148741      0.5262        0.0006       0.52508      0.52732
STOPP         3148741      0.5442        0.0007       0.54292      0.54552
FORTA         3148741      0.5150        0.0006       0.51381      0.51613
-------------------------------------------------------------------------
Ho: area(PRISCUS) = area(STOPP) = area(FORTA)
```

```
    chi2(2) =   1216.21        Prob>chi2 =    0.0000
```

Graph



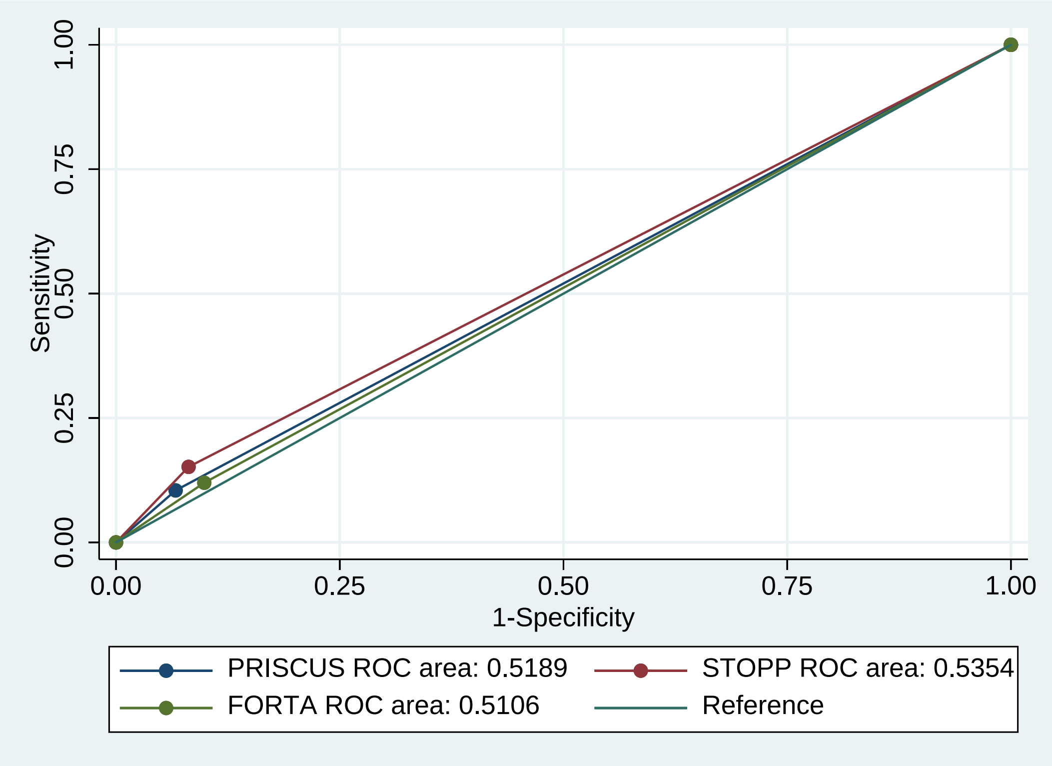
Quartal 8

Tabelle

```
. roccomp uaw_q PRISCUS STOPP FORTA if num_PSF4Q==8, graph sum

                              ROC                    -Asymptotic Normal--
                 Obs         Area     Std. Err.     [95% Conf. Interval]
-------------------------------------------------------------------------
PRISCUS      3111862       0.5189       0.0005       0.51790     0.51998
STOPP        3111862       0.5354       0.0006       0.53414     0.53658
FORTA        3111862       0.5106       0.0006       0.50951     0.51173
-------------------------------------------------------------------------
Ho: area(PRISCUS) = area(STOPP) = area(FORTA)
```

```
    chi2(2) =   991.96       Prob>chi2 =   0.0000
```

Graph



uaw_einw

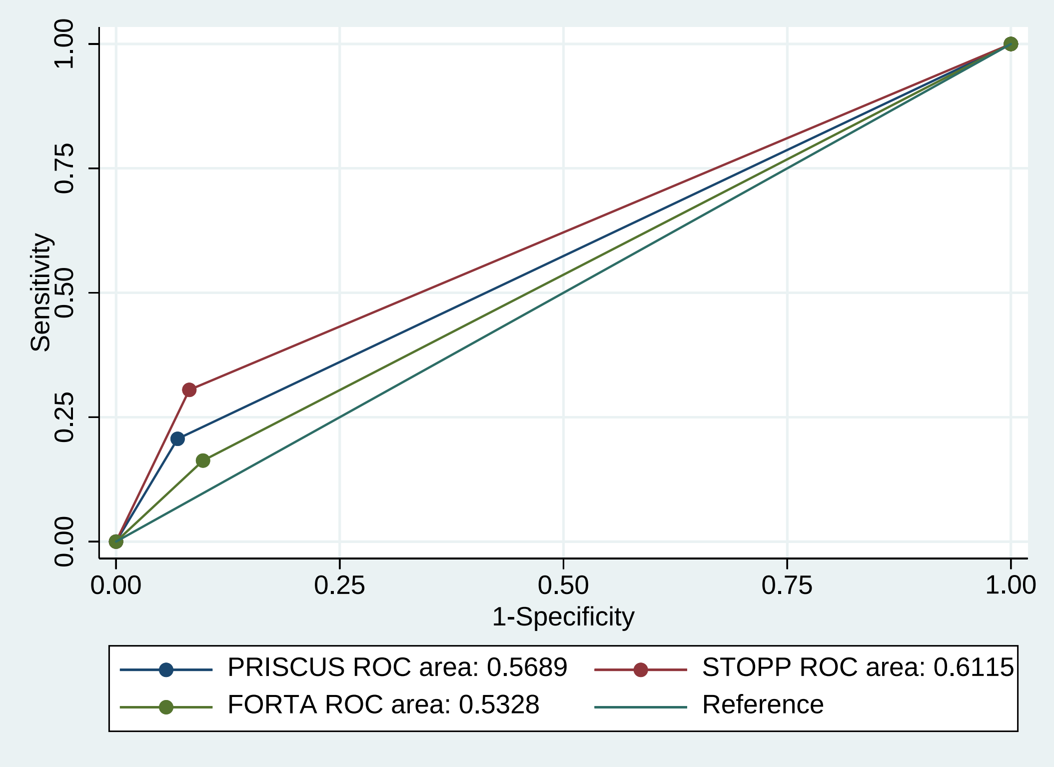
Quartal 5

Tabelle

```
. roccomp uaw_einw_q PRISCUS STOPP FORTA if num_PSF4Q==5, graph sum

                              ROC                    -Asymptotic Normal--
                   Obs       Area     Std. Err.      [95% Conf. Interval]
-------------------------------------------------------------------------
PRISCUS        3235804     0.5689       0.0007        0.56754     0.57018
STOPP          3235804     0.6115       0.0008        0.61002     0.61303
FORTA          3235804     0.5328       0.0006        0.53157     0.53400
-------------------------------------------------------------------------
```

```
Ho: area(PRISCUS) = area(STOPP) = area(FORTA)
    chi2(2) =  6479.06       Prob>chi2 =   0.0000
```

Graph



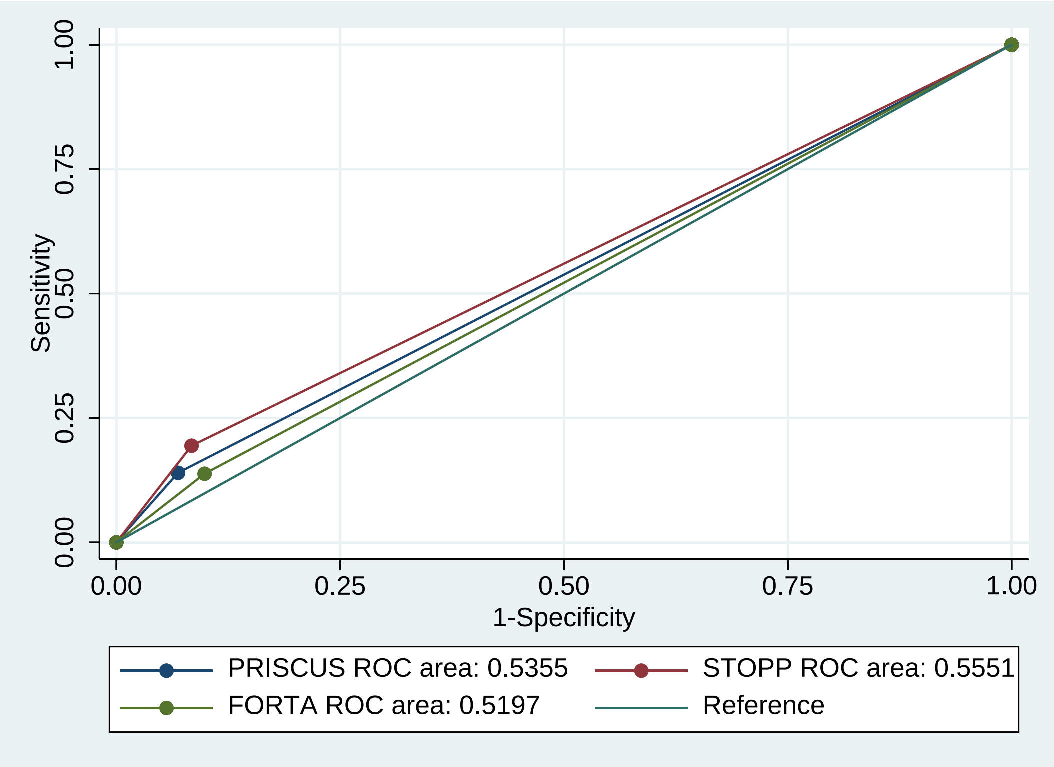
Quartal 6

Tabelle

```
. roccomp uaw_einw_q PRISCUS STOPP FORTA if num_PSF4Q==6, graph sum

                              ROC                    -Asymptotic Normal--
                  Obs         Area     Std. Err.     [95% Conf. Interval]
-------------------------------------------------------------------------
PRISCUS       3191814       0.5355       0.0007       0.53415     0.53678
STOPP         3191814       0.5551       0.0008       0.55361     0.55660
FORTA         3191814       0.5197       0.0007       0.51840     0.52101
-------------------------------------------------------------------------
```

```
Ho: area(PRISCUS) = area(STOPP) = area(FORTA)
    chi2(2) =  1331.21       Prob>chi2 =   0.0000
```

Graph



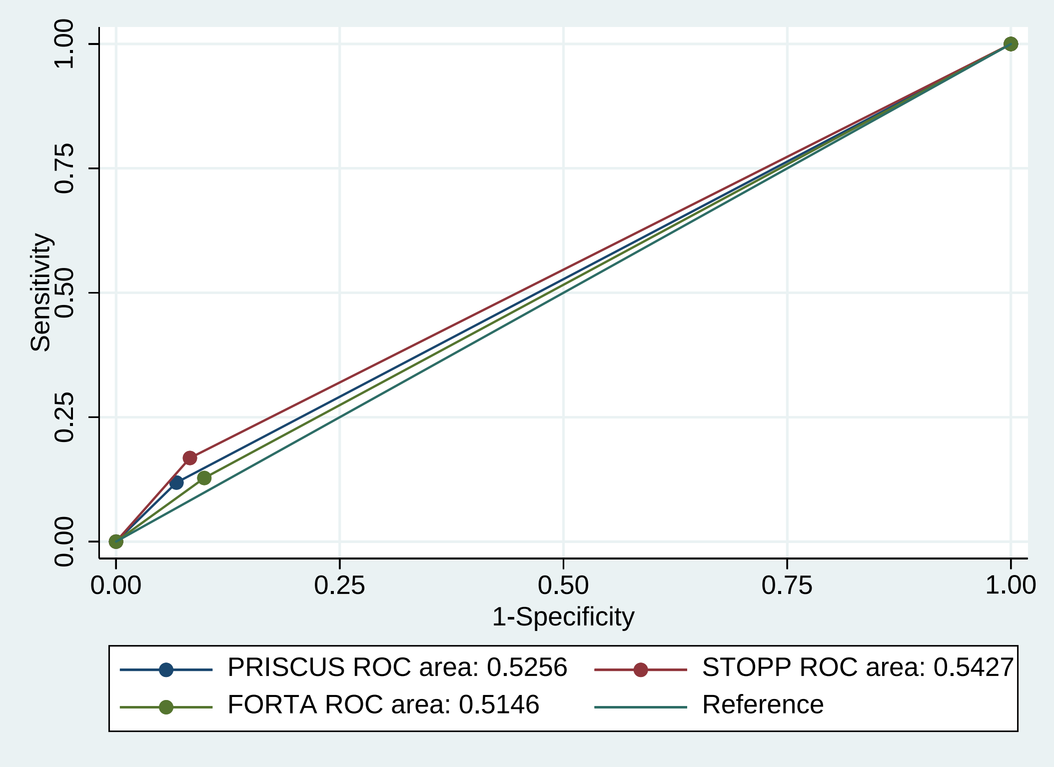
Quartal 7

Tabelle

```
. roccomp uaw_einw_q PRISCUS STOPP FORTA if num_PSF4Q==7, graph sum

                              ROC                    -Asymptotic Normal--
                  Obs        Area      Std. Err.     [95% Conf. Interval]
-------------------------------------------------------------------------
PRISCUS       3148741      0.5256         0.0006      0.52430     0.52681
STOPP         3148741      0.5427         0.0007      0.54128     0.54418
FORTA         3148741      0.5146         0.0007      0.51329     0.51588
-------------------------------------------------------------------------
```

```
Ho: area(PRISCUS) = area(STOPP) = area(FORTA)
    chi2(2) =   902.80       Prob>chi2 =   0.0000
```

Graph



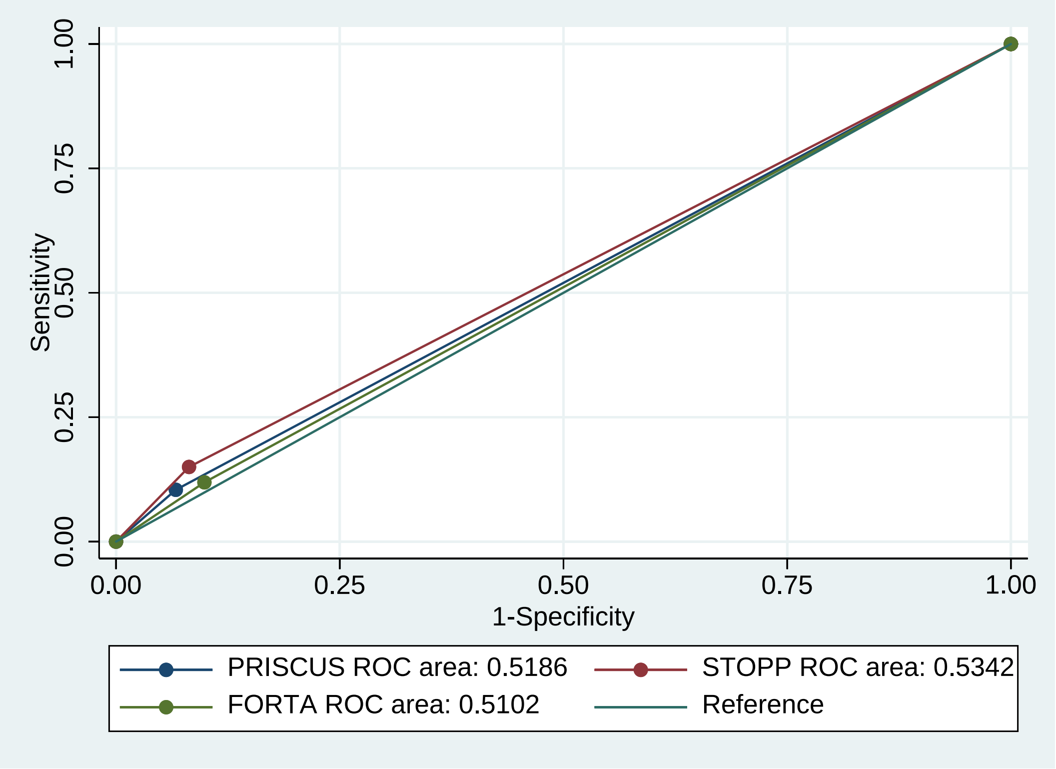
Quartal 8

Tabelle

```
. roccomp uaw_einw_q PRISCUS STOPP FORTA if num_PSF4Q==8, graph sum

                              ROC                    -Asymptotic Normal--
                   Obs       Area     Std. Err.      [95% Conf. Interval]
-------------------------------------------------------------------------
PRISCUS        3111862     0.5186       0.0006        0.51745     0.51979
STOPP          3111862     0.5342       0.0007        0.53288     0.53561
FORTA          3111862     0.5102       0.0006        0.50891     0.51140
-------------------------------------------------------------------------
```

```
Ho: area(PRISCUS) = area(STOPP) = area(FORTA)
    chi2(2) =   746.73       Prob>chi2 =   0.0000
```

Graph



uaw_entl

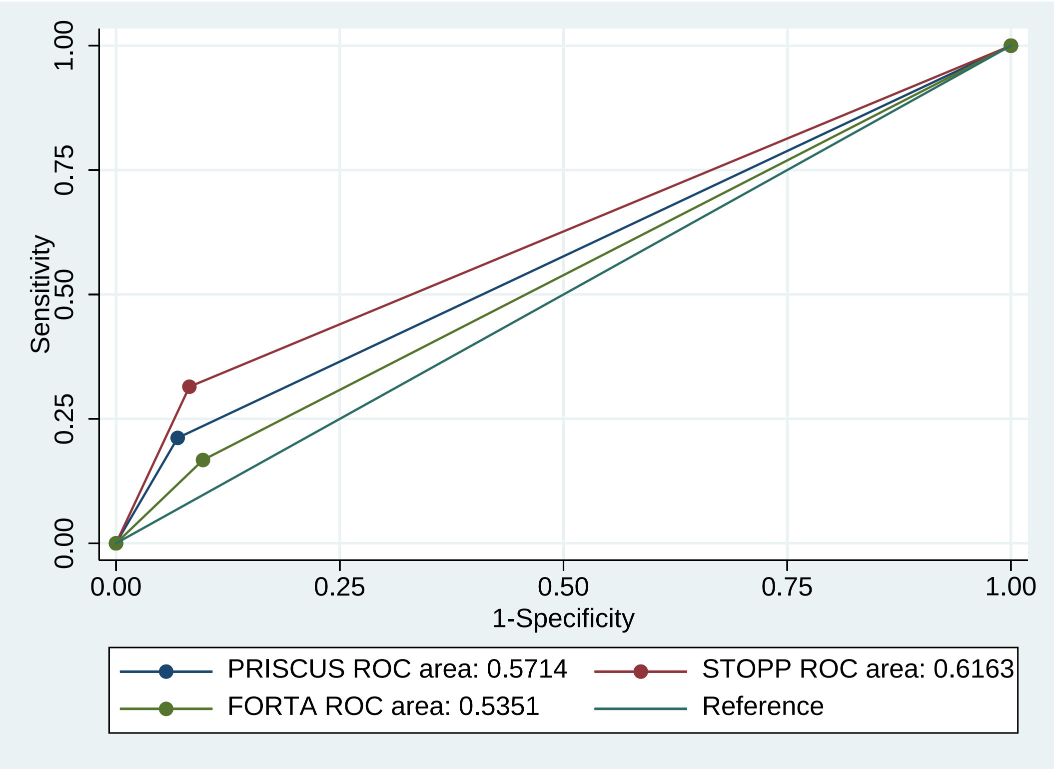
Quartal 5

Tabelle

```
. roccomp uaw_entl_q PRISCUS STOPP FORTA if num_PSF4Q==5, graph sum

                              ROC                    -Asymptotic Normal--
                  Obs         Area     Std. Err.      [95% Conf. Interval]
-------------------------------------------------------------------------
PRISCUS       3235804       0.5714       0.0007        0.57006     0.57280
STOPP         3235804       0.6163       0.0008        0.61475     0.61787
FORTA         3235804       0.5351       0.0006        0.53385     0.53636
```

```
------------------------------------------------------------------------
Ho: area(PRISCUS) = area(STOPP) = area(FORTA)
    chi2(2) =  6380.33       Prob>chi2 =   0.0000
```

Graph



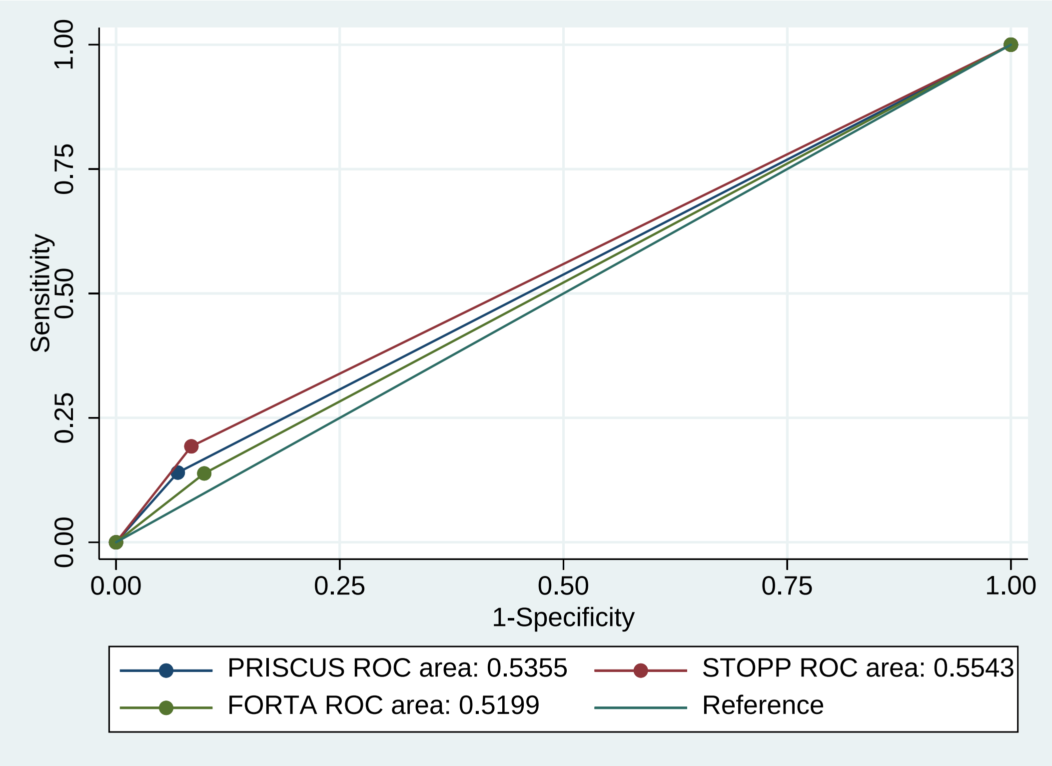
Quartal 6

Tabelle

```
. roccomp uaw_entl_q PRISCUS STOPP FORTA if num_PSF4Q==6, graph sum

                              ROC                    -Asymptotic Normal--
                  Obs        Area     Std. Err.      [95% Conf. Interval]
------------------------------------------------------------------------
PRISCUS         3191814     0.5355      0.0007       0.53417     0.53691
STOPP           3191814     0.5543      0.0008       0.55276     0.55587
FORTA           3191814     0.5199      0.0007       0.51853     0.52126
```

```
------------------------------------------------------------------------------
Ho: area(PRISCUS) = area(STOPP) = area(FORTA)
    chi2(2) =  1153.74       Prob>chi2 =   0.0000
```

Graph



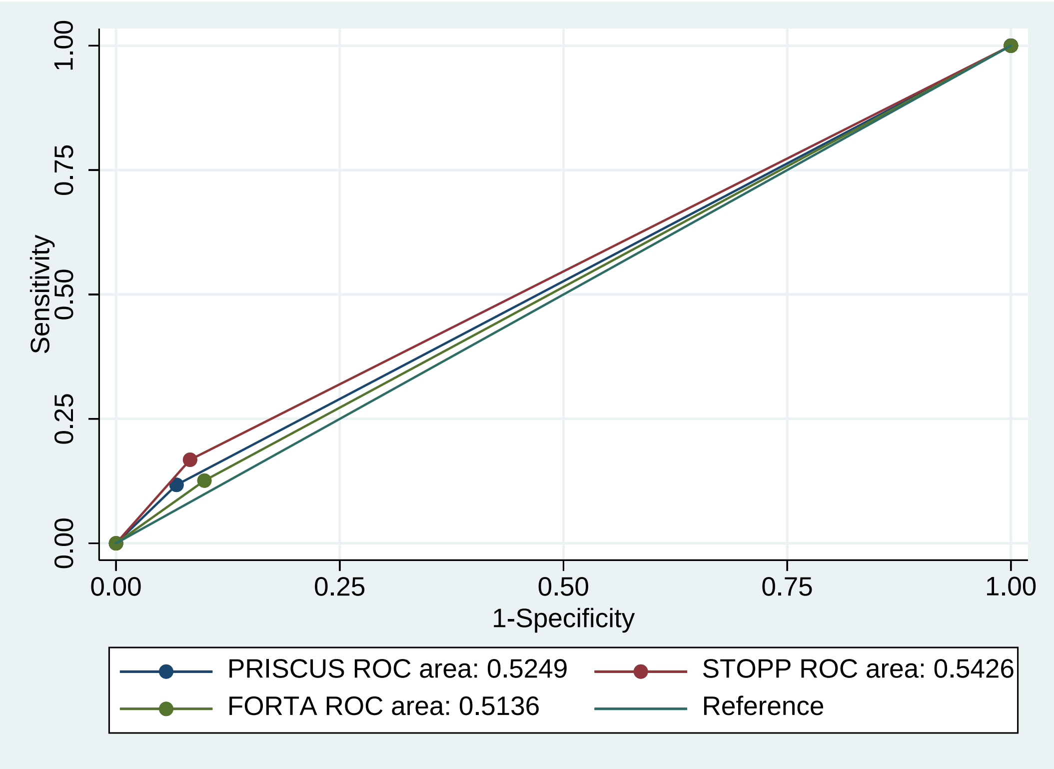
Quartal 7

Tabelle

```
. roccomp uaw_entl_q PRISCUS STOPP FORTA if num_PSF4Q==7, graph sum

                              ROC                    -Asymptotic Normal--
                  Obs        Area     Std. Err.     [95% Conf. Interval]
------------------------------------------------------------------------------
PRISCUS        3148741      0.5249       0.0007        0.52358      0.52619
STOPP          3148741      0.5426       0.0008        0.54107      0.54410
FORTA          3148741      0.5136       0.0007        0.51227      0.51496
```

```
------------------------------------------------------------------------
Ho: area(PRISCUS) = area(STOPP) = area(FORTA)
    chi2(2) =   873.87       Prob>chi2 =   0.0000
```

Graph



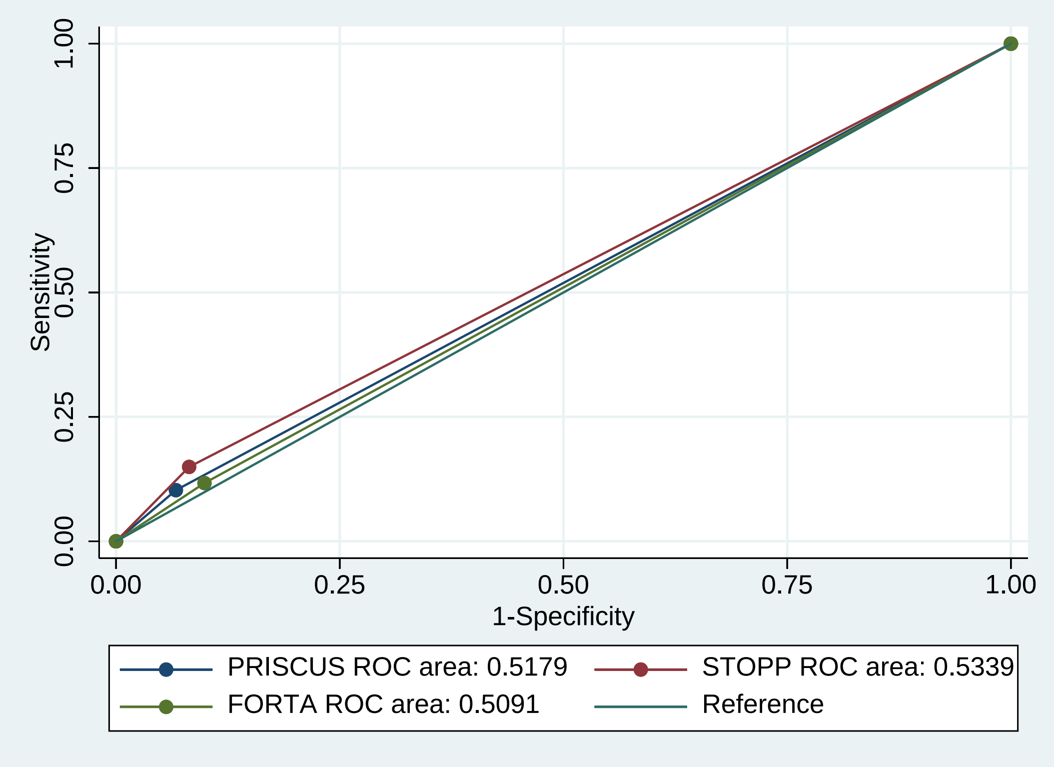
Quartal 8

Tabelle

```
. roccomp uaw_entl_q PRISCUS STOPP FORTA if num_PSF4Q==8, graph sum

                              ROC                    -Asymptotic Normal--
                   Obs       Area     Std. Err.      [95% Conf. Interval]
------------------------------------------------------------------------
PRISCUS        3111862     0.5179       0.0006        0.51671     0.51913
STOPP          3111862     0.5339       0.0007        0.53251     0.53534
FORTA          3111862     0.5091       0.0007        0.50779     0.51036
```

