6TH SWISS HEALTH ECONOMICS WORKSHOP

CSS**INSTITUT**

PROGRAM

10:00 **ARRIVAL**

10:20–10:25 **CHRISTIAN P.R. SCHMID**
Welcome

	1A BEHAVIORAL RESPONSES IN HEALTHCARE DEMAND	1B INSIGHTS INTO RISK MANAGEMENT
10:30–11:05	**FABIENNE LOETSCHER** Forward-looking behavior in health insurance Discussant:	**HÉLÈNE SCHERNBERG** Genetic insurance and the value of genetic information Discussant:
11:05–11:40	**NICOLAS ZIEBARTH** Fundamentally Reforming the DI System: Evidence from German Cohorts Discussant:	**KATERYNA RIABCHENKO** The Effect of Voluntary Health Insurance on Healthcare Utilisation and OOP health spending in population over 50 yo. Country comparison study based on panel data from SHARE Discussant:

COFFEE BREAK

	2A HEALTHCARE DELIVERY	2B HEALTHCARE EQUITY IN SWITZERLAND
11:50–12:25	**MARIA WISNIEWSKA** Does telemedicine affect prescribing quality in primary care? Evidence from COVID-19 lockdowns in Australia Discussant:	**CHRISTINA VETSCH-TZOGIOU** Improving risk adjustment in Switzerland with pharmaceutical cost groups Discussant:
12:25–13:00	**FLAVIA CAVALLINI** Consequences of Hospitalization and Doctor Practice Style Discussant:	**JEANNE BERCHE** COVID-19 Socioeconomic inequalities on individuals' well-being in Switzerland Discussant:

LUNCH

	3A HEALTH OVER THE LIFE CYCLE	3B NETWORKED CARE
14:20–14:55	**JOHANNA KUTZ** Effect of Temperature and Weather Shocks on Health at Birth: Evidence from the US Discussant:	**SUSAN MENDEZ** Teams in the operating room Discussant:
14:55–15:30	**RICHARD FELSINGER** Ageing well? Exploring self-reported quality of life in the older Austrian population Discussant:	**DANIEL AMMANN** Do Provider Networks Reduce Medical Spending and Unnecessary Care? Discussant:

COFFEE BREAK

	4A HEALTHCARE DECISION MAKING	4B SHOCKS AND HEALTH CARE ACCESS
16:00–16:35	**LAN ZOU** The impact of subsidies on deductible choice in health insurance Discussant:	**IGOR FRANCETIC** Unexpected demand and inequalities in queue prioritisation in emergency care Discussant:
16:35–17:10	**KATHRIN DURIZZO** When Patients are Uninformed: Evidence from a Patient Information Provision Experiment in Ghana Discussant:	**ADRIEN MONTALBO** The Economic Origins of Vaccine Hesitancy: Evidence from Smallpox in Nineteenth-Century France Discussant:
17:15–17:20	**CHRISTIAN P.R. SCHMID** Concluding Remarks	
17:20–18:20	**MICHAEL GERFIN** Annual Meeting of the SGGÖ	

PARALLEL SESSION 1 10:30–11:40

1A — BEHAVIORAL RESPONSES IN HEALTHCARE DEMAND

10:30–11:05 **FABIENNE LÖTSCHER (UNIVERSITY OF BERN)**
Forward-Looking Behavior in Health Insurance
Co-Authors: Caroline Chuard-Keller, Christian P.R. Schmid

Objectives: Many health plans include cost-sharing on an annual basis, which induces changes in patient out-of-pocket prices across years. We investigate whether patients alter their health-care demand in anticipation of future price changes.
Methods: We exploit a natural experiment, which generates a sharp difference in the probability that young adults face an increase in their out-of-pocket price for health care in the next year. We apply an IV approach to estimate the effect of future price changes on the current demand for health care.
Results: We find that individuals expecting higher prices in the following year increase their current outpatient healthcare spending by about CHF 39 (or 5%). This behavior is exclusively observed in male patients who already consume outpatient health care (intensive margin); no anticipatory spending is noted in the inpatient sector.
Discussion: The study highlights behavioral changes due to anticipated future cost increases under health plan regulations. The presence of such forward-looking behavior has significant implications for health-care demand analysis, health insurance design, and the potential welfare benefits of patient cost-sharing.

