Literature Report

张晨峰, 华东理工大学商学院

Abstract

Health and work in the family: Evidence from spouses' cancer diagnoses

- Journal of Health Economics---2017---Sung-Hee Jeon,R. Vincent Pohl

Using Canadian administrative data from multiple sources, we provide the first nationally representative estimates for the effect of spouses' cancer diagnoses on individuals' employment and earnings and on family income. Our identification strategy exploits unexpected health shocks and combines matching with individual fixed effects in a generalized difference-in-differences framework to control for observable and unobservable heterogeneity. While the effect of spousal health shocks on labor supply is theoretically ambiguous, we find strong evidence for a decline in employment and earnings of individuals whose spouses are diagnosed with cancer. We interpret this result as individuals reducing their labor supply to provide care to their sick spouses and to enjoy joint leisure. Family income substantially declines after spouses' cancer diagnoses, suggesting that the financial consequences of such health shocks are considerable.

How vertical integration affects the quantity and cost of care for Medicare beneficiaries

- Journal of Health Economics---2017---Thomas G. Koch,Brett W. Wendling,Nathan Wilson

Health systems are employing physicians in growing numbers. The implications of this trend are poorly understood and controversial. We use rich data from the Centers for Medicare and Medicaid Services to examine the effects of a set of physician acquisitions by hospital systems on outpatient utilization and spending. We find that financial integration systematically produces economically large changes in the acquired physicians' behavior, but has less consistent effects at the acquiring system level.

Employment effects of active labor market programs for sick-listed workers

- Journal of Health Economics---2017---Anders Holm,Jan Høgelund,Mette Gørtz,Kristin Storck Rasmussen,Helle Sofie Bøje Houlberg

We use register data of 88,948 sick-listed workers in Denmark over the period 2008–2011 to investigate the effect of active labor market programs on the duration until returning to non-subsidized employment and the duration of this employment. To identify causal treatment effects, we exploit over-time variation in the use

of active labor market programs in 98 job centers and time-to- event. We find that ordinary education and subsidized job training have significant positive employment effects. Subsidized job training has a large, positive effect on the transition into employment but no effect on the subsequent employment duration. In contrast, ordinary education has a positive effect on employment duration but no effect on the transition into employment. The latter effect is the result of two opposing effects, a large positive effect of having completed education and a large negative lock-in effect, with low re-employment chances during program participation.

Effectiveness of vaccination recommendations versus mandates: Evidence from the hepatitis A vaccine

- Journal of Health Economics---2017---Emily C. Lawler

I provide novel evidence on the effectiveness of two vaccination policies – simple non-binding recommendations to vaccinate versus mandates requiring vaccination prior to childcare or kindergarten attendance – in the context of the only disease whose institutional features permit a credible examination of both: hepatitis A. Using provider-verified immunization data I find that recommendations significantly increased hepatitis A vaccination rates among young children by at least 20 percentage points, while mandates increase rates by another 8 percentage points. These policies also significantly reduced population hepatitis A incidence. My results suggest a range of policy options for addressing suboptimally low population vaccination rates.

Economic conditions, illicit drug use, and substance use disorders in the United States

- Journal of Health Economics---2017---Christopher S. Carpenter,Chandler McClellan,Daniel I. Rees

We provide the first analysis of the relationship between economic conditions and the use of illicit drugs other than marijuana. Drawing on US data from 2002 to 2015, we find mixed evidence on the cyclicality of illicit drug use. However, we find robust evidence that economic downturns lead to increases in the intensity of prescription pain reliever use as well as increases in clinically relevant substance use disorders involving opioids. These effects are concentrated among working-age white males with low educational attainment. We conclude that policymakers should consider devoting more, not fewer, resources to treating substance use disorders during economic downturns.

Do hospital mergers reduce costs?

- Journal of Health Economics---2017---Matt Schmitt

Proponents of hospital consolidation claim that mergers lead to significant cost savings, but there is little systematic evidence backing these claims. For a large sample of hospital mergers between 2000 and 2010, I estimate difference-in-differences models that compare cost trends at acquired hospitals to cost trends at hospitals whose ownership did not change. I find evidence of economically and statistically significant cost reductions at acquired hospitals. On average, acquired hospitals realize cost savings between 4 and 7 percent in the years following the acquisition. These results are robust to a variety of different control strategies, and do not appear to be easily explained by post-merger changes in service and/or patient mix. I then explore several extensions of the results to examine (a) whether the acquiring hospital/system realizes cost savings post-merger and (b) if cost savings depend on the size of the acquirer and/or the geographic overlap of the merging hospitals.

The role of imperfect surrogate endpoint information in drug approval and reimbursement decisions

- Journal of Health Economics---2017---Katalin Bognar,John Romley,Jay P. Bae,James Murray,Jacquelyn W. Chou,Darius Lakdawalla

Approval of new drugs is increasingly reliant on "surrogate endpoints," which correlate with but imperfectly predict clinical benefits. Proponents argue

surrogate endpoints allow for faster approval, but critics charge they provide inadequate evidence. We develop an economic framework that addresses the value of improvement in the predictive power, or "quality," of surrogate endpoints, and clarifies how quality can influence decisions by regulators, payers, and manufacturers. For example, the framework shows how lower-quality surrogates lead to greater misalignment of incentives between payers and regulators, resulting in more drugs that are approved for use but not covered by payers. Efficient price-negotiation in the marketplace can help align payer incentives for granting access based on surrogates. Higher-quality surrogates increase manufacturer profits and social surplus from early access to new drugs. Since the return on better quality is shared between manufacturers and payers, private incentives to invest in higher-quality surrogates are inefficiently low.

Claims-shifting: The problem of parallel reimbursement regimes

- Journal of Health Economics---2017---Olesya Fomenko,Jonathan Gruber

Parallel reimbursement regimes, under which providers have some discretion over which payer gets billed for patient treatment, are a common feature of health care markets. In the U.S., the largest such system is under Workers' Compensation (WC), where the treatment workers with injuries that are not definitively tied to a work accident may be billed either under group health insurance plans or under WC. We document that there is significant reclassification of injuries from group health plans into WC, or "claims shifting", when the financial incentives to do so are strongest. In particular, we find that injuries to workers enrolled in capitated group health plans (such as HMOs) see a higher incidence of their claims for soft-tissue injuries (which are hard to classify specifically as work related) under WC than under group health, relative to those in non-capitated plans. Such a pattern is not evident for workers with traumatic injuries. Moreover, we find that such reclassification is more common in states with higher WC fees, once again for soft tissue but not traumatic injuries. Our results imply that a significant shift towards capitated reimbursement, or reimbursement reductions, under GH could lead to a large rise in the cost of WC plans.

The long-term health impacts of Medicaid and CHIP

- Journal of Health Economics---2017---Owen Thompson

This paper estimates the effect of US public health insurance programs for children on health. Previous work in this area has typically focused on the relationship between current program eligibility and current health. But because health is a stock variable which reflects the cumulative influence of health inputs, it would be preferable to estimate the impact of total program eligibility during childhood on longer-term health outcomes. I provide such estimates by using longitudinal data to construct Medicaid and CHIP eligibility measures that are observed from birth through age 18 and estimating the effect of cumulative program exposure on a variety of health outcomes observed in early adulthood. To account for the endogeneity of program eligibility, I exploit variation in Medicaid and CHIP generosity across states and over time for children of different ages. I find that an additional year of public health insurance eligibility during childhood improves a summary index of adult health by.079 standard deviations, and substantially reduces health limitations, chronic conditions and asthma prevalence while improving self-rated health.

Non-separable time preferences, novelty consumption and body weight: Theory and evidence from the East German transition to capitalism

- Journal of Health Economics---2017---Davide Dragone,Nicolas Ziebarth

This paper develops a dynamic model to illustrate how diet and body weight change when novel food products become available to consumers. We propose a microfounded test to empirically discriminate between

habit and taste formation in intertemporal preferences. Moreover, we show that 'novelty consumption' and endogenous preferences can explain the persistent correlation between economic development and obesity. By empirically studying the German reunification, we find that East Germans consumed more novel Western food and gained more weight than West Germans when a larger variety of food products became readily accessible after the fall of the Wall. The observed consumption patterns suggest that food consumption features habit formation.

