



4th Swiss Health Economics Workshop



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CSS Institute for Empirical Health Economics, Lucerne

September 13, 2019

Room 5.250

Room 5.258

10.15	Arrival
10.25 – 10.30	Konstantin Beck: Welcome
10.30 – 11.10	Michael Gerfin: Keynote
	1A – Physician Market (Chair: Boris Kaiser)
11.20 – 12.00	Camila Plaza: More Consultations, Less Talking Medicine: Evidence of the Swiss Physician Reimbursement Reform, <i>discussed by Peter Zweifel</i>
12.00 – 12.40	Michel Fuino: How does the Regulation of Doctors' Admissions affect Health Expenditure? Evidence from Switzerland, <i>discussed by Nikola Jovanoski</i>
12.40 – 14.00	Lunch
	2A – Demand for Health Care (Chair: Stefan Boes)
14.00 – 14.40	Véra Zabrodina: Dynamic moral hazard under nonlinear health insurance contracts, <i>discussed by Camila Plaza</i>
14.40 – 15.20	Nikola Jovanoski: The Effect of Colorectal Cancer Screening Coverage, <i>discussed by Véra Zabrodina</i>
15.20 – 15.50	Coffee Break
	3 – Risk and Risk Adjustment (Chair: Harry Telser)
15.50 – 16.30	Konstantin Beck: Pareto superior improvement of risk adjustment (in Switzerland)?, <i>discussed by Maria Trottmann</i>
16.30 – 17.10	Janina Nemitz: Voluntary Pooling of Genetic Risk: A Health Insurance Experiment, <i>discussed by Michel Fuino</i>
17.10 – 17.20	Konstantin Beck: Concluding Remarks
17.30 – 18.30	Stefan Felder: Annual Meeting of the SGGÖ

	1B – Decompositions (Chair: Lukas Kauer)
	Katharina Blankart: Mind the gap! Explaining physician level changes in multisource drug utilization over time – a decomposition approach, <i>discussed by Michael Stucki</i>
	Michael Stucki: Factors Related to the Change in Swiss Inpatient Costs by Disease – A 6-Factor Decomposition, <i>discussed by Katharina Blankart</i>
	2B – Longevity (Chair: Konstantin Beck)
	Michel Fuino: On the Characteristics of Reporting ADL Limitations and Formal LTC Usage across Europe, <i>discussed by Simone Balestra</i>
	Peter Zweifel: The 'red herring' conundrum: interpretation and new evidence, <i>discussed by Konstantin Beck</i>

1A – Physician Market

11.20 – 12.40, Room 5.250, chaired by Boris Kaiser, B,S,S. Basel

More Consultations, Less Talking Medicine: Evidence of the Swiss Physician Reimbursement Reform

Presenter: Camila Plaza, University of Basel

Co-Author(s): Stefan Felder, University of Basel

Discussant: Peter Zweifel, University of Zurich

Abstract: In October 2014 the TarMed reform was implemented in Switzerland with the goal to even out the financial standing of general practitioners relative to that of specialists in the outpatient sector. The reform had two measures: first, GPs would be able to bill an additional 9 CHF per patient (once per consult per day). Second, the fees for certain technical services of specialists were reduced. Given a reimbursement system of fee-for-service in Switzerland, we predict that physicians reacted to the economic incentives of the reform by increasing their consults per patient and a decreasing the amount of time per consult. Using monthly insurance claims panel data aggregated at the physician praxis level, for the period of January 2013-December 2015, we run panel data difference in difference models with physician and time fixed effects in order to test for the causal effects of the reform. Our treatment group is formed by GPs and our control group by the unaffected specialists. We control for physician characteristics as well as seasonality. The results support our hypothesis: we find evidence for an increase in consults per patients and a decrease in time per consult. Moreover, these results could provide policy makers a better understanding of physician behavior and their and their sensitivity to financial incentives of reforms (both past and future) under the current FFS reimbursement system.