11:05–11:40 **NICOLAS ZIEBARTH (ZEW MANNHEIM)**
Fundamentally Reforming the DI System: Evidence from German Cohorts
Co-Authors: Johannes Geyer, Bjoern Fischer

Since 2001, cohorts born after 1960 are no longer eligible for public "Occupational Disability Insurance (ODI)" in Germany. ODI is a supplemental second strand of public DI covering work disability in employees' previous occupation. However, the cohorts whose public ODI was cut, remain insured by the main first strand of public DI covering general work disability in any occupation. First, using administrative and survey data, we show that the reform significantly reduced the inflow of new DI beneficiaries by more than 30% in the long-run. Second, we study interaction effects with the private individual ODI market. Using representative data, we do not find much evidence that the treated cohorts purchased private ODI policies at significantly higher rates to compensate for the loss of public ODI. To explain such low take-up, we employ a general equilibrium model featuring the roles of the social safety net, administrative costs, and asymmetric information. These driving forces help explain three stylized facts in the individual experience-rated private market for ODI policies: (1) low private ODI take-up and interaction effects with the public system---despite a high lifecycle work disability risk, (2) strong and positive income and health gradients in private ODI take-up, and (3) inversely related income and health gradients in work disability risk over the lifecycle.

10:30–11:40 PARALLEL SESSION 1

1B — INSIGHTS INTO RISK MANAGEMENT

10:30–11:05 **HÉLÈNE SCHERNBERG (ETH ZURICH)**
Genetic insurance and the value of genetic information

Losing at the genetic lottery can put you at a higher risk for debilitating illnesses, disability, or early death. This paper investigates the value of learning about one's risk, e.g. through genetic testing, when the information cannot be used to influence health outcomes. In a 3-periods setting where insurance markets are complete, I show that individuals prefer consumption levels that depend on their risk type, suggesting that genetic information matters. This result crucially hinges on their risk aversion being stronger than under standard time-separable discounted expected utility. More precisely, I show that these more risk-averse individuals would value the existence of genetic insurance, which pays out if one is found to be genetically unlucky. Individuals with standard preferences, on the other hand, do not value genetic insurance. This highlights the potential desirability of policies aimed at reducing social inequality due to factors outside one's control, such as genetics. Finally, I calibrate a multi-period life-cycle model and quantify the amounts of optimal genetic insurance coverage in the case of breast cancer and Huntington's disease.

11:05–11:40 **KATERYNA RIABCHENKO (UNIVERSITY OF LAUSANNE)**
The Effect of Voluntary Health Insurance on Healthcare Utilisation and OOP health spending in population over 50 yo. Country comparison study based on panel data from SHARE
Co-Authors: Joachim Marti, Carlo de Pietro

Objective: This paper examines whether voluntary health insurance (VHI) coverage increases access to healthcare services and reduces the burden of out-of-pocket expenditures (OOP) for individuals over 50 in 16 countries (15 European countries and Israel) between 2013-2017.
Methods: We estimate individual healthcare utilisation and OOP spending with panel-data models using longitudinal data from SHARE (the Survey of Health, Ageing and Retirement in Europe). We explore the occurrence of an acute health shock (namely the first onset of cancer, myocardial infarction, stroke or hip fracture) to identify the effect of VHI on individual OOP health spending and healthcare utilisation. We utilised two approaches for observation clustering to compare the effects between the countries. One is based on country health policy analysis (VHI attributes in a given country), and the second is based on a probabilistic modelling algorithm (the Latent Class Analysis).
Results: In general, under a health shock people use more health services and spend substantially more out-of-pocket than before. However, the VHI policyholders have a less pronounced increase in healthcare use and higher OOP spending. Interestingly, the clustering allows us to notice a difference in VHI effects for different countries.
Discussion: The effect of VHI on healthcare utilisation and OOP broadly corresponds with the role assigned by policymakers and regulations in a given country.