Effects of payment reform in more versus less competitive markets

- Journal of Health Economics---2017---Neeraj Sood,Abby Alpert,Kayleigh Barnes,Peter Huckfeldt,José J. Escarce

Policymakers are increasingly interested in reducing healthcare costs and inefficiencies through innovative payment strategies. These strategies may have heterogeneous impacts across geographic areas, potentially reducing or exacerbating geographic variation in healthcare spending. In this paper, we exploit a major payment reform for home health care to examine whether reductions in reimbursement lead to differential changes in treatment intensity and provider costs depending on the level of competition in a market. Using Medicare claims, we find that while providers in more competitive markets had higher average costs in the pre-reform period, these markets experienced larger proportional reductions in treatment intensity and costs after the reform relative to less competitive markets. This led to a convergence in spending across geographic areas. We find that much of the reduction in provider costs is driven by greater exit of "high-cost" providers in more competitive markets.

Damage caps and defensive medicine, revisited

- Journal of Health Economics---2017---Myungho Paik,Bernard Black,David A. Hyman

Does tort reform reduce defensive medicine and thus healthcare spending? Several (though not all) prior studies, using a difference-in-differences (DiD) approach, find lower Medicare spending for hospital care after states adopt caps on non-economic or total damages ("damage caps"), during the "second" reform wave of the mid-1980s. We re-examine this issue in several ways. We study the nine states that adopted caps during the "third reform wave," from 2002 to 2005. We find that damage caps have no significant impact on Medicare Part A spending, but predict roughly 4% higher Medicare Part B spending. We then revisit the 1980s caps, and find no evidence of a post-adoption drop (or rise) in spending for these caps.

Dropped out or pushed out? Insurance market exit and provider market power in Medicare Advantage

- Journal of Health Economics---2017---Daria Pelech

This paper explores how provider and insurer market power affect which markets an insurer chooses to operate in. A 2011 policy change required that certain private insurance plans in Medicare form provider networks de novo; in response, insurers cancelled two-thirds of the affected plans. Using detailed data on pre-policy provider and insurer market structure, I compare markets where insurers built networks to those they exited. Overall, insurers in the most concentrated hospital and physician markets were 9 and 13 percentage points more likely to exit, respectively, than those in the least concentrated markets. Conversely, insurers with more market power were less likely to exit than those with less, and an insurer's market power had the largest effect on exit in concentrated hospital markets. These findings suggest that concentrated provider markets contribute to insurer exit and that insurers with less market power have more difficulty surviving in concentrated provider markets.

The effect of hospital/physician integration on hospital choice

- Journal of Health Economics---2016---Laurence C. Baker,M. Kate Bundorf,Daniel P. Kessler

In this paper, we estimate how hospital ownership of physicians' practices affects their patients' hospital choices. We match data on the hospital admissions of Medicare beneficiaries, including the identity of their physician, with data on the identity of the owner of their physician's practice. We find that a hospital's ownership of a physician dramatically increases the probability that the physician's patients will choose the owning hospital. We also find that patients are more likely to choose a high-cost, low-quality hospital when their physician is owned by that hospital.

Non-monotonic health behaviours – implications for individual health-related behaviour in a demand-for-health framework

- Journal of Health Economics---2016---Kristian Bolin,Björn Lindgren

A number of behaviours influence health in a non-monotonic way. Physical activity and alcohol consumption, for instance, may be beneficial to one's health in moderate but detrimental in large quantities. We develop a demand-for-health framework that incorporates the feature of a physiologically optimal level. An individual may still choose a physiologically non-optimal level, because of the trade-off in his or her preferences for health versus other utility-affecting commodities. However, any deviation above or below the physiologically optimal level will be punished with respect to health. Distinguishing between two individual types we study (a) the qualitative properties of optimal time-paths of health capital and health-related behaviour, (b) the perturbations of the optimal time-paths that result from changes in exogenous parameters, and (c) steady state properties. Predictions of the model and the implications for empirical analysis are discussed at length. Some comments on potential future extensions conclude the paper.

Including health insurance in poverty measurement: The impact of Massachusetts health reform on poverty

- Journal of Health Economics---2016---Sanders D. Korenman,Dahlia K. Remler

We develop and implement what we believe is the first conceptually valid health-inclusive poverty measure (HIPM) – a measure that includes health care or insurance in the poverty needs threshold and health insurance benefits in family resources – and we discuss its limitations. Building on the Census Bureau's Supplemental Poverty Measure, we construct a pilot HIPM for the under-65 population under ACA-like health reform in Massachusetts. This pilot demonstrates the practicality, face validity and value of a HIPM. Results suggest that public health insurance benefits and premium subsidies accounted for a substantial, one-third reduction in the health inclusive poverty rate.

Do hospital-owned skilled nursing facilities provide better post-acute care quality?

- Journal of Health Economics---2016---Momotazur Rahman,Edward Norton,David C. Grabowski

As hospitals are increasingly held accountable for patients' post-discharge outcomes under new payment models, hospitals may choose to acquire skilled nursing facilities (SNFs) to better manage these outcomes. This raises the question of whether patients discharged to hospital-based SNFs have better outcomes. In unadjusted comparisons, hospital-based SNF patients have much lower Medicare utilization in the 180 days following discharge relative to freestanding SNF patients. We solved the problem of differential selection into hospital-based and freestanding SNFs by using differential distance from home to the nearest hospital with a SNF relative to the distance from home to the nearest hospital without a SNF as an instrument. We found that hospital-based SNF patients spent roughly 5 more days in the community and 6 fewer days in the SNF in the 180 days following their original hospital discharge with no significant effect on mortality or hospital readmission.

Eliminating composite bias in treatment effects estimates: Applications to quality of life assessment

- Journal of Health Economics---2016---Ian McCarthy

Researchers are often interested in composite measures such as overall ratings, indices of physical or mental health, or health-related quality-of-life (HRQoL) outcomes. Such measures are typically composed of two or more underlying discrete variables. In this paper, I investigate conditions where the estimated treatment effect based solely on the composite outcome is biased under non-random treatment assignment, which I refer to as composite bias. I then compare the magnitude of this bias across a variety of estimators, including ordinary least squares, propensity score estimators, and an alternative two-stage approach that first estimates treatment effects on the underlying outcomes and then combines these effects into an overall effect on the composite outcome of interest. The results highlight the presence of composite bias, identify general conditions under which such bias exists, and offer guidance as to how best to minimize this bias in practice.

Quality rating and private-prices: Evidence from the nursing home industry

- Journal of Health Economics---2016---Sean Shenghsiu Huang,Richard A. Hirth

We use the rollout of the five-star rating of nursing homes to study how private-pay prices respond to quality rating. We find that star rating increases the price differential between top- and bottom-ranked facilities. On average, prices of top-ranked facilities increased by 4.8 to 6.0 percent more than the prices of bottom-ranked facilities. We find stronger price effects in markets that are less concentrated where consumers may have more choices of alternative nursing homes. Our results suggest that with simplified design and when markets are less concentrated, consumers are more responsive to quality reporting.

How product standardization affects choice: Evidence from the Massachusetts Health Insurance Exchange

- Journal of Health Economics---2016---Keith Ericson,Amanda Starc

This paper examines the effect of choice architecture on Massachusetts' Health Insurance Exchange. A policy change standardized cost-sharing parameters of plans across insurers and altered information presentation. Post-change, consumers chose more generous plans and different brands, but were not more price-sensitive. We use a discrete choice model that allows the policy to affect how attributes are valued to decompose the policy's effects into a valuation effect and a product availability effect. The brand shifts are largely explained by the availability effect and the generosity shift by the valuation effect. A hypothetical choice experiment replicates our results and explores alternative counterfactuals.

The effect of narrow provider networks on health care use

- Journal of Health Economics---2016---Alicia Atwood,Anthony Lo Sasso

Network design is an often overlooked aspect of health insurance contracts. Recent policy factors have resulted in narrower provider networks. We provide plausibly causal evidence on the effect of narrow network plans offered by a large national health insurance carrier in a major metropolitan market. Our econometric design exploits the fact that some firms offer a narrow network plan to their employees and some do not. Our results show that narrow network health plans lead to reductions in health care utilization and spending. We find evidence that narrow networks save money by selecting lower cost providers into the network.

The effect of college education on mortality

- Journal of Health Economics---2016---Kasey Buckles,Andreas Hagemann,Ofer Malamud,Melinda Morrill,Abigail Wozniak

We exploit exogenous variation in years of completed college induced by draft-avoidance behavior during the Vietnam War to examine the impact of college on adult mortality. Our estimates imply that increasing college attainment from the level of the state at the 25th percentile of the education distribution to that of the state at the 75th percentile would decrease cumulative

mortality for cohorts in our sample by 8 to 10 percent relative to the mean. Most of the reduction in mortality is from deaths due to cancer and heart disease. We also explore potential mechanisms, including differential earnings and health insurance.