```
------------------------------------------------------------------------
Ho: area(PRISCUS) = area(STOPP) = area(FORTA)
    chi2(2) =   737.16       Prob>chi2 =   0.0000
```

Graph



Prävalent

tod_q

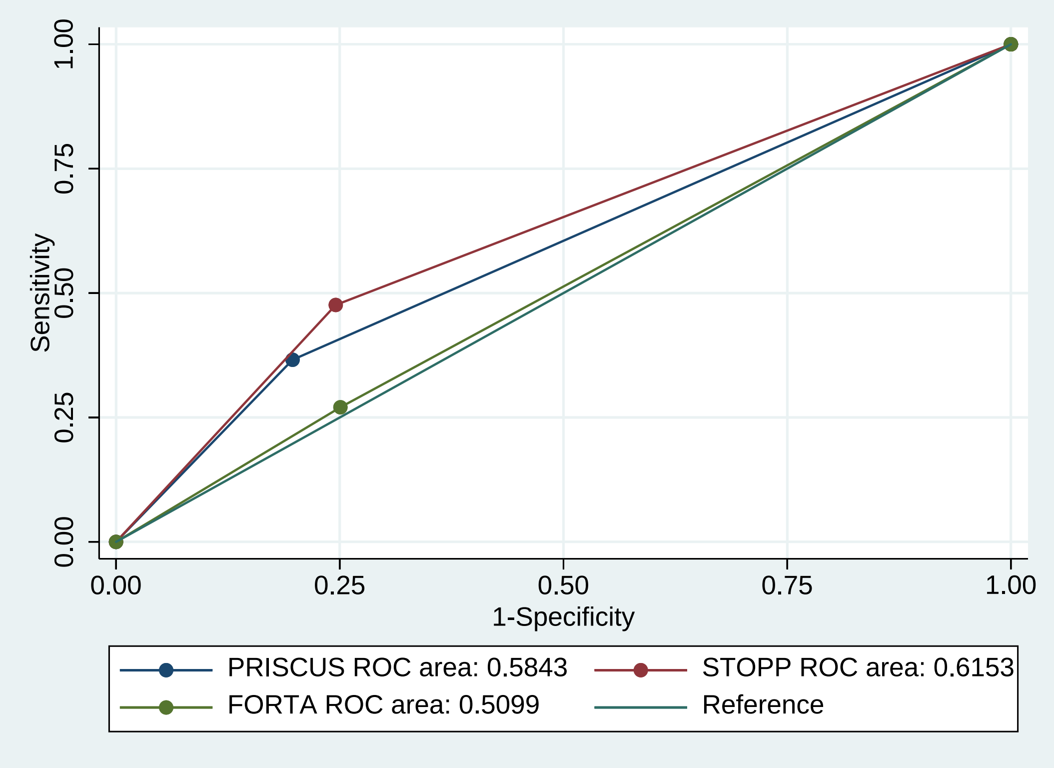
Quartal 5

Tabelle

```
. roccomp tod_q PRISCUS STOPP FORTA if num_PSF4Q_prev==5, graph sum

                              ROC                    -Asymptotic Normal--
                   Obs       Area     Std. Err.      [95% Conf. Interval]
------------------------------------------------------------------------
```

```
PRISCUS         5290656     0.5843        0.0007         0.58289     0.58580
STOPP           5290656     0.6153        0.0008         0.61378     0.61679
FORTA           5290656     0.5099        0.0007         0.50856     0.51124
-------------------------------------------------------------------------
Ho: area(PRISCUS) = area(STOPP) = area(FORTA)
    chi2(2) = 11007.52       Prob>chi2 =   0.0000
```

Graph



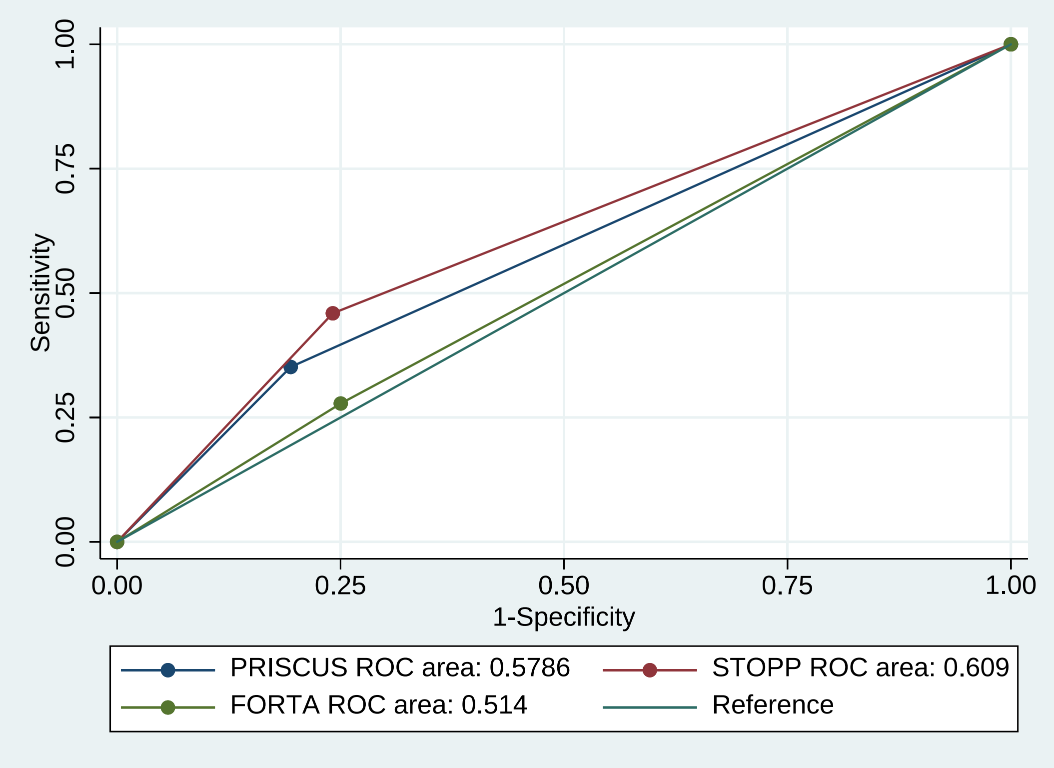
Quartal 6

Tabelle

```
. roccomp tod_q PRISCUS STOPP FORTA if num_PSF4Q_prev==6, graph sum

                              ROC                    -Asymptotic Normal--
                   Obs       Area     Std. Err.      [95% Conf. Interval]
-------------------------------------------------------------------------
```

```
PRISCUS        5183627     0.5786        0.0008         0.57714     0.58012
STOPP          5183627     0.6090        0.0008         0.60747     0.61057
FORTA          5183627     0.5140        0.0007         0.51256     0.51536
-------------------------------------------------------------------------
Ho: area(PRISCUS) = area(STOPP) = area(FORTA)
    chi2(2) =  8665.32       Prob>chi2 =   0.0000
```

Graph



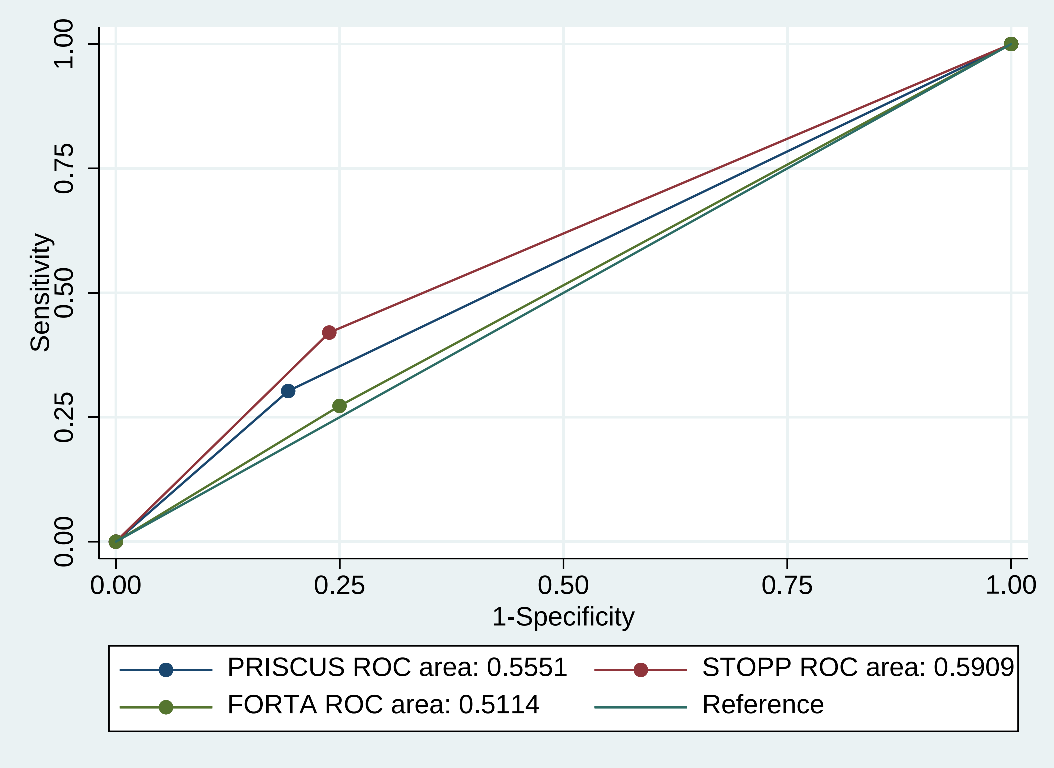
Quartal 7

Tabelle

```
. roccomp tod_q PRISCUS STOPP FORTA if num_PSF4Q_prev==7, graph sum

                              ROC                    -Asymptotic Normal--
                   Obs       Area     Std. Err.      [95% Conf. Interval]
-------------------------------------------------------------------------
```

```
PRISCUS         5083426     0.5551        0.0008          0.55352     0.55671
STOPP           5083426     0.5909        0.0009          0.58915     0.59258
FORTA           5083426     0.5114        0.0008          0.50989     0.51299
-------------------------------------------------------------------------
Ho: area(PRISCUS) = area(STOPP) = area(FORTA)
    chi2(2) =  4772.27       Prob>chi2 =   0.0000
```

Graph



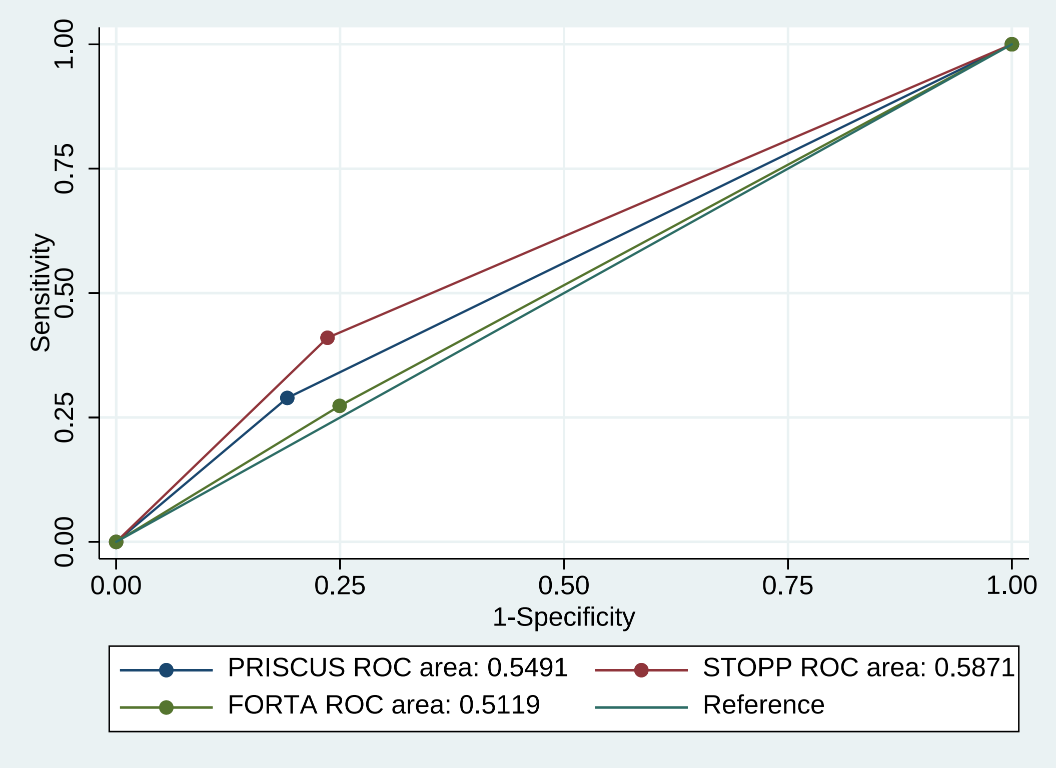
Quartal 8

Tabelle

```
. roccomp tod_q PRISCUS STOPP FORTA if num_PSF4Q_prev==8, graph sum

                                ROC                     -Asymptotic Normal--
                   Obs         Area     Std. Err.      [95% Conf. Interval]
-------------------------------------------------------------------------
```

```
PRISCUS        5002937    0.5491       0.0009        0.54745     0.55079
STOPP          5002937    0.5871       0.0009        0.58532     0.58894
FORTA          5002937    0.5119       0.0008        0.51028     0.51356
-------------------------------------------------------------------------
Ho: area(PRISCUS) = area(STOPP) = area(FORTA)
    chi2(2) =  3757.51       Prob>chi2 =   0.0000
```

Graph



uaw_q (kombiniert Einweisung/Entlassung)

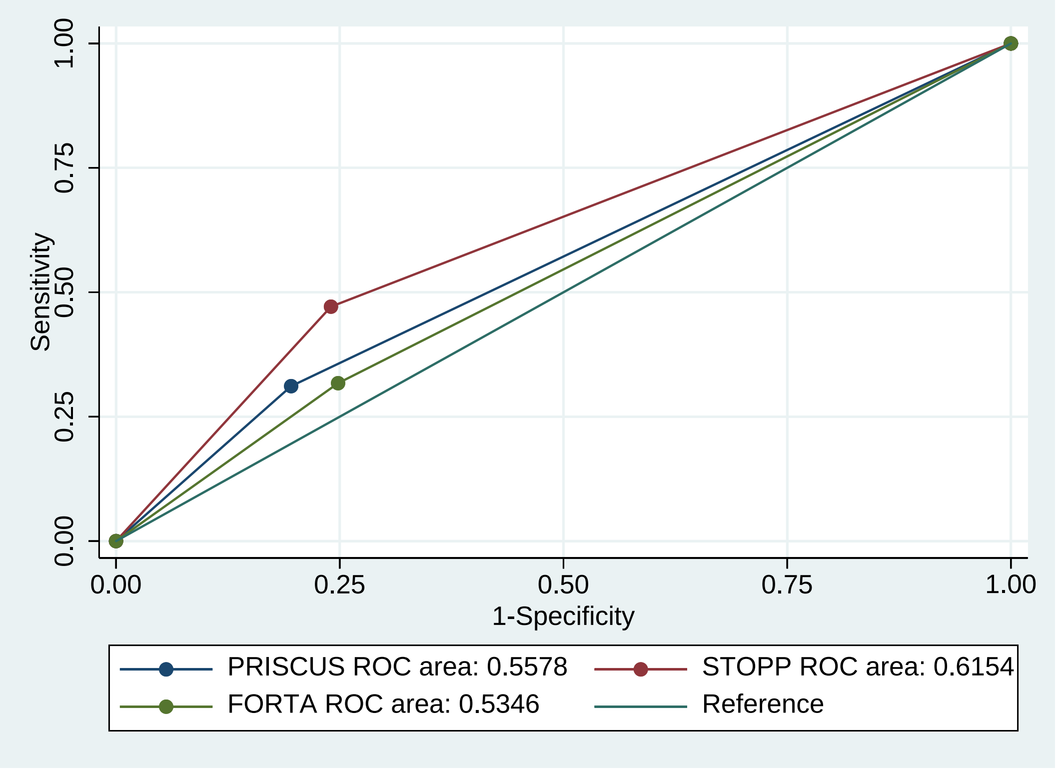
Quartal 5

Tabelle

```
. roccomp uaw_q PRISCUS STOPP FORTA if num_PSF4Q_prev==5, graph sum

                               ROC                    -Asymptotic Normal--
                    Obs       Area     Std. Err.      [95% Conf. Interval]
```

```
-------------------------------------------------------------------------
PRISCUS        5290656     0.5578       0.0005        0.55686     0.55878
STOPP          5290656     0.6154       0.0005        0.61440     0.61648
FORTA          5290656     0.5346       0.0005        0.53362     0.53556
-------------------------------------------------------------------------
Ho: area(PRISCUS) = area(STOPP) = area(FORTA)
    chi2(2) = 13321.90       Prob>chi2 =   0.0000
```

Graph



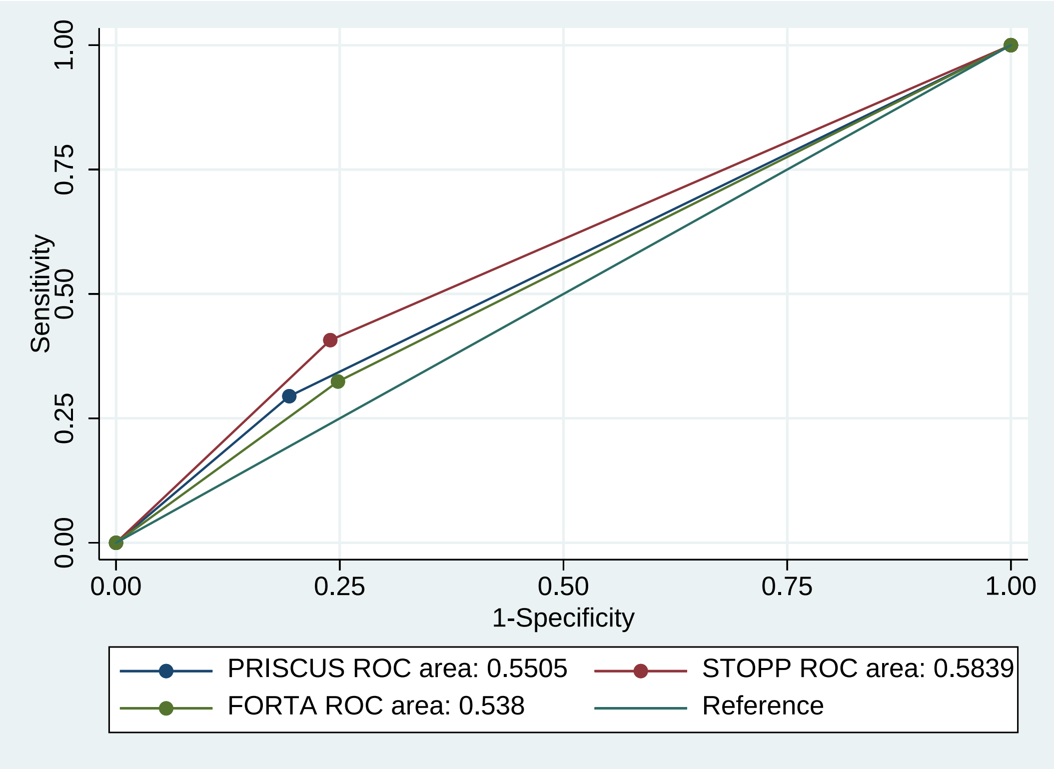
Quartal 6

Tabelle

```
. roccomp uaw_q PRISCUS STOPP FORTA if num_PSF4Q_prev==6, graph sum

                              ROC                    -Asymptotic Normal--
                   Obs        Area     Std. Err.     [95% Conf. Interval]
```

```
--------------------------------------------------------------------------
PRISCUS        5183627     0.5505       0.0005          0.54943      0.55152
STOPP          5183627     0.5839       0.0006          0.58276      0.58501
FORTA          5183627     0.5380       0.0005          0.53694      0.53908
--------------------------------------------------------------------------
Ho: area(PRISCUS) = area(STOPP) = area(FORTA)
    chi2(2) =  3767.82       Prob>chi2 =   0.0000
```

Graph



Quartal 7

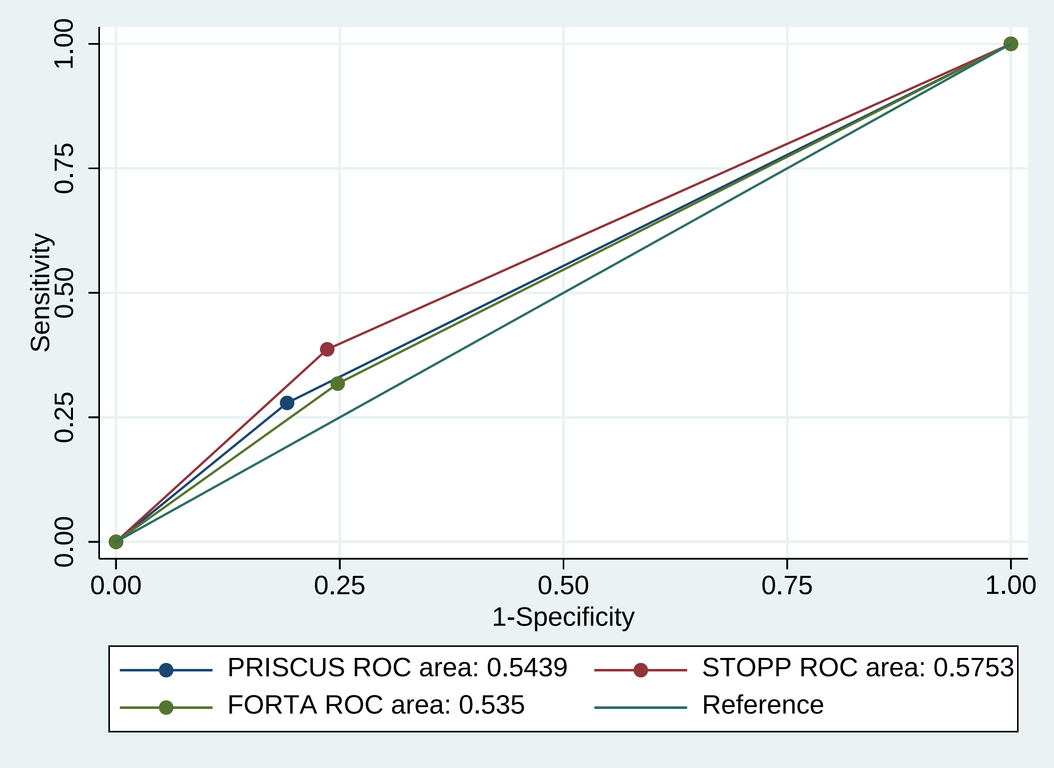
Tabelle

```
. roccomp uaw_q PRISCUS STOPP FORTA if num_PSF4Q_prev==7, graph sum

                              ROC                    -Asymptotic Normal--
```

	Obs	Area	Std. Err.	[95% Conf.	Interval]
PRISCUS	5083426	0.5439	0.0005	0.54285	0.54496
STOPP	5083426	0.5753	0.0006	0.57417	0.57646
FORTA	5083426	0.5350	0.0006	0.53388	0.53608

```
Ho: area(PRISCUS) = area(STOPP) = area(FORTA)
    chi2(2) =  2901.50        Prob>chi2 =   0.0000
```

Graph



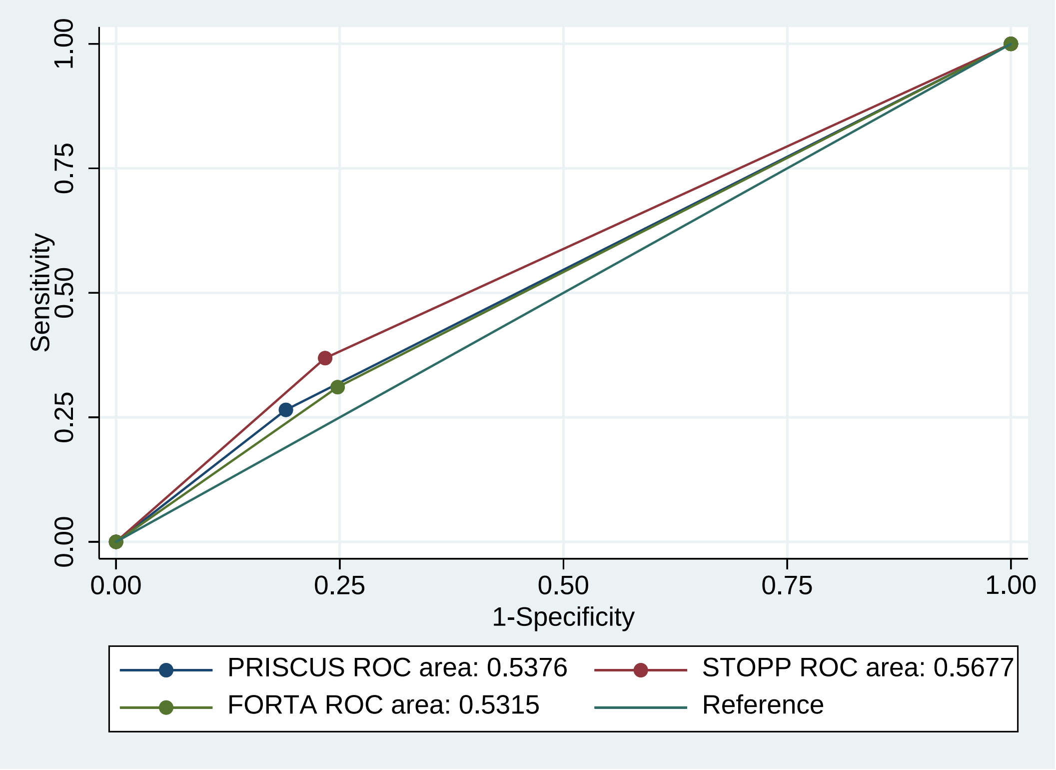
Quartal 8

Tabelle

```
. roccomp uaw_q PRISCUS STOPP FORTA if num_PSF4Q_prev==8, graph sum
```

```
                              ROC                    -Asymptotic Normal--
                   Obs        Area     Std. Err.     [95% Conf. Interval]
-------------------------------------------------------------------------
PRISCUS        5002937      0.5376       0.0005       0.53656     0.53865
STOPP          5002937      0.5677       0.0006       0.56652     0.56880
FORTA          5002937      0.5315       0.0006       0.53043     0.53262
-------------------------------------------------------------------------
Ho: area(PRISCUS) = area(STOPP) = area(FORTA)
    chi2(2) =  2489.09       Prob>chi2 =   0.0000
```

Graph



uaw_einw

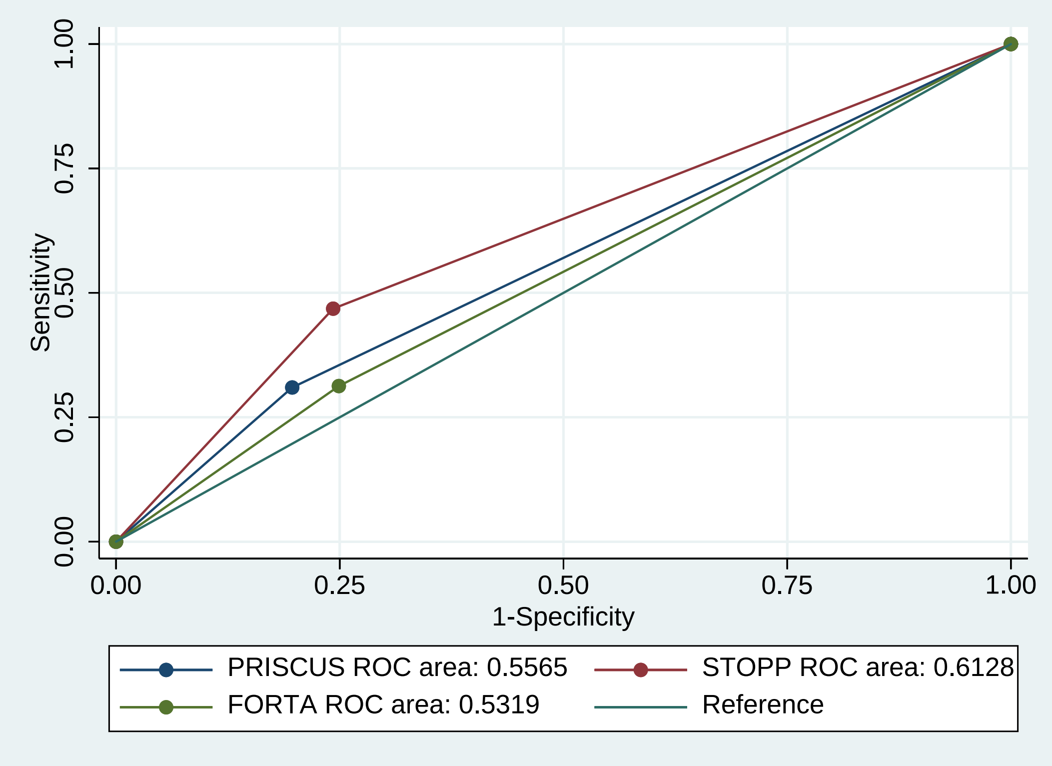
Quartal 5

Tabelle