PARALLEL SESSION 2 11:50–13:00

2A — HEALTHCARE DELIVERY

11:50–12:25 **MARIA WISNIEWSKA (MONASH UNIVERSITY)**

Does telemedicine affect prescribing quality in primary care? Evidence from COVID-19 lockdowns in Australia

Co-Authors: Daniel Avdic, Susan Mendez, Johannes Kunz

Objectives: The study investigates the impact of the nationwide rollout of telemedicine services in Australia on quality of care among the GPs. Specifically, the study seeks to analyse how utilisation of remote consultations affects antibiotic prescribing.
Methods: The study employs a two-step empirical strategy: first, we classify physicians into fast and slow telehealth adopters based on their intensity of utilising telehealth services during the lockdown period. Second, we compare their rates of antibiotic prescriptions using difference-in-differences empirical design. In the study, we use a national longitudinal survey of doctors (MABEL) linked with their administrative records.
Results: Our study finds that the rate of antibiotic prescriptions per consultation of fast adopters decreased significantly compared to slow adopters. The study also identifies that telehealth did not impair the quality of services. Additionally, there was a small but insignificant increase in total visit costs, however it was mainly covered by government subsidies.
Discussion: The insights from our study have implications for healthcare policy, showing that telemedicine doesn't elicit risky prescribing behaviours among general practitioners. First, that telemedicine may have a potential in improving the efficiency of conducting primary care consultations. Second, that it might be used in bringing high-quality care to isolated and disadvantaged groups.

12:25–13:00 **FLAVIA CAVALLINI (UNIVERSITÀ DELLA SVIZZERA ITALIANA)**

Consequences of Hospitalization and Doctor Practice Style

Co-Authors: Fabrizio Mazzonna, Pieter Bakx

This study aims to explore the impact of general practitioners' (GPs) practice styles on patients' health and labor market outcomes following hospitalization. We exploit administrative data from the Netherlands covering hospitalization events and subsequent health and economic outcomes from 2009 to 2020, linked to data on GP practice. We construct a practice-specific measure of GPs' prescribing propensities, focusing on benzodiazepines, opioids, antidepressants, and antibiotics, to create a generalized measure of doctors' practice styles. Through a non-parametric event study approach, we compare patients' outcomes before and after hospitalization exposed to GPs with different prescription styles, accounting for individual and time fixed effects.
Preliminary findings confirm significant economic impacts of hospitalization, with a notable increase in medication consumption post-hospitalization. Patients treated by GPs with a higher propensity to prescribe medications experience worse labor market outcomes, particularly a reduction in work income starting four years post-hospitalization. The analysis also reveals demographic nuances, with younger patients and males facing more pronounced income losses. These findings highlight the intricate relationships between health care practices, patient demographics, and economic recovery post-hospitalization, suggesting the need for targeted interventions to mitigate negative economic impacts.

2B — HEALTHCARE EQUITY IN SWITZERLAND

11:50–12:25 **CHRISTINA VETSCH-TZOGIOU (ZHAW)**

Improving risk adjustment in Switzerland with pharmaceutical cost groups

Co-Authors: Michael Stucki, Lukas Kauer, Lennart Pirktl, Richard C. van Kleef, Andreas Kohler, Anna Drewek, Christoph Thomman, Marcel Dettling, Simon Wieser

Objectives: Risk adjustment (RA) schemes curb the incentive for risk selection among insurers. We examined the impact of the introduction of a morbidity-based risk indicator, namely pharmaceutical cost groups (PCG), into the Swiss RA in 2020 on the potential for risk selection.
Methods:We used two data sets, covering the entire population, and containing information on health insurance, healthcare spending, medication use, and demographic factors. We compared the model performance of all RA schemes since 2014, examining individual-level spending predictions and over- or undercompensation. We also explored premium convergence, changes in market structure, and the financial and administrative impact on insurers.
Results:Including PCGs into RA enabled a more accurate prediction of healthcare spending and led to a considerable reduction in under- and overcompensation in many subgroups. Yet, some PCGs exhibited significant prediction error variation. Insurers with a favourable risk structure before the RA reform experienced a higher mean premium increase than those with a worse risk structure. The reform also led to market consolidation, accompanied by a higher administrative burden for insurers.
Discussion:The Swiss RA scheme with PCGs reduced the incentives for risk selection and improved the prediction of spending. However, PCGs may lead to new potential for risk selection, which should be closely monitored by the regulators.