Asymmetric information and user orientation in general practice: Exploring the agency relationship in a best–worst scaling study

- Journal of Health Economics---2016---Line Pedersen,Stephane Hess,Trine Kjær

This study uses a best–worst scaling experiment to test whether general practitioners (GPs) act as perfect agents for the patients in the consultation; and if not, whether this is due to asymmetric information and/or other motivations than user orientation. Survey data were collected from 775 GPs and 1379 Danish citizens eliciting preferences for a consultation. Sequential models allowing for within-person preference heterogeneity and heteroskedasticity between best and worst choices were estimated. We show that GPs do not always act as perfect agents and that this non-alignment stems from GPs being both unable and unwilling to do so. Unable since GPs have imperfect information about patients' preferences, and unwilling since they are also motivated by other factors than user orientation. Our findings highlight the need for multi-pronged strategies targeting different motivational factors to ensure that GPs act in correspondence with patients' preferences in areas where alignment is warranted.

The Mental Health Parity and Addiction Equity Act evaluation study: Impact on specialty behavioral health utilization and expenditures among "carve-out" enrollees

- Journal of Health Economics---2016---Susan L. Ettner,Jessica M. Harwood,Amber Thalmayer,Michael K. Ong,Haiyong Xu,Michael J. Bresolin,Kenneth B. Wells,Chi-Hong Tseng,Francisca Azocar

Interrupted time series with and without controls was used to evaluate whether the federal Mental Health Parity and Addiction Equity Act (MHPAEA) and its Interim Final Rule increased the probability of specialty behavioral health treatment and levels of utilization and expenditures among patients receiving treatment. Linked insurance claims, eligibility, plan and employer data from 2008 to 2013 were used to estimate segmented regression analyses, allowing for level and slope changes during the transition (2010) and post-MHPAEA (2011–2013) periods. The sample included 1,812,541 individuals ages 27–64 (49,968,367 person-months) in 10,010 Optum "carve-out" plans. Two-part regression models with Generalized Estimating Equations were used to estimate expenditures by payer and outpatient, intermediate and inpatient service use. We found little evidence that MHPAEA increased utilization significantly, but somewhat more robust evidence that costs shifted from patients to plans. Thus the primary impact of MHPAEA among carve-out enrollees may have been a reduction in patient financial burden.

Does the extension of primary care practice opening hours reduce the use of emergency services?

- Journal of Health Economics---2016---Matteo Lippi Bruni,Irene Mammi,Cristina Ugolini

Overcrowding in emergency departments generates potential inefficiencies. Using regional administrative data, we investigate the impact that an increase in the accessibility of primary care has on emergency visits in Italy. We consider two measures of avoidable emergency visits recorded at list level for each General Practitioner. We test whether extending practices' opening hours to up to 12 hours/day reduces the inappropriate utilization of emergency services. Since subscribing to the extension program is voluntary, we account for the potential endogeneity of participation in a count model for emergency admissions in two ways: first, we use a two-stage residual inclusion approach. Then we exploit panel methods on data covering a three-year period, thus accounting directly for individual heterogeneity. Our results show that increasing primary care accessibility acts as a restraint on the

inappropriate use of emergency departments. The estimated effect is in the range of a 10–15% reduction in inappropriate admissions.

Health shocks and risk aversion

- Journal of Health Economics---2016---Simon Decker,Hendrik Schmitz

We empirically assess whether a health shock influences individual risk aversion. We use grip strength data to obtain an objective health shock indicator. In order to account for the non-random nature of our data regression-adjusted matching is employed. Risk preferences are traditionally assumed to be constant. However, we find that a health shock increases individual risk aversion. The finding is robust to a series of sensitivity analyses and persists for at least four years after the shock. Income changes do not seem to be the driving mechanism.

Doctor–patient differences in risk and time preferences: A field experiment

- Journal of Health Economics---2016---Matteo Galizzi,Marisa Miraldo,Charitini Stavropoulou,Marjon van der Pol

We conduct a framed field experiment among patients and doctors to test whether the two groups have similar risk and time preferences. We elicit risk and time preferences using multiple price list tests and their adaptations to the healthcare context. Risk and time preferences are compared in terms of switching points in the tests and the structurally estimated behavioural parameters. We find that doctors and patients significantly differ in their time preferences: doctors discount future outcomes less heavily than patients. We find no evidence that doctors and patients systematically differ in their risk preferences in the healthcare domain.

Do working conditions at older ages shape the health gradient?

- Journal of Health Economics---2016---Lauren L. Schmitz

This study examines whether working conditions at the end of workers' careers impact health and contribute to health disparities across occupations. A dynamic panel correlated random effects model is used in conjunction with a rich data set that combines information from the Health and Retirement Study (HRS), expert ratings of job demands from the Occupational Information Network (O*NET), and mid-career earnings records from the Social Security Administration's (SSA) Master Earnings File (MEF). Results reveal a strong relationship between positive aspects of the psychosocial work environment and improved self-reported health status, blood pressure, and cognitive function. However, there is little evidence to suggest that working conditions shape observed health disparities between occupations in the years leading up to retirement.

A soft pillow for hard times? Economic insecurity, food intake and body weight in Russia

- Journal of Health Economics---2016---Matthias Staudigel

This study investigates causal effects of economic insecurity on subjective anxiety, food intake, and weight outcomes. A review of psychological and nutrition studies highlights the complexity of processes at work on each stage of this causal chain. Econometric analyses trace the effects along the hypothesized pathway using detailed household panel data from the Russia Longitudinal Monitoring Survey from 1994 to 2005. Economic insecurity measures serve as key explanatory variables in regressions and are instrumented by exogenous regional indicators. Results support a causal chain from economic insecurity to weight outcomes for some population subgroups. In contrast to the leading hypothesis that economic insecurity increases body weight, I find strong evidence of a decreasing effect among women. Results suggest further that consumption of foods rich in sugar responds strongly to higher levels of economic insecurity. Heterogeneous impacts of economic insecurity on body weight call for individual-level interventions rather than large-scale action.

Incentives and children's dietary choices: A field experiment in primary schools

- Journal of Health Economics---2016---Michèle Belot,Jonathan James,Patrick Nolen

We conduct a field experiment in 31 primary schools in England to test the effectiveness of different temporary incentives on increasing choice and consumption of fruit and vegetables at lunchtime. In each treatment, pupils received a sticker for choosing a fruit or vegetable at lunch. They were eligible for an additional reward at the end of the week depending on the number of stickers accumulated, either individually (individual scheme) or in comparison to others (competition). Overall, we find no significant effect of the individual scheme, but positive effects of competition. For children who had margin to increase their consumption, competition increases choice of fruit and vegetables by 33% and consumption by 48%. These positive effects generally carry over to the week immediately following the treatment, but are not sustained effects six months later. We also find large differences in effectiveness across demographic characteristics such as age and gender.

Choice of hospital: Which type of quality matters?

- Journal of Health Economics---2016---Nils Gutacker,Luigi Siciliani,Giuseppe Moscelli,Hugh Gravelle

The implications of hospital quality competition depend on what type of quality affects choice of hospital. Previous studies of quality and choice of hospitals have used crude measures of quality such as mortality and readmission rates rather than measures of the health gain from specific treatments. We estimate multinomial logit models of hospital choice by patients undergoing hip replacement surgery in the English NHS to test whether hospital demand responds to quality as measured by detailed patient reports of health before and after hip replacement. We find that a one standard deviation increase in average health gain increases demand by up to 10%. The more traditional measures of hospital quality are less important in determining hospital choice.

The value of disease prevention vs treatment

- Journal of Health Economics---2016---Christoph Rheinberger,Daniel Herrera-Araujo,James Hammitt

We present an integrated valuation model for diseases that are life-threatening. The model extends the standard one-period value-per-statistical-life model to three health prospects: healthy, ill, and dead. We derive willingness-to-pay values for prevention efforts that reduce a disease's incidence rate as well as for treatments that lower the corresponding health deterioration and mortality rates. We find that the demand value of prevention always exceeds that of treatment. People often overweight small risks and underweight large ones. We use the rank dependent utility framework to explore how the demand for prevention and treatment alters when people evaluate probabilities in a non-linear manner. For incidence and mortality rates associated with common types of cancers, the inverse-S shaped probability weighting found in experimental studies leads to a significant increase in the demand values of both treatment and prevention.

Earmarking and the political support of fat taxes

- Journal of Health Economics---2016---Helmuth Cremer,Catarina Goulão,Kerstin Roeder

An unhealthy good causes health issues in the long run. It creates a misperceived utility loss and increases health care costs. Conversely, a healthy good provides misperceived utility gains and reduces health care costs. Individuals differ in income and in their degree of misperception; they vote over a fat tax according to their misperceived utility. A fraction of the tax proceeds is "earmarked" to reduce health insurance premiums; the remainder finances a subsidy on the healthy good. This earmarking rule is determined to maximize welfare, anticipating the induced political equilibrium. The equilibrium fat tax is always lower than the utilitarian level. This is not necessarily true

with a Rawlsian objective. The determination of the earmarking rule is complex. Even in the utilitarian case, it is not just used to boost political support for the fat tax. Instead, it may involve a tradeoff between fat tax and healthy good subsidy.