```
. roccomp uaw_einw_q PRISCUS STOPP FORTA if num_PSF4Q_prev==5, graph sum
```

```
                         ROC                     -Asymptotic Normal--
               Obs       Area     Std. Err.      [95% Conf. Interval]
-------------------------------------------------------------------------
PRISCUS        5290656     0.5565       0.0006        0.55539     0.55757
STOPP          5290656     0.6128       0.0006        0.61163     0.61397
FORTA          5290656     0.5319       0.0006        0.53077     0.53295
-------------------------------------------------------------------------
Ho: area(PRISCUS) = area(STOPP) = area(FORTA)
    chi2(2) = 10384.98       Prob>chi2 =   0.0000
```

Graph



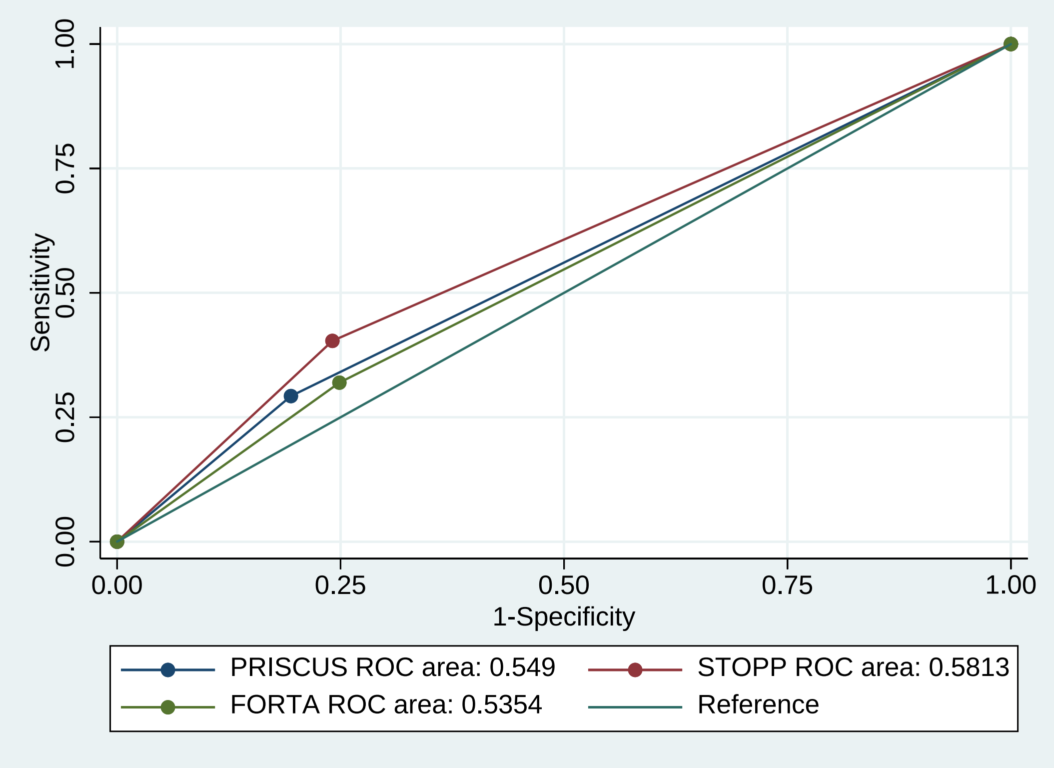
Quartal 6

Tabelle

```
. roccomp uaw_einw_q PRISCUS STOPP FORTA if num_PSF4Q_prev==6, graph sum
```

```
                             ROC                       -Asymptotic Normal--
                  Obs       Area     Std. Err.      [95% Conf. Interval]
-------------------------------------------------------------------------
PRISCUS        5183627     0.5490       0.0006        0.54783     0.55018
STOPP          5183627     0.5813       0.0006        0.58002     0.58256
FORTA          5183627     0.5354       0.0006        0.53421     0.53662
-------------------------------------------------------------------------
Ho: area(PRISCUS) = area(STOPP) = area(FORTA)
    chi2(2) =  2928.45       Prob>chi2 =   0.0000
```

Graph



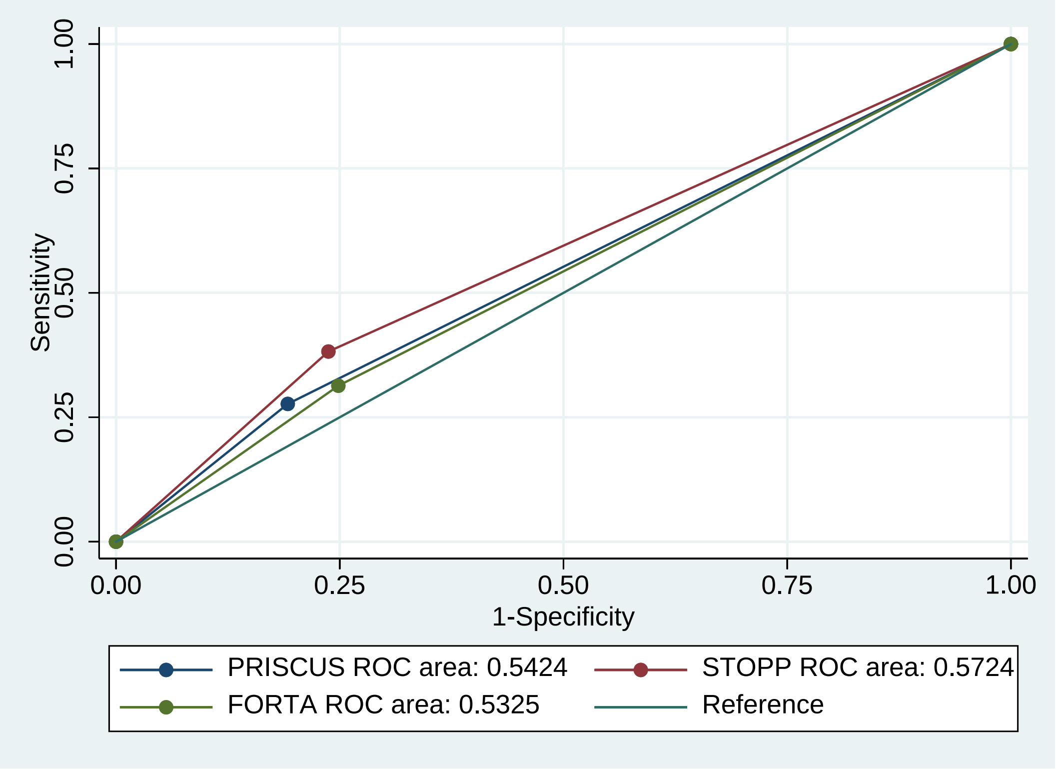
Quartal 7

Tabelle

```
. roccomp uaw_einw_q PRISCUS STOPP FORTA if num_PSF4Q_prev==7, graph sum
```

```
                          ROC                    -Asymptotic Normal--
                  Obs     Area     Std. Err.     [95% Conf. Interval]
------------------------------------------------------------------------
PRISCUS       5083426    0.5424      0.0006       0.54126     0.54364
STOPP         5083426    0.5724      0.0007       0.57107     0.57366
FORTA         5083426    0.5325      0.0006       0.53123     0.53370
------------------------------------------------------------------------
Ho: area(PRISCUS) = area(STOPP) = area(FORTA)
    chi2(2) =  2192.41       Prob>chi2 =   0.0000
```

Graph



Quartal 8

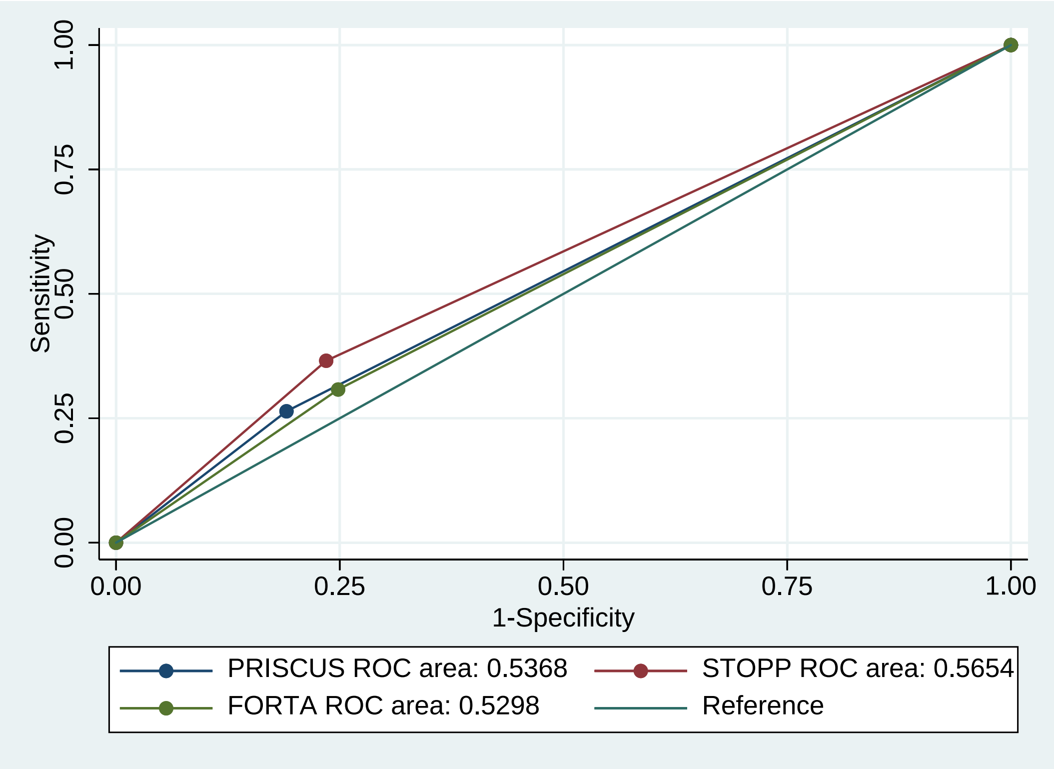
Tabelle

```
. roccomp uaw_einw_q PRISCUS STOPP FORTA if num_PSF4Q_prev==8, graph sum
```

	Obs	ROC Area	Std. Err.	-Asymptotic Normal-- [95% Conf.	Interval]
PRISCUS	5002937	0.5368	0.0006	0.53562	0.53798
STOPP	5002937	0.5654	0.0007	0.56408	0.56666
FORTA	5002937	0.5298	0.0006	0.52854	0.53101

```
Ho: area(PRISCUS) = area(STOPP) = area(FORTA)
    chi2(2) =  1858.87        Prob>chi2 =   0.0000
```

Graph



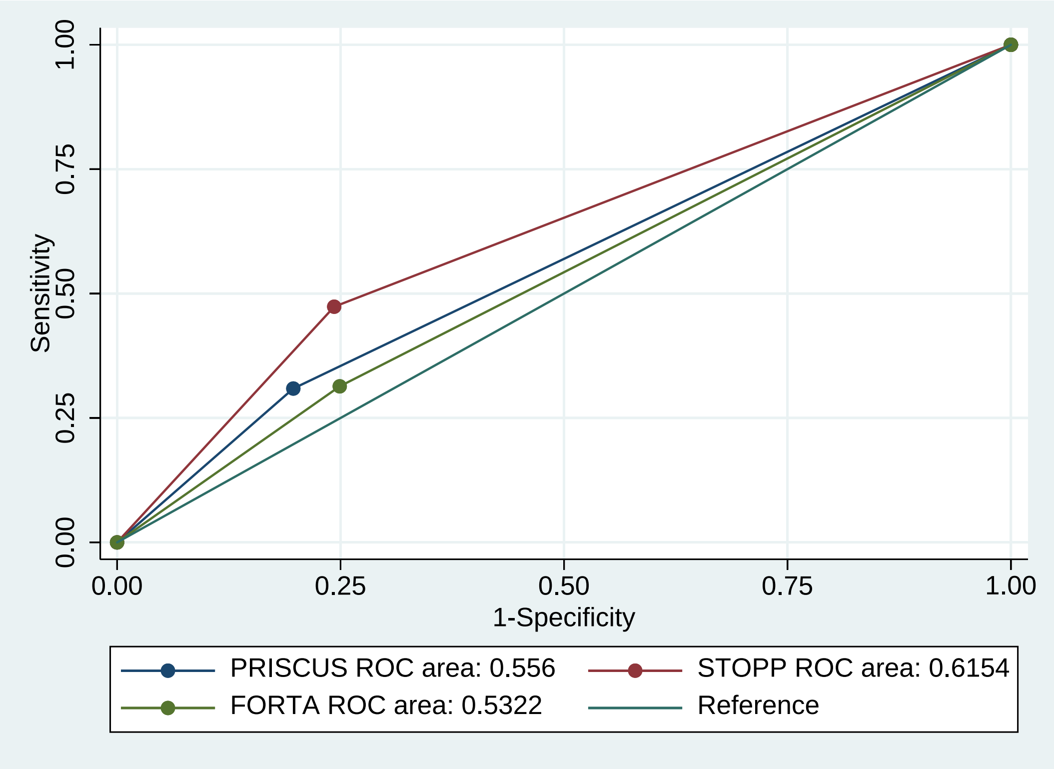
uaw_entl

Quartal 5

Tabelle

```
. roccomp uaw_entl_q PRISCUS STOPP FORTA if num_PSF4Q_prev==5, graph sum

                              ROC                    -Asymptotic Normal--
                   Obs       Area     Std. Err.      [95% Conf. Interval]
-------------------------------------------------------------------------
PRISCUS        5290656     0.5560       0.0006        0.55488     0.55712
STOPP          5290656     0.6154       0.0006        0.61414     0.61656
FORTA          5290656     0.5322       0.0006        0.53110     0.53336
-------------------------------------------------------------------------
Ho: area(PRISCUS) = area(STOPP) = area(FORTA)
    chi2(2) = 10335.14       Prob>chi2 =   0.0000
```

Graph

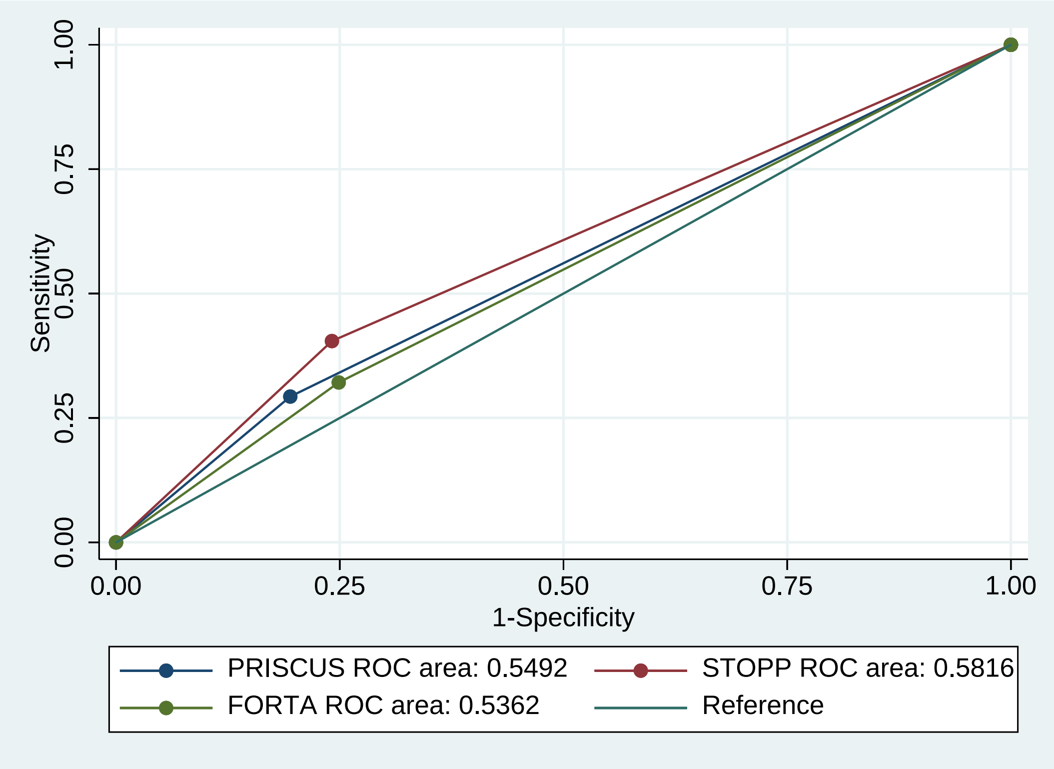


Quartal 6

Tabelle

```
. roccomp uaw_entl_q PRISCUS STOPP FORTA if num_PSF4Q_prev==6, graph sum

                              ROC                    -Asymptotic Normal--
                  Obs        Area     Std. Err.      [95% Conf. Interval]
-------------------------------------------------------------------------
PRISCUS        5183627      0.5492       0.0006        0.54793    0.55037
STOPP          5183627      0.5816       0.0007        0.58033    0.58296
FORTA          5183627      0.5362       0.0006        0.53498    0.53749
-------------------------------------------------------------------------
Ho: area(PRISCUS) = area(STOPP) = area(FORTA)
    chi2(2) =  2674.99       Prob>chi2 =   0.0000
```

Graph

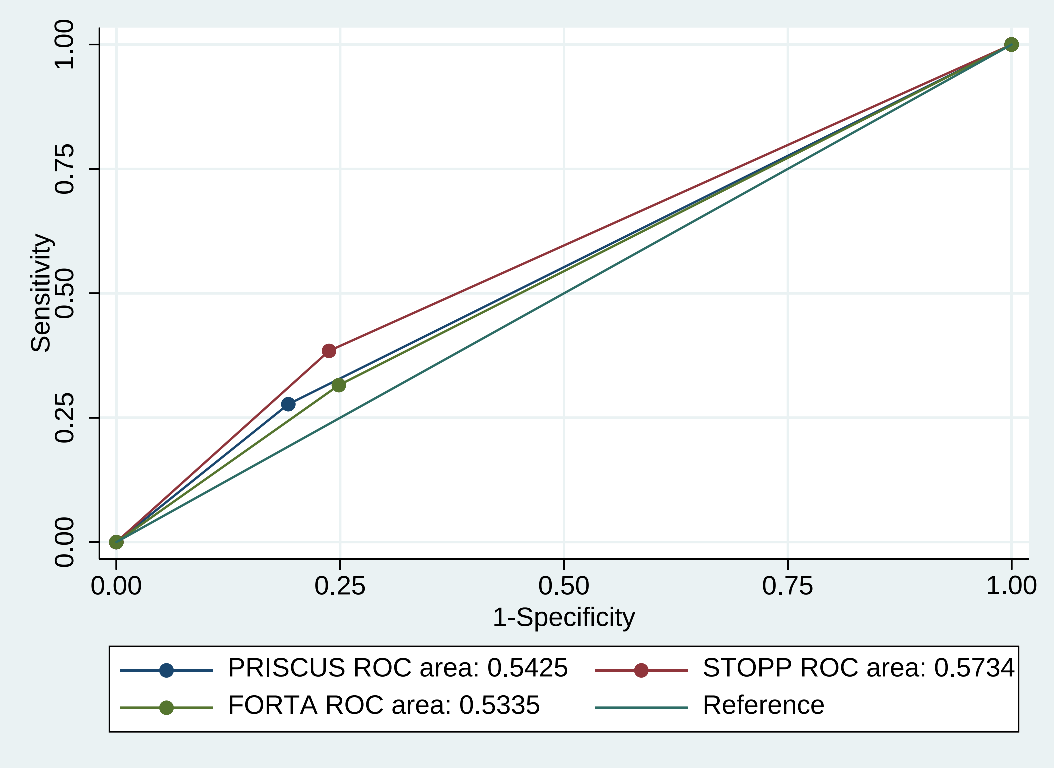


Quartal 7

Tabelle

```
. roccomp uaw_entl_q PRISCUS STOPP FORTA if num_PSF4Q_prev==7, graph sum

                              ROC                    -Asymptotic Normal--
                  Obs       Area     Std. Err.      [95% Conf. Interval]
-------------------------------------------------------------------------
PRISCUS       5083426     0.5425       0.0006        0.54130     0.54378
STOPP         5083426     0.5734       0.0007        0.57202     0.57471
FORTA         5083426     0.5335       0.0007        0.53217     0.53474
-------------------------------------------------------------------------
Ho: area(PRISCUS) = area(STOPP) = area(FORTA)
    chi2(2) =  2061.46       Prob>chi2 =   0.0000
```

Graph

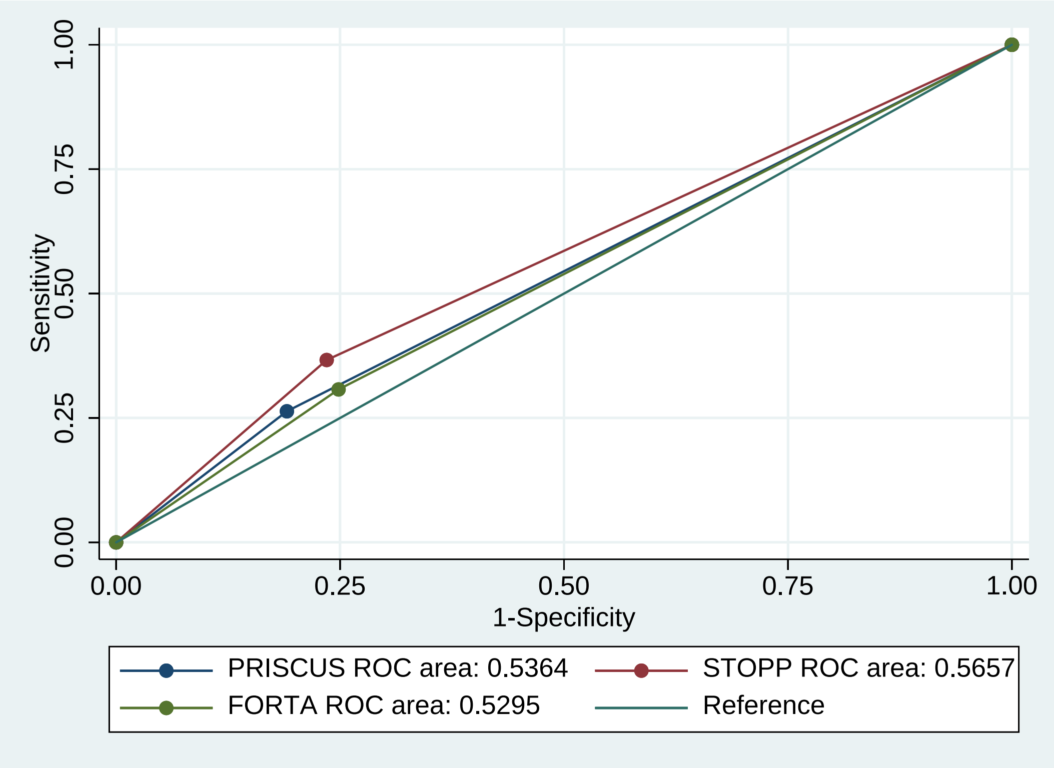


Quartal 8

Tabelle