12:25–13:00 **JEANNE BERCHE (UNIVERSITY OF LAUSANNE)**

COVID-19 Socioeconomic inequalities on individuals' well-being in Switzerland

Co-Authors: Joachim Marti

This paper aims to evaluate the impact of the COVID-19 pandemic on well-being in Switzerland, specifically focusing on individuals facing pre-existing circumstances and determining whether the crisis has widened socio-economic inequalities. To address this, we utilize longitudinal data from the Swiss Household Panel (SHP) spanning 2016 to 2022, alongside the COVID questionnaire, to assess well-being across multiple dimensions. We apply an equality of opportunity framework, traditionally focused on early-life circumstances as sources of unfair inequalities. This perspective is broadened by including variables defining individuals' living conditions at the hectare level, considered an unfair source of well-being variation. The prevalence of individuals satisfied with leisure time has declined from 84% to 62% between 2019 and 2020 (COVID questionnaire). Concurrently, the prevalence of individuals experiencing depression has risen from 49% to 70%, persisting even in 2022 without returning to pre-crisis levels. While inequalities in various well-being dimensions remain stable, depression sees an increase. A Shapley-Shorrock decomposition analysis highlights that during the COVID crisis, employment status and access to green spaces play a more substantial role in socio-economic inequality than before. This may be attributed to job vulnerability in low-income sectors contributing to income disparities and limited access to green spaces worsening mental health.

PARALLEL SESSION 3 14:20–15:30

3A — HEALTH OVER THE LIFE CYCLE

14:20–14:55 **JOHANNA KUTZ (UNIVERSITY OF ST. GALLEN)**
Effect of Temperature and Weather Shocks on Health at Birth: Evidence from the US
Co-Authors: Daniel Avdic, Susan Mendez, Johannes Kunz

Objectives: This study aims to understand the impact of in-utero exposure to extreme weather events, focusing on heat shocks, on birth outcomes. Beyond assessing average effects, it analyzes heterogeneity to identify the most vulnerable groups.
Methods: Using comprehensive weather records and data on US infants born between 1989 and 2004, we investigate how in-utero exposure to weather events affects birth outcomes, employing the causal forest, a cutting-edge causal machine learning technique.
Results: In-utero exposure to heat shocks correlates with a 6-gram reduction in average birth weight and an increased rate of small for gestational age (SGA) births. Heterogeneity analysis reveals disproportionate vulnerability among infants born to black, Mexican, or low-educated mothers.
Discussion: Addressing the adverse effects of in-utero exposure to extreme weather events, particularly heat shocks, is crucial for mitigating climate change's impact on birth outcomes. Targeted interventions are needed for vulnerable groups, informed by insights from causal machine learning techniques.

14:55–15:30 **RICHARD FELSINGER (MEDICAL UNIVERSITY OF VIENNA)**
Ageing well? Exploring self-reported quality of life in the older Austrian population
Co-Authors: Susanne Mayer, Gerald Haidinger, Judit Simon

Objectives: This study aimed to examine the change in self-reported quality of life (QoL) over time in the Austrian older-aged population and explore associated factors.
Methods: Repeated cross-sectional data was retrieved from three waves of the Austrian Health Interview Survey conducted in 2006, 2014 and 2019, including a total of 10 056 participants aged 65 years and above. To estimate QoL in this age group, domain scores of the WHOQOL-BREF were used. Trends in QoL were descriptively analysed, adjusted Wald tests were conducted to compare means of older women and men and linear regression models were estimated to explore the impact of sociodemographic factors and survey year on QoL.
Results: While QoL scores increased over time, a steady decrease with age was observable in all survey waves. Mean scores were significantly higher in men than in women in all QoL domains and in each survey year except for the social domain. In the regression analyses, sex differences disappeared in most domains after adjusting for income and education. Factors associated with significantly higher QoL scores in all domains included younger age, higher education, higher income and living in Western Austria.
Discussion: Observed sex differences in QoL seem to be driven mainly by income and education differences in the older-aged Austrian population. Further efforts towards developing sustainable policies to reduce socioeconomic inequalities also with attention to sex/gender gap are strongly needed.