Quality standards versus nutritional taxes: Health and welfare impacts with strategic firms

- Journal of Health Economics---2016---Vincent Réquillart,Louis-Georges Soler,Yu Zang

The goal of this paper is to better understand firms' strategic reactions to nutritional policies targeting food quality improvements and to derive optimal policies. We propose a model of product differentiation, taking into account the taste and health characteristics of products. We study how two firms react to alternative policies: an MQS policy, linear taxation of the two goods on the market, and taxation of the low-quality good. The MQS and the taxation of the low-quality product are the preferred options by a social planner. If taste is moderately important, the MQS policy is chosen by a populist and a paternalist social planner. If taste is a major component of choice, the populist planner chooses to tax the low-quality product whereas the paternalist planner prefers the MQS policy. Finally, for a paternalist social planner, an MQS-based policy always allows for higher levels of welfare than an information policy alone.

Private versus social incentives for pharmaceutical innovation

- Journal of Health Economics---2016---Paula González,Ines Macho-Stadler,David Perez-Castrillo

We provide a theoretical framework to contribute to the current debate regarding the tendency of pharmaceutical companies to direct their R&D toward marketing products that are "follow-on" drugs of already existing drugs, rather than toward the development of breakthrough drugs. We construct a model with a population of patients who can be treated with drugs that are horizontally and vertically differentiated. In addition to a pioneering drug, a new drug can be marketed as the result of an innovative process. We analyze physician prescription choices and the optimal pricing decision of an innovative firm. We also characterize the incentives of the innovative firm to conduct R&D activities, disentangling the quest for breakthrough drugs from the firm effort to develop follow-on drugs. Our results offer theoretical support for the conventional wisdom that pharmaceutical firms devote too many resources to conducting R&D activities that lead to incremental innovations.

Late-stage pharmaceutical R&D and pricing policies under two-stage regulation

- Journal of Health Economics---2016---Sebastian Jobjörnsson,Martin Forster,Paolo Pertile,Carl-Fredrik Burman

We present a model combining the two regulatory stages relevant to the approval of a new health technology: the authorisation of its commercialisation and the insurer's decision about whether to reimburse its cost. We show that the degree of uncertainty concerning the true value of the insurer's maximum willingness to pay for a unit increase in effectiveness has a non-monotonic impact on the optimal price of the innovation, the firm's expected profit and the optimal sample size of the clinical trial. A key result is that there exists a range of values of the uncertainty parameter over which a reduction in uncertainty benefits the firm, the insurer and patients. We consider how different policy parameters may be used as incentive mechanisms, and the incentives to invest in R&D for marginal projects such as those targeting rare diseases. The model is calibrated using data on a new treatment for cystic fibrosis.

Reference pricing with endogenous generic entry

- Journal of Health Economics---2016---Kurt Brekke,Chiara Canta,Odd Rune Straume

Reference pricing intends to reduce pharmaceutical

expenditures by increasing demand elasticity and stimulating generic competition. We develop a novel model where a brand-name producer competes in prices with several generics producers in a market with brand-biased and brand-neutral consumers. Comparing with coinsurance, we show that reference pricing, contrary to policy makers' intentions, discourages generic entry, as it induces the brand-name producer to price more aggressively. Thus, the net effect of reference pricing on drug prices is ambiguous, implying that reference pricing can be counterproductive in reducing expenditures. However, under price regulation, we show that reference pricing may stimulate generic entry, since a binding price cap weakens the aggressive price response by the brand-name producer. This may explain mixed empirical results on the competitive effects of reference pricing. Finally, we show that reference pricing may be welfare improving when accounting for brand preferences despite its adverse effects on entry and prices.

The design of long term care insurance contracts

- Journal of Health Economics---2016---Helmuth Cremer,Jean-Marie Lozachmeur,Pierre Pestieau

This paper studies the design of long term care (LTC) insurance contracts in the presence of ex post moral hazard. While this problem bears some similarity with the study of health insurance (Blomqvist, 1997) the significance of informal LTC affects the problem in several crucial ways. It introduces the potential crowding out of informal care by market care financed through insurance coverage. Furthermore, the information structure becomes more intricate. Informal care is not publicly observable and, unlike the insurer, caregivers know the true needs of their relatives. We determine the optimal second-best contract and show that the optimal reimbursement rate can be written as an A-B-C expression à la Diamond (1998). These terms respectively reflect the efficiency loss as measured by the inverse of the demand elasticity, the distribution of needs and the preferences for risk sharing. Interestingly, informal care directly affects only the first term. More precisely the first term decreases with the presence and significance of informal care. Roughly speaking this means that an efficient LTC insurance contract should offer lower (marginal) reimbursement rates than its counterpart in a health insurance context.

Long-term care and births timing

- Journal of Health Economics---2016---Pierre Pestieau,Gregory Ponthiere

Due to the aging process, the provision of long-term care (LTC) to the dependent elderly has become a major challenge of our epoch. But our societies are also characterized, since the 1970s, by a postponement of births, which, by raising the intergenerational age gap, can affect the provision of LTC by children. In order to examine the impact of those demographic trends on the optimal policy, we develop a four-period OLG model where individuals, who receive children's informal LTC at the old age, must choose, when being young, how to allocate births along their life cycle. It is shown that, in line with empirical evidence, early children provide more LTC to their elderly parents than do late children, because they face a lower opportunity cost of providing LTC. When comparing the laissez-faire with the long-run social optimum, it appears that individuals have, at the laissez-faire, too few early births, and too many late births. We then study, in first-best and second-best settings, how the social optimum can be decentralized by encouraging early births, in such a way as to reduce the social burden of LTC provision.

Competition and screening with motivated health professionals

- Journal of Health Economics---2016---Francesca Barigozzi,Nadia Burani

Two hospitals compete for the exclusive services of health professionals, who are privately informed about their ability and motivation. Hospitals differ in their ownership structure and in the mission they pursue. The non-profit hospital sacrifices some profits to follow its mission but becomes attractive for motivated workers. In equilibrium, when both hospitals are active, the

sorting of workers to hospitals is efficient and ability-neutral. Allocative distortions are decreasing in the degree of competition and disappear when hospitals are similar. The non-profit hospital tends to provide a higher amount of care and offer lower salaries than the for-profit one.

Patient mobility and health care quality when regions and patients differ in income

- Journal of Health Economics---2016---Kurt Brekke,Rosella Levaggi,Luigi Siciliani,Odd Rune Straume

We study the effects of cross-border patient mobility on health care quality and welfare when income varies across and within regions. We use a Salop model with a high-, middle-, and low-income region. In each region, a policy maker chooses health care quality to maximise the utility of its residents when health care costs are financed by general income taxation. In equilibrium, regions with higher income offer better quality, which creates an incentive for patient mobility from lower- to higher-income regions. Assuming a prospective payment scheme based on DRG-pricing, we find that lower non-monetary (administrative) mobility costs have (i) no effect on quality or welfare in the high-income region; (ii) a negative effect on quality but a positive effect on welfare for the middle-income region; and (iii) ambiguous effects on quality and welfare for the low-income region. Lower monetary mobility costs (copayments) might reduce welfare in both the middle- and low-income region. Thus, health policies that stimulate cross-border patient mobility can be counterproductive when regions differ in income.

You sneeze, you lose

- Journal of Health Economics---2016---Simon Bensnes

Pollen is known to cause allergic reactions and affect cognitive performance in around 20% of the population. Although pollen season peaks when students take high-stakes exams, the effect of pollen allergies on school performance has received nearly no attention from economists. Using a student fixed effects model and administrative Norwegian data, this paper finds that increasing the ambient pollen levels by one standard deviation at the mean leads to a 2.5% standard deviation decrease in test scores, with potentially larger effects for allergic students. There also appear to be longer-run effects. The findings imply that random increases in pollen counts reduce test scores for allergic students relative to their peers, who consequently will be at a disadvantage when competing for jobs or higher education. This paper contributes to the literature by illuminating the interplay between individual health and human capital accumulation, which in turn can impact long-run economic growth.