```
. roccomp uaw_entl_q PRISCUS STOPP FORTA if num_PSF4Q_prev==8, graph sum

                              ROC                    -Asymptotic Normal--
                 Obs         Area     Std. Err.      [95% Conf. Interval]
-------------------------------------------------------------------------
PRISCUS       5002937      0.5364       0.0006        0.53519     0.53763
STOPP         5002937      0.5657       0.0007        0.56437     0.56704
FORTA         5002937      0.5295       0.0007        0.52825     0.53080
-------------------------------------------------------------------------
Ho: area(PRISCUS) = area(STOPP) = area(FORTA)
    chi2(2) =  1794.13       Prob>chi2 =   0.0000
```

Graph


Sensitivity
0.00
0.25
0.50
0.75
1.00
0.00
0.25
0.50
0.75
1.00
1-Specificity
PRISCUS ROC area: 0.5364
STOPP ROC area: 0.5657
FORTA ROC area: 0.5295
Reference

Anlage_2_UAW_Code-Definition

Die Anlage ist über den folgenden Link abrufbar: https://innovationsfonds.g-ba.de/downloads/beschluss-dokumente/36/2021-01-22_PIM-STOP_Ergebnisbericht_Anlage%202.xls

Anlage: Festlegung der ICD10 und ATC Codes für STOPP/START Kriterien Version 2

Progress Report: Festlegung der ICD10 und ATC Codes für STOPP/START Kriterien Version 2

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Abstract

Hintergrund

Mithilfe der STOPP/START-Kriterien ist es möglich, die Pharmakotherapie über adäquate Verordnungen bei Älteren zu verbessern. Jedoch sind die Definitionen der STOPP/START-Kriterien aus dem klinischen Kontext heraus formuliert, weshalb zu deren Anwendung auf Sekundärdaten eine spezifische Definition notwendig wird. Ziel dieses Projekts war daher die Spezifikation der STOPP/START Kriterien Version 2 auf Basis abrechungsrelevanter internationaler Diagnose- (ICD10) und Arzneimittel-Codes (ATC), um computergesteuerte Extraktion aus Krankenakten und klinischen Datenbänken zu ermöglichen.

Methoden

Bei den STOPP/START-Kriterien, die auf Grundlage der ersten Version aus 2008 in der zweiten Version aus 2014 beibehalten wurden, konnte auf bereits etablierte Spezifikationen zurückgegriffen werden, wobei eine Translation von ICD9 in ICD10 Codes notwendig war. Bei in 2014 neu hinzugekommenen oder angepassten Kriterien musste eine komplett neue Übertragung klinischer Informationen in entsprechende ICD10- und ATC-Codes festgelegt werden.

Ergebnisse

Es konnten 73 von 81 STOPP- und alle 34 START-Kriterien anhand ihrer entsprechenden ICD10 und ATC Codes definiert werden. Bei Acht Kriterien war keine Übertragung aufgrund nicht zugänglicher Information möglich. Bei anderen Kriterien sind teilweise noch weitere Variablen nötig, die nicht explizit in Sekundärdaten vorhanden sind.

Konklusion

Die STOPP/START Kriterien Version 2 wurden anhand internationaler Kodierungssysteme spezifiziert, die üblicherweise von Krankenhäusern und Krankenkassen angewendet werden. Dadurch sind diese Verordnungskriterien für die Versorgungsforschung nutzbar. Eine weitere Überprüfung durch klinische Experten könnte die Güte und Prädiktivität der Übersetzung noch erhöhen.

Einleitung

Aufgrund der demographischen Entwicklung in Deutschland nimmt die Zahl an älteren Patienten zu und die Ausgaben im Gesundheitssektor steigen [1]. Dadurch gewinnt die Analyse der Qualität der medizinischen Versorgung derzeit an Bedeutung. In den Vordergrund tritt dabei die Untersuchung von Gefährdungen der Patienten durch den Arzneimitteltherapieprozess [2,3]. Insbesondere seit dem vom Institute of Medicine im Jahr 1999 veröffentlichten Bericht „To err is human“ [4] nahm das Interesse an der Arzneimitteltherapiesicherheit stetig zu. In Deutschland gibt es geschätzte 10.000 – 60.000 Todesfälle durch Medikationsfehler pro Jahr [5]. Dabei machen Verordnungsfehler etwa drei Viertel der Medikationsfehler aus [6-8]. Aufgrund von physiologischen Veränderungen und zunehmender Komorbidität im Alter sind ältere Patienten besonders gefährdet für die negativen Auswirkungen solcher Fehler [9]. Verordnungsfehler sind häufig bei älteren Patienten und mit unerwünschten Arzneimittelwirkungen [10], Hospitalisierung [11], zunehmenden Kosten [12] und Tod [13] verbunden.

Ein Ansatz zur Verbesserung der Arzneimittelsicherheit in dieser Altersgruppe ist die Formulierung von STOPP/START Kriterien [14]. Diese Kriterien beinhalten potentiell inadäquate Arzneimittel, etwa aufgrund der häufigen Beteiligung an Interaktionen bei älteren Patienten, des negativen Nutzen-Risiko-Verhältnisses oder des Vorhandenseins sichererer und effektiverer Alternativen (STOPP-Kriterien). Dazu kommt der Aspekt der Unterversorgung mit alterserprobten Arzneimitteln mit klarer Evidenz für deren Nutzen (START-Kriterien). Die Häufigkeit der Unterversorgung mit diesen Arzneimitteln lässt diesen Aspekt als mindestens gleichwertig erscheinen [15]. Allgemein werden in diesen expliziten, aber kontextabhängigen Kriterien risikorelevante Faktoren, wie Komedikation, Komorbidität, Drug-Disease-Interaktionen, Dosis u.a. berücksichtigt.

Allerdings sind die Definitionen der STOPP/START-Kriterien nicht zur Anwendung in Sekundärdaten spezifiziert [16]. Dazu bedarf es einer konketen Festlegung, zum Beispiel für Definitionen wie „long-acting benzodiazepines“ oder „peripheral vascular symptoms“. Eine Spezifizierung der Kriterien in kodierte Erkrankungen oder Symptome und Medikamente stellt einen wichtigen Schritt dar. Außerdem ist die manuelle Applikation zeitaufwändig und erfordert ein hohes Maß an Familiarität. Eine computergestützte Extraktion von den STOPP/START-Kriterien würde die Identifikation von inadäquaten Verordnungen bei älteren Patienten erleichtern [16]. Ziel dieses Projekts war daher die Spezifikation der STOPP/START-Kriterien Version 2 [17] anhand internationaler Diagnose- und Arzneimittel-Codes, um sie für Forschung in Sekundärdaten nutzbar zu machen.

Material und Methoden

STOPP/START Kriterien

Die STOPP/START-Kriterien bestehen aus zwei Komponenten. Die erste Komponente, die Kriterien für potenziell ungeeignete Verschreibungen bei älteren Patienten umfasst, heißt STOPP (Screening Tool of Older Person`s Prescriptions). Die zweite Komponente namens START (Screening Tool to Alert doctors to Right Treatment) beinhaltet Kriterien für angemessene indizierte Behandlung und dient der Identifikation von Unterversorgung im klinischen Alltag.

Um die STOPP/START-Kriterien auch in retrospektiven Auswertungen von Sekundärdaten verwenden zu können, wurden die klinischen Formulierungen der STOPP/START Version 2 [17] in internationale Diagnosen-Codes (ICD10; International Statistical Classification of Diseases) und Arzneistoffe-Codes (ATC; Anatomical Therapeutic Chemical Classification) übersetzt.

Vergleich von STOPP/START Kriterien Version 1 und 2

Die STOPP/START-Kriterien Version 1 [14] und die STOPP/START-Kriterien Version 2 wurden miteinander verglichen. Es wurde bewertet, welche neuen evidenzbasierten Kriterien hinzugefügt, welche obsoleten Kriterien herausgenommen und welche Kriterien verändert wurden.

Übersetzung von unveränderten Kriterien

Die Kriterien, die aus Version 1 unverändert oder unwesentlich verändert in die Version 2 übernommen wurden, wurden unter Verwendung der Publikation von deGroot et al. [18] übersetzt, in der ICD9 und ATC Codes für STOPP/START Kriterien Version 1 bereits spezifiziert wurden (Abbildung 1). Dabei wurden die ATC Codes von deGroot et al. übernommen. Die verwendeten ICD9 Codes wurden mit Hilfe der ICD10Data.com Website [19] in ICD10 Codes konvertiert.

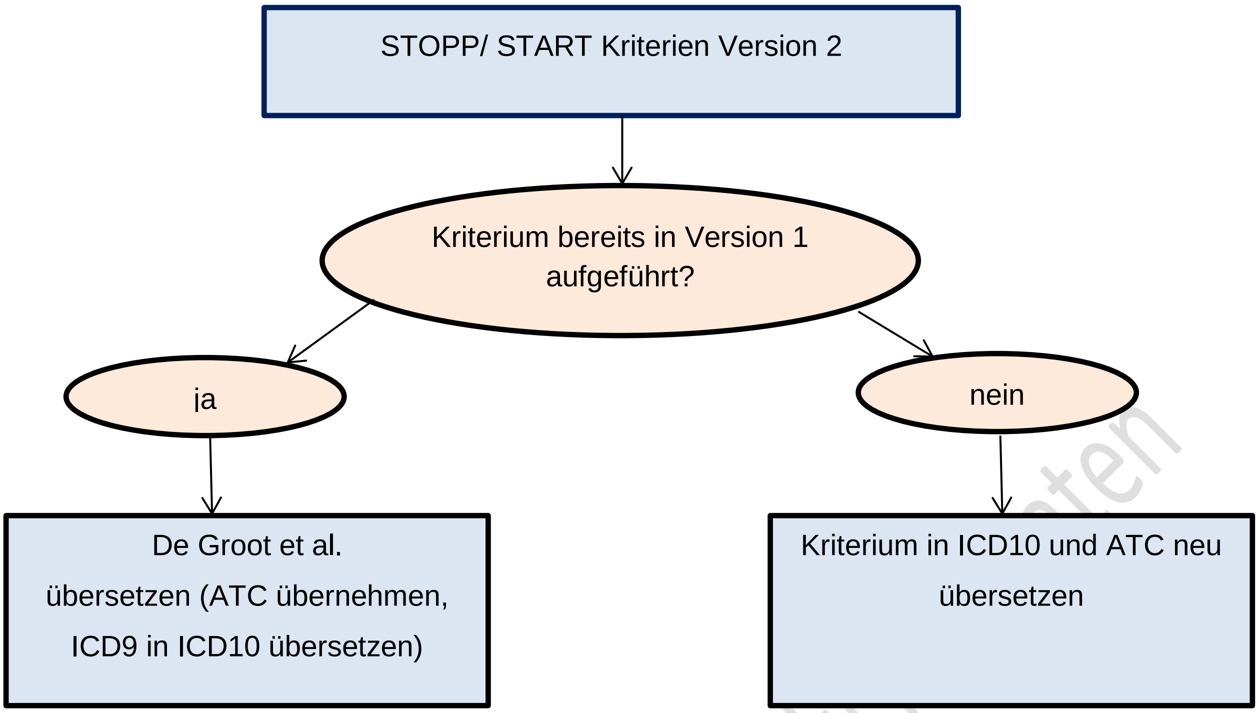

Abbildung 1: Schematische Darstellung zur Vorgehensweise; STOPP/START Kriterien von Version 2 enthalten alte Kriterien von Version 1, die bereits von de Groot et al. in entsprechende ICD9 und ATC Codes übersetzt wurden, und neue Kriterien. Bei den alten Kriterien wurde die Übersetzung von ICD9 in ICD10 Codes durchgeführt. Bei den neuen Kriterien mussten die ICD10 und ATC Codes neu identifiziert werden.

Übersetzung von neuen Kriterien

Die STOPP/START Kriterien, die in der Version 2 neu hinzugekommen sind, wurden komplett neu spezifiziert. Arzneistoffe oder Arzneistoffgruppen wurden gemäß des ATC Klassifikationssystems kodiert. Die entsprechenden ATC Codes wurden der WIdO-Liste 2014 (Wissenschaftliches Institut der AOK) [20] entnommen. Dabei umfassen die übersetzten Definitionen neben den Monopräparaten mit jeweils einem wirksamen Bestandteil auch die Kombinationspräparate, die den im Kriterium genannten Wirkstoff enthalten. Krankheiten und Symptome wurden gemäß der Internationalen Klassifikation der Krankheiten Version 10 (ICD10) kodiert. Die entsprechenden ICD10 Codes wurden mit Hilfe von Websites ICD10Data.com [19] und ICD-Code.de [21] identifiziert. Außerdem wurden in Version 2 Kriterien identifiziert, die aufgrund von fehlender Information oder unklarer Definition nicht umgesetzt werden konnten.

Berichten der Ergebnisse und Optimierung

Die Ergebnisse wurden in einer Tabelle (Anhang 1) dargestellt. Bei Unsicherheit über die entsprechenden Diagnose- oder Arzneistoffe-Codes wurden alle möglichen Optionen und Überlegungen in der Kommentarspalte notiert. Die Tabelle wurde durch eine zweite Person geprüft; Abweichungen und Unklarheiten wurden anschließend im Gespräch geklärt.

Ergebnisse

Die Version 2 umfasst 81 STOPP- und 34 START-Kriterien. Verglichen mit der Version 1 waren bei der Version 2 44 STOPP/START-Kriterien neu hinzugekommen und 15 STOPP/START-Kriterien wurden herausgenommen.

Von 81 STOPP-Kriterien wurden 41 Kriterien vollständig, 32 Kriterien teilweise und 8 Kriterien nicht umgesetzt. Bei den nur teilweise umgesetzten Kriterien fehlten Informationen, wie zum Beispiel das Alter des Patienten, Angaben zur Dosis des Arzneimittels oder zum Schweregrad der Erkrankung usw., die nicht in ICD10- und ATC-Codes übersetzt werden konnten. Je nach Datenbasis sind diese Informationen jedoch potenziell zugänglich. Bei den nicht umsetzbaren Kriterien fehlten die essentielle Informationen, die nicht in ICD10- und ATC-Codes abgebildet sind. Von 34 START Kriterien wurden 11 Kriterien vollständig und 23 Kriterien nur teilweise umgesetzt, da zusätzlich noch weitere Variablen nötig waren.

Exemplarische Vorgehensbeschreibung

Im Folgenden wird anhand einiger herausgegriffener STOPP/START-Kriterien die Vorgehensweise zur Festlegung der ICD10- und ATC-Codes erklärt.

Das STOPP-Kriterium B1 lautet: „Digoxin für Herzinsuffizienz mit normaler systolischer Funktion der Herzventrikeln“. Digoxin wurde als ATC Code C01AA05 („Digoxin“) und C01AA55 („Kombinationen von Digoxin“) übersetzt. Herzinsuffizienz wurde mit dem ICD10-Code I50 spezifiziert. Da es keinen ICD10-Code für normale systolische Funktion der Herzventrikeln gab, wurden die Codes I50 NOT (I50.2 AND I50.4) verwendet. Ausschluss von I50.2 (systolische Herzinsuffizienz) und I50.4 (kombinierte systolische und diastolische Herzinsuffizienz) deutet auf normale systolische Funktion hin.

Außerdem war die Nierenfunktion bei Digoxin-Gabe wichtig, so hieß das STOPP Kriterium E1: „Langfristige Digoxin-Gabe mit einer Dosis von mehr als 125 µg/Tag bei akuter oder chronischer Nierenkrankheit mit glomerulärer Filtrationsrate (GFR) unter 30 ml/min/1,73 m^2“. Es wurden folgende ICD10 Codes benutzt: N17 (akutes Nierenversagen) OR N18.4 (chronische Nierenkrankheit, Stadium 4, mit GFR < 30 ml/min/1,73 m^2) OR N18.5 (chronische Nierenkrankheit, Stadium 5, mit GFR < 15 ml/min/1,73 m^2) OR N19 (nicht näher bezeichnete Niereninsuffizienz) OR R94.4 (abnorme Ergebnisse von Nierenfunktionsprüfungen (inkl.: Nierenfunktionstest mit abnormem Befund)). Da akutes Nierenversagen reversibel ist, wurde der entsprechende Code (N17) miteingeschlossen, wenn akutes Nierenversagen im letzten Jahr auftrat. Das Kriterium konnte nicht vollständig umgesetzt werden, da Variablen wie Dosis > 125 µg/Tag, langfristige Einnahme und akutes Nierenversagen im letzten Jahr benötigt wurden. Gegebenenfalls kann diese Information jedoch extrahiert werden, etwa durch Verlinkung von Datenbanken oder umfassenden Krankenkassendaten.

Das STOPP-Kriterium C10 lautet: „NSARs zusammen mit Vitamin-K-Antagonisten, direkten Thrombininhibitoren oder Faktor-Xa-Inhibitoren (Risiko einer gastrointestinalen Blutung)“. Das Kriterium wurde übersetzt in folgende ATC Codes: (M01A (nichtsteroidale Antiphlogistika und Antirheumatika) OR N02BA (Salicylsäure und Derivate)) AND (B01AA (Vitamin-K-Antagonisten) OR B01AE (direkte Thrombininhibitoren) OR B01AF (direkte Faktor-Xa-Inhibitoren) OR B01AB09 (Danaparoid) OR B01AX05 (Fondaparinux)). Danaparoid und Fondaparinux vertreten die indirekten Faktor-Xa-Inhibitoren.

Das START Kriterium A1 “Vitamin-K-Antagonisten oder direkte Thrombininhibitoren oder Faktor-Xa-Inhibitoren bei chronischem Vorhofflimmern” wurde übersetzt in: (I48 (Vorhofflimmern und Vorhofflattern)) NOT (B01AA (Vitamin-K-Antagonisten) OR B01AE (direkte Thrombininhibitoren) OR B01AF (direkte Faktor-Xa-Inhibitoren) OR B01AB09 (Danaparoid) OR B01AX05 (Fondaparinux)). Es wurde der ICD10-Code für Vorhofflimmern und -Flattern verwendet, da diese weitgefasste Definition im Delphi-Prozess von deGroot et al. ICD9 427.3 (Vorhofflimmern und Vorhofflattern) selektiert wurde.

Das START Kriterium E3 „Vitamin D und Calcium-Ergänzungsmittel für Patienten mit bekannter Osteoporose und/oder früheren Frakturen (T-Wert der Knochendichtemessung höher als -2,5)“ wurde übersetzt in: ((M80 OR M81 OR M82) OR (S22 OR S32 OR S42 OR S52 OR S62 OR S72 OR S82 OR S92)) NOT ((A12AA OR A12AX OR A11JB) AND (A11CC OR A11CB OR A12AX)). M80 bis M82 standen für Osteoporose mit pathologischer Fraktur (M80), ohne pathologische Fraktur (M81) und bei anderenorts klassifizierten Krankheiten (M82). S22 bis S92 waren ICD10-Codes für Frakturen der Rippe(n), des Sternums und der Brustwirbelsäule (S22), der Lendenwirbelsäule und des Beckens (S32), im Bereich der Schulter und des Oberarmes (S42), des Unterarmes (S52), im Bereich des Handgelenkes und der Hand (S62), des Femurs (S72), des Unterschenkels, einschließlich des oberen Sprunggelenkes (S82) und des Fußes (S92). Es wurden Codes für Fraktur des Schädels und der Gesichtsschädelknochen (S02) und Fraktur im Bereich des Halses (S12) ausgeschlossen, da es bei einem Sturz oder Fall der älteren Patienten so gut wie nie zu Brüchen dieser Knochen kommt. S02 und S12 konnten nicht in einen Zusammenhang mit Osteoporose gebracht werden. Die verwendeten ATC Codes standen für Calcium (A12AA), Calcium, Kombinationen mit Vitamin D und/oder anderen Mitteln (A12AX), Calciumcarbonate plus Vitamine (Calcevita) (A11JB), Vitamin D und Analoga (A11CC) und Vitamin A und D in Kombination (A11CB). Zur vollständigen Umsetzung des Kriteriums fehlten solche Variablen wie frühere Brüche, T-Wert der Knochendichtemessung und Alter des Patienten.

Für das START Kriterium B1 „Regulär inhalierte ß2-Agonisten oder antimuskarinische Bronchodilatatoren (z. B. Ipratropium, Tiotropium) für mildes bis mittelschweres Asthma oder COPD“ wurden folgende ICD10- und ATC-Codes festgelegt: (J41 OR J43 OR J44 OR J45) NOT (R03AC OR R03BB). Dabei wurde COPD durch die Codes J41 (einfache und schleimig-eitrige chronische Bronchitis), J43 (Emphysem) und J44 (sonstige chronische obstruktive Lungenkrankheit) und Asthma durch J45 (Asthma bronchiale) dargestellt. R03AC stand für selektive ß2-Adrenozeptor-Agonisten und R03BB für Anticholinergika. Auftretende Komplikationen bei der Übersetzung dieses Kriteriums waren das Fehlen eines reinen ICD10-Codes für COPD und Schweregrad des Asthmas.

Diskussion

Das Ziel dieses Projekts bestand darin, evidenzbasierte Verordnungskriterien in ein für Sekundärdaten anwendbares Format zu übersetzen. Es wurden 73 von 81 STOPP und alle 34 START Kriterien übersetzt. Bei dem Prozess der Übersetzung sind einige Schwierigkeiten mit den fehlenden entsprechenden Codes und der Interpretation und Spezifikation von manchen Erkrankungen und Arzneimittelgruppen aufgetreten. Obwohl viele Kriterien leicht zu übersetzen waren, enthielten manche Kriterien Diagnosen, die aufgrund ihrer breiten Definition verschieden interpretiert werden konnten. So ist zum Beispiel bei „Cerebral, coronary or peripheral vascular symptoms / disease“ nicht eindeutig klar, welche Diagnosen zu dieser Formulierung gehören. Es wurde zum Beispiel entschieden Arteriosklerose nicht in diese Formulierung miteinzuschließen, da Arteriosklerose ohne eine klinische Manifestierung keinen medizinischen Eingriff benötigt. Viele Kriterien erforderten außerdem eine Literaturrecherche für eine korrekte Spezifikation. Zum Beispiel war es schwer „ein erhöhtes Risiko für Osteoporose“ zu spezifizieren, weil es viele Risikofaktoren gibt. Oder es war schwer festzulegen, welche ICD10 Codes zu „history of falling or tendency to fall“ gehören oder welche Antihistaminika als Antihistaminika der ersten Generation betrachtet wird. Für manche Diagnosen oder Symptome konnte nicht immer ein entsprechender oder völlig übereinstimmender ICD10-Code gefunden werden: so gab es zum Beispiel für „ankle oedema“ ein ICPC (International Classification of Primary Care) aber keinen entsprechenden ICD10-Code. Einige Kriterien enthielten Variablen wie zum Beispiel biochemische Werte, klinische Information wie etwa Blutdruck oder Alter des Patienten und Schweregrad oder chronischer Aspekt einer Erkrankung. Da diese Variablen nicht in ICD10-Codes übersetzt werden konnten, wurden sie in einer extra Spalte in der Tabelle, bezeichnet als „Comment“ dargestellt. Im Vergleich zur Übersetzung der Version 1 konnten bei der Version 2 mehr Kriterien nicht übersetzt werden (Version 1: 1 STOPP-Kriterium wurde nicht übersetzt; Version 2: 8 STOPP-Kriterien). Das lag daran, dass bei der Version 2 44 STOPP/START-Kriterien neu hinzugekommen waren und manche Formulierungen wie zum Beispiel „Any drug prescribed without an evidence-based clinical indication“ nicht in ATC- und ICD-Codes übersetzt werden konnten.

Die Stärke dieses Projekts besteht darin, dass die STOPP/START Kriterien Version 2 anhand internationaler Kodierungssysteme (ICD10- und ATC-Codes) übersetzt wurden, die üblicherweise von Krankenkassen oder Krankenhäusern angewendet werden. Dadurch kann die Nutzung der Verordnungskriterien in der Versorgungsforschung ermöglicht werden. Im klinischen Alltag könnten die in ICD10- und ATC-Codes übersetzten STOPP/START-Kriterien für die Entwicklung eines computergesteuerten Programms verwendet werden, welches die ärztlichen Verordnungen unterstützen soll.

Limitationen

Dieses Projekt weist aber auch einige Limitationen auf. Die Spezifizierung ist konzipiert für perfekte Kodierung, welche im klinischen Alltag nicht immer selbstverständlich ist. Zum Beispiel könnte in der klinischen Praxis anstatt Vorhofflimmern auch Palpitation kodiert werden. Außerdem konnten nicht alle Kriterien (vollständig) in entsprechende ICD10-Codes übersetzt werden. Das könnte zu einer Nichtberücksichtigung führen und dadurch könnten falsch-positive Ergebnisse entstehen. Jedoch können bei nicht vollständig umgesetzten Kriterien alternative Daten genutzt werden, wie zum Beispiel biochemische Werte für STOPP-Kriterium D4 („Selective serotonin re-uptake inhibitors (SSRI’s) with current or recent significant hyponatraemia i.e. serum Na+ < 130 mmol/l“).

Generell ist auch die Validierung von Diagnose Codes schwierig: So ist zum Beispiel beschrieben, dass die Diagnose Codes für COPD (START B1 und B2) bei älteren Patienten geringe Validität haben [22]. Bei Patienten im Alter von 65 Jahren oder älter war COPD in der Krankenversicherungsdatenbank RAMQ (Régie de l’assurance-maladie du Québec) zweimal häufiger verbreitet als in der National Population Health Survey in 1994/1995. 47% der Patienten im Alter von 65 Jahren oder älter hatten kein Rezept für Beta-2-Agonisten eingelöst (First-Line-Therapie für COPD während der Zeitdauer der Studie). Außerdem erschienen 42% der Patienten mit einer RAMQ-Diagnose von COPD nur einmal mit dieser Diagnose in der Datenbank. Das alles deutet auf eine geringe Validität des COPD Codes hin. Somit sollten allgemein die Diagnose Codes auf Validität geprüft werden, bevor sie in der Versorgungsforschung genutzt werden und Studienergebnisse, die sich auf Diagnose Codes mit unbekannter oder geringer Validität stützen entsprechend kritisch bewertet werden. Auch der Diagnose Code für Vorhofflimmern (START A1) weist laut der Publikation von Navar-Boggan [23] eine Misklassifikation von bis zu 12% auf, wenn man damit Patienten identifizieren will, die tatsächlich Vorhofflimmern besitzen. Die Misklassifikation kann jedoch durch Miteinbeziehen von Diagnose Codes für Begleiterkrankungen wie Herzinsuffizienz, Diabetes mellitus, arterielle Hypertonie, Schlaganfall oder transitorische ischämische Attacke und Gefäßerkrankungen (Herzinfarkt, pAVK) minimiert werden, wenn diese Erkrankungen innerhalb des vorangegangenen Jahres aufgetreten sind [23]. Das Benutzen eines auf CHA2DS2-VASc-Score basierten Algorithmus minimiert die Misklassifikation ebenso [23].

Andere Diagnose Codes wie zum Beispiel für Herzinsuffizienz (STOPP B1 und B13) sind hingegen äußerst prädiktiv. In einer Studie [24] wurden klinisch erfasste Daten mit administrativer Datenbank hinsichtlich des Vorliegens der Herzinsuffizienz Diagnose miteinander verglichen. Dafür haben die Autoren der Studie 1808 Patientenaufzeichnungen untersucht, die von 14 Krankenhäusern stichprobenartig genommen wurden, und diese Daten mit den administrativen Aufzeichnungen des Kanadischen Instituts für Gesundheitsinformation verglichen. Es ergab sich, dass der positive prädiktive Wert von ICD9 428 (Herzinsuffizienz) bei Primärdiagnose 94,3% beträgt. Der ICD Code für Herzinsuffizienz kann somit in der Versorgungsforschung genutzt werden. Die Codes für chronische Niereninsuffizienz (STOPP E1) können laut Vlasshaert [25] und Winkelmeyer [26] ebenso in der Versorgungsforschung und im klinischen Alltag genutzt werden. Um zu diesem Ergebnis zu kommen, wurden zuerst die glomerulären Filtrationsraten von krankenversicherten Patienten anhand von Stationskurven bewertet. Betrug die glomeruläre Filtrationsrate weniger als 60 ml/min/1,73 m^2, lag chronische Niereninsuffizienz vor. Dann wurden die Krankenversicherungsdaten vom vorangegangenen Jahr auf das Vorliegen des Diagnosecodes für chronische Niereninsuffizienz überprüft. Die berechnete Spezifität für den Diagnosecode betrug 99% und der positive prädiktive Wert 97,5%. Somit wurde gezeigt, dass die Krankenversicherungsdaten genutzt werden können, um Patienten mit chronischer Niereninsuffizienz zu identifizieren.

Konklusion

In diesem Projekt konnte eine Übersetzung der STOPP/START Kriterien Version 2 in ICD10 und ATC Codes entwickelt werden. Eine weitere Überprüfung durch klinische Experten kann die Güte der Übersetzung noch verbessern.

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Anlage_04 Operationalisierung STOPP START B

Appendix Table 2: MEDI-RADAR operationalization of STOPP criteria for secondary data (revised definitions are highlighted in red color)

criterion	ATC	Drug 1	Link	ICD10	Diagnosis	Link	ATC 2	Drug 2	Comment	Ref
B3	C07	β -blocker	**AND**				C08DA01 OR C08DA51 OR C08DA81 OR C08GA02 OR C08DB01	Verapamil or diltiazem		[1]
B4	C07	β -blocker	**AND**	R00.1 OR I44.1 OR I44.2	Bradycardia, type II heart block or complete heart block (type III)				Consideration of only current bradycardia within same quarter	
B7	C03CA OR C03CB	Sulfonamides plain; sulfonamides and potassium in combination	**AND**	I87.2 NOT I50 NOT K72 NOT K70 NOT K74 NOT K76.7 NOT N04 NOT N18	Venous insufficiency (peripheral); NOT heart failure; NOT liver failure; NOT nephrotic syndrome; NOT renal failure (chronic)				2 billing codes for venous insufficiency (ICD10)	[1-9]
B8	C03AA03 OR C03EA01 OR C09DA04 OR C03EA01 OR C09DA06 OR C07BB02 OR C09DA07 OR C07BB07 OR C09DA08 OR C09BA01 OR C09DX01 OR C09BA02 OR C09DX03 OR C09BA03 OR	Hydrochloro-tiazide and thiazide combinations	**AND**	E87.6 OR E87.1 OR E83.52 OR M10.	Hypokalaemia OR hyponatraemia OR hypercalcaemia OR gout				Consideration of only current hypokaliaemia etc within same quarter; 2 billing codes for gout (ICD10);	[1]

criterion	ATC	Drug 1	Link	ICD10	Diagnosis	Link	ATC 2	Drug 2	Comment	Ref
	C09XA52 OR C09BA05 OR C09BA09 OR C09BA06 OR C09DA01 C09DA02 OR C09DA03									
B9	C03CA OR C03CB	Sulfonamides plain; sulfonamides and potassium in combination	**AND**	(I10 OR I15) AND (N39.3 OR N39.4)	Essential hypertension; secondary hypertension; AND concurrent urinary incontinence				2 billing codes for hypertension (ICD10)	[10, 11]
B11	C09A OR C09B OR C09C OR C09D	ACE inhibitors or Angiotensin Receptor Blockers	**AND**	E87.5	Hyperkalaemia				Consideration of only current hyperkaliaemia within same quarter	
B12	C03DA	Aldosterone antagonists	**AND**			**AND**	C03DB OR C09A OR C09B OR C09C OR C09D	Concurrent potassium-conserving drugs		
B13	G04BE03 OR G04BE08 OR G04BE09 OR R03DA04 OR R03DA07	Phosphodiesterase type-5 inhibitors	**AND**	**(**I50 AND I95	Heart failure AND hypotension	**OR**	C01DA**)**	Organic nitrates	2 billing codes for heart failure (ICD10)	[2-5]

criterion	ATC	Drug 1	Link	ICD10	Diagnosis	Link	ATC 2	Drug 2	Comment	Ref
C2	B01AC06 OR B01AC08 OR B01AC36 OR B01AC56	Salicylates	**AND**	K22.1 OR K25.0/12/4/5/6 OR K26.0/10/1/2/4/5/6 OR K27.0/12/4/5/6 OR K28.2/4/5/6 ~~OR K29~~	History of peptic ulcer disease (bleeding or perforation)	**NOT**	A02BC	Proton pump inhibitors		
C3	B01AC06 OR B01AC08 OR B01AC36 OR B01AC56 OR B01AC04 OR B01AC34 OR C01DX21 OR B01AA OR B01AE OR B01AF	Salicylates, clopidogrel, dipyridamole, vitamin K antagonists, direct thrombin inhibitors or factor Xa inhibitors	**AND**	~~I10.1 OR I15~~ OR (D69 NOT D69.3) OR (D68 NOT D68.3) OR (I61 OR I62 OR I69.1 OR N02 OR R04 OR R31 OR K22.1 OR K25.0/12/4/5/6 OR K26.0/10/1/2/4/5/6 OR K27.0/12/4/5/6 OR K28.2/4/5/6 ~~OR K29~~	~~Uncontrolled severe hypertension,~~ bleeding diathesis, recent non-trivial spontaneous bleeding				HAS-BLED [12] and uncontrolled sever hypertension, among others, not applicable,	[10, 11]

criterion	ATC	Drug 1	Link	ICD10	Diagnosis	Link	ATC 2	Drug 2	Comment	Ref
C5	B01AC06 OR B01AC08 OR B01AC36 OR B01AC56	Salicylates	~~AND~~	~~I48~~	~~Chronic atrial fibrillation~~	**AND**	B01AA OR B01AE OR B01AF	Vitamin K antagonist, direct thrombin inhibitor or factor Xa inhibitors	no restriction to indication	[13, 14]
C6	B01AC	Antiplatelet agents	**AND**	I20.0 OR I20.1 OR I20.8 OR I20.9 OR I21 OR I22 OR I23 OR I24 OR I25 OR I65 OR I63 OR I66 OR I67.2 OR I69.3 OR I73.9 OR I74 OR I75	Stable coronary, cerebrovascular or peripheral arterial disease	**AND**	B01AA OR B01AE OR B01AF	Vitamin K antagonist, direct thrombin inhibitor or factor Xa inhibitors		[1, 15-19]
C7	B01AC05	Ticlopidine							„in any circumstances“	
C10	M01A OR N02BA	NSAID				**AND**	B01AA OR B01AE OR B01AF	Vitamin K antagonist, direct thrombin inhibitor or factor Xa inhibitors		