3B — NETWORKED CARE

14:20–14:55 **SUSAN MENDEZ (UNIVERSITY OF MELBOURNE)**
Teams in the operating room
Co-Authors: Khic-Huoy Prang, Jongsay Yong, Adam Elshaug, Anthony Scott

Objectives: we investigate the impact of familiarity between surgeons and anesthetists on pricing within a system where doctors determine fees and negotiate payment arrangements with insurance providers.
Methods: Using claims data from a major private health insurance company in Australia, spanning 2012 to 2019, we examine records from approximately 0.6 million patients linked to their providers. This allows us to risk-adjust for patient complexity and identify repeated interactions between surgeon and anaesthetist dyads over time. In episodes involving both types of doctors, their combined prices account for over 70 percent of the total claim.
Given doctors' ability to choose their collaborators, we employ an instrumental variable strategy based on potential disruption in their availability. This allows us to assess the causal relationship between shared work experience and pricing outcomes.
Results: We find that surgeons and anaesthetists with one standard deviation higher shared work experience have on average six percent lower prices (equivalent to AUD 130). We find no significant effects on the likelihood of entering into agreements with insurance companies but small positive impacts on the quality of care.
Discussion: The impact of shared work experience on pricing underscores the role of professional relationships in shaping economic aspects of healthcare provision.

14:55–15:30 **DANIEL AMMANN (BERN UNIVERSITY OF APPLIED SCIENCES)**
Do Provider Networks Reduce Medical Spending and Unnecessary Care?
Co-Authors: Tobias Müller, Lukas Kauer

Objective: Managed care systems often incentivize the utilization of provider networks which aim to improve the treatment of patients by coordinating the entire course of care. We study how managed care mechanisms change physician behavior through provider networks. A special focus is laid on cost implications and changes in unnecessary screenings achieved through non-financial incentives.
Methods: We analyze the effect of provider networks on costs as well as the provision of unnecessary care based on a staggered difference in difference design. We follow patients enrolled in the family doctor model whose physician joins a provider network at some point in time. We use patients whose physician joins the network at a later point as a comparison group. Our primary cost outcomes include stationary and ambulatory services, medications, laboratory testing and vaccination costs. Outcomes indicating unnecessary screenings are the number of vitamin D tests and PSA screenings.
Results: Preliminary results show a post treatment level shift in total costs. The point estimates indicate cost reductions of up to 15%. The main drivers of the cost reductions seem to be ambulatory and medication costs. No significant change can be seen in the number of PSA screenings and vitamin D tests administered.
Discussion: While provider networks can effectively reduce medical spending by its doctors the same might not be true for unnecessary care.

PARALLEL SESSION 4 16:00–17:10

4A — HEALTHCARE DECISION MAKING

16:00–16:35 **LAN ZOU (HARVARD UNIVERSITY)**
The impact of subsidies on deductible choice in health insurance

This paper provides the first empirical evidence disentangling the income and substitution effects of health insurance subsidies among low-income adults. Identifying the distinct magnitudes of these effects enables the calibration of subsidy mechanisms to effectively optimize resource allocation while fostering equitable healthcare access. This paper exploits two administrative discontinuity points in the Swiss basic health insurance market, each helping to identify a unique effect. In the Swiss health insurance system, all individuals are mandated to hold a basic coverage plan and face the option of purchasing a lower deductible plan, similar to a top-up insurance option. The first discontinuity is an income threshold triggering subsidy eligibility, amplifying consumers' purchasing power for supplemental coverage without altering its price, thereby illustrating the income effect. The second discontinuity point occurs when subsidies offset the basic plan's cost and change the relative price of supplemental coverage, thus revealing the substitution effect. Using a regression kink discontinuity design, I show that the 20 percent increase in insurance coverage is due to the income effect. Additionally, 25 percent of consumers are enticed by the zero-price effect switch from comprehensive to basic coverage plans, thus reducing their health expenditure from CHF 5,687 to CHF 1,109. This substantial cost reduction highlights the moral hazard behavior induced by the subsidy.