The tax-free year in Iceland: A natural experiment to explore the impact of a short-term increase in labor supply on the risk of heart attacks

- Journal of Health Economics---2016---Thorhildur Ólafsdóttir,Birgir Hrafnkelsson,Gudmundur Thorgeirsson,Tinna Laufey Ásgeirsdóttir

Evidence is mixed on whether society-wide economic conditions affect cardiovascular health and the reasons for the suggested relationship are largely untested. We explore whether a short-term increase in labor supply affects the probability of acute myocardial infarctions, using a natural experiment in Iceland. In 1987 personal income taxes were temporarily reduced to zero, resulting in an overall increase in labor supply. We merge and analyze individual-level, registry-based data on earnings and AMIs including all Icelandic men and women aged 45–74 during the period 1982–1992. The results support the prominent hypothesis of increased work as a mechanism explaining worsening heart health in upswings, for men aged 45–64 who were self-employed. We furthermore find a larger increase in probability of AMIs during the tax-free year in men aged 45–54 than men aged 55–64.

The anticipatory effects of Medicare Part D on drug utilization

- Journal of Health Economics---2016---Abby Alpert

While health care policies are frequently signed into law well before they are implemented, such lags are ignored in most empirical work. This paper demonstrates the importance of implementation lags in the context of Medicare Part D, the prescription drug benefit that took effect two years after it was signed into law. Exploiting the differential responses of chronic and acute drugs to anticipated future prices, I show that individuals reduced drug utilization for chronic but not acute drugs in anticipation of Part D's implementation. Accounting for this anticipatory response substantially reduces the estimated total treatment effect of Part D.

Shock, but no shift: Hospitals' responses to changes in patient insurance mix

- Journal of Health Economics---2016---Kathryn L. Wagner

Medicaid reimburses healthcare providers for services at a lower rate than any other type of insurance coverage. To account for the burden of treating Medicaid patients, providers claim that they must cost-shift by raising the rates of individuals covered by private insurance. Previous investigations of cost-shifting has produced mixed results. In this paper, I exploit a disabled Medicaid expansion where crowd-out was complete to investigate cost-shifting. I find that hospitals reduce the charge rates of the privately insured. Given that Medicaid is expanding in several states under the Affordable Care Act, these results may alleviate cost-shifting concerns of the reform.

Quantile treatment effects of job loss on health

- Journal of Health Economics---2016---Valentin Schiele,Hendrik Schmitz

Studies on health effects of job loss mostly estimate mean effects. We argue that the effects might differ over the distribution of the health status and use quantile regression methods to provide a more complete picture. To take the potential endogeneity of job loss into account, we estimate quantile treatment effects where we rely on job loss due to plant closures. We find that the effect of job loss indeed varies across the mental and physical health distribution. Job loss due to plant closures affects physical health adversely for individuals in the middle and lower part of the health distribution while those in best physical condition do not seem to be affected. The results for mental health, though less distinct, point in the same direction. We find no effects on BMI.

Donor registries, first-person consent legislation, and the supply of deceased organ donors

- Journal of Health Economics---2016---Kevin Callison,Adelin Levin

In this paper, we exploit the varied timing in state adoption of organ donor registries and first-person consent (FPC) legislation to examine corresponding changes in the supply of deceased organ donors. Results indicate that the establishment of a state organ donor registry leads to an increase in donation rates of approximately 8%, while the adoption of FPC legislation has no effect on the supply of organ donors. These results reinforce the need to encourage individuals to communicate their donation preferences, either explicitly via a registry or by discussing them with family.

Life cycle responses to health insurance status

- Journal of Health Economics---2016---Florian Pelgrin,Pascal St-Amour

This paper studies the lifetime effects of exogenous changes in health insurance coverage (e.g. Medicare, PPACA, termination of employer-provided plans) on the dynamic optimal allocation (consumption, leisure, health expenditures), status (health and wealth), and welfare. We solve, simulate, and structurally estimate a parsimonious life cycle model with endogenous exposure to morbidity and mortality risks, and exogenous health insurance. By varying coverage, we identify the marginal effects of insurance when young and/or when old on allocations, statuses, and welfare. Our results highlight positive effects of insurance on health, wealth and welfare, as well as mid-life substitution away from healthy leisure in favor of more health expenses, caused by peaking wages, and accelerating health issues.

Decision rules for allocation of finances to health systems strengthening

- Journal of Health Economics---2016---Alec Morton,Ranjeeta Thomas,Peter C. Smith

A key dilemma in global health is how to allocate funds between disease-specific "vertical projects" on the one hand and "horizontal programmes" which aim to strengthen the entire health system on the other. While economic evaluation provides a way of approaching the prioritisation of vertical projects, it provides less guidance on how to prioritise between horizontal and vertical spending. We approach this problem by formulating a mathematical program which captures the complementary benefits of funding both vertical projects and horizontal programmes. We show that our solution to this math program has an appealing intuitive structure. We illustrate our model by computationally solving two specialised versions of this problem, with illustrations based on the problem of allocating funding for infectious diseases in sub-Saharan Africa. We conclude by reflecting on how such a model may be developed in the future and used to guide empirical data collection and theory development.

Privatization and quality: Evidence from elderly care in Sweden

- Journal of Health Economics---2016---Mats A. Bergman,Per Johansson,Sofia Lundberg,Giancarlo Spagnolo

Non-contractible quality dimensions are at risk of degradation when the provision of public services is privatized. However, privatization may increase quality by fostering performance-improving innovation, particularly if combined with increased competition. We assemble a large data set on elderly care services in Sweden between 1990 and 2009 and estimate how opening to private provision affected mortality rates – an important and not easily contractible quality dimension – using a difference-in-difference-in-difference approach. The results indicate that privatization and the associated increase in competition significantly improved non-contractible quality as measured by mortality rates.

Cost savings of developmental screenings: Evidence from a nationwide program

- Journal of Health Economics---2016---Martin Halla,Gerald J. Pruckner,Thomas Schober

Early intervention is considered the optimal response to developmental disorders in children. We evaluate a nationwide developmental screening program for preschoolers in Austria and the resulting interventions. Identification of treatment effects is determined by a birthday cutoff-based discontinuity in the eligibility for a financial incentive to participate in the screening. Assigned preschoolers are 14.5 percentage points more likely to participate in the program. For participants with high socio-economic status (SES), we find little evidence for interventions and consistently no effect on healthcare costs in the long run. For low SES preschoolers, we find evidence for substantial interventions, but only weak evidence for cost savings in the long run.

Competition, information, and quality: Evidence from nursing homes

- Journal of Health Economics---2016---Xin Zhao

Economic theory suggests that competition and information can both be important for product quality, and yet evidence on how they may interact to affect quality is sparse. This paper estimates the impact of competition between nursing homes on their quality, and how this impact varies when consumers have better access to information. The effect of competition is identified using exogenous variation in the geographical proximity of nursing homes to their potential consumers. The change in information transparency is captured by the launch of the Five-Star Quality Rating System in 2009, which improved access to the quality information of nursing homes. We find that while the effect of competition on nursing home quality is generally rather limited, this effect becomes significantly stronger with increased information transparency. The results suggest that regulations on public quality reporting and on market structure are policy complements, and should be considered jointly to best improve quality.

Risk selection and heterogeneous preferences in health insurance markets with a public option

- Journal of Health Economics---2016---Maria Polyakova

Conventional wisdom suggests that if private health insurance plans compete alongside a public option, they may endanger the latter's financial stability by cream-skimming good risks. This paper argues that two factors may contribute to the extent of cream-skimming: (i) degree of horizontal differentiation between public and private options when preferences are heterogeneous; (ii) whether contract design encourages choice of private insurance before information about risk is revealed. I explore the role of these factors empirically within the unique institutional setting of the German health insurance system. Using a fuzzy regression discontinuity design to disentangle adverse selection and moral hazard, I find no compelling support for extensive cream-skimming of public option by private insurers despite their ability to fully underwrite risk. A model of demand for private insurance supports the idea that heterogeneity in non-pecuniary preferences and long-term structure of private insurance contracts may be muting cream-skimming in this setting.

GPs' implicit prioritization through clinical choices – evidence from three national health services

- Journal of Health Economics---2016---Julie Riise,Arne Hole,Dorte Gyrd-Hansen,Diane Skåtun

We present results from an extensive discrete choice experiment, which was conducted in three countries (Norway, Scotland, and England) with the aim of disclosing stated prescription behaviour in different decision making contexts and across different cost containment cultures. We show that GPs in all countries respond to information about societal costs, benefits and effectiveness, and that they make trade-offs between them. The UK GPs have higher willingness to accept costs when they can prescribe medicines that are cheaper or more preferred by the patient, while Norwegian GPs tend to have higher willingness to accept costs for attributes regarding effectiveness or the doctors' experience. In general, there is a substantial amount of heterogeneity also within each country. We discuss the results from the DCE in the light of the GPs' two conflicting agency roles and what we know about the incentive structures and cultures in the different countries.