How does the Regulation of Doctors' Admissions affect Health Expenditure? Evidence from Switzerland

Presenter: Michel Fuino, University of Lausanne (HEC)

Co-Author(s): Joël Wagner, University of Lausanne (HEC)
Philipp Trein, University of Lausanne (HEC)

Discussant: Nikola Jovanoski, University of Basel

Abstract: *Objectives:* Since the introduction of the currently in place Swiss health insurance system in 1996, health costs and related insurance premiums have been steadily increasing at a higher rate than the GDP. The increase in medical density is one of the causes often brought forward to explain this situation. Since 2000, the Swiss Parliament has repeatedly extended or reintroduced a moratorium system giving the cantons a tool to limit the admissions to practice. In this paper, we analyze the impact of the moratorium policy on the number of doctors and the health costs from doctor's visits over the period from 2007 to 2018. *Methods:* Based on data stemming from the Swiss medical data pool santésuisse, we use interrupted time series to describe the development of the number of specialist doctors and general practitioners as well as the related health costs. *Results:* Our results show that while the number of doctors has been significantly influenced by the policy, the volume of claims related to doctor's visits has not significantly changed. We observe that the removal of the moratorium from 2011 to about mid-2012 has had more important consequences in cantons with university hospitals. We observe heterogeneous results when comparing along different medical specialization areas. *Discussion:* While our results indicate a clear relationship between the moratorium policy and the increase in the number of doctors, we cannot prove a significant containment effect on health costs.

1B – Decomposition

11.20 – 12.40, Room 5.258, chaired by Lukas Kauer, CSS Institute

Mind the gap! Explaining physician level changes in multisource drug utilization over time – a decomposition approach

Presenter: Katharina Blankart, University of Duisburg-Essen (Germany)
Co-Author(s): Sotiris Vadoros, King's College London (United Kingdom)
Discussant: Michael Stucki, ZHAW Winterthur Institute of Health Economics
Abstract: *Objectives:* With significant differences in treatment cost between drugs, changes in drug utilization can be one of the main drivers of increases in health care expenditure. In this study, we aim to explain changes in drug utilization at physician level and by market status, i.e. generic compared to brand name and off-patent compared to on-patent markets.
Methods: We perform analyses to identify drivers of the changes in utilization in the German prescription drug market, accounting for market structure, promotional activity, regulation and physician characteristics. In a drug utilization model, we account for the potential selectivity bias as decisions to adopt generic (off-patent) drugs may be different from the decisions to adopt brand name (on-patent) drugs. Using Oaxaca-Blinder decomposition, we divide the gap in changes in utilization between markets in a part explained by differences in determinants of utilization and a part not attributable to group differences.
Results: For 2011-2014, we document substantial increases in utilization (5.73 prescriptions/generic drug). Changes in utilization were attributed to multiple factors, especially competition, regulation, and physician specific characteristics.
Discussion: Gaps in utilization between different markets cannot be fully explained by differences in the fact that generic and brand name markets reflect different life cycle phases, but also by group differences in the effects of the determinants.

Factors Related to the Change in Swiss Inpatient Costs by Disease – A 6-Factor Decomposition

Presenter: Michael Stucki, ZHAW Winterthur Institute of Health Economics
Co-Author(s): Simon Wieser, ZHAW Winterthur Institute of Health Economics
Discussant: Katharina Blankart, University of Duisburg-Essen (Germany)
Abstract: Rising healthcare spending dominates the health policy debate in Switzerland. Potential cost drivers include population growth and ageing, increasing prevalence of chronic diseases and medical progress. However, the contribution of these and other factors is largely unknown. This paper identifies the factors associated with the change in inpatient care costs by disease between 2013 and 2017 in the canton of Zurich and estimates their contribution to the change.
The data is provided by the cantonal health department and entails diagnostic and detailed cost information on all inpatient cases. Using cost instead of reimbursement data allows us to distinguish between different types of healthcare costs. We apply a Das Gupta rate decomposition for aggregate costs by disease and age/sex groups. Six factors were included: population size and structure, treated prevalence, utilization, length of stay and costs per day.
The most important contributor to the change in condition-specific costs was a rise in costs per day of treatment. This effect was counteracted for most conditions by a reduction in the length of stay. Changes in population size and population structure generally had a positive but modest association with costs. Effective cost containment policies require reliable estimates of key factors influencing costs on a granular level. A better understanding of the epidemiological trends may be particularly useful for the definition of spending budgets discussed in Switzerland.