16:35–17:10 **KATHRIN DURIZZO (ETH ZURICH)**
When Patients are Uninformed: Evidence from a Patient Information Provision Experiment in Ghana
Co-Authors: Isabel Günther, Edward Asiedu

Objective: Many people in low-income countries are pushed into poverty because of high healthcare costs. While insurances programs have on average reduced out-of-pocket expenses, many insured patients still have to pay for covered health care services at point of care. In this study, we analyze whether better informed patients lead to a reduction of out-of-pocket expenditures and better quality of care.
Methods: We conducted a RCT in 43 primary health facilities in Ghana and randomly assigned 2,220 patients to receiving either a control message or one of four information treatments on the Ghana national health insurance before entering a health facility. The treatments included information on general insurance coverage or a patient specific information and an insurance membership handbook to take home.
Results: We find that providing information about the benefits package reduced out-of-pocket payments for insured patients by 38%. There was no effect on health care provision, indicating that information about the insurance can improve financial protection without harming quality of care. All four information treatments were equally effective.
Discussion: These results highlight that current channels to inform the patients could be improved in the Ghanian health system. The knowledge about the health insurance benefit package remains low, emphasizing the need for more research on best practices to improve insurance literacy.

4B — SHOCKS AND HEALTH CARE ACCESS

16:00–16:35 **IGOR FRANCETIC (UNIVERSITY OF MANCHESTER)**
Unexpected demand and inequalities in queue prioritisation in emergency care
Co-Authors: Rachel Meacock, Luigi Siciliani, Matt Sutton

Background: Queues are likely to form in emergency care settings when facilities have limited capacity and offer open access. Patients are likely to wait until other patients ahead of them in the queue have been processed. However, care professionals may prioritise the queue and move some patients forward, impacting both equity and efficiency.
Methods: Using data from 136 emergency departments (EDs) in England in 2017/18, we calculate queue lengths and number of patients moving ahead in the queue for all patients. We use regression models to examine how processing of arriving patients responds to unexpected ED demand, defined as deviation from a high-dimensional ED-specific seasonality. We then explore gender, age and IMD inequalities in prioritisation in response to demand shocks.
Results: On average, patients waited behind 3.05 patients and experienced 1.75 patients moving ahead of them whilst waiting for initial assessment. Females and patients from the most deprived areas waited slightly but systematically longer than males and least deprived patients. The gap was amplified in response to demand shocks. Focusing on time to treatment after initial assessment, the patterns of prioritisation inequalities linked to demand shocks are similar but clearer compared to the queue for initial assessment.
Conclusion: EDs do not change their prioritisation patterns when faced with unexpected demand, but inequalities in prioritisation are slightly amplified by demand shocks.

16:35–17:10 **ADRIEN MONTALBO (UNIVERSITY OF SUSSEX)**
The Economic Origins of Vaccine Hesitancy: Evidence from Smallpox in Nineteenth-Century France
Co-Authors: Quentin Lippmann

Despite a growing literature in economics focusing mostly on the consequences of epidemics, little is known about vaccine hesitancy and the drivers of vaccination in the long run. This paper fills this gap in the literature by focusing on vaccination against smallpox in nineteenth-century France. Smallpox was one the deadliest disease up until the introduction of vaccination, as it is estimated to have killed between 50,000 and 80,000 persons per year in France until 1800. To study the determinants of vaccination, we collected precise data on the number of children vaccinated each year within French departments between 1806 and 1888. By using wheat prices instrumented by rainfall and the phylloxera crisis as exogenous sources of income variation, we find that negative income shocks were linked to an increase in vaccination in France. Therefore, families reacted to negative shocks by vaccinating their children more often. This result can be explained by the fact that parents chose to vaccinate their children when their existence was threatened by negative income shocks, which reveals a time-inconsistent behaviour of parents as regards vaccination. Our results also indicate that this effect was stronger in departments where the ratio of children to the total population was lower. Therefore in areas where the death of a child represented a stronger shock on the total income of the household, families were more willing to protect their children in case of negative income shocks.


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