The value of mortality risk reductions. Pure altruism – a confounder?

- Journal of Health Economics---2016---Dorte Gyrd-Hansen,Trine Kjær,Jytte Seested Nielsen

This paper examines public valuations of mortality risk reductions. We set up a theoretical framework that allows for altruistic preferences, and subsequently test theoretical predictions through the design of a discrete choice experiment. By varying the tax scenario (uniform versus individual tax), the experimental design allows us to verify whether pure altruistic preferences are present and the underlying causes. We find evidence of negative pure altruism. Under a coercive uniform tax system respondents lower their willingness to pay possibly to ensure that they are not forcing others to pay at a level that corresponds to their own – higher – valuations. This hypothesis is supported by the observation that respondents perceive other individuals' valuations to be lower than their own. Our results suggest that public valuations of mortality risk reductions may underestimate the true societal value because respondents are considering other individuals' welfare, and wrongfully perceive other people's valuations to be low.

Can increased primary care access reduce demand for emergency care? Evidence from England's 7-day GP opening

- Journal of Health Economics---2016---Peter Dolton,Vikram Pathania

Restricted access to primary care can lead to avoidable, excessive use of expensive emergency care. Since 2013, partly to alleviate overcrowding at the Accident & Emergency (A&E) units of hospitals, the UK has been

piloting 7-day opening of General Practitioner (GP) practices to improve primary care access for patients. We evaluate the impact of these pilots on patient attendances at A&E. We estimate that 7-day GP opening has reduced A&E attendances by patients of pilot practices by 9.9% with most of the impact on weekends which see A&E attendances fall by 17.9%. The effect is non-monotonic in case severity with most of the fall occurring in cases of moderate severity. An additional finding is that there is also a 9.9% fall in weekend hospital admissions (from A&E) which is entirely driven by a fall in admissions of elderly patients. The impact on A&E attendances appears to be bigger among wealthier patients. We present evidence in support of a causal interpretation of our results and discuss policy implications.

Cost versus control: Understanding ownership through outsourcing in hospitals

- Journal of Health Economics---2016---Christina Marsh Dalton,Patrick Warren

For-profit hospitals in California contract out services much more intensely than either private nonprofit or public hospitals. To explain why, we build a model in which the outsourcing decision is a trade-off between cost and control. Since nonprofit firms are more restricted in how they consume net revenues, they experience more rapidly diminishing value of a dollar saved, and they are less attracted to a low-cost but low-control outsourcing opportunity than a for-profit firm is. This difference is exaggerated in services where the benefits of controlling the details of production are particularly important but minimized when a fixed-cost shock raises the marginal value of a dollar of cost savings. We test these predictions in a panel of California hospitals, finding evidence for each and that the set of services that private non-profits are particularly interested in controlling (physician-intensive services) is very different from those than public hospitals are particularly interested in (labor-intensive services). These results suggest that a model of public or nonprofit make-or-buy decisions should be more than a simple relabeling of a model derived in the for-profit context.

Why has under-5 mortality decreased at such different rates in different countries?

- Journal of Health Economics---2016---Dean T. Jamison,Shane M. Murphy,Martin E. Sandbu

Controlling for socioeconomic and geographic factors, under-5 mortality (5q0) in developing countries has been declining at about 2.7% per year, a high rate of 'technical progress'. This paper adduces theoretical and empirical reasons for rejecting the usual specification of homogeneous technical progress across countries and uses a panel of 95 developing countries for the period 1970–2000 to explore the consequences of heterogeneity. Allowing country-specific rates of technical progress sharply reduces the estimated income elasticity of 5q0 and points to country variation in technical progress as the principal source of the (large) cross-country variation in 5q0 decline. Education levels and physician coverage also contribute and are less affected than income of allowing country variation in technical progress. The paper concludes by decomposing 1970–2000 5q0 decline into its different sources for each country.

Job mobility among parents of children with chronic health conditions: Early effects of the 2010 Affordable Care Act

- Journal of Health Economics---2016---Pinka Chatterji,Peter Brandon,Sara Markowitz

We examine the effects of the 2010 Patient Protection and Affordable Care Act's (ACA) prohibition of preexisting conditions exclusions for children on job mobility among parents. We use a difference-in-difference approach, comparing pre-post policy changes in job mobility among privately-insured parents of children with chronic health conditions vs. privately-insured parents of healthy children. Data come from the 2004 and 2008 Survey of Income and Program Participation (SIPP). Among married fathers, the policy change is associated with about a 0.7 percentage point, or 35 percent increase, in the likelihood of leaving an employer voluntarily. We find no evidence that the policy change

affected job mobility among married and unmarried mothers.

Improving efficiency or impairing access? Health care consolidation and quality of care: Evidence from emergency hospital closures in Sweden

- Journal of Health Economics---2016---Daniel Avdic

Recent health care consolidation trends raise the important policy question whether improved emergency medical services and enhanced productivity can offset adverse quality effects from decreased access. This paper empirically analyzes how geographical distance from an emergency hospital affects the probability of surviving an acute myocardial infarction (AMI), accounting for health-based spatial sorting and data limitations on out-of-hospital mortality. Exploiting policy-induced variation in hospital distance derived from emergency hospital closures and detailed Swedish mortality data over two decades, results show a drastically decreasing probability of surviving an AMI as residential distance from a hospital increases one year after a closure occurred. The effect disappears in subsequent years, however, suggesting that involved agents quickly adapted to the new environment.

The impact of financing of screening tests on utilization and outcomes: The case of amniocentesis

- Journal of Health Economics---2016---Ity Shurtz,Amnon Brzezinski,Ayala Frumkin

We use a 1993 policy change in Israel's public healthcare system that lowered the eligibility age for amniocentesis to 35 to study the effects of financing of screening tests. Financing is found to have increased amniocentesis testing by about 35%. At ages above the eligibility threshold, utilization rates rose to roughly 33%, reflection nearly full takeup among prospective users of amniocentesis. Additionally, whereas below the age-35 threshold amniocentesis utilization rates increase with maternal age, this relation is muted above this age. Finally, no evidence is found that financing affects outcomes such as pregnancy terminations and births of children with Down syndrome. These results support the view that women above the eligibility threshold tend to refrain from acquiring inexpensive information about their degree of risk that absent the financing they would acquire, and instead, undergo the accurate and costly test regardless of additional information that noninvasive screening would provide.

Health insurance and the demand for medical care: Instrumental variable estimates using health insurer claims data

- Journal of Health Economics---2016---Abe Dunn

This paper takes a different approach to estimating demand for medical care that uses the negotiated prices between insurers and providers as an instrument. The instrument is viewed as a textbook "cost shifting" instrument that impacts plan offerings, but is unobserved by consumers. The paper finds a price elasticity of demand of around 0.20, matching the elasticity found in the RAND Health Insurance Experiment. The paper also studies within-market variation in demand for prescription drugs and other medical care services and obtains comparable price elasticity estimates.

A general method for decomposing the causes of socioeconomic inequality in health

- Journal of Health Economics---2016---Gawain Heckley,Ulf-G. Gerdtham,Gustav Kjellsson

We introduce a general decomposition method applicable to all forms of bivariate rank dependent indices of socioeconomic inequality in health, including the concentration index. The technique is based on recentered influence function regression and requires only the application of OLS to a transformed variable with similar interpretation. Our method requires few identifying assumptions to yield valid estimates in most common empirical applications, unlike current methods favoured in the literature. Using the Swedish Twin Registry and a within twin pair fixed effects identification strategy, our new method finds no evidence of

a causal effect of education on income-related health inequality.

How to sell a condom? The impact of demand creation tools on male and female condom sales in resource limited settings

- Journal of Health Economics---2016---Fern Terris-Prestholt,Frank Windmeijer

Despite condoms being cheap and effective in preventing HIV, there remains an 8billion shortfall in condom use in risky sex-acts. Social marketing organisations apply private sector marketing approaches to sell public health products. This paper investigates the impact of marketing tools, including promotion and pricing, on demand for male and female condoms in 52 countries between 1997 and 2009. A static model differentiates drivers of demand between products, while a dynamic panel data estimator estimates their short- and long-run impacts. Products are not equally affected: female condoms are not affected by advertising, but highly affected by interpersonal communication and HIV prevalence. Price and promotion have significant short- and long-run effects, with female condoms far more sensitive to price than male condoms. The design of optimal distribution strategies for new and existing HIV prevention technologies must consider both product and target population characteristics.