criterion	ATC	Drug 1	Link	ICD10	Diagnosis	Link	ATC 2	Drug 2	Comment	Ref
C11	(M01A OR N02BA) AND B01AC	NSAID with concurrent antiplatelet agent(s)				**NOT**	A02BC	PPI prophylaxis		
D1	N06AA OR N06CA01	TriCyclic Anti-depressants (TCA)	**AND**	~~F00 OR F01 OR F02 OR F03 OR G30 OR G31 OR~~ H40.2 OR I44 OR I45 OR I47.2 OR N40 OR R33	~~Dementia,~~ narrow angle glaucoma, cardiac conduction abnormalities, ~~prostatism,~~ or prior history of urinary retention					[1]
D3	N05AA01 OR N05AH02 OR N05AF01 OR N05AB02 OR N05AC04 OR N05AA03 OR N05AF05	Chlor-promazine, clozapine, flupenthixol, fluphenzine, pipothiazine, promazine, zuclo-penthixol	**AND**	N40 OR R33	~~History of prostatism or previous~~ urinary retention					
D4	N06AB	SSRI	**AND**	E87.1	Current or recent significant hypo-natraemia				Consideration of only current hyponatraemia within same quarter	[1]
D5	N05CD OR N05BA OR N03AE	Benzodiazepines during > 1 month							prescription period during follow-up > 30 d	[1]

criterion	ATC	Drug 1	Link	ICD10	Diagnosis	Link	ATC 2	Drug 2	Comment	Ref
D6	N05A NOT (N05AH02 OR N05AH04 OR ~~N05AN~~)	Anti-psychotics (except quetiapine or clozapine)	**AND**	G20 OR G21 OR G22 OR G23 OR G31.85 OR G31.82	Parkinsonism or Lewy Body Disease				Prescribing prevalence of lithium in older people in Germany practically negligible	[1, 20]
D7	N04A	Anticholi-nergic anti-Parkinson drugs				**AND**	N05A ~~NOT N05AN~~	Anti-psychotics	Prescribing prevalence of lithium in older people in Germany practically negligible	[1]
D8	N04A	Anticholi-nergic anti-Parkinson drugs	**AND**	F05 ~~OR F00 OR F01 OR F02 OR F03 OR G30 OR G31~~	Delirium ~~or dementia~~					
D13	N04BA OR N04BC	Levodopa or dopamine agonists	**AND**	G25.0	Benign essential tremor					
E1	C01AA05	Digoxin	**AND**	N17 OR N18.4 OR N18.5	Impaired renal function;					[7, 9]
E2	B01AE	Direct thrombin inhibitors	**AND**	N17 OR N18.4 OR N18.5	Impaired renal function				N19 OR R94.4 not considered to be more specific; Consideration of acute renal failure only within same quarter; 2 billing codes required for chronic conditions	[7, 9]
E3	B01AF	Factor Xa inhibitors	**AND**	N17 OR N18.5	Impaired renal function					[7, 9]
E4	M01A	NSAIDs	**AND**	N17 OR N18.3 OR N18.4 OR N18.5	Impaired renal function					[7, 9]

criterion	ATC	Drug 1	Link	ICD10	Diagnosis	Link	ATC 2	Drug 2	Comment	Ref
E5	M04AC01	Colchicine	**AND**	N17 OR N18 OR N19	Impaired renal function					[7, 9]
E6	A10BA02	Metformin	**AND**	N17 OR N18.5	Impaired renal function;					[7, 9]
F1	N05AB04 OR A03FA01	Prochlor-perazine or metoclo-pramide	**AND**	G20 OR G21 OR G22 OR G23	Parkinsonism					[1, 20]
F3	N04A OR (B03 NOT B03AC) OR N02A OR C08DA01 OR C08DA51 ~~OR A02AB~~	Drugs likely to cause constipation (e.g. anti-muscarinic / anti-cholinergic drugs, oral iron, opioids, verapamil, aluminium antacids)	**AND**	K59.0	Chronic constipation				Billing codes for (chronic) constipation were required to be refreshed (i.e. operationalized as a temporary diagnosis); No reimbursement for aluminium antacids	[1, 21]
G1	R03DA	Theophylline monotherapy	**AND**	~~J41 OR J42 OR J43~~ OR J44	COPD	**NOT**	R03A OR R03BA OR R03BB	Inhalative Anticholinergics, glucocorticoids and adrenergics	R03DA relates to Theophylline as the lead xanthine; 2 billing codes (ICD10) for COPD	[1, 22, 23]
G2	H02AB OR H02BX	Systemic cortico-steroids	**AND**	~~J41 OR J42 OR J43 OR~~ J44	Moderate-severe COPD	**NOT**	R03BA OR R03AK	Inhaled corticosteroids	2 billing codes (ICD10) for COPD without severity categorization [24]	[1, 22, 23]

criterion	ATC	Drug 1	Link	ICD10	Diagnosis	Link	ATC 2	Drug 2	Comment	Ref
G3	R03BB	Anti-muscarinic broncho-dilators	**AND**	H40.2 OR N40 OR R33	History of narrow angle glaucoma or urinary retention				Consideration of urinary retention only within same quarter	[1]
H1	M01A OR N02BA NOT M01AH	NSAID other than COX-2 selective agents	**AND**	K22.1 OR K25. 0/12/4/5/6 OR K26. 0/10/1/2/4/ 5/6 OR K27. 0/12/4/5/6 OR K28.2/4/5/6 ~~OR K29~~	History of peptic ulcer disease with gastrointestinal bleeding	**NOT**	(A02BC OR A02BA)	PPI or H2 antagonist	High predictive value of ICD codes to identify peptic ulcer gastrointestinal bleeding	[25]
H4	H02AB OR H02BX	Cortico-steroids	**AND**	M05 OR M06	Rheumatoid arthrtitis	**NOT**	L04AX01 OR L04AX03 OR L04AA13 OR L04AD01 OR A07EC01 OR P01BA OR L04AC03 OR L04AC07 OR L04AB OR L04AA24 OR L01XC02 OR M01CB01 OR M01CB03 OR M01AA OR M01AB OR M01AC OR M01AE OR	No specific agent (DMARD), i.e., monotherapy	Exposure period of corticosteroids during follow-up > 3 months; 2 billing codes for rheumatoid arthritis (ICD10)	[1, 26]

criterion	ATC	Drug 1	Link	ICD10	Diagnosis	Link	ATC 2	Drug 2	Comment	Ref
							M01AG OR M01AH OR M01AX01 OR N02BA			
H5	H02AB OR H02BX	Cortico-steroids	**AND**	M15 OR M16 OR M17 OR M18 OR M19 OR M47	Osteoarthritis				2 billing codes (ICD10)	[1]
H6	M01A OR N02BA OR M04AC01	NSAID or colchicine	**AND**	M10	Gout	**NOT**	M04AA	Xanthin-oxidase inhibitor	NSAID exposure > 90 d during follow-up; 2 billing codes (ICD10) for gout	[1]
H7	M01AH	COX-2 selective NSAIDs	**AND**	I20.0 OR I20.1 OR I20.8 OR I20.9 OR I21 OR I22 OR I23 OR I24 OR I25 OR I65 OR I63 OR I66 OR I67.2 OR I69.3 OR I73.9 OR I74 OR I75	Cardiovascular disease					

criterion	ATC	Drug 1	Link	ICD10	Diagnosis	Link	ATC 2	Drug 2	Comment	Ref
H8	(M01A OR N02BA) AND (H02AB OR H02BX)	NSAID with cortico-steroids				**NOT**	A02BC	PPI		
H9	M05BA04 OR M05BA06 OR M05BA07 OR M05BB	Oral bisphos-phonates	**AND**	K22.1 OR K25. 0/12/4/5/6 OR K26. 0/10/1/2/4/5/6	Current or recent history of upper gastrointestinal disease i.e. ~~dysphagia, oesophagitis, gastritis, duodenitis, or~~ peptic ulcer disease with upper gastrointestinal bleeding				Focus on upper gastrointestinal bleeding; drug choice for mostly oral administration in German ambulatory care settings	[25]
I1	G04BD	(Urogenital) anti-muscarinic drugs	**AND**	F00 OR F01 OR F02 OR F03 OR G30 OR G31 OR H40.2 OR N40 OR R33	Dementia, ~~or chronic cognitive impairment~~, or narrow-angle glaucoma, or chronic prostatism					[1]
I2	G04CA OR C02CA04 OR C02CA06 OR C02KD01	Selective alpha-1 blockers	**AND**	I95.1 OR R55	Orthostatic hypotension or micturition syncope				micturition not applicable; 2 billing codes (ICD10) for orthostatic hypotension	

criterion	ATC	Drug 1	Link	ICD10	Diagnosis	Link	ATC 2	Drug 2	Comment	Ref
J1	A10BB01 OR A10BB02 OR A10BB12	Sulphonyl-ureas (long-acting)	**AND**	E11	Type 2 diabetes mellitus				2 billing codes (ICD10) for DM2	[1, 27, 28]
J2	A10BG OR A10BD05 OR A10BD06 OR A10BD09 OR A10BD12	Thiazolidenediones	**AND**	I50	Heart failure				2 billing codes (ICD10) for heart failure	[2-5]
J3	C07	Beta-blockers	**AND**	(E10 OR E11 ~~OR E12 OR E13 OR E14~~) AND (E16.0 OR E16.1 OR E16.2)	Diabetes mellitus				2 billing codes (ICD10) for DM; frequent hypoglycaemic episodes requires 2 billing codes	[1, 27, 28]
J4	G03AA OR G03AB OR G03C OR G03EA OR G03EB OR G03F OR G03HB OR L02AA	Oestrogens	**AND**	C50 OR I26 ~~OR I80 OR I81 OR I82 OR G08~~	History of breast cancer or venous thromboembolism					[1, 6]
~~J6~~	~~G03B~~	~~Androgens~~	~~**NO**~~	~~E29.1~~	~~Hypogonadism~~				→ criterion not present after data management	

criterion	ATC	Drug 1	Link	ICD10	Diagnosis	Link	ATC 2	Drug 2	Comment	Ref
K1	N03AE OR N05BA OR N05CD	Benzo-diazepines	**AND**	Z91.81 OR R29.6 OR S01 OR S02 OR S09 OR S22 OR S32 OR S52 OR S62 OR S82 OR S92	History of falling / at risk for falling; repeated falls; typical fracture				Proxy: fragility fracture(s),	[1, 29-33]
K2	N05A NOT N05AN	Neuroleptic drugs	**AND**	Z91.81 OR R29.6 OR S01 OR S02 OR S09 OR S22 OR S32 OR S52 OR S62 OR S82 OR S92	History of falling / at risk for falling; repeated falls; typical fracture				Prescribing prevalence of lithium in older people in Germany practically negligible	[1, 29-33]
K3	C02DB01 OR C02LG01 OR C02LG51 OR C02DB02 OR C02LG02 OR C02DC01 OR G04CA OR C02CA04 OR C02CA06 OR C02KD01 OR C08 OR C09	Vasodilator drugs	**AND**	AND I95.1	with persistent postural hypotension				2 billing codes (ICD10) for postural hypotension	[1, 29-33]

criterion	ATC	Drug 1	Link	ICD10	Diagnosis	Link	ATC 2	Drug 2	Comment	Ref
K4	N05CF01 OR N05CF02 OR N05CF03	Zopiclone, zolpidem, zaleplon	**AND**	Z91.81 OR R29.6 OR S01 OR S02 OR S09 OR S22 OR S32 OR S52 OR S62 OR S82 OR S92	History of falling / at risk for falling; repeated falls; typical fracture				See above	[29-33]
M1	N04A OR G04BD	Anticholi-nergic anti-Parkinson drugs or bladder anti-spasmodics,				**AND**	N06AA OR N06CA01	tricyclic anti-depressants	Drugs with local application are excluded; combinations reduced to actually reimbursable drugs	

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Criteria

Section A: Indication of medication

1. Any drug prescribed without an evidence-based clinical indication.
2. Any drug prescribed beyond the recommended duration, where treatment duration is well defined.
3. Any duplicate drug class prescription e.g. two concurrent NSAIDs, SSRIs, loop diuretics, ACE inhibitors, anticoagulants (optimisation of monotherapy within a single drug class should be observed prior to considering a new agent).

Section B: Cardiovascular System

1. Digoxin for heart failure with normal systolic ventricular function (no clear evidence of benefit)
2. Verapamil or diltiazem with NYHA Class III or IV heart failure (may worsen heart failure).
3. Beta-blocker in combination with verapamil or diltiazem (risk of heart block).
4. Beta blocker with bradycardia (< 50/min), type II heart block or complete heart block (risk of complete heart block, asystole).
5. Amiodarone as first-line antiarrhythmic therapy in supraventricular tachyarrhythmias (higher risk of side-effects than beta-blockers, digoxin, verapamil or diltiazem)
6. Loop diuretic as first-line treatment for hypertension (safer, more effective alternatives available).
7. Loop diuretic for dependent ankle oedema without clinical, biochemical evidence or radiological evidence of heart failure, liver failure, nephrotic syndrome or renal failure (leg elevation and /or compression hosiery usually more appropriate).
8. Thiazide diuretic with current significant hypokalaemia (i.e. serum K+ < 3.0 mmol/l), hyponatraemia (i.e. serum Na+ < 130 mmol/l) hypercalcaemia (i.e. corrected serum calcium > 2.65 mmol/l) or with a history of gout (hypokalaemia, hyponatraemia, hypercalcaemia and gout can be precipitated by thiazide diuretic)
9. Loop diuretic for treatment of hypertension with concurrent urinary incontinence (may exacerbate incontinence).
10. Centrally-acting antihypertensives (e.g. methyldopa, clonidine, moxonidine, rilmenidine, guanfacine), unless clear intolerance of, or lack of efficacy with, other classes of antihypertensives (centrally-active antihypertensives are generally less well tolerated by older people than younger people)
11. ACE inhibitors or Angiotensin Receptor Blockers in patients with hyperkalaemia.
12. Aldosterone antagonists (e.g. spironolactone, eplerenone) with concurrent potassium-conserving drugs (e.g. ACEI's, ARB's, amiloride, triamterene) without monitoring of serum potassium (risk of dangerous hyperkalaemia i.e. > 6.0 mmol/l – serum K should be monitored regularly, i.e. at least every 6 months).
13. Phosphodiesterase type-5 inhibitors (e.g. sildenafil, tadalafil, vardenafil) in severe heart failure characterised by hypotension i.e. systolic BP < 90 mmHg, or concurrent nitrate therapy for angina (risk of cardiovascular collapse)

Section C: Antiplatelet/Anticoagulant Drugs

1. Long-term aspirin at doses greater than 160mg per day (increased risk of bleeding, no evidence for increased efficacy).
2. Aspirin with a past history of peptic ulcer disease without concomitant PPI (risk of recurrent peptic ulcer).

3. Aspirin, clopidogrel, dipyridamole, vitamin K antagonists, direct thrombin inhibitors or factor Xa inhibitors with concurrent significant bleeding risk, i.e. uncontrolled severe hypertension, bleeding diathesis, recent non-trivial spontaneous bleeding) (high risk of bleeding).
4. Aspirin plus clopidogrel as secondary stroke prevention, unless the patient has a coronary stent(s) inserted in the previous 12 months or concurrent acute coronary syndrome or has a high grade symptomatic carotid arterial stenosis (no evidence of added benefit over clopidogrel monotherapy)
5. Aspirin in combination with vitamin K antagonist, direct thrombin inhibitor or factor Xa inhibitors in patients with chronic atrial fibrillation (no added benefit from aspirin)
6. Antiplatelet agents with vitamin K antagonist, direct thrombin inhibitor or factor Xa inhibitors in patients with stable coronary, cerebrovascular or peripheral arterial disease (No added benefit from dual therapy).
7. Ticlopidine in any circumstances (clopidogrel and prasugrel have similar efficacy, stronger evidence and fewer side-effects).
8. Vitamin K antagonist, direct thrombin inhibitor or factor Xa inhibitors for first deep venous thrombosis without continuing provoking risk factors (e.g. thrombophilia) for > 6 months, (no proven added benefit).
9. Vitamin K antagonist, direct thrombin inhibitor or factor Xa inhibitors for first pulmonary embolus without continuing provoking risk factors (e.g. thrombophilia) for > 12 months (no proven added benefit).
10. NSAID and vitamin K antagonist, direct thrombin inhibitor or factor Xa inhibitors in combination (risk of major gastrointestinal bleeding).
11. NSAID with concurrent antiplatelet agent(s) without PPI prophylaxis (increased risk of peptic ulcer disease)

Section D: Central Nervous System and Psychotropic Drugs

1. TriCyclic Antidepressants (TCAs) with dementia, narrow angle glaucoma, cardiac conduction abnormalities, prostatism, or prior history of urinary retention (risk of worsening these conditions).
2. Initiation of TriCyclic Antidepressants (TCAs) as first-line antidepressant treatment (higher risk of adverse drug reactions with TCAs than with SSRIs or SNRIs).
3. Neuroleptics with moderate-marked antimuscarinic/anticholinergic effects (chlorpromazine, clozapine, flupenthixol, fluphenzine, pipothiazine, promazine, zuclopenthixol) with a history of prostatism or previous urinary retention (high risk of urinary retention).
4. Selective serotonin re-uptake inhibitors (SSRI's) with current or recent significant hyponatraemia i.e. serum Na+ < 130 mmol/l (risk of exacerbating or precipitating hyponatraemia).
5. Benzodiazepines for ≥ 4 weeks (no indication for longer treatment; risk of prolonged sedation, confusion, impaired balance, falls, road traffic accidents; all benzodiazepines should be withdrawn gradually if taken for more than 4 weeks as there is a risk of causing a benzodiazepine withdrawal syndrome if stopped abruptly).
6. Antipsychotics (i.e. other than quetiapine or clozapine) in those with parkinsonism or Lewy Body Disease (risk of severe extra-pyramidal symptoms)
7. Anticholinergics/antimuscarinics to treat extra-pyramidal side-effects of neuroleptic medications (risk of anticholinergic toxicity),
8. Anticholinergics/antimuscarinics in patients with delirium or dementia (risk of exacerbation of cognitive impairment).
9. Neuroleptic antipsychotic in patients with behavioural and psychological symptoms of dementia (BPSD) unless symptoms are severe and other non-pharmacological treatments have failed (increased risk of stroke).

10. Neuroleptics as hypnotics, unless sleep disorder is due to psychosis or dementia (risk of confusion, hypotension, extra-pyramidal side effects, falls).
11. Acetylcholinesterase inhibitors with a known history of persistent bradycardia (< 60 beats/min.), heart block or recurrent unexplained syncope or concurrent treatment with drugs that reduce heart rate such as beta-blockers, digoxin, diltiazem, verapamil (risk of cardiac conduction failure, syncope and injury).
12. Phenothiazines as first-line treatment, since safer and more efficacious alternatives exist (phenothiazines are sedative, have significant anti-muscarinic toxicity in older people, with the exception of prochlorperazine for nausea/vomiting/vertigo, chlorpromazine for relief of persistent hiccoughs and levomepromazine as an anti-emetic in palliative care).
13. Levodopa or dopamine agonists for benign essential tremor (no evidence of efficacy)
14. First-generation antihistamines (safer, less toxic antihistamines now widely available).

Section E: Renal System. The following drugs are potentially inappropriate in older people with acute or chronic kidney disease with renal function below particular levels of eGFR (refer to summary of product characteristics datasheets and local formulary guidelines)

1. Digoxin at a long-term dose greater than 125µg/day if eGFR < 30 ml/min/1.73m2 (risk of digoxin toxicity if plasma levels not measured).
2. Direct thrombin inhibitors (e.g. dabigatran) if eGFR < 30 ml/min/1.73m2 (risk of bleeding)
3. Factor Xa inhibitors (e.g. rivaroxaban, apixaban) if eGFR < 15 ml/min/1.73m2 (risk of bleeding)
4. NSAID’s if eGFR < 50 ml/min/1.73m2 (risk of deterioration in renal function).
5. Colchicine if eGFR < 10 ml/min/1.73m2 (risk of colchicine toxicity)
6. Metformin if eGFR < 30 ml/min/1.73m2 (risk of lactic acidosis).

Section F: Gastrointestinal System

1. Prochlorperazine or metoclopramide with Parkinsonism (risk of exacerbating Parkinsonian symptoms).
2. PPI for uncomplicated peptic ulcer disease or erosive peptic oesophagitis at full therapeutic dosage for > 8 weeks (dose reduction or earlier discontinuation indicated).
3. Drugs likely to cause constipation (e.g. antimuscarinic/anticholinergic drugs, oral iron, opioids, verapamil, aluminium antacids) in patients with chronic constipation where non-constipating alternatives are available (risk of exacerbation of constipation).
4. Oral elemental iron doses greater than 200 mg daily (e.g. ferrous fumarate> 600 mg/day, ferrous sulphate > 600 mg/day, ferrous gluconate> 1800 mg/day; no evidence of enhanced iron absorption above these doses).

Section G: Respiratory System

1. Theophylline as monotherapy for COPD (safer, more effective alternative; risk of adverse effects due to narrow therapeutic index).
2. Systemic corticosteroids instead of inhaled corticosteroids for maintenance therapy in moderate-severe COPD (unnecessary exposure to long-term side-effects of systemic corticosteroids and effective inhaled therapies are available).

3. Anti-muscarinic bronchodilators (e.g. ipratropium, tiotropium) with a history of narrow angle glaucoma (may exacerbate glaucoma) or bladder outflow obstruction (may cause urinary retention).
4. Non-selective beta-blocker (whether oral or topical for glaucoma) with a history of asthma requiring treatment (risk of increased bronchospasm).
5. Benzodiazepines with acute or chronic respiratory failure i.e. $pO_2 < 8.0$ kPa ± $pCO_2 > 6.5$ kPa (risk of exacerbation of respiratory failure).

Section H: Musculoskeletal System

1. Non-steroidal anti-inflammatory drug (NSAID) other than COX-2 selective agents with history of peptic ulcer disease or gastrointestinal bleeding, unless with concurrent PPI or H2 antagonist (risk of peptic ulcer relapse).
2. NSAID with severe hypertension (risk of exacerbation of hypertension) or severe heart failure (risk of exacerbation of heart failure).
3. Long-term use of NSAID (>3 months) for symptom relief of osteoarthritis pain where paracetamol has not been tried (simple analgesics preferable and usually as effective for pain relief)
4. Long-term corticosteroids (>3 months) as monotherapy for rheumatoid arthrtitis (risk of systemic corticosteroid side-effects).
5. Corticosteroids (other than periodic intra-articular injections for mono-articular pain) for osteoarthritis (risk of systemic corticosteroid side-effects).
6. Long-term NSAID or colchicine (>3 months) for chronic treatment of gout where there is no contraindication to a xanthine-oxidase inhibitor (e.g. allopurinol, febuxostat) (xanthine-oxidase inhibitors are first choice prophylactic drugs in gout).
7. COX-2 selective NSAIDs with concurrent cardiovascular disease (increased risk of myocardial infarction and stroke)
8. NSAID with concurrent corticosteroids without PPI prophylaxis (increased risk of peptic ulcer disease)
9. Oral bisphosphonates in patients with a current or recent history of upper gastrointestinal disease i.e. dysphagia, oesophagitis, gastritis, duodenitis, or peptic ulcer disease, or upper gastrointestinal bleeding (risk of relapse/exacerbation of oesophagitis, oesophageal ulcer, oesophageal stricture)

Section I: Urogenital System

1. Antimuscarinic drugs with dementia, or chronic cognitive impairment (risk of increased confusion, agitation) or narrow-angle glaucoma (risk of acute exacerbation of glaucoma), or chronic prostatism (risk of urinary retention).
2. Selective alpha-1 selective alpha blockers in those with symptomatic orthostatic hypotension or micturition syncope (risk of precipitating recurrent syncope)

Section J. Endocrine System

1. Sulphonylureas with a long duration of action (e.g. glibenclamide, chlorpropamide, glimepiride) with type 2 diabetes mellitus (risk of prolonged hypoglycaemia).
2. Thiazolidenediones (e.g. rosiglitazone, pioglitazone) in patients with heart failure (risk of exacerbation of heart failure)
3. Beta-blockers in diabetes mellitus with frequent hypoglycaemic episodes (risk of suppressing hypoglycaemic symptoms).
4. Oestrogens with a history of breast cancer or venous thromboembolism (increased risk of recurrence).
5. Oral oestrogens without progestogen in patients with intact uterus (risk of endometrial cancer).

6. Androgens (male sex hormones) in the absence of primary or secondary hypogonadism (risk of androgen toxicity; no proven benefit outside of the hypogonadism indication).

Section K: Drugs that predictably increase the risk of falls in older people

1. Benzodiazepines (sedative, may cause reduced sensorium, impair balance).
2. Neuroleptic drugs (may cause gait dyspraxia, Parkinsonism).
3. Vasodilator drugs (e.g. alpha-1 receptor blockers, calcium channel blockers, long-acting nitrates, ACE inhibitors, angiotensin I receptor blockers,) with persistent postural hypotension i.e. recurrent drop in systolic blood pressure ≥ 20mmHg (risk of syncope, falls).
4. Hypnotic Z-drugs e.g. zopiclone, zolpidem, zaleplon (may cause protracted daytime sedation, ataxia).

Section L: Analgesic Drugs

1. Use of oral or transdermal strong opioids (morphine, oxycodone, fentanyl, buprenorphine, diamorphine, methadone, tramadol, pethidine, pentazocine) as first line therapy for mild pain (WHO analgesic ladder not observed).
2. Use of regular (as distinct from PRN) opioids without concomitant laxative (risk of severe constipation).
3. Long-acting opioids without short-acting opioids for break-through pain (risk of persistence of severe pain)

Section M: Antimuscarinic/Anticholinergic Drug Burden

1. Concomitant use of two or more drugs with antimuscarinic/anticholinergic properties (e.g. bladder antispasmodics, intestinal antispasmodics, tricyclic antidepressants, first generation antihistamines) (risk of increased antimuscarinic/anticholinergic toxicity)

criterion	ICD10	Diagnosis	Link	ATC 1	Drug 1	Link	ATC 2	Drug 2	Comments and possible modifications for the future	Ref
A1	I48.1 OR I48.2 OR I48.91	Chronic atrial fibrillation	**NOT**	B01AA OR B01AE OR B01AF	Oral anticoagulants				Misclassification (up to 12%) of patients with prevalent AF indicated for anticoagulation could be minimized by requiring comorbidity diagnoses (congestive heart failure, diabetes [1], hypertension [2], stroke or transient ischemic attack [3, 4] and vascular disease [5]); we restricted it to require 2 billing codes (i.e. persistent) diagnoses of (chronic) AF	[6-8]
A2	I48.1 OR I48.2 OR I48.91	Chronic atrial fibrillation	**NOT**	B01AC06 OR B01AC08 OR B01AC36 OR B01AC56	Acetyl salicylic acid (+/- Dipyridamol or as Carbasalat)				Proxy: Contraindication to oral anticoagulants operationalized by absence of OAC (i.e. given A1)	[6, 8]
A3	I20.0 OR I20.1 OR I20.8 OR I20.9 OR I21 OR I22 OR I23 OR I24 OR I25 OR I65 OR I63 OR I66 OR I67.2 OR I69.3 OR I73.9 OR I74 OR I75	History of coronary, cerebral or peripheral vascular disease	**NOT**	B01AC	Clopidogrel, Acetyl salicylic acid (+/- Dipyridamol or as Carbasalat), Prasugrel, Ticagrelor, combinations				Further possibilities: combination with procedure codes [9]; Inclusion of venous thromboembolism [10] not considered to be more specific	[3, 5, 7, 9, 11, 12]

criterion	ICD10	Diagnosis	Link	ATC 1	Drug 1	Link	ATC 2	Drug 2	Comments and possible modifications for the future	Ref
A5	I20.0 OR I20.1 OR I20.8 OR I20.9 OR I21 OR I22 OR I23 OR I24 OR I25 OR I65 OR I63 OR I66 OR I67.2 OR I69.3 OR I73.9 OR I74 OR I75	History of coronary, cerebral or peripheral vascular disease	**NOT**	C10AA OR C10BA OR C10BX	Statins				See A3	[3, 5, 7, 9, 11, 12]
A6	I50.1 OR I50.9 OR I20.0 OR I20.1 OR I20.8 OR I20.9 OR I21 OR I22 OR I23 OR I24 OR I25	Chronic (systolic) heart failure and/or documented history of coronary artery disease	**NOT**	C09A OR C09B OR C09C OR C09D	ACE-inhibitor or angiotensin II receptor blocker				Further possibilities: (1) a narrow definition that uses only I50.0, I50.1, and I50.9, and a broader definition that also includes the codes for cardiomyopathy (I.42) and pulmonary edema (J.81); we restricted it to require 2 billing codes	[7, 13-16]
A7	I20 OR I21 OR I22 OR I23 OR I24 OR I25	ischaemic heart disease, Stable angina pectoris	**NOT**	C07	β-blocker					[5, 7, 11, 17-19]
A8	I50.1 OR I50.9	stable systolic heart failure	**NOT**	C07AB07 OR C07AB12 OR C07AB02 OR C07AG02	Bisoprolol, nebivolol, metoprolol or carvedilol				See A6	[13-16]

criterion	ICD10	Diagnosis	Link	ATC 1	Drug 1	Link	ATC 2	Drug 2	Comments and possible modifications for the future	Ref
C2	F32 OR F33 (NOT F33.4)	Depression (according to DSM IV and psycho-therapy not effect-tive or wanted)	**NOT**	N06A (**NOT** N06AA)	Antidepressant drugs except TCA				persistent symptomes (>= 2 billing codes)	[7, 20, 21]
D1	K22.1 OR K25. 0/12/4/5/6 OR K26. 0/10/1/2/4/5/6 OR K27. 0/12/4/5/6 OR K28.2/4/5/6	Severe gastrooesophageal acid reflux disease or peptic stricture requiring dilatation	**NOT**	A02BC	Protonpump inhibitor				Missing proxy for severity; only inclusion of previous bleeding events	[7]
E1	M05 OR M06	Active moderate-severe rheumatoid disease (> 4 weeks)	**NOT**	L04AX01 OR L04AX03 OR L04AA13 OR L04AD01 OR A07EC01 OR P01BA OR L04AC03 OR L04AC07 OR L04AB OR L04AA24 OR L01XC02 OR M01CB01 OR M01CB03 OR M01AA OR M01AB OR M01AC OR M01AE OR M01AG OR M01AH OR	DMARD				Missing proxy for disabling rheumatoid disease; we restricted it to require 2 billing codes; Alternative definition by drug utilization [22]	[7, 23, 24]

criterion	ICD10	Diagnosis	Link	ATC 1	Drug 1	Link	ATC 2	Drug 2	Comments and possible modifications for the future	Ref
				M01AX01 OR N02BA						
E2				H02A OR H02BX	Long-term (> 30d) systemic corticosteroid therapy	**NOT**	M05BA OR M05BB	Bisphosphonates	VitD plus Ca mostly not reimbursable	[7]