2A – Demand for Health Care

14.00 – 15.20, Room 5.250, chaired by Stefan Boes, University of Lucerne

Dynamic moral hazard under nonlinear health insurance contracts

Presenter: Véra Zabrodina, University of Basel

Co-Author(s):

Discussant: Camila Plaza, University of Basel

Abstract: Nonlinear health insurance plans with deductibles and co-payments have spread, motivated by the potential to limit moral hazard. While evidence shows that individuals bunch their yearly spending around kinks in the budget set and anticipate year-end deductible resets, reduced-form evidence lacks on how spending adjusts dynamically as changes in out-of-pocket prices unfold. This paper explores the short-term responses of healthcare spending following an unanticipated health shock pushing the individual above the deductible. Specifically, I elicit the elasticity of spending with respect to spot and future prices, which are an endogenous function of spending. I instrument for these prices using the within-year timing of the shock, which exogenously shifts the distance to the year-end deductible reset and thus the price curve.

Using data on individuals with high-deductible plans from Switzerland, I find that before the year-end reset, spending is higher the earlier the shock, rejecting the null of myopia and no response to future prices. After the reset, the increase in spot prices sharply decreases spending to a constant level. Individuals with earlier within-year shock timing thus spend more and longer. To conceptualize these patterns, I formulate a simple model of dynamic health capital production with health shocks and frictions. Understanding these dynamic responses is key to design health insurance markets that result in cost-efficient spending.

The Effect of Colorectal Cancer Screening Coverage

Presenter: Nikola Jovanoski, University of Basel

Co-Author(s):

Discussant: Véra Zabrodina, University of Basel

Abstract: *Objectives:* The United States Preventive Services Task Force recommends that individuals who are between 50 and 75 years old should routinely screen for colorectal cancer. This is because it would provide them with the opportunity to prevent the cancer, or detect and treat it, while it is still at an earlier stage. However, many do not routinely screen and impede the prevention and avoidable treatment of the cancer, or confront a lower survival rate. Certain states in the US have introduced law that requires health insurers to cover the costs of colorectal cancer tests, expecting it to foster screening for colorectal cancer. They do not, however, exempt the tests from cost-sharing provisions.

Methods: I exploit the use of a regression discontinuity design to analyse the effectiveness of the laws.

Results: The results show that the laws do not encourage less affluent individuals to screen, however, the probability that a more affluent individual screens increases by 6-17 percentage points.

Discussion: This difference may be attributed to the ability that these individuals have to cover cost-sharing fees. The results indicate that the laws have the capacity to encourage individuals to screen for the cancer, but that it may not influence all individuals. This study may assist policy makers from countries with similar health systems that intend to introduce or amend similar policies.

2B – Longevity

14.00 – 15.20, Room 5.258, chaired by Konstantin Beck, CSS Institute

On the Characteristics of Reporting ADL Limitations and Formal LTC Usage across Europe

Presenter: Michel Fuino, University of Lausanne (HEC)
Co-Author(s): Joël Wagner, University of Lausanne (HEC)
Igor Rudnytskyi, University of Lausanne (HEC)
Discussant: Simone Balestra, University of St. Gallen (CDI-HSG)
Abstract: *Objectives:* The increase in the proportion of elderly people in most industrialized countries triggers higher demand for long-term care (LTC) associated with limitations in activities of daily living (ADL). The aim of this research is to derive the drivers affecting the probability of reporting limitations in ADL and the probability of demanding formal LTC, e.g., personal care and services in domestic tasks.
Methods: By using the most recent wave of a cross-national European survey on individuals aged over 50 years (SHARE, wave 6), we develop econometric models for identifying the effect of demographic, social and medical factors on ADL limitations and formal LTC along five conjectures.
Results: Regarding functional limitations, we find that characteristics such as age, gender, wealth status and education level influence the reporting probability. While we find that pathologies significantly increase the probability to become dependent, the effect of cancer is lower. Regarding the probability to use formal LTC, we emphasize on the decrease in the probability due to the presence of the partner in the household, in particular for housekeeping. This is less the case for help with personal care. Pathologies such as cancer have no influence while others like mental and Parkinson diseases highly increase it. Elderly living in countries with LTC family care schemes report less formal care than in others. This indicates the importance of LTC policies.