An elicitation of utility for quality of life under prospect theory

- Journal of Health Economics---2016---Arthur Attema,Werner Brouwer,l' Haridon, Olivier,Jose Luis Pinto,Olivier l'Haridon

This paper performs several tests of decision analysis applied to the health domain. First, we conduct a test of the normative expected utility theory. Second, we investigate the possibility to elicit the more general prospect theory. We observe risk aversion for gains and losses and violations of expected utility. These results imply that mechanisms governing decisions in the health domain are similar to those in the monetary domain. However, we also report one important deviation: utility is universally concave for the health outcomes used in this study, in contrast to the commonly found S-shaped utility for monetary outcomes, with concave utility for gains and convex utility for losses.

Village sanitation and child health: Effects and external validity in a randomized field experiment in rural India

- Journal of Health Economics---2016---Jeffrey Hammer,Dean Spears

Over a billion people worldwide defecate in the open, with important consequences for early-life health and human capital accumulation in developing countries. We report a cluster randomized controlled trial of a village sanitation intervention conducted in rural Maharashtra, India designed to identify an effect of village sanitation on average child height, an outcome of increasing importance to economists. We find an effect of approximately 0.3 height-for-age standard deviations, which is consistent with observations and hypotheses in economic and health literatures. We further exploit details of the planning and implementation of the experiment to study treatment heterogeneity and external validity.

Solving shortage in a priceless market: Insights from blood donation

- Journal of Health Economics---2016---Tianshu Sun,Susan Feng Lu,Ginger Zhe Jin

Shortage is common in many markets, such as those for human organs or blood, but the problem is often difficult to solve through price adjustment, given safety and ethical concerns. In this paper, we study two non-price methods that are often used to alleviate shortage for human blood. The first method is informing existing donors of a current shortage via a mobile message and encouraging them to donate voluntarily. The second method is asking the patient's family or friends to donate in a family replacement (FR) program at the time of shortage. Using 447,357 individual donation records across 8 years from a large Chinese blood bank,

we show that both methods are effective in addressing blood shortage in the short run but have different implications for total blood supply in the long run. We compare the efficacy of these methods and discuss their applications under different scenarios to alleviate shortage.

Tradeoffs in the design of health plan payment systems: Fit, power and balance

- Journal of Health Economics---2016---Michael Geruso,Thomas G. McGuire

In many markets, including the new U.S. Marketplaces, health insurance plans are paid by risk-adjusted capitation, sometimes combined with reinsurance and other payment mechanisms. This paper proposes a framework for evaluating the de facto insurer incentives embedded in these complex payment systems. We discuss fit, power and balance, each of which addresses a distinct market failure in health insurance. We implement empirical metrics of fit, power, and balance in a study of Marketplace payment systems. Using data similar to that used to develop the Marketplace risk adjustment scheme, we quantify tradeoffs among the three classes of incentives. We show that an essential tradeoff arises between the goals of limiting costs and limiting cream skimming because risk adjustment, which is aimed at discouraging cream-skimming, weakens cost control incentives in practice. A simple reinsurance system scores better on our measures of fit, power and balance than the risk adjustment scheme in use in the Marketplaces.

Innovation in the pharmaceutical industry: New estimates of R&D costs

- Journal of Health Economics---2016---Joseph DiMasi,Henry G. Grabowski,Ronald W. Hansen

The research and development costs of 106 randomly selected new drugs were obtained from a survey of 10 pharmaceutical firms. These data were used to estimate the average pre-tax cost of new drug and biologics development. The costs of compounds abandoned during testing were linked to the costs of compounds that obtained marketing approval. The estimated average out-of-pocket cost per approved new compound is $1395 million (2013 dollars). Capitalizing out-of-pocket costs to the point of marketing approval at a real discount rate of 10.5% yields a total pre-approval cost estimate of $2558 million (2013 dollars). When compared to the results of the previous study in this series, total capitalized costs were shown to have increased at an annual rate of 8.5% above general price inflation. Adding an estimate of post-approval R&D costs increases the cost estimate to $2870 million (2013 dollars).

Assaults, murders and walkers: The impact of violent crime on physical activity

- Journal of Health Economics---2016---Katharina Janke,Carol Propper,Michael Shields

We investigate an underexplored externality of crime: the impact of violent crime on individuals' participation in walking. For many adults walking is the only regular physical activity. We use a sample of nearly 1 million people in 323 small areas in England between 2005 and 2011 matched to quarterly crime data at the small area level. Within area variation identifies the causal effect of local violent crime on walking and a difference-in-difference analysis of two high-profile crimes corroborates our results. We find a significant deterrent effect of violent crime on walking that translates into a drop in overall physical activity.

Health insurance and diversity of treatment

- Journal of Health Economics---2016---David Bardey,Bruno Jullien,Jean-Marie Lozachmeur

We determine the optimal health policy mix when the average utility of patients increases with the supply of drugs available in a therapeutic class. Health risk coverage relies on two instruments, copayment and reference pricing, both of which affect the risk associated with health expenses and diversity of treatment. For a fixed supply of drugs, the reference pricing policy aims at minimizing expenses, in which case the equilibrium price of drugs is independent of the copayment

rate. However, with an endogenous supply of drugs, diversity of treatment may susbtitute for insurance so that the reference pricing may depart from maximal cost-containment in order to promote entry. We next analyze the determinants of the optimal policy. While an increase in risk aversion, or in the side effect loss, increases diversity and decreases the copayment rate, an increase in entry cost decreases both diversity and the copayment rate.

Provider practice style and patient health outcomes: The case of heart attacks

- Journal of Health Economics---2016---Janet Currie,W. Bentley Macleod,Jessica Van Parys

When a patient arrives at the Emergency Room with acute myocardial infarction (AMI), the provider on duty must quickly decide how aggressively the patient should be treated. Using Florida data on all such patients from 1992 to 2014, we decompose practice style into two components: The provider's probability of conducting invasive procedures on the average patient (which we characterize as aggressiveness), and the responsiveness of the choice of procedure to the patient's characteristics. We show that within hospitals and years, patients with more aggressive providers have consistently higher costs and better outcomes. Since all patients benefit from higher utilization of invasive procedures, targeting procedure use to the most appropriate patients benefits these patients at the expense of the less appropriate patients. We also find that the most aggressive and responsive physicians are young, male, and trained in top 20 schools.

Mandate-based health reform and the labor market: Evidence from the Massachusetts reform

- Journal of Health Economics---2016---Jonathan T. Kolstad,Amanda Kowalski

We model the labor market impact of the key provisions of the national and Massachusetts "mandate-based" health reforms: individual mandates, employer mandates, and subsidies. We characterize the compensating differential for employer-sponsored health insurance (ESHI) and the welfare impact of reform in terms of "sufficient statistics." We compare welfare under mandate-based reform to welfare in a counterfactual world where individuals do not value ESHI. Relying on the Massachusetts reform, we find that jobs with ESHI pay $2812 less annually, somewhat less than the cost of ESHI to employers. Accordingly, the deadweight loss of mandate-based health reform was approximately 8 percent of its potential size.

Catastrophic medical expenditure risk

- Journal of Health Economics---2016---Gabriela Flores,O' Donnell, Owen,Owen O'Donnell

We propose a measure of household exposure to particularly onerous medical expenses. The measure can be decomposed into the probability that medical expenditure exceeds a threshold, the loss due to predictably low consumption of other goods if it does and the further loss arising from the volatility of medical expenses above the threshold. Depending on the choice of threshold, the measure is consistent with a model of reference-dependent utility with loss aversion. Unlike the risk premium, the measure is only sensitive to particularly high expenses, and can identify households that expect to incur such expenses and would benefit from subsidised, but not actuarially fair, insurance. An empirical illustration using data from seven Asian countries demonstrates the importance of taking account of informal insurance and reveals clear differences in catastrophic medical expenditure risk across and within countries. In general, risk is higher among poorer, rural and chronically ill populations.

Insuring against health shocks: Health insurance and household choices

- Journal of Health Economics---2016---Kai Liu

This paper provides empirical evidence on the role of public health insurance in mitigating adverse outcomes associated with health shocks. Exploiting the rollout of a universal health insurance program in rural China, I find that total household income and consumption are fully insured against health shocks even without

access to health insurance. Household labor supply is an important insurance mechanism against health shocks. Access to health insurance helps households to maintain investment in children's human capital during negative health shocks, which suggests that one benefit of health insurance could arise from reducing the use of costly smoothing mechanisms.

Do "Consumer-Directed" health plans bend the cost curve over time?