E4	M80 OR M81 OR M82 OR	Osteoporosis		M05BA OR M05BB OR M05BX OR H05AA02	Bisphosphonates, strontium ranelate, teriparatide, denosumab				2 billing codes for osteoporosis required Proxy: contraindication to certain antiresorptive agents missclassification up to 50 % for Vertebral compression fractures; positive predictive value of 79 % for tibia/fibula and 98 % for hip fracture; → therefore no consideration of fractures to be more specific	[25-28]
E6	M10	Gout	**NOT**	M04AA	Allopurinol, febuxostat				2 billing codes for gout required	
F1	(E10 OR E11) AND (R80 OR N06 OR N39.1)	Diabetes with proteinuria or microalbuminuria	**NOT**	C09A OR C09B OR C09C OR C09D	ACE-inhibitor or angiotensin II receptor blocker					[1, 29]

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Criteria

Section A: Cardiovascular System

1. Vitamin K antagonists or direct thrombin inhibitors or factor Xa inhibitors in the presence of chronic atrial fibrillation.
2. Aspirin (75 mg – 160 mg once daily) in the presence of chronic atrial fibrillation, where Vitamin K antagonists or direct thrombin inhibitors or factor Xa inhibitors are contraindicated.
3. Antiplatelet therapy (aspirin or clopidogrel or prasugrel or ticagrelor) with a documented history of coronary, cerebral or peripheral vascular disease.
4. Antihypertensive therapy where systolic blood pressure consistently > 160 mmHg and/or diastolic blood pressure consistently >90 mmHg; if systolic blood pressure > 140 mmHg and /or diastolic blood pressure > 90 mmHg, if diabetic.
5. Statin therapy with a documented history of coronary, cerebral or peripheral vascular disease, unless the patient's status is end-of-life or age is > 85 years.
6. Angiotensin Converting Enzyme (ACE) inhibitor with systolic heart failure and/or documented coronary artery disease.
7. Beta-blocker with ischaemic heart disease.
8. Appropriate beta-blocker (bisoprolol, nebivolol, metoprolol or carvedilol) with stable systolic heart failure.

Section B: Respiratory System

1. Regular inhaled β2 agonist or antimuscarinic bronchodilator (e.g. ipratropium, tiotropium) for mild to moderate asthma or COPD.
2. Regular inhaled corticosteroid for moderate-severe asthma or COPD, where FEV1 <50% of predicted value and repeated exacerbations requiring treatment with oral corticosteroids.
3. Home continuous oxygen with documented chronic hypoxaemia (i.e. pO2 < 8.0 kPa or 60 mmHg or SaO2 < 89%)

Section C: Central Nervous System& Eyes

1. L-DOPA or a dopamine agonist in idiopathic Parkinson's disease with functional impairment and resultant disability.
2. Non-TCA antidepressant drug in the presence of persistent major depressive symptoms.
3. Acetylcholinesterase inhibitor (e.g. donepezil, rivastigmine, galantamine) for mild-moderate Alzheimer's dementia or Lewy Body dementia (rivastigmine).
4. Topical prostaglandin, prostamide or beta-blocker for primary open-angle glaucoma.
5. Selective serotonin reuptake inhibitor (or SNRI or pregabalin if SSRI contraindicated) for persistent severe anxiety that interferes with independent functioning.
6. Dopamine agonist (ropinirole or pramipexole or rotigotine) for Restless Legs Syndrome, once iron deficiency and severe renal failure have been excluded.

Section D: Gastrointestinal System

1. Proton Pump Inhibitor with severe gastro-oesophageal reflux disease or peptic stricture requiring dilatation.
2. Fibre supplements (e.g. bran, ispaghula, methylcellulose, sterculia) for diverticulosis with a history of constipation.

Section E: Musculoskeletal System

1. Disease-modifying anti-rheumatic drug (DMARD) with active, disabling rheumatoid disease.
2. Bisphosphonates and vitamin D and calcium in patients taking long-term systemic corticosteroid therapy.
3. Vitamin D and calcium supplement in patients with known osteoporosis and/or previous fragility fracture(s) and/or (Bone Mineral Density T-scores more than -2.5 in multiple sites).

4. Bone anti-resorptive or anabolic therapy (e.g. bisphosphonate, strontium ranelate, teriparatide, denosumab) in patients with documented osteoporosis, where no pharmacological or clinical status contraindication exists (Bone Mineral Density T-scores -> 2.5 in multiple sites) and/or previous history of fragility fracture(s).
5. Vitamin D supplement in older people who are housebound or experiencing falls or with osteopenia (Bone Mineral Density T-score is > -1.0 but < -2.5 in multiple sites).
6. Xanthine-oxidase inhibitors (e.g. allopurinol, febuxostat) with a history of recurrent episodes of gout.
7. Folic acid supplement in patients taking methotexate.

Section F: Endocrine System

1. ACE inhibitor or Angiotensin Receptor Blocker (if intolerant of ACE inhibitor) in diabetes with evidence of renal disease i.e. dipstick proteinuria or microalbuminuria (>30mg/24 hours) with or without serum biochemical renal impairment.

Section G: Urogenital System

1. Alpha-1 receptor blocker with symptomatic prostatism, where prostatectomy is not considered necessary.
2. 5-alpha reductase inhibitor with symptomatic prostatism, where prostatectomy is not considered necessary.
3. Topical vaginal oestrogen or vaginal oestrogen pessary for symptomatic atrophic vaginitis.

Section H: Analgesics

1. High-potency opioids in moderate-severe pain, where paracetamol, NSAIDs or low-potency opioids are not appropriate to the pain severity or have been ineffective.
2. Laxatives in patients receiving opioids regularly.

Section I: Vaccines

1. Seasonal trivalent influenza vaccine annually
2. Pneumococcal vaccine at least once after age 65 according to national guidelines

FORTA class	ICD10	Diagnosis	ATC	Drug	Comment	Ref
A	I10; I11; I12; I13; I15	Arterial hypertension	C09A; C09B; C09C; C09D; C08CA; C08GA01; C10BX03	Renin-angiotensin system inhibitor (ace inhibitor, angiotensin receptor antagonist); long-acting calcium antagonist of dihydropyridine type	Indispensable	
D	I10; I11; I12; I13; I15	Arterial hypertension	C02AC01; C02LC01; C02LC51; C02DC; C08DA	Clonidine, minoxidil, calcium antagonist of verapamil type	Avoid	
A	I110; I130; I132; I50	Cardiac insufficiency	C09A; C09B; C09C; C09D; C07	Renin-angiotensin system inhibitor (ace inhibitor, angiotensin receptor antagonist); beta blocker	Indispensable; beta blocker: Class B for patients >80 years due to orthostatic hypotension and increased risk of falls	
A	I21; I22; I23; Z95.1; Z95.5; I63; I64; I69; G45	Coronary heart disease and stroke	C09A; C09B; B01AC06; C07; C01DA	Renin-angiotensin system blocker (ace inhibitor); acetylsalicylic acid; frequency-lowering beta blocker; nitroglycerin spray (single use, acute as on-demand medication)	Indispensable	
A	I20; I21; I22; I23; I24; I25; Z95.1; Z95.5	Chronic therapy following myocardial infarction	C09A; C09B; B01AC06; C07; C01DA; J07BB; C10AA; C10BA; C10BX	Renin angiotensin system blocker (ace Inhibitors); acetylsalicylic acid; frequency-lowering beta blocker; nitroglycerine spray (single use as on-demand medication; influenza vaccination (inactivated subunit vaccines); statin	Indispensable; statin: Class B for patients >80 years	
D	I20; I21; I22; I23; I24; I25; Z95.1; Z95.5	Chronic therapy following myocardial infarction	C01B (NOT C01BD01); C08CA	Class-I-III antiarrhythmic agent (NOT amiodarone); dihydropyridine antagonist (if no hypertension I10; I11; I12; I13; I15)	Avoid	
A	I48; I47; I44	Atrial vibrillation	B01AA; B01AB; C07	Oral anticoagulation (alternative: low molecular weight heparin); frequency-lowering beta blocker	Indispensable	
D	I48; I47; I44	Atrial vibrillation	C01B (NOT C01BD01)	Class-I-III antiarrhythmic agent (NOT amiodarone)	Avoid	
A	J44	Chronic obstructive pulmonary disease (COPD)	R03BA; R03BB; V03AN01; J07BB; J07AL	Inhalative glucocorticoid; inhalative long-acting parasympatholytic agent; long-term administration of oxygen; annual influenza immunization; pneumococcal immunization	Indispensable	

FORTA class	ICD10	Diagnosis	ATC	Drug	Comment	Ref
D	J44	Chronic obstructive pulmonary disease (COPD)	R05D	Systemic glucocorticoid (chronic use); antitussives (e.g. codein; butamirate)	Avoid	
A	M80; M81	Osteoporosis	A12A; M05BA; G03XC01	Calcium and Vitamin D supplement; bisphosphonate; raloxifen (female patients)	Indispensable; calcium and Vitamin D supplement reimbursement in Germany? -> otc drug	
D	M80; M81	Osteoporosis	A14AB01; A12CD; G03C	Nandrolone decanoate; fluoride; hormone replacement therapy (HRT) (estrogen, except for perimenopausal)	Avoid	
A	E11; E12; E13; E14	Type II diabetes mellitus	A10A; A10BB12;	Insulin and insulin analog; 3rd generation sulfonylurea (e.g. glimepiride)	Indispensable	
D	E11; E12; E13; E14	Type II diabetes mellitus	A10BD03; A10BD04; A10BG02	Rosiglitazone	Avoid	
D	F00; F01; F02; F03; G30	Dementia	A11G; A11HA03; A12CE; A13AP02; A14AA07; G03BA03; G03E; C04AE; N06DX13; N06DX19; N06DX57; C06AA; M01AB01; M01AB51; C01EB03; N06DP01; V03AC01; N04BD01; N06BX02; N06BX03	Selegiline; nimodipine; ginkgo biloba; ergoline derivative; piracetam; pyritinol; antioxidant (Vitamin E, selenium, Vitamin C); phytotherapeutic agent (e.g. ginseng); hormone preparation (e.g. DHEA (Dehydroepiandrosterone)); testosterone; antiphlogistic (e.g. indomethacin); desferrioxamine	Avoid	
D	F32; F33	Depression	N06AX18	Reboxetin	Avoid	
D	G47	Insomnia / sleep disorders	N05BA; N06AA05; N06AA12; R06AA02; R06AA52; N05CM20; N05CX07; A04AB02; A04AB52	Benzodiazepine; opipramole; doxepine; diphenhydramine	Avoid	
D	R52.1; R52.2; R52.9; F45; M79; M54	Chronic pain	N03AF01; N06AA09; N06CA01; M01A;	Carbamazepin; amitriptyline; NSAID; celecoxib	Avoid	

FORTA class	ICD10	Diagnosis	ATC	Drug	Comment	Ref
D	G20; G21; G22	Parkinson's disease	N04AA02	biperidine	Avoid	

F O R T A – Classification System A-D

Class A

= Indispensable drug, clear-cut benefit in terms of efficacy/safety ratio proven in elderly patients for a given indication

Class B

= Drugs with proven or obvious efficacy in the elderly, but limited extent of effect and/or safety concerns

Class C

= Drugs with questionable efficacy/safety profiles in the elderly which should be avoided or omitted in the presence of too many drugs, absence of benefits or emerging side effects; explore alternatives

Class D

= Avoid if at all possible in the elderly, omit first and use alternative substances

The FORTA List[3,4] Part 1
Delphi Expert Consensus Validation 2012

FORTA
A | B | C | D

Classification of the most frequently used long-term medications†
for the pharmacotherapy of older patients
by indication/diagnosis, ranked according to FORTA classification
Newly proposed drugs are mentioned under the respective diagnosis and marked by *; they are listed in greater detail in the second part.

(† long-term defined as > 4 weeks. Please note that the distinction between acute/chronic may not always be clear-cut; exceptions are noted)

ARTERIAL HYPERTENSION	**FORTA Class (**original FORTA class in parentheses if different from consensus results**)**	**Nr. of raters**	**Consensus coefficient, Round 1 (cutoff 0.800)**	**Expert ratings on a numerical scale: A=1, B=2, C=3, D=4** Mean; Mode	**Selection of pertinent comments given by participating experts during the consensus procedure**
Substance/Group					

Renin-Angiotensin system inhibitors ACE inhibitors	**A**	20	0.975	1.1; 1	
Angiotensin receptor antagonists	**A**	20	0.975	1.1; 1	
Long-acting calcium antagonists, dihydropyridine type, for example amlodipine	**A**	19	1.000	1.0; 1	
Betablockers	**B**	19	1.000	2.0; 2	**Note**: Metoprolol is metabolized by CYP2D6: 5-10% of Caucasians are poor metabolizers
Diuretics	**B**	19	0.974	1.9; 2	**Note**: favorable in connection with cardiac insufficiency
Alpha blockers	**C**	20	0.950	3.1; 3	
Spironolactone	**C**	20	0.925	3.1; 3	**Note**: frequent, clinically relevant hyponatremia
Moxonidine	**C**	20	0.950	3.1; 3	
Clonidine	**D**	20	0.950	3.9; 4	**Note**: May be applied when hypertensive crisis is accompanied by tachycardia
Minoxidil	**D**	20	1.000	4.0; 4	
Calcium antagonists, verapamil type	**D**	20	0.950	3.9; 4	**Caution**: Hypotension, QT-prolongation
Aliskiren*					
Urapidil*					
CARDIAC INSUFFICIENCY	**FORTA Class** (original FORTA class in parentheses if different from consensus results)	**Nr. of raters**	**Consensus coefficient, Round 1 (cutoff 0.800)**	**Expert ratings on a numerical scale: A=1, B=2, C=3, D=4** **Mean; Mode**	**Selection of pertinent comments given by participating experts during the consensus procedure**
Substance/Group					

Renin-angiotensin system inhibitors **ACE inhibitors**	**A**	20	0.950	1.1; 1	**Note**: chronic use may cause persistent cough
Angiotensin receptor antagonists	**A**	20	0.950	1.1; 1	
Betablockers (metoprolol, carvedilol, bisoprolol, nevibolol)	**A**	20	0.950	1.1; 1	**Note**: Metoprolol is metabolized by CYP2D6: 5-10% of Caucasians are poor metabolizers **Note**: **Class B** for patients >80 years **Caution**: orthostatic hypotension; increased risk of falls
Diuretics	**B**	19	0.947	1.9; 2	**Note**: With mild to moderate cardiac insufficiency and chronic progression; in cases of acute symptomatic cardiac insufficiency, there is generally no alternative
Spironolactone	**B**	20	0.925	2.2; 2	**Caution**: hyperkalemia, especially in combination with ACE inhibitors and NSAIDs **Caution**: renal insufficiency
Digitalis preparations	**C**	20	0.925	3.0; 3	**Caution**: increased toxicity in association with chronic renal illnesses (nausea, vomiting, arrhythmias)
CORONARY HEART DISEASE AND STROKE	**FORTA Class** (original FORTA class in parentheses if different from consensus results)	**Nr. of raters**	**Consensus coefficient, Round 1 (cutoff 0.800)**	**Expert ratings on a numerical scale: A=1, B=2, C=3, D=4** **Mean; Mode**	**Note:** Further development of the FORTA system may lead to differentiation between these two diagnoses as well as more specific definition of acute/chronic treatment **Selection of pertinent comments given by participating experts during the consensus procedure**
Substance/Group					
Renin- angiotensin system blockers: ACE inhibitors	**A**	20	0.975	1.1; 1	
Acetylsalicylic acid	**A**	20	1.000	1.0; 1	
Unfractionated heparin and low molecular weight heparin	**A**	18	1.000	1.0; 1	**Caution**: only for thrombosis prophylaxis in stroke patients, not for acute therapy of stroke per se

Frequency-lowering betablockers	**A**	20	1.000	1.0; 1	**Note**: second –line therapy when hypertension is present **Caution**: less favorable in stroke patients
Nitroglycerin spray, single use, acute as on-demand medication	**A**	20	1.000	1.0; 1	**Caution**: not to be used in cases of acute stroke due to uncontrollable drops in blood pressure
Clopidogrel	**B** **A** for stent	19	0.921	1.8; 2	**Caution:** only for secondary prevention, insufficient evidence for acute stroke
Thrombolytics, especially rTPA (recombinant tissue-type plasminogen activator)	**B**	17	1.000	2.0; 2	**Note**: recommended as the only accepted therapy for acute stroke
Statins	**B**	20	0.875	2.0; 2	**Caution**: terminally ill patients **Caution**: some statins are metabolized by the CYP 3A4 system
Nitrates, long-term	**C**	20	0.950	2.9; 3	**Note:** in patients with peripheral microangiopathy, improvement in exercise capacity **Caution**: combinations with other antihypertensive agents due to hypotension and risk of falls
Gp IIb/IIIa antagonists (glycoprotein 2b/3a inhibitors)	**C**	16	0.969	2.9; 3	**Note**: acute therapy; especially indicated following interventions (PTCA and stents) with peripheral emboli, in spite of high risk of bleeding
Ivabradin*					
CHRONIC THERAPY FOLLOWING MYOCARDIAL INFARCTION	**FORTA Class** (original FORTA class in parentheses if different from consensus results)	**Nr. of raters**	**Consensus coefficient, Round 1 (cutoff 0.800)**	**Expert ratings on a numerical scale: A=1, B=2, C=3, D=4** **Mean; Mode**	**Selection of pertinent comments given by participating experts during the consensus procedure**
Substance/group					
Renin angiotensin system blockers **ACE Inhibitors**	**A**	20	0.975	1.1; 1	
Acetylsalicylic acid	**A**	20	0.975	1.1; 1	

(100 mg/d)					
Frequency-lowering beta blockers	**A**	20	1.000	1.0; 1	**Note**: metoprolol is metabolized by CYP2D6: 5-10% of Caucasians are poor metabolizers
Nitroglycerine spray, single use as on-demand medication	**A**	20	1.000	1.0; 1	
Influenza vaccination (inactivated subunit vaccines)	**A**	17	1.000	1.0; 1	
Statins	**A** **B** for very old (>80 years) patients	20	0.900	1.2; 1	
Clopidogrel	**B** **A** with stent, aspirin intolerance	19	0.974	1.9; 2	**Note**: secondary prevention
Nitrates, long-term	**C**	20	0.975	3.0; 3	
Fibrates	**C**	18	0.889	3.2; 3	
Niacin	**C**	19	1.000	3.0; 3	
Ezetimib	**C**	19	0.921	3.2; 3	
Amiodarone	**C**	20	0.975	3.1; 3	
All other class-I-III antiarrhythmic agents	**D**	20	1.000	4.0; 4	
Dihydropyridine antagonists (if no hypertension)	**D**	20	1.000	4.0; 4	
	FORTA Class (original FORTA class in parentheses if different from		**Consensus coefficient, Round 1**	**Expert ratings on a numerical scale: A=1, B=2, C=3, D=4**	

ATRIAL FIBRILLATION	consensus results)	**Nr. of raters**	**(cutoff 0.800)**	**Mean; Mode**	**Selection of pertinent comments given by participating experts during the consensus procedure**
Substance/group					
Oral anticoagulation (e.g. Phenprocoumon, warfarin)	**A**	20	0.975	1.1; 1	
Alternative: low molecular weight heparin	**A**	19	0.974	1.1; 1	**Caution**: lack of evidence as to long-term use
Frequency-lowering betablockers	**A**	20	1.000	1.0; 1	
Digoxin	**B**	20 (R1) 19 (R2)	0.800	2.4; 2 (R1) 2.4; 2 (R2)	**Recommendation**: When possible, reduce dosage, even with normal renal function and drug monitoring level **Caution**: accumulation in patients with renal insufficiency; adverse effects (loss of appetite, nausea)
Digitoxin	(D) **C**	20 (R1) 19 (R2)	0.525	3.1; 4 (R1) 2.5; 2 (R2)	**Note**: may be easier to regulate in patients with chronic kidney disease (CKD) than digoxin; fluctuations in liver function are observed less frequently than in renal function **Caution**: regular monitoring
Class III antiarrhythmic agent Dronedarone	(B) **C**	18 (R1) 18 (R2)	0.555	2.9; 3 (R1) 3.0; 3 (R2)	**Caution:** lack of evidence for elderly patients, risk/benefit ratio difficult to estimate; liver toxicity
Diltiazem, Verapamil	**C**	20	0.975	3.1; 3	
Acetylsalicylic acid (100 mg/d)	**C**	20	0.850	3.1; 3	**Caution**: rarely sufficient; risk of adverse effects
Class III antiarrhythmic agent Amiodarone	**C**	19	0.868	3.1; 3	**Recommendation:** discontinue when atrial fibrillation persists and tachyarrhythmia can be controlled otherwise
All other class I-III antiarrhythmic agents	**D**	20	1.000	4.0; 4	
Dabigatran*					
Rivaroxaban*					
	FORTA Class (original FORTA class in			**Expert ratings on a numerical scale: A=1, B=2, C=3, D=4**	

CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD)	parentheses if different from consensus results)	Nr. of raters	Consensus coefficient, Round 1 (cutoff 0.800)	Mean; Mode	Selection of pertinent comments given by participating experts during the consensus procedure
Substance/group					
Inhalative glucocorticoids	**A**	20	1.000	1.0; 1	**Note:** therapy of asthma **Caution**: compliance problems, frailty syndrome
Inhalative long-acting parasympatholytic agents	**A**	19	1.000	1.0; 1	**Note:** therapy of COPD **Caution**: compliance problems, frailty syndrome
Systemic glucocorticoids, acute, short-term use in cases of exacerbation	**A**	20	0.975	1.1; 1	
Antibiotics (acute) in cases of exacerbation, after calculated selection and, if necessary, according to antibiogram	**A**	20	0.975	1.1; 1	
Long-term administration of oxygen	**A**	19	0.974	1.1; 1	**Caution**: pCO_2 ↑
Annual influenza immunizations	**A**	19	1.000	1.0; 1	
Pneumococcal immunizations for persons ≥ 65 years	**A**	18	0.972	1.1; 1	
Inhalative beta 2 mimetic agents	**B**	19	1.000	2.0; 2	
Theophyllin	**C**	20	0.875	3.2; 3	**Caution:** side effect profile: tremor, nausea, loss of appetite, tachycardia
Mucolytic agents, e,g, acetyl cystein, bromhexin	**C**	20	0.950	3.1; 3	
Systemic glucocorticoids, chronic use	**D**	20	0.975	4.0; 4	
Antitussives: opioid A., e.g. codein; non-opioid A., e.g. butamirate	**D**	20	1.000	4.0; 4	

OSTEOPOROSIS	**FORTA Class** (original FORTA class in parenteses if different from consensus results)	**Nr. of raters**	**Consensus coefficient, Round 1 (cutoff 0.800)**	**Expert ratings on a numerical scale: A=1, B=2, C=3, D=4** **Mean; Mode**	**Selection of pertinent comments given by participating experts during the consensus procedure**
Substance/Group					
Calcium and Vitamin D supplements	**A**	20	0.975	1.1; 1	**Recommendation**: calcium supplements only when sufficient calcium intake is not guaranteed
Bisphosphonates (Alendronate, Ibandronate, Risendronate, Zoledronate)	**A**	20	0.900	1.2; 1	**Note**: oral less effective than intravenous application
Raloxifen	**A**	17	0.882	1.2; 1	**Caution**: possible risk of thromboembolism
Teriparatide	**B**	15	0.967	1.9; 2	**Note**: cost issues may limit use
Strontium ranelate	**B**	17 (R1) 18 (R2)	0.794	2.1; 2 (R1) 2.1; 2 (R2)	**Note**: favorable evidence for patients > 80 years; daily administration, as well as strict adherence to scheduling around mealtimes **Caution**: contraindicated in patients with renal insufficiency
Alfacalcidol	**C**	18	0.944	2.9; 3	
Parathormone	**C**	19	0.921	2.9; 3	
Nandrolone decanoate	**D**	18	1.000	4.0; 4	
Fluoride	**D**	19	1.000	4.0; 4	
Hormone replacement therapy (HRT): estrogen, except for perimenopausal)	**D**	19	0.921	3.8; 4	
Denosumab*					

	FORTA Class (original FORTA class in parentheses		**Consensus**	**Expert ratings on a numerical scale: A=1, B=2, C=3, D=4**	

TYPE II DIABETES MELLITUS	if different from consensus results)	Nr. of raters	coefficient, Round 1 (cutoff 0.800)	Mean; Mode	Selection of pertinent comments given by participating experts during the consensus procedure
Substance/group					
Insulin and insulin analogs	**A**	19	0.974	1.1; 1	
3rd generation sulfonylureas (for example, glimepiride)	**A**	20	0.925	1.2; 1	
1st generation sulfonylureas (for example, glibenclamide)	**B**	19	0.842	2.3; 2	**Caution**: risk of hypoglycemia
Metformin	**B**	20	0.975	2.0; 2	**Note:** lower risk of hypoglycemia **Caution**: contraindicated in patients with impaired renal function
Acarbose	**B**	19	0.816	2.4; 2	**Note**: less effective, favorable alternatives available
Glinides (for example, nateglinide)	**C**	18	0.972	2.9; 3	**Note**: within this group, repaglinide may be most favorable in terms of controllability
DPP4 (Dipeptidylpeptidase) Inhibitors	**C**	19	0.895	2.8; 3	
GLP1 (Glucagon-Like Peptide-1) analogs	**C**	19	0.974	3.1; 3	
PPAR-ɣ Ligands (Peroxisomal Proliferator-Activated Receptor gamma) **Pioglitazone**	**C**	20	0.950	3.1; 3	**Caution**: risk of edema
Rosiglitazone	**D**	20	1.000	4.0; 4	
	FORTA Class (original FORTA class in parentheses if different from		**Consensus coefficient, Round 1**	**Expert ratings on a numerical scale: A=1, B=2, C=3, D=4**	

DEMENTIA	consensus results)	**Nr. of raters**	**(cutoff 0.800)**	**Mean; Mode**	**Selection of pertinent comments given by participating experts during the consensus procedure**
Substance/group					
Acetylcholinesterase inhibitors for example, Donepezil, Galantamine, Rivastigmine	**B**	20	0.900	2.0; 2	
Memantine	**B**	19	0.895	2.1; 2	**Note**: treatment of dementia of the Alzheimer type
Statins	**C**	17	0.853	3.3; 3	
Selegiline	(C) **D**	19 (R1) 20 (R2)	0.763	3.5; 3 (R1) 3.7; 4 (R2)	**Note:** risk overrides any benefit **Caution**: contraindicated when severe cardiac and cardiovascular illnesses are present
Nimodipine	(C) **D**	20 (R1) 19 (R2)	0.750	3.5; 3 (R1) 3.7; 4 (R2)	**Note:** lack of evidence as to benefits
Ginkgo biloba	(C) **D**	20 (R1) 20 (R2)	0.775	3.5; 3 (R1) 3.6; 4 (R2)	**Note:** lack of evidence as to benefits **Caution**: Interaction potential via CYP 450 system
Ergoline derivatives	(C) **D**	19 (R1) 20 (R2)	0.763	3.5; 3 (R1) 3.8; 4 (R2)	**Note:** lack of evidence as to benefits **Note**: no longer administered in Austria due to risk of toxic effects
Piracetam	(C) **D**	20 (R1) 20 (R2)	0.800	3.4; 3 (R1) 3.6; 4 (R2)	**Note:** lack of evidence as to benefits
Pyritinol	(C) **D**	18 (R1) 19 (R2)	0.778	3.4; 3 (R1) 3.7; 4 (R2)	**Note:** lack of evidence as to benefits
Antioxidants: Vitamin E, Selenium, Vitamin C	(C) **D**	19 (R1) 20 (R2)	0.711	3.6; 4 (R1) 3.9; 4 (R2)	**Note:** lack of evidence as to benefits **Note**: vitamin deficiency due to malnutrition is common in association with dementia
Phytotherapeutic agents, e.g. Ginseng	(C) **D**	20 (R1) 20 (R2)	0.725	3.6; 4 (R1) 3.8; 4 (R2)	**Note:** lack of evidence as to benefits
Hormone preparations, e.g. DHEA (Dehydroepiandrosterone), Testosterone	(C) **D**	20 (R1) 20 (R2)	0.700	3.6; 4 (R1) 3.9; 4 (R2)	**Note:** lack of evidence as to benefits
Antiphlogistics, e.g. Indomethacin	**D**	20	1.000	4.0; 4	
Desferrioxamine	**D**	19	1.000	4.0; 4	

BEHAVIORAL AND PSYCHOLOGICAL SYMPTOMS OF DEMENTIA (BPSD)	FORTA Class (original FORTA class in parentheses if different from consensus results)	Nr. of raters	Consensus coefficient, Round 1 (cutoff 0.800)	Expert ratings on a numerical scale A=1, B=2, C=3, D=4 Mean; Mode	Selection of pertinent comments given by participating experts during the consensus procedure
BPSD: DEPRESSION					
Substance/group					
SSRI (Selective Serotonin Reuptake Inhibitors) Citalopram/Escitalopram, Sertralin, Fluoxetin in the usual dosages	**B**	20	0.900	2.1; 2	**Recommendation:** maximum 20mg for citalopram **Caution:** risk of protracted serotonin syndrome with fluoxetin
Mirtazapine (15-45mg/d)	**B**	20	0.875	2.2; 2	**Recommendation**: well-tolerated in low doses (15mg)
SNRI (Serotonin-Noradrenalin-Reuptake-Inhibitors) Venlafaxin, Duloxetin	**B**	18	0.917	2.2; 2	
BPSD: PARANOIA, HALLUCINATION	**FORTA Class** (original FORTA class in parentheses if different from consensus results)	**Nr. of raters**	**Consensus coefficient, Round 1 (cutoff 0.800)**	**Expert ratings on a numerical scale A=1, B=2, C=3, D=4** **Mean; Mode**	**Note: These drugs should be considered critically under any circumstances**; they may however be indicated for the therapy of older patients for whom other forms of intervention are not possible or feasible. Based on the results of the Delphi Consensus Procedure, this indication group is under intensified observation for further development. **Selection of pertinent comments given by participating experts during the consensus procedure**
Substance/group					
Risperidone (initially 0,5-1 mg/d)	(D) **C**	20 (R1) 20 (R2)	0.500	3.0; 2 (R1) 2.7; 2 (R2)	**Note**: alternatives are few, also an option when aggressiveness is displayed **Caution**: keep dosages and treatment time at a minimum
Haloperidol	(D)	19 (R1)	0.632	3.3; 4 (R1)	**Note:** only licensed substance for treatment of delirium when