The 'red herring' conundrum: interpretation and new evidence

Presenter: Peter Zweifel, University of Zurich
Co-Author(s):
Discussant: Konstantin Beck, CSS Institute and University of Lucerne
Abstract: *Objectives:* (1) Provide a simple theoretical motivation for the importance of time to death; (2) Review the conflicting evidence in the light of the argument that some of the datasets employed do not reflect pure demand but rationing by physicians as well; (3) Present new experimental evidence reflecting pure demand that confirms the 'red herring' hypothesis.
Methods: A model incorporating both patient demand and rationing by the physician is constructed to derive age profiles of healthcare expenditure (HCE) reflecting their relative strength.
Results: Out of 20 studies that provide information on the age profile of HCE, those supporting the 'red herring' hypothesis come from countries without rationing, those contradicting it, from countries with rationing -- with very few exceptions. A recent Discrete Choice Experiment, being pure demand-side, provides decisive corroborating evidence.
Discussion: Almost 30 years ago, a panel data set containing decedents enabled Zweifel et al. (1999) to distinguish between three concepts of time: (i) historical time, (ii) time since birth, i.e. age, and (iii) time to death. In explaining HCE as measured by a social health insurer, (ii) turned out insignificant when (i) and (iii) were controlled for, prompting the authors to call the conventional emphasis on age as a determinant of HCE a 'red herring'. Evidence confirming (disproving respectively) this finding, is now systematically related to the type of healthcare system.

3 – Risk and Risk Adjustment

15.50 – 17.10, Room 5.250, chaired by Harry Telser, Polynomics

Pareto superior improvement of risk adjustment (in Switzerland)?

Presenter: Konstantin Beck, CSS Institute and University of Lucerne
Co-Author(s): Lukas Kauer, CSS Institute and University of Zurich
Thomas G. McGuire, Harvard University
Christian P.R. Schmid, CSS Institute and University of Bern
Discussant: Maria Trottmann, Swica
Abstract: In Switzerland, as in many other countries, solidarity in its competitive health insurance market has been increased by improving risk adjustment. All researchers involved in this process neglected so far the fact that Switzerland knows beside risk adjustment another important risk sharing mechanism, since all inpatient costs are subsidized by the cantons by 55 percent. Our research shows that this risk sharing reduces the incentive for risk selection even stronger than risk adjustment based on region, demographics, prior hospitalization and pharmaceutical cost groups is able to. For markets with community rated premiums exists a fundamental tradeoff between improving solidarity and reducing incentives for efficiency (Schokkaert et al. 1998). Since the risk sharing established in Switzerland is inefficient – it is criticized to disturb relative prices of service types (inpatient versus outpatient care), and it is unnecessary to subsidize low cost inpatient stays – a transformation of the existing inpatient subsidy into a high risk cost sharing mechanism (independent of service type chosen and by holding the transferred volume constant) could simultaneously increase solidarity in the health insurance market, increase efficiency in service type allocation and strengthen insurer's incentive to contain cost and even reduce complexity of the risk adjustment formula. Our argument is based empirically on a sample of 996'000 enrollees from which we derive power and payment system fit (Geruso/McGuire 2016).

Voluntary Pooling of Genetic Risk: A Health Insurance Experiment

Presenter: Janina Nemitz, ZHAW Winterthur Institute of Health Economics
Co-Author(s): Christian Waibel, ETH Zurich
Wanda Mimra, IÉSEG School of Management (France)
Discussant: Michel Fuino, University of Lausanne (HEC)
Abstract: Scientific and technological advances increasingly allow for better tailoring of health insurance plans to individual health risk profiles. This development questions the sustainability of health plans that feature strong cross-subsidization across different health risk types and health behaviors. An important observation is that the willingness to cross-subsidize risks in health plans might depend on whether the risk is uncontrollable by individuals, such as genetic risk, or modifiable via health behaviors. This paper provides the results of an experiment on the willingness to pool genetic risk in health insurance. Subjects' overall health risk has an assigned, uncontrollable genetic risk part that differs across individuals as well as a behavioral risk part, which can be reduced by costly effort. Participants can decide between a pooling, community-rated group insurance scheme and an insurance with a fully individually risk-adjusted premium. In the experimental variation, the group insurance scheme either includes behavioral risk or separates it out via individual premium discounts. Although we observe social preferences for pooling, only a low level of actual genetic risk pooling emerges across the experimental conditions. This is due to both large heterogeneity in social preferences across subjects, and the dynamics of the willingness to pay for group insurance in the different experimental markets.