(initially 0.5 mg/d, max. 3 mg/d)	**C**	20 (R2)		3.0; 3 (R2)	drug therapy is necessary; very few alternatives **Caution**: strict adherence to maximum dosage
Quetiapine (25-200 mg/d)	(D) **C**	20 (R1) 20 (R2)	0.575	3.2; 4 (R1) 2.9; 3 (R2)	**Note**: May be an option when haloperidol is contraindicated, also in cases of Parkinson-related delirium
Aripiprazole (2-15 mg/d)	(D) **C**	19 (R1) 17 (R2)	0.789	3.6; 4 (R1) 3.4; 4 (R2)	
Clozapine (10-50 mg/d)	**D**	20 (R1) 19 (R2)	0.800	3.6; 4 (R1) 3.7; 4 (R2)	**Recommendation**: treatment of Lewy Body dementia
BPSD: RESTLESSNESS, AGITATION, (AGGRESSIVENESS)	**FORTA Class** (original FORTA class in parentheses if different from consensus results)	**Nr. of raters**	**Consensus coefficient, Round 1 (cutoff 0.800)**	**Expert ratings on a numerical scale A=1, B=2, C=3, D=4** **Mean; Mode**	**Note: These drugs should be considered critically under any circumstances**; they may however be indicated for the therapy of older patients for whom other forms of intervention are not possible or feasible. Based on the results of the Delphi Consensus Procedure, this indication group is under intensified observation for further development. **Selection of pertinent comments given by participating experts during the consensus procedure**
Substance/group					
Trazodone (50-200 mg/d)	**C**	17	0.912	3.2; 3	
Risperidone (initially 0.5-1 mg/d, maximum 3 mg/d)	(D) **C**	20 (R1) 20 (R2)	0.625	3.3; 4 (R1) 2.7; 2 (R2)	**Recommendation**: ≤ 2mg/d **Note**: also effective in treating aggressiveness
Quetiapine (25-200 mg/d)	(D) **C**	19 (R1) 20 (R2)	0.763	3.5; 4 (R1) 3.3; 3 (R2)	**Note**: also effective in treating aggressiveness; favorable extrapyramidal side effect profile
Melperone (25-150 mg/d)	(D) **C**	20 (R1) 20 (R2)	0.675	3.4; 4 (R1) 3.4; 4 (R2)	**Note**: also effective in treating aggressiveness
Pipamperone (20-120 mg/d)	**D**	19 (R1) 17 (R2)	0.789	3.6; 4 (R1) 3.6; 4 (R2)	**Note**: also effective in treating aggressiveness
Clomethiazole (5-15 mg/d)	**D**	19	0.947	3.9; 4	

BPSD: SLEEP DISORDERS	FORTA Class (original FORTA class in parentheses if different from consensus results)	Nr. of raters	Consensus coefficient, Round 1 (cutoff 0.800)	Expert ratings on a numerical scale A=1, B=2, C=3, D=4 Mean; Mode	Selection of pertinent comments given by participating experts during the consensus procedure
Substance/group					
Slow-release melatonin (2-4 mg)	**C**	18	0.833	3.1; 3	
Zopiclone (3.75-7.5 mg)	**C**	18	1.000	3.0; 3	**Caution:** not for long-term use
Tetracyclic antidepressant Mirtazapine (15-30mg)	**C**	20 (R1) 20 (R2)	0.775	3.0; 3 (R1) 3.0; 3 (R2)	**Recommendation**: lowest possible dosages recommended
Tricyclic antidepressant Doxepine (25-50mg)	**C**	18	0.801	3.4; 3	**Recommendation**: other substances should be favored when symptoms of depression are not present **Caution**: anticholinergic side effects

DEPRESSION Prophylaxis and therapy for patients with moderate to major depression	FORTA Class (original FORTA class in parentheses if different from consensus results)	Nr. of raters	Consensus coefficient, Round 1 (cutoff 0.800)	Expert ratings on a numerical scale (median): A=1, B=2, C=3, D=4 Mean; Mode	Selection of pertinent comments given by participating experts during the consensus procedure
Substance/group					
SSRIs (Selective Serotonin Reuptake Inhibitor)					
Sertraline	**B**	20	1.000	2.0; 2	
Escitalopram	**B**	19	1.000	2.0; 2	

Citalopram					
	B	20	0.975	2.0; 2	**Recommendation**: maximum 20 mg for older patients **Note**: Compared to escitalopram, more marked change in QT interval due to the ineffective enantiomere
Tricyclic antidepressant Nortriptyline	**C**	20	0.925	3.2; 3	
Tetracyclic antidepressant Mirtazapine	**C**	20	0.825	2.7; 3	**Recommendation**: apply lowest possible dosage
SNRIs (Serotonin-Noradrenalin Reuptake Inhibitors) **Venlafaxin**	**C**	20	0.950	2.9; 3	
Duloxetin	**C**	20	0.975	3.0; 3	
Monoamine oxidase A (MAO) inhibitor Moclobemide	**C**	19	0.947	3.0; 3	
Dopamine and norepinephrine reuptake inhibitor Bupropion	**C**	18	0.917	3.1; 3	
Selective noradrenaline re-uptake inhibitor Reboxetin	**D**	20	0.925	3.9; 4	
Trazodone*					
Olanzapine*					
Benzodiazepines* (general, long-acting, short-acting)					
St. John's Wort*					
NEW INDICATION BIPOLAR DISORDER*					
	FORTA Class (original			**Expert ratings on a numerical scale**	

INSOMNIA / SLEEP DISORDERS	FORTA class if different from consensus results)	Nr. of raters	Consensus coefficient, Round 1 (cutoff 0.800)	A=1, B=2, C=3, D=4 Mean; Mode	Selection of pertinent comments given by participating experts during the consensus procedure
Substance/group					
ω1-Benzodiazepine agonists **Zolpidem**	**C**	20	1.000	3.0; 3	
Zaleplone	**C**	18	1.000	3.0; 3	
Non-benzodiazepine hypnotic **Zopiclone**	**C**	18	1.000	3.9; 3	
Butyrophenone **derivative Pipamperone**	**C**	18	0.806	3.3; 3	
Melatonin (slow-release)	**C**	18	0.861	3.2; 3	
Melperone*					
Tetracyclic antidepressant Mirtazapine	**(D)** **C**	20 (R1) 20 (R2)	0.700	3.4; 4 (R1) 3.5; 4 (R2)	**Recommendation**: indicated in association with additional symptoms of depression; also effective in low doses (15mg)
Benzodiazepines, e.g. **Oxazepam (medium half-life)**	**D**	20	0.900	3.8; 4	
Triazolam (very short half-life)	**D**	19	0.974	3.9; 4	
Sigma receptor agonist Opipramole	**D**	19	1.000	4.0; 4	
Tricyclic antidepressant Doxepine	**D**	19	0.974	3.9; 4	
Antihistamine Diphenhydramine	**D**	19	1.000	4.0; 4	

CHRONIC PAIN	**FORTA Class** (original FORTA class in parentheses if different from consensus results)	**Nr. of raters**	**Consensus coefficient, Round 1 (cutoff 0.800)**	**Expert ratings on a numerical scale A=1, B=2, C=3, D=4** Mean; Mode	**Selection of pertinent comments given by participating experts during the consensus procedure**
Substance/Group					
Paracetamol (acetaminophen)	**A**	20	0.950	1.1; 1	**Caution**: previous liver damage
Metamizole	**B**	20	0.950	1.0; 2	**Recommendation**: risk/benefit relation favorable, combination therapy and regular monitoring of blood count
SSRI (Selective Serotonin Reuptake Inhibitors) / SNRI (Serotonin-Noradrenalin-Reuptake Inhibitor), e.g. Venlafaxin	**B**	18	0.833	2.3; 2	**Note**: consider venlafaxin only in individual cases
Opioids, e.g. Buprenorphine	**B**	19	0.974	2.1; 2	**Caution**: potentially delirogenic; possible limitations in patient adherence due to adverse effects (CNS, nausea, constipation)
Tilidine/naloxone	**B**	20	0.975	2.0; 2	
Except for Morphin	**C**	20	0.900	2.8; 3	
Antiepileptic agents Pregabalin	**C**	20	0.950	2.9; 3	**Recommendation**: shown to be favorable for neuropathic pain; effective in low doses and well-tolerated
Carbamazepin	**D**	20	0.875	3.8; 4	**Note**: little evidence available for older patients

Tricyclic antidepressant Amitriptylin	**D**	19	0.895	3.8; 4	
NSAIDs (nonsteroidal anti-inflammatory drugs), e.g. Naproxen	**D**	20	0.975	4.0; 4	**Recommendation**: when renal function is satisfactory and no contraindications present, exceptions may be made for musculo-skeletal pain
Celecoxib	**D**	20	0.950	3.9; 4	
Antiepileptic agent Gabapentin*					
Opioids* (oxycodone, hydromorphone)					
NEW INDICATION EPILEPSY*					
PARKINSON'S DISEASE	**FORTA Class** (original FORTA class in parentheses if different from consensus results)	**Nr. of raters**	**Consensus coefficient, Round 1 (cutoff 0.800)**	**Expert ratings on a numerical scale A=1, B=2, C=3, D=4** **Mean; Mode**	**Selection of pertinent comments given by participating experts during the consensus procedure**
Substance/group					
L-DOPA	**B**	20	0.900	1.8; 2	**Note**: in available guidelines, drug of choice for patients >70 years, favorable side effect profile with regard to hallucinosis and psychosis
COMT (Catechol-O-Methyltransferase) Inhibitor Entacapone	**B**	19	0.947	2.1; 2	

MAO-B inhibitors					
Selegiline	**C**	20	0.950	2.9; 3	
Rasagiline	**C**	19	0.974	2.9; 3	
Dopamine agonists					
Ropinirole	**C**	19	0.947	3.0; 3	**Caution**: potentially delirogenic
Pramipexole	**C**	19	0.947	3.0; 3	**Caution**: potentially delirogenic
Glutamate antagonists					
Amantadine	**C**	19	0.921	3.1; 3	**Caution**: high risk of adverse effects; potentially delirogenic; possible QT-prolongation **Note:** indicated for dyskinesia, parenteral therapy of akinetic crisis
Anticholinergics					
Biperidene	**D**	20	1.000	4.0; 4	
INCONTINENCE Drug therapy for urge incontinence	**FORTA Class** (original FORTA class in parentheses if different from consensus results)	**Nr. of raters**	**Consensus coefficient, Round 1 (cutoff 0.800)**	**Expert ratings on a numerical scale A=1, B=2, C=3, D=4** **Mean; Mode**	**Selection of pertinent comments given by participating experts during the consensus procedure**
Substance/group					
Trospium chloride	**B**	18	0.972	1.9; 2	
Oxybutynin	**C**	19	0.947	3.1; 3	**Caution**: intensification of dementia
Tolterodine	**C**	18	0.944	3.1; 3	**Caution**: intensification of dementia

NEW INDICATION GASTROINTESTINAL ILLNESSES/ CONCOMITANT THERAPY WITH NSAIDs*					
ONCOLOGICAL DISEASES: SOLID TUMORS					**Note:** Use of the FORTA system is limited for the following indications due to the highly specialized nature and complexity of treatment options, e.g. combination therapies, as well as new advances being made which may affect the state of evidence and the FORTA ratings. Strictly speaking, some of these therapy options may not be defined as long-term treatment and thus may not adhere to the FORTA principle. In general, few studies are available pertaining to older patients. Due also to the lower number of raters, this area is under intensified observation for further development.
INDICATION Substance/group	**FORTA Class** (original FORTA class in parentheses if different from consensus results)	**Nr. of raters**	**Consensus coefficient, Round 1 (cutoff 0.800)**	**Expert ratings on a numerical scale A=1, B=2, C=3, D=4** **Mean; Mode**	**Selection of pertinent comments given by participating experts during the consensus procedure**
BREAST CANCER Adjuvant therapy					
Hormone therapy, e.g. **Tamoxifen**	**A**	12	1.000	1.0; 1	
Aromatase inhibitors	**A**	11	1.000	1.0; 1	
Immunotherapy / “Targeted” therapy					

Trastuzumab	**A**	10	1.000	1.0; 1	
Chemotherapy, e.g. **CMF (Combination Cyclophosphamide, Methotrexate, 5-Fluorouracil)**	**B**	8	1.000	2.0; 2	
AC/EC Regimen(Anthracyclin/ Epirubicin, Cyclophosphamide)	**B**	8	1.000	2.0; 2	
BREAST CANCER Advanced Stage					
Hormone therapy, e.g. Tamoxifen, Aromatase inhibitors	**A**	10	1.000	1.0; 1	
Immunotherapy/Targeted Therapy **Trastuzumab / Lapatinib**	**A**	8	1.000	1.0; 1	
Chemotherapy, e.g. anthracyclins, taxanes	**B**	7	0.929	1.9; 2	
VEGF (Vascular Endothelial Growth Factor) Inhibition Bevacizumab	**B**	7	1.000	2.0; 2	
COLORECTAL CARCINOMA Adjuvant Therapy					
FOLFOX Regimen (Folinic acid, Fluorouracil, Oxaliplatin)	**B**	7	1.000	2.0; 2	
5-Fluorouracil based	**B**	7	1.000	2.0; 2	

infusion regimen					
Capecitabine	**B**	7	1.000	2.0; 2	
COLORECTAL CARCINOMA Advanced stage					
Chemotherapy FOLFOX (Folinic acid, Fluorouracil, Oxaliplatin)	**B**	7	0.929	2.1; 2	
VEGF (Vascular Endothelial Growth Factor) Inhibition Bevacizumab	**B**	7	0.929	2.1; 2	
EGFR (Epidermal-Growth-Factor-Receptor) Inhibition Cetuximab	**B**	7	0.929	2.1; 2	
Panitumumab	**B**	7	0.929	2.1; 2	
BRONCHIAL CARCINOMA Adjuvant therapy					
Adjuvant chemotherapy (Cisplatin-based)	**B**	5	1.000	2.0; 2	
BRONCHIAL CARCINOMA Advanced Stage					
Docetaxel	**A**	5	1.000	1.0; 1	
Vinorelbin	**A**	5	1.000	1.0; 1	
Primary combination therapy Cisplatin/Gemcitabin, or Cisplatin/Vinorelbin	**B**	5	1.000	2.0; 2	
GASTRIC CANCER					
ECF Regime (Epirubicin, Cisplatin, 5-Fluorouracil)	**A**	5	0.900	1.2; 1	**Expert recommendation**: alternative FLO (5-fluorouracil, folinic acid, oxaliplatin); capecitabin shown to be particularly favorable, regardless of age

ONCOLOGICAL DISEASES HEMATOLOGICAL NEOPLASIAS	**FORTA Class** (original FORTA class in parentheses if different from consensus results)	**Nr. of raters**	**Consensus coefficient, Round 1 (cutoff 0.800)**	**Expert ratings on a numerical scale A=1, B=2, C=3, D=4** Mean; Mode	**Selection of pertinent comments given by participating experts during the consensus procedure**
INDICATION Substance/group					
MDS (Myelodysplastic syndrome) Azacytidine	**A**	6	1.000	1.0; 1	
AML (Acute myeloid leukemia) Anthracyclines + cytosine arabinoside (cytarabine)	**A**	7	0.857	1.3; 1	
CLL (Chronic lymphatic leukemia) Chlorambucil, Fludarabin, Bendamustin	**A**	8	0.875	1.3; 1	**Caution**: based on a study comparing fludarabin with chlorambucil, more deaths associated with fludarabin
Multiple myeloma Primary therapy with Prednisolone	**A**	8	1.000	1.0; 1	
Thalidomide	**A**	8	0.875	1.3; 1	
Melphalan	**A**	8	0.875	1.3; 1	

ONCOLOGICAL SUPPORTIVE THERAPY	FORTA Class	Nr. of raters	Consensus coefficient, Round 1 (cutoff 0.800)	Expert ratings on a numerical scale A=1, B=2, C=3, D=4 Mean; Mode	Selection of pertinent comments given by participating experts during the consensus procedure
Substance/group					
G-CSF (Granulocyte Colony Stimulation Factor)	**A**	13	1.000	1.0; 1	
Antiemetic agents (e.g. 5-HT receptor inhibitors)	**A**	16	1.000	1.0; 1	**Caution**: anticholinergic side effects for dimenhydrinate
Erythropoesis Stimulating Agents, ESA	**B**	14	0.964	1.9; 2	**Note**: effective for anemia associated with renal insufficiency
NEW INDICATION ANEMIA*					

Anlage_6 Operationalisierung PRISCUS

Die Anlage ist über den folgenden Link abrufbar: https://innovationsfonds.g-ba.de/downloads/beschluss-dokumente/37/2021-01-22_PIM-STOP_Ergebnisbericht_Anlage%206.xls

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Methodology

Prediction of Drug-Related Risks Using Clinical Context Information in Longitudinal Claims Data

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ABSTRACT

Objectives: To develop and internally validate prediction models for medication-related risks arising from overuse, misuse, and underuse that utilize clinical context information and are suitable for routine risk assessment in claims data (i.e., medication-based models predicting the risk for hospital admission apparent in routine claims data or MEDI-RADAR). **Methods:** Based on nationwide claims from health-insured persons in Germany between 2010 and 2012, we drew a random sample of people aged ≥65 years (N = 22,500 randomly allocated to training set, N = 7500 to validation set). Individual duration of drug supply was estimated from prescription patterns to yield time-varying drug exposure windows. Together with concurrent medical conditions (ICD-10 diagnoses), exposure to the STOPP/START (screening tool of older persons' potentially inappropriate prescriptions/screening tool to alert doctors to the right treatment) criteria was derived. These were tested as time-dependent covariates together with time-constant covariates (patient demographics, baseline comorbidities) in regularized Cox regression models. **Results:** STOPP/START variables were iteratively refined and selected by regularization to include 2 up to 11 START variables and 8 up to 31 STOPP variables in parsimonious and liberal selections in the prediction modeling. The models discriminated well between patients with and without all-cause hospitalizations, potentially drug-induced hospitalizations, and mortality (parsimonious model c-indices with 95% confidence intervals: 0.63 [0.62–0.64], 0.67 [0.65–0.68], and 0.78 [0.76–0.80]). **Conclusions:** The STOPP/START criteria proved to efficiently predict medication-related risk in models possessing good performance. Timely detection of such risks by routine monitoring in claims data can support tailored interventions targeting these modifiable risk factors. Their impact on older peoples' medication safety and effectiveness can now be explored in future implementation studies.

Keywords: clinical outcomes assessment, clinical prediction model, National Health Insurance/Claims Data, pharmacology/pharmacotherapy, STOPP/START criteria

Introduction

Aging populations gradually develop multiple (chronic) conditions, many of which require pharmacological treatment. However, the consequential complexity of drug use in such heterogeneous populations is challenging and can confer additional risk of treatment-related harm through potentially inappropriate prescribing (PIP) [1–3]. Hospitalizations are among the most serious and momentous health events with far-reaching consequences to an individual's health state [4,5] and (public) health care costs [4,6]. Therefore, it is of paramount importance to avert preventable hospitalizations by adequate drug treatment. Preventable drug-related morbidity includes adverse drug events (ADEs), hospital admissions, and death [7]. Longitudinal (claims) datasets enable the timely detection of such risks, and thus routine risk prediction is a promising strategy to guide tailored interventions targeting these risks [4].

Among risk factors for adverse outcomes in older people, medication is an easily accessible and potentially manageable risk factor with high potential for risk reduction [1,8]. Associated risks can be classified as overuse, misuse, or underuse [3,9]. Explicit screening tools such as the STOPP/START (screening tool of older

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persons' potentially inappropriate prescriptions/screening tool to alert doctors to the right treatment) criteria specifically detect these forms of PIP [3]. Considering the high prevalence of PIP and its consequences, numerous elaborate interventions investigated the suitability of the criteria to detect PIP and thereby improved various health outcomes [1,9,10]. An ideal way of addressing this problem in practice would be to use routine data timely.

Using the STOPP/START criteria in routine claims data, Brown et al. [11] recently assessed their predictive power for major health outcomes and found only modest prognostic relevance, possibly because limited effort was made to optimize predictive performance within the challenging framework of claims data analyses [12]. To improve model performance and consider major challenges such as variable and time-dependent drug exposures (and thus risks), diagnosis (in)validity, and predictive overfitting of large, overoptimistically developed models, we aimed to further exploit the full potential of a medication-based risk tool for automatic detection. In the remainder of the article, this type of tool is described as medication-based model predicting the risk for hospital admission apparent in routine claims data (MEDI-RADAR). Hence, we examined STOPP/START criteria at the level of single criteria and applied advanced variable selection procedures reducing prediction error [13,14]. After an a priori assessed concept, we applied a time-dependent modeling framework in which patients are considered at risk only when being actually exposed to a criterion [4]. Concurrently, we expanded the set of candidate predictors to investigate the contribution of medication underuse [2], which has not been evaluated for its predictive value before.

Methods

Data Sources and Study Sample

The analyses were performed on previously described anonymized data from the German Statutory Health Insurance Fund (AOK) and covered a nationwide sample of claims from health-insured persons [6,15,16]. In brief, the population consisted of older people aged ≥65 years who were continuously insured by AOK from January 1, 2010 until the end of 2012 or death, if occurring earlier. Before inclusion, the 6,849,622 potentially eligible health-insured persons aged ≥65 years of age were characterized during a 12-month run-in period in 2010 with regard to demographics and comorbidities. A person was excluded if he or she died during this run-in period or if either no (ambulatory) diagnosis codes were reported or no prescriptions were recorded anytime during the study period. Because our applied methodology for parameter estimation and prediction is computationally challenging [17], we built our models based on a random sample drawn from all eligible health-insured persons. Gradually increasing the sample of health-insured person for development and validation of the prediction model, we empirically confirmed the notion that predictive performance is insensitive to varying large sample sizes [18]. We therefore drew a random sample of 30,000 health-insured persons. The study was conducted in accordance with the Declaration of Helsinki in its current version. In Germany, by law, retrospective claims analyses with anonymized data do not require ethics committee approval.

Variables and Their Definition

Study outcomes

In the database, medical conditions are documented as ICD-10-coded diagnoses covering date and admission, discharge of each hospital stay, and outpatient morbidity once every quarter. In accordance with the applied time-to-(first)-event methodology, hospitalization dates during the follow-up period (2011–2012) were obtained with their respective admission and discharge diagnoses. The first outcome definition considered hospitalization from any cause (all-cause hospitalization). The refined outcome definition (ADE hospitalization) considered ADE as any injury potentially resulting from drug treatment and thus included medication errors and adverse drug reactions of the patients' current medication [19]. We expanded the original set of published ICD-10 codes according to this definition by complementing it with ratings of two independent clinical assessors (Walter E. Haefeli, Andreas D. Meid), who consented on an empirically derived set of actually coded admission claims regarding their potential relationship to an ADE (73% concordance with literature set; see Appendix Table 1 in Supplemental Materials found at https://doi.org/10.1016/j.jval.2018.05.004). For these two outcome definitions, death was treated as a censoring event during follow-up. Because only the month of death was available after the data anonymization process, the first day of the month was conservatively chosen as the date of death.

Medication related to the STOPP/START list

Exposure with drugs mentioned on the STOPP/START list was derived from prescriptions by their unique Pharmacy Central Number (PZN) [20] and the corresponding Anatomical Therapeutic Chemical (ATC) code. The AiDKlinik (www.aidklinik.de) drug information and clinical decision support system provided information on ingredients, package size, dosage form, and package dose unit based on the MMI database (MMI Pharmindex, Neu-Isenburg, Germany). A previously evaluated method was applied to estimate drug prescription durations based on their longitudinal coverage [15]. The algorithm compares the accumulated dose and the elapsed time using consecutive prescriptions for the respective drug to approximate the actual average daily dose. Dividing the dispensed package size by the estimated average dose yields the duration of drug exposure. A modification of the original formula was used for single or sporadic prescriptions [21]: Unless fixed dosing regimens were available (e.g., biologicals for the treatment of rheumatoid arthritis) [21], we estimated the individual daily dose using the study population's mean (intercept) dose and covariate effects based on indication (ATC code), comorbidities (Elixhauser groups [22]), sex, and age [21] as obtained from patients with multiple prescriptions.

Medical conditions related to the STOPP/START list

Diagnoses and medical conditions related to the STOPP/START criteria were obtained from ambulatory ICD-10 codes. Indicator variables for chronic diseases (e.g., diabetes) and medical history (e.g., increased bleeding propensity indicated by previous events) were continued from the quarter of their first occurrence, whereas indicator variables for temporary conditions (e.g., electrolyte disturbances, such as hyperkalemia) ended with the quarter of coding. Considering the general difficulties of validly extracting underlying diseases from billing codes, we refined the STOPP/START variable definitions in a subsequent attempt to further improve prediction model performance. In the refinement, we restricted the choice of potential ICD-10 codes or stipulated more than one billing code (adapted definitions are highlighted in Appendix Tables 2 and 3 in Supplemental Materials found at https://doi.org/10.1016/j.jval.2018.05.004).

Operationalization of STOPP/START criteria for time-dependent (candidate) predictors

Addressing the challenge of operationalizing the clinically defined STOPP/START criteria [12], we built definitions on preliminary work based on the first version of STOPP/START [23]. New or modified criteria of the current second version [3] were newly defined and transferred into the same format. Two independent reviewers (Andreas D. Meid, Sarah Mächler) consented on an initial set of 52 STOPP criteria (of 80 in total) and 13 START criteria (of 34 in total) that was deemed applicable to German claims data from a clinical perspective with a good chance of success. Along with the refinement of medical conditions, this basic operationalization of the STOPP/START criteria was conceptually revised attempting to enhance coding validity and thereby improve the models' predictive performance (as described above for medical conditions, highlighted in Appendix Tables 2 and 3 in Supplemental Materials found at https://doi.org/10.1016/j.jval.2018.05.004). The follow-up period from 2011 to 2012 was used to develop and internally validate the prediction model (for an exemplary exposure chart, see Appendix Fig. 1 in Supplemental Materials found at https://doi.org/10.1016/j.jval.2018.05.004).

Further covariates for adjustment as time-constant predictors
Elixhauser groups [22] and their weighted score [24] were determined during the 12-month run-in period by the R package icd. Any hospitalization within the run-in period was treated as a binary indicator for prior hospitalization. Age and sex were further variables included as time-constant covariates.

Statistical Analysis

Standard descriptive methods were used to describe characteristics of patients exposed to criteria of the STOPP/START list in the sample drawn for prediction modeling. Statistical tests were two-sided, and 95% confidence intervals were calculated according to an alpha level of 0.05.

Applying a time-to-event approach, we studied the performance of independent variables to predict an outcome during exposure to them (time-dependent Cox model) [4]. Model development and validation was achieved by randomly splitting the sample in a 3:1 ratio, leaving 22,500 individuals for the training set (in-sample) and 7500 for the test set (out-of-sample). Variable selection in the training set was conducted by applying the least absolute shrinkage and selection operator (LASSO) principle on scaled variables with the Bayesian information criterion (BIC) as a parsimonious selection criterion and the Akaike information criterion (AIC) as a more liberal selection criterion [13]. This was accomplished by regularized Cox models with time-dependent covariates (R package penalized) [17]. The concordance statistic (c-index) for time-dependent covariates was primarily used to assess performance and to guide preliminary decisions regarding model selection [25]. Due to the very high memory demand that arose when using the penalized package (up to about 1.7 TB memory), a high-performance cluster was used, providing nodes with a maximum of 2 TB memory to conduct the penalized regression analysis. In general, analyses were performed using the R software or environment versions 3.3.2 and 3.4.0 (R Foundation for Statistical Computing, Vienna, Austria).

Results

The sampled data for prediction modeling included 30,000 randomly selected health-insured persons with a mean age of 76.05 years (standard deviation 7.17 years); of these participants, 66.7% were female. Among persons exposed to distinct STOPP/START criteria, differences in mean age, percentage of female patients, and mean comorbidity score were small (Table 1). Similarly, unadjusted incidence rates for all-cause hospitalizations as a relatively frequent event were remarkably similar for this basic STOPP/START operationalization, where a median number of 3 STOPP criteria and 10 START criteria were present in the time window before the event. Exposure times and the related incidence rates showed the most pronounced changes upon variable refinement of the STOPP/START operationalization (Appendix Tables 2 and 3 in Supplemental Materials found at https://doi.org/10.1016/j.jval.2018.05.004).

During model development, we accounted for the multifactorial event origin and thereby disentangled individual cofactors contributing to the individuals' risk in multivariate Cox models with time-dependent covariates. Some of the candidate predictors were highly correlated, and any regularized variable selection consistently included the basic risk factors of age, sex, and prior hospitalization in an overall stable selection process (Appendix Fig. 2 in Supplemental Materials found at https://doi.org/10.1016/j.jval.2018.05.004). For most selected criteria, the clinically refined variable definitions eliminated negative signs in parameter estimates that would otherwise pretend to be protective (Fig. 1). (Appendix Table 4 in Supplemental Materials found at https://doi.org/10.1016/j.jval.2018.05.004) provides the complete final models from the parsimonious BIC selection. Regarding the BIC selection, predictors belonged to the cardiovascular system (START A-criteria), coagulation system (STOPP C-criteria), central nervous system (STOPP D-criteria), musculoskeletal system (STOPP H-criteria, START E-criteria) including the risk for falls (STOPP K-criteria). In general, the models included more STOPP than START variables and a higher number of medication-based predictors resulted for all-cause hospitalizations than for ADE-specific hospitalizations or mortality. Many mortality predictors were also selected for hospitalizations, although mostly with a smaller attributed effect.

Prediction model performance was determined by the models' ability to discriminate between high-risk patients and low-risk patients in respect to actually observed events. In general, the discriminatory performance (c-index) was comparable between AIC set (liberal selection) and BIC set (parsimonious selection) (Fig. 2). Comparable performance was also achieved between in-sample and out-of-sample predictions, indicating efficient regularization in the shrinkage estimates obtained by the LASSO procedure. With the refined variable definitions, the predictive ability generally increased from all-cause hospitalization (c-indices of BIC selections based on the revised STOPP/START operationalization with 95% confidence interval: 0.63 [0.62–0.64]) to potentially ADE-related hospitalization (0.67 [0.65–0.68]) to mortality (0.78 [0.76–0.80]).

Aiming to guide clinicians and decision makers toward efficient monitoring and health care resource allocation, we investigated relative contributions of individual medication-based predictors comprised in the BIC selection for ADE-related hospitalizations. We thus plotted effect sizes in dependence of the predictors' frequency and obtained a distinct pattern that may help guiding the prioritization of monitoring efforts and targeted interventions (Fig. 3A). The histogram of calculated risks at a given follow-up time resembled a slightly right-skewed normal distribution, whereas most of the events within a fixed follow-up time were attributed to the middle and upper tertile of this distribution (Fig. 3B), and the lower tertile contained only 8.5% of the ADE-related hospitalizations. Of note, this time-fixed outcome definition achieved considerable discrimination as indicated by a c-index of 0.69 (i.e., area under the receiver-operating characteristic curve, Fig. 3C). Exploring the exposure status in the distribution's tertiles revealed distinct patterns with increasing frequencies of more severely weighted STOPP/START criteria and generally more combinations in higher tertiles were evident (Fig. 3D).

Discussion

Using routine claims data, the trained and refined prediction models, MEDI-RADAR, efficiently predicted patients at risk for

Table 1 – Exposure to candidate predictors from study baseline until a hospitalization event (sorted by STOPP and START variables and their relative exposure time)

STOPP/ START criterion[†,‡]	Characteristics of exposed patients*				
	Mean age	Percentage of females	Elixhauser weighted comorbidity score	Exposure time coverage [%]	Unadjusted incidence rate [per person year]
STOPP K3	76.4 (.)	50.7 (.)	39.2 (.)	73.5 (.)	0.35 (.)
STOPP E4	75.4 (↑↑)	55.4 (↑↑)	39.9 (↑↑)	47.1 (↑↑)	0.28 (↑↑)
STOPP H1	75.3 (→)	55.2 (→)	39.8 (↑↑)	45.7 (↓↓)	0.28 (↓↓)
STOPP C3	77.4 (→)	46.2 (→)	41.7 (↑↑)	24.8 (↓↓)	0.43 (↓)
STOPP B9	79.3 (→)	56.1 (↓)	41.3 (↑)	21.5 (↓↓)	0.46 (↓)
STOPP B7	79.3 (↓)	56.2 (↓↓)	41.3 (↑↑)	21.5 (↓↓)	0.46 (↓↓)
STOPP E6	74.6 (↑↑)	49.8 (↑↑)	40.8 (↑↑)	14.2 (↑↑)	0.31 (↑↑)
STOPP H5	75.7 (→)	55.2 (→)	43.5 (↑↑)	13.9 (↓↓)	0.34 (↓↓)
STOPP C2	77.5 (→)	45.2 (→)	40.9 (→)	13.2 (→)	0.36 (→)
STOPP G2	75.7 (→)	55.8 (↓)	43.5 (↑↑)	12.9 (↓↓)	0.34 (↓)
STOPP H4	75.8 (→)	54.2 (→)	43.6 (↑)	11.3 (↓↓)	0.33 (→)
STOPP B8	76.5 (→)	55.7 (↑)	40.5 (↑↑)	10.6 (↓↓)	0.33 (→)
STOPP D1	76.2 (→)	65.8 (→)	42.1 (↑↑)	9.66 (↓↓)	0.36 (↓)
STOPP F1	77.4 (→)	63.7 (↓)	42.0 (↑)	9.61 (↓↓)	0.34 (↓)
STOPP B4	75.8 (→)	52.6 (↓)	48.9 (↑↑)	9.43 (↓↓)	0.26 (↓)
STOPP I2	75.5 (.)	9.50 (.)	42.0 (.)	8.21 (.)	0.35 (.)
STOPP K1	77.8 (→)	63.8 (↓)	40.5 (↑↑)	7.92 (↓↓)	0.37 (→)
STOPP J4	73.7 (→)	82.3 (→)	44.4 (↑↑)	7.21 (↓↓)	0.28 (→)
STOPP K2	80.1 (→)	60.7 (→)	39.5 (↑↑)	6.77 (↓↓)	0.43 (↓)
STOPP J1	76.3 (→)	47.7 (→)	40.6 (↑↑)	6.66 (↓↓)	0.35 (→)
STOPP D6	80.2 (→)	61.1 (↓)	39.4 (→)	6.31 (→)	0.42 (→)
STOPP D5	78.1 (→)	64.5 (↓)	40.2 (↑↑)	5.38 (↓↓)	0.33 (↓)
STOPP H6	75.2 (→)	57.7 (↓)	36.1 (→)	4.95 (↑↑)	0.19 (↑↑)
STOPP C11	76.5 (→)	45.5 (→)	42.2 (↑↑)	4.74 (↑↑)	0.32 (↑↑)
STOPP H9	78.3 (→)	75.1 (↓)	42.4 (→)	4.70 (↑)	0.36 (→)
STOPP I1	77.2 (→)	58.1 (→)	43.3 (↑↑)	4.56 (↓↓)	0.38 (↓↓)
STOPP H8	74.9 (→)	58.2 (↓)	43.1 (↑)	3.98 (↓)	0.28 (→)
STOPP G3	75.6 (→)	40.0 (→)	43.3 (→)	3.75 (→)	0.48 (→)
STOPP F3	77.6 (→)	62.1 (↓)	50.7 (↑)	3.73 (↓↓)	0.38 (↓↓)
STOPP D13	78.0 (.)	57.3 (.)	43.3 (.)	3.69 (.)	0.41 (.)
STOPP B11	75.9 (.)	51.8 (.)	50.8 (.)	3.23 (.)	0.24 (.)
STOPP H7	76.0 (.)	60.6 (.)	41.9 (.)	3.14 (.)	0.30 (.)
STOPP K4	77.2 (→)	61.6 (→)	42.5 (↑)	3.00 (→)	0.41 (→)
STOPP C10	76.1 (→)	49.0 (→)	44.4 (↑↑)	2.99 (↓↓)	0.35 (→)
STOPP B12	77.4 (→)	46.9 (→)	42.6 (→)	2.02 (↑)	0.47 (→)
STOPP G1	76.6 (→)	49.3 (↓)	39.9 (→)	1.07 (→)	0.42 (→)
STOPP B3	76.1 (→)	50.2 (→)	43.8 (↑)	0.56 (↓)	0.29 (→)
STOPP M1	75.8 (→)	68.9 (↓)	48.6 (→)	0.52 (→)	0.43 (↓)
STOPP D8	74.4 (→)	60.2 (→)	44.1 (→)	0.51 (↑)	0.33 (→)
STOPP C6	76.4 (↑)	41.5 (↓)	44.2 (↑↑)	0.48 (↓↓)	0.54 (↑↑)
STOPP E5	75.3 (→)	26.8 (→)	41.9 (→)	0.41 (→)	0.22 (→)
STOPP C5	76.6 (→)	42.4 (↑↑)	44.1 (↑↑)	0.39 (↓↓)	0.53 (↓↓)
STOPP D7	74.4 (→)	62.9 (→)	41.3 (→)	0.31 (→)	0.30 (↑)
STOPP J2	73.6 (→)	38.8 (→)	46.3 (↑)	0.25 (↓)	0.37 (↓)
STOPP E3	75.7 (→)	57.5 (↓)	37.0 (↑)	0.24 (↓↓)	0.12 (↑)
STOPP D3	74.7 (→)	58.0 (↓↓)	45.8 (↑↑)	0.17 (↓↓)	0.51 (↓↓)
STOPP E2	75.6 (→)	44.9 (↑)	41.2 (→)	0.16 (↑)	0.08 (↓↓)
STOPP C7	75.9 (→)	60.9 (↑↑)	41.8 (↑↑)	0.07 (↓↓)	0.35 (↑↑)
STOPP E1	81.8 (→)	59.2 (↑)	40.7 (→)	0.06 (↓)	0.40 (↑↑)
STOPP J3	74.8 (→)	52.6 (↓↓)	58.7 (↑↑)	0.06 (↓↓)	0.44 (↓↓)
START A6	76.2 (.)	51.5 (.)	38.3 (.)	99.7 (.)	0.36 (.)
START E4	76.2 (→)	51.4 (→)	38.3 (↑)	99.4 (↓)	0.36 (→)
START A1	76.2 (→)	51.9 (↑)	38.2 (↑↑)	97.1 (↓↓)	0.35 (↓↓)
START E6	76.2 (→)	52.1 (→)	38.2 (↑↑)	96.5 (↓↓)	0.35 (↓↓)
START E1	76.2 (→)	51.5 (→)	38.5 (↑↑)	95.5 (↓↓)	0.34 (↓↓)
START A3	76.1 (→)	52.3 (→)	38.2 (↑↑)	95.2 (↓↓)	0.34 (↓)
START D1	76.0 (→)	51.5 (→)	38.1 (↑)	93.6 (↓)	0.33 (→)

continued on next page

Table 1 – *continued*

STOPP/ START criterion[†,‡]	Characteristics of exposed patients[*] Mean age	Percentage of females	Elixhauser weighted comorbidity score	Exposure time coverage [%]	Unadjusted incidence rate [per person year]
START A2	76.0 (→)	52.5 (→)	38.1 (↑↑)	92.9 (↓↓)	0.33 (↓↓)
START A5	76.3 (→)	52.5 (→)	38.0 (↑↑)	89.1 (↓↓)	0.34 (↓↓)
START A8	76.1 (→)	52.0 (→)	38.2 (↑)	84.4 (↓)	0.32 (→)
START A7	76.1 (→)	51.9 (→)	38.3 (↑↑)	80.8 (↓↓)	0.32 (↓)
START C2	75.9 (→)	53.0 (→)	41.0 (↑)	76.3 (↓)	0.30 (→)
START E2	75.8 (→)	56.5 (→)	42.9 (↑)	7.72 (↓↓)	0.31 (↑)
START F1	76.3 (→)	49.1 (↓)	58.9 (→)	0.33 (↑↑)	0.25 (↑↑)

STOPP, screening tool of older persons' potentially inappropriate prescriptions; START, screening tool to alert doctors to the right treatment.
[*] Numerical values relate to the basic operationalization of STOPP/START variables, and the relative percentage change upon refinement is indicated in parentheses (→: change within ±2%; ↑ and ↓: change within ±>2% to 10%; ↑↑ and ↓↓: change greater than ±>10%; ".": criterion removed during refinement).
[†] For a complete criteria description, see O'Mahony and coworkers [3] or Appendix Tables 2 and 3.
[‡] We applied a risk-orientated notation defining exposure to a STOPP or START criterion by the presence of a STOPP condition or the absence of a necessary START medication, respectively.

major treatment-related harm and revealed high c-indices for discriminatory ability regarding the particularly relevant clinical outcomes hospitalization and death. In addition to confirming well-established risk factors (e.g., age, prior hospitalization), these results were impressively driven by a selection of contextual prescribing situations linking drug treatment with medical conditions. The parsimonious BIC models achieved comparable performance, whereas both the parsimonious and liberal selection resulted in clinically meaningful models [26] upon revision of the criteria (Fig. 1, and Appendix Table 4 in Supplemental Materials found at https://doi.org/10.1016/j.jval.2018.05.004).

MEDI-RADAR substantially expands the published model by Brown et al., who conducted a fundamental full-model comparison with the Beers criteria [11]. Because we trained our models for optimal performance in longitudinal routine data, it is not surprising that a substantially higher prediction performance (c-index) was achieved. It is slightly lower than observed in models without a particular focus on medication [4], provided that such comparison is admissible at all; these latter models use time-constant predictors and therefore likely do not reflect dosing and timing variability of drug therapy as opposed to other, less modifiable risks. As an example, although medication can be potentially changed, risks emerging from metastatic tumor are less modifiable. Considering specific (ADE-related) hospitalizations, the achieved results are among the best results ever reported in comparable studies [27]. Taking an exemplary look at the period just before a potentially ADE-related hospitalization, this period is often characterized by an increase in the individual risk for the following event. Clinically, such exemplary cases can provide reassuring information on the potential mechanism. Examples include abrupt increases of syncopes after the onset of alpha blockers (STOPP I2 criterion), frequent occurrence of fractures (e.g., of the femur) after starting benzodiazepines (STOPP K1 criterion) or neuroleptic drugs (STOPP K2 criterion), sporadic occurrences of bleeding gastric ulcers upon starting antithrombotic agents in patients with a history of bleeding (STOPP C3 criterion), or atrioventricular block and atrial fibrillation upon combined initiation of aldosterone antagonists and potassium-sparing drugs (STOPP B12 criterion) [3]. Mostly STOPP variables were selected for the successful prediction of ADE-related hospitalizations (Fig. 1), thus further validating our modeling approach.

Concerning missing evidence-based (preventive) pharmacological treatments (START criteria), our study proved to identify patients at risk for relevant clinical endpoints. As expected, the selected predictors had quite a different impact on hospitalization and mortality for several reasons. First, many of the preventive START measures address disease burden and quality of life rather than mortality (e.g., C2, nontricylic antidepressants in the presence of major depression; E2, prevention of steroid-induced osteoporosis; E4, antiresorptive therapy in patients with osteoporosis). Second, for many therapies with potential impact on mortality, an observation period of 2 years may be too short to let evolve its full impact on survival (e.g., A7, use of beta blockers in ischemic heart disease). Third, many critical events often do not immediately result in death, and therefore many life-threatening situations will lead to admission (e.g., coronary artery disease as covered by A6 and A7 or embolic disease addressed in A1) while not necessarily precluding death in hospital. Finally, concurrent therapies and interventions can substantially modify the risk of death as expected in patients with coronary artery disease (START A6, A7). On the other hand, our study suggested a profound effect of statin therapy on survival in patients with atherosclerotic vascular disease (A5). If these predicted events could have been indeed prevented by an appropriate and tailored intervention, its impact translating into prevented deaths and hospitalizations could be tremendous considering the vast possibilities of a population-based monitoring program.

When interpreting the selected risk factors and drawing comparisons with the respective associations from the literature, one has to consider the project's intentions to maximize the predictive performance in an unselected sample rather than aiming to elucidate net exposure-outcome associations by tailored study designs and techniques (e.g., case-only designs [16] or new-user designs [15], as previously reported from the same data source). The prediction of medication-related risks in patients with multiple morbidities is of considerable clinical importance because the central risk for PIP [28], drug-drug interactions, or drug-disease interactions [29] can be specifically addressed. The prescribing situations reflected in our sparse, BIC-selected model for ADE-related hospitalizations clearly illustrate the clinical implications of risk modulation. For this important outcome, our analyses show that the information contained in

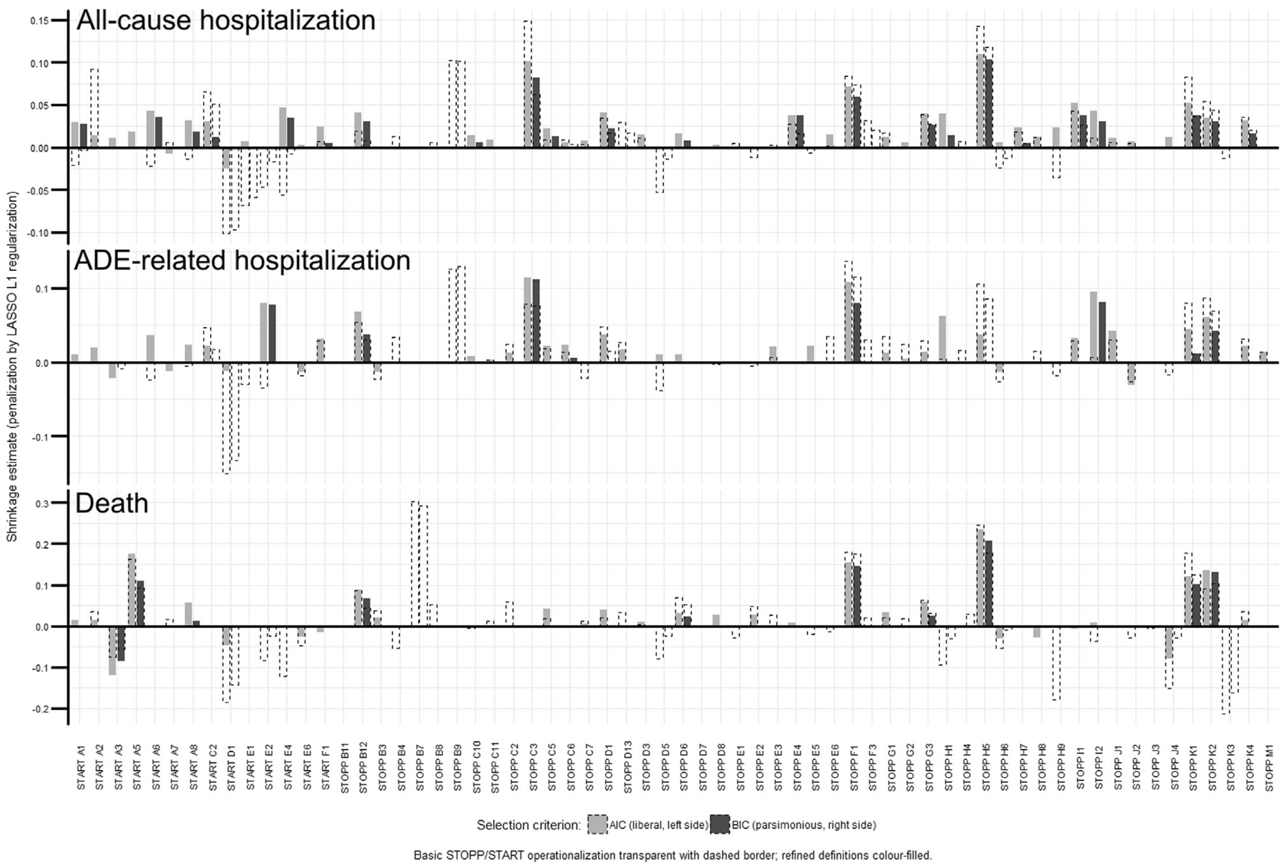

Fig. 1 – Selected (standardized) predictors for different outcomes (upper panel: all-cause hospitalization; mid panel: ADE-related hospitalization; lower panel: mortality) and regularization procedures (AIC, BIC). Two model selections (AIC: light gray, left side; BIC: dark gray, right side) provided different predictor sets for the study outcomes. Dashed lines indicate the results from the basic STOPP/START operationalization, and filled bars represent the (linear) predictor estimates upon refined variable definitions (for a complete criteria description, see O'Mahony and coworkers [3] or Appendix Tables 2 and 3). In accordance with our risk-orientated notation, parameter estimates with positive signs indicate risks by presence of a STOPP condition or the absence of a necessary START medication, respectively. Standardized parameter estimates being shrunk to zero are actually not selected. AIC, Akaike information criterion; BIC, Bayesian information criterion.

routine claims data efficiently predicts relevant risks such as serious bleeding (STOPP C3, STOPP C6, STOPP H1), falls (STOPP I2, STOPP K1, STOPP K2, START E2), or electrolyte imbalances (hyperkalemia, STOPP B12). Hyperkalemia is associated with severe consequences in heart failure patients [30], and the associations of benzodiazepine usage with fall-related fractures [31] or antithrombotic and nonsteroidal anti-inflammatory drugs (NSAIDs) with hospitalization due to bleeding [15] are also well known. MEDI-RADAR indicated that these associations are predictive in routine claims data and that risk calculation based on them may identify patients with imminent, potentially preventable hospitalizations. Moreover, the consequences of these selected criteria match with many outcomes of special relevance in older people [32]. Among those, autonomy, independence in activities of daily living, falls, time spent in hospital, and overall survival could likely be improved by effectively preventing hazardous prescribing situations. Potential clinical solutions are manifold and have to be chosen for the individual case; these could include prescribing of safer alternatives (e.g., alternatives to NSAIDs), avoiding dispensable drugs (e.g., benzodiazepines, alpha blockers), adjusting doses (e.g., benzodiazepines, neuroleptics), and adding missing beneficial drugs (e.g., bleeding prophylaxis by proton-pump inhibitors, PPIs), among others.

Clinicians, health care decision makers, and policy makers can benefit from information about the selected criteria, their attributed risk and frequency, and their relative contribution to the respective outcome to support clinical monitoring or assist in designing health care programs. Our differentiated analysis of the parsimonious STOPP/START selection concerning ADE-related hospitalizations supports the assumption that both higher risk and relative frequency can help to individually assess risks and decide for interventions (Fig. 3). As an example, one would thus give less weight to the STOPP criterion H1 (nonselective NSAIDs with history of gastrointestinal bleeding and no PPI prophylaxis) than to STOPP C3 (antithrombotics or oral anticoagulants with concurrent significant bleeding risk) when aiming to minimize the risk for bleeding. Concomitant occurrence of several criteria appears to require particular attention. The pioneering work by Dreischulte and coworkers impressively demonstrated health system–based improvements of potentially inappropriate prescriptions belonging to this group characterized by elevated bleeding risk [33].

Thus, medication-related hospital admissions have a substantial public health impact. Such potentially preventable costs are estimated at €94 million in the Netherlands in 2006 [34], €706 million in the UK in 2004 [35], and €434 million in Germany in 2006

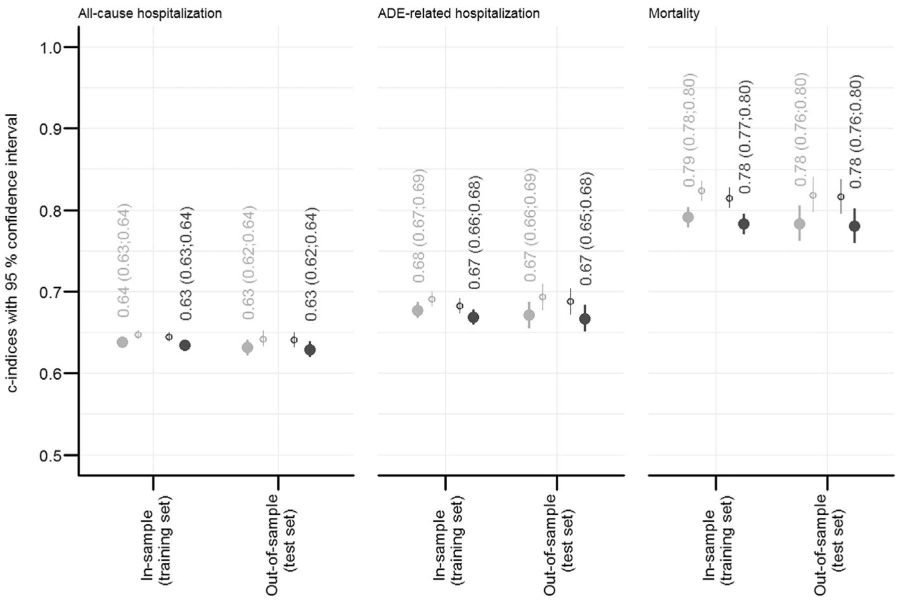

Fig. 2 – Prediction model performance (c-indices). Discriminatory ability is visualized in training (in-sample) and test set (out-of-sample) for two model selections (AIC: light gray, left side; BIC: dark gray, right side). The basic STOPP/START operationalization is indicated by open symbols, and filled symbols represent the refined variable definitions. AIC, Akaike information criterion; BIC, Bayesian information criterion.

[36]. There is undisputed consensus that patients at high risk should be offered preventive measures to achieve net cost savings from avoided downstream morbidity and expenditure [4]. However, it remains a challenge to optimize the case-finding process by developing more sophisticated tools for identifying patients at risk and also for subsequently tailoring the most specific, efficient, and effective intervention to increase drug safety to the benefit of patients and health care systems [4]. These challenges have stimulated initiatives for the development of software solutions promoting safer prescribing [37]. For example, the European Union–funded SENATOR project designed around the STOPP/START criteria is currently tested in the hospital setting for its ability to reduce ADEs and health care costs [38]. It will be interesting to see whether prediction models such as MEDI-RADAR can add additional value to assist such systems in the safe handling of medication complexity in older patients with multiple conditions. Thus, exploration of claims data as described within our work can have profound implications for clinical decision making.

Although the vast amount of medical data accumulating in health insurance claims offers unprecedented opportunities to monitor patients for treatment safety and effectiveness, there are ethical and legal considerations that should accompany the use of individually identifiable health information, including individual health conditions, health service utilization, and payments for them. While maintaining data confidentiality and impeding use for inappropriate intentions, the patients' self-determination must be safeguarded. The patients' consent for such analyses has to be voluntary and any (financial) incentive for consenting should be carefully scrutinized for undue influence [39].

The strengths of this study included the following: 1) the effort devoted to meticulously define drug exposure and comorbidity of the individual patient and 2) the assessment of distinct STOPP/START criteria at the individual patient level in a way that allowed us to consider changes over time according to varying exposure with drugs and medical conditions (and to define drug-related risk only while being exposed). More variables do not automatically yield better-performing prediction models [40], but rather promote overfitting and can, thus, impair predictive performance [14]. In this respect, our results proved to be internally consistent and robust. This includes numerous attempts for improvement and sensitivity analyses with varying sample sizes, reference coding instead of dummy coding, (penalized) logistic regression models (also with time integration of relative exposure to STOPP/START criteria in the preceding 12 months), unregularized Cox models (full model formula and re-estimation with LASSO-selected predictors), consideration of prescription dates instead of redemption dates, further refinements of the STOPP/START-based variable definitions, or composite endpoints combining mortality with hospitalizations.

A common limitation of routine data is information validity. Superfluous, inconsistent, or missing diagnosis codes are a potential limiter in any study with routine data recorded for reimbursement rather than research purposes. We addressed these difficulties at multiple stages from variable definitions to appropriate control of overfitting. Information validity, generalizability, and transportability would be a crucial aspect for external validation in other settings, where a check for necessary model updating is warranted [41]. The comparatively small sample size might mislead people to believe that rare outcomes or consequences from rare conditions were not sufficiently reflected. Neither did the predictive performance change with varying sample sizes (data not shown) nor are more extensive models with more (but infrequent) risk factors of a practical advantage [18,40]. Concise models are rather advantageous in daily practice to promote sustainability of improved prescribing behavior [33], for example, in primary care, a previously often neglected setting to apply STOPP/START criteria with gradually emerging potential [42]. Finally, given the comparatively small numbers of selected START variables, one may think of alternative study designs. Disease exacerbation induced by underuse could not only be

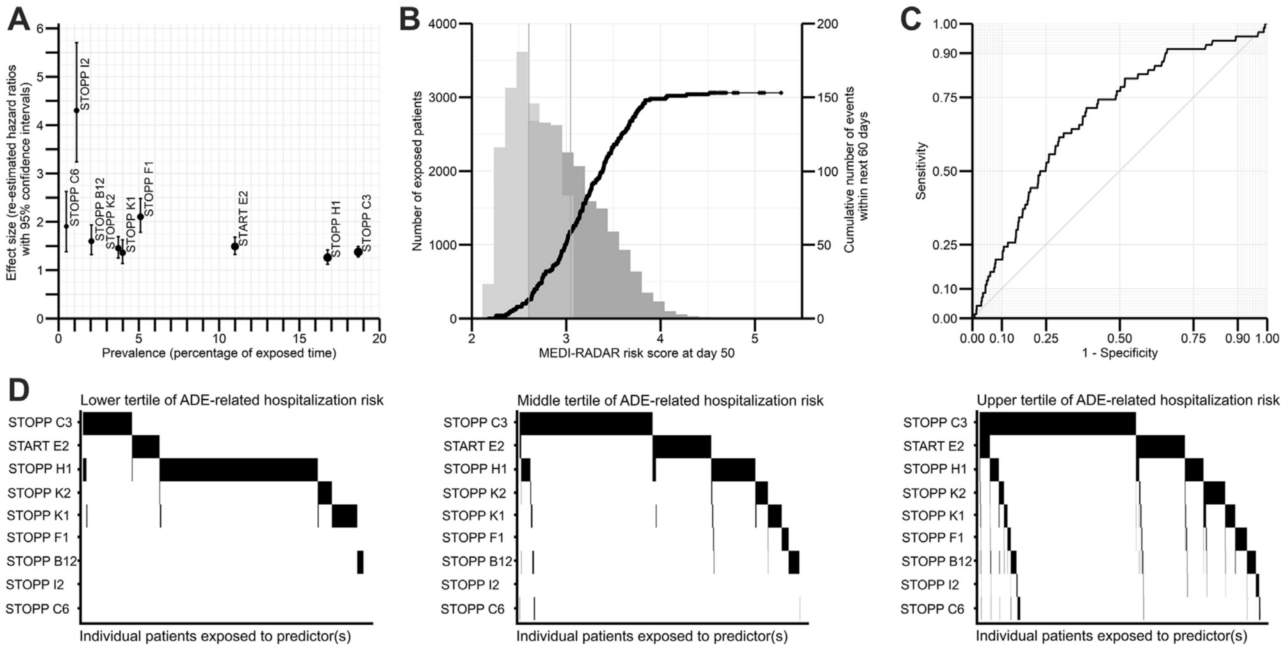

Fig. 3 – Contribution of individual STOPP/START criteria in the BIC-selected MEDI-RADAR model for ADE-related hospitalizations. (A) Re-estimated hazard ratios from the training set with corresponding 95% confidence intervals are plotted against their relative frequency expressed as the percentage of time being exposed. (B) The calculated risk score (summarized linear predictor; see Appendix Table 4 in Supplemental Materials) for the total study sample is derived at day 50 as an arbitrary time point and plotted as a histogram with 30 bins, and distribution tertiles are highlighted by vertical lines and ascending shades of gray. As an overlay, ADE-related hospitalizations within 60 days of follow-up are cumulatively added up. (C) The corresponding receiver-operating characteristic curve yields an area under the curve (i.e., c-index) of 0.69 [0.63–0.75] in an equally sized training set and test set. (D) For each risk-score-distribution tertile, the exposure status to single STOPP/START criteria and their coincidence are shown for each patient as a line in a matrix plot. ADE, adverse drug event; BIC, Bayesian information criterion; MEDI-RADAR, medication-based models predicting the risk for hospital admission apparent in routine claims data.

captured by the binary exposure status within an exposure window, but should also account for the (non-) treatment's duration, timing (i.e., intermittent vs. chronic nonexposure), and intensity (i.e., current dose, recent increase or decrease in dose, cumulative dose) [43,44]. Whether this appealing concept is applicable to prediction modeling should be explored by further methodological research.

Conclusions

Our study showed that a large number of the clinically defined explicit prescribing criteria from the STOPP/START list can be adapted to reliably predict adverse outcomes in claims data. The good predictive performance supports the notion that routine monitoring of medication safety in individual patients is possible under almost real-time conditions. To assess its clinical utility, implementation of these criteria within an interventional program to optimize prescribing is desired to further evaluate the effectiveness of this approach.

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Supplemental Materials

Supplementary data associated with this article can be found in the online version at https://doi.org/10.1016/j.jval.2018.05.004.

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