- Journal of Health Economics---2016---Amelia M. Haviland,Matthew D. Eisenberg,Ateev Mehrotra,Peter J. Huckfeldt,Neeraj Sood

"Consumer-Directed" Health Plans (CDHPs), those with high deductibles and personal medical accounts, are intended to reduce health care spending through greater patient cost exposure. Prior research agrees that in the first year, CDHPs reduce spending. There is little research and in it results are mixed regarding the impact of CDHPs over the longer term. We add to this literature with an intent-to-treat, difference-in-differences analysis of health care spending over up to three years post CDHP offer among 13 million person-years of data from 54 large US firms, half of which offered CDHPs. To strengthen the identification, we balance observables over time within firm, by developing weights through a machine learning algorithm, generalized boosted regression. We find that spending is reduced for those in firms offering CDHPs in all three years post offer relative to firms continuing to offer lower-deductible plans. The reductions are driven by spending decreases in outpatient care and pharmaceuticals, with no evidence of increases in emergency department or inpatient care over the three-year window.

Effects of Medicaid disease management programs on medical expenditures: Evidence from a natural experiment in Georgia

- Journal of Health Economics---2016---Keith Kranker

In recent decades, most states' Medicaid programs have introduced disease management programs for chronically ill beneficiaries. Interventions assist beneficiaries and their health care providers to appropriately manage chronic health condition(s) according to established clinical guidelines. Cost containment has been a key justification for the creation of these programs despite mixed evidence they actually save money. This study evaluates the effects of a disease management program in Georgia by exploiting a natural experiment that delayed the introduction of high-intensity services for several thousand beneficiaries. Expenditures for medical claims decreased an average of $89 per person per month for the high- and moderate-risk groups, but those savings were not large enough to offset the total costs of the program. Impacts varied by the intensity of interventions, over time, and across disease groups. Heterogeneous treatment effect analysis indicates that decreases in medical expenditures were largest at the most expensive tail of the distribution.

Does the benefits schedule of cash assistance programs affect the purchase of temptation goods? Evidence from Peru

- Journal of Health Economics---2016---Justin S. White,Sanjay Basu

A critique of cash assistance programs is that beneficiaries may spend the money on "temptation goods" such as alcohol and tobacco. We exploit a change in the payment schedule of Peru's conditional cash transfer program to identify the impact of benefit receipt frequency on the purchase of temptation goods. We use annual household data among cross-sectional and panel samples to analyze the effect of the policy change on the share of the household budget devoted to four categories of temptation goods. Using a difference-in-differences estimation approach, we find that larger, less frequent payments increased the expenditure share of alcohol by 55–80% and sweets by 10–40%, although the absolute magnitudes of these effects are small. Our study suggests that less frequent benefits scheduling may lead cash recipients to make certain types of temptation purchases.

The fatality and morbidity components of the value of statistical life

- Journal of Health Economics---2016---Elissa Philip Gentry,W Viscusi

The fatality risk–money tradeoff that is the value of a statistical life (VSL) may vary with the nature of the fatality event. While all fatalities involve loss of future life expectancy, the morbidity effects and their duration may differ. This article analyzes fatality risks accompanied by morbidity effects of different duration to disentangle the mortality and morbidity components of VSL using data from the Census of Fatal Occupational Injuries (CFOI). The VSL is comprised of the sum of the value of the fatality risk and the value of the morbidity risk. Labor market valuations of morbidity risks are positive, even for fatalities that are caused by traumatic injuries. The value of the fatality risk is the dominant component of VSL, rather than the value of the morbidity risk.

Growth and welfare effects of health care in knowledge-based economies

- Journal of Health Economics---2016---Michael Kuhn,Klaus Prettner

We study the effects of labor intensive health care within a research and development (R&D) driven growth model with overlapping generations. Health care increases longevity, labor participation, and productivity, while it also diverts labor away from production and R&D. We examine under which conditions expanding health care enhances growth and welfare and establish mild conditions under which the provision of health care beyond the growth-maximizing level is Pareto superior.

Testing for changes in the SES-mortality gradient when the distribution of education changes too

- Journal of Health Economics---2016---Thomas Goldring,Fabian Lange,Seth Richards-Shubik

We develop a flexible test for changes in the SES-mortality gradient that accounts for changes in the distribution of education, the most commonly used marker of SES. We implement the test for the period between 1984 and 2006 in the United States using microdata from the Census and other surveys linked to death records. Using our flexible test, we find that the evidence for a change in the SES-mortality gradient is not as strong as previous research has suggested. Our results indicate that the gradient increased for females during this time period, but we cannot rule out that the gradient among males has not changed. Informally, the results suggest that the changes for females are mainly driven by the bottom of the education distribution.

Social capital and access to primary health care in developing countries: Evidence from Sub-Saharan Africa

- Journal of Health Economics---2016---Guillaume Hollard,Omar Sene

We test for a causal role of social capital, as measured by self-reported trust, in determining access to basic health facilities in Sub-Saharan Africa. To skirt the reverse-causality problems between social capital and basic health, we rely on instrumental-variable (IV) estimates. A one standard-deviation increase in trust is predicted to lead to a 0.22 standard-deviation fall in doctor absenteeism, a 0.31 standard-deviation fall in waiting time and a 0.30 standard-deviation fall in bribes. As a robustness check, we also use a different database regarding a different health issue, access to clean water. We find that a one standard-deviation rise in trust leads to a 0.33 standard-deviation rise in access to clean water. The variety of public goods considered provides insights about the possible channels through which social capital is converted into health improvements.

Long-term health effects of Vietnam-era military service: A quasi-experiment using Australian conscription lotteries

- Journal of Health Economics---2016---David Johnston,Michael Shields,Peter Siminski

This paper estimates the long-term health effects of

Vietnam-era military service using Australia's National conscription lotteries for identification. Our primary contribution is the quality and breadth of our health outcomes. We use several administrative sources, containing a near-universe of records on mortality (1994–2011), cancer diagnoses (1982–2008), and emergency hospital presentations (2005–2010). We also analyse a range of self-reported morbidity indicators (2006–2009). We find no significant long-term effects on mortality, cancer or emergency hospital visits. In contrast, we find significant detrimental effects on a number of morbidity measures. Hearing and mental health appear to be particularly affected.

Gaining weight through retirement? Results from the SHARE survey

- Journal of Health Economics---2016---Mathilde Godard

This paper estimates the causal impact of retirement on the Body Mass Index (BMI) of adults aged 50–69 years old, on the probability of being either overweight or obese and on the probability of being obese. Based on the 2004, 2006 and 2010–2011 waves of the Survey of Health, Ageing and Retirement in Europe (SHARE), our identification strategy exploits variation in European Early Retirement Ages (ERAs) and stepwise increases in ERAs in Austria and Italy between 2004 and 2011 to examine an exogenous shock to retirement behavior. Our results show that retirement induced by discontinuous incentives in early retirement schemes causes a 12-percentage point increase in the probability of being obese among men within a two- to four-year period. We find that the impact of retirement is highly non-linear and mostly affects the right-hand side of the male BMI distribution. Additional results show that this pattern is driven by men retiring from strenuous jobs and by those who were already at risk of obesity. In contrast, no significant results are found among women.

Habit formation in children: Evidence from incentives for healthy eating

- Journal of Health Economics---2016---George Loewenstein,Joseph Price,Kevin Volpp

We present findings from a field experiment conducted at 40 elementary schools involving 8000 children and 400,000 child-day observations, which tested whether providing short-run incentives can create habit formation in children. Over a 3- or 5-week period, students received an incentive for eating a serving of fruits or vegetables during lunch. Relative to an average baseline rate of 39%, providing small incentives doubled the fraction of children eating at least one serving of fruits or vegetables. Two months after the end of the intervention, the consumption rate at schools remained 21% above baseline for the 3-week treatment and 44% above baseline for the 5-week treatment. These findings indicate that short-run incentives can produce changes in behavior that persist after incentives are removed.

The effect of parental involvement laws on teen birth control use

- Journal of Health Economics---2016---Joseph J. Sabia,D. Mark Anderson

In Volume 32, Issue 5 of this journal, Colman, Dee, and Joyce (CDJ) used data from the National Youth Risk Behavior Surveys (NYRBS) and found that parental involvement (PI) laws had no effect on the probability that minors abstain from sex or use contraception. We re-examine this question, augmenting the NYRBS with data from the State Youth Risk Behavior Surveys (SYRBS), and use a variety of identification strategies to control for state-level time-varying unmeasured heterogeneity. Consistent with CDJ, we find that PI laws have no effect on minor teen females' abstinence decisions. However, when we exploit additional state policy variation unavailable to CDJ and use non-minor teens as a within-state control group, we find evidence to suggest that PI laws are associated with an increase in the probability that sexually active minor teen females use birth control.

Spousal labor market effects from government health insurance: Evidence from a veterans affairs expansion

- Journal of Health Economics---2016---Melissa A. Boyle,Joanna Lahey

Measuring the total impact of health insurance receipt on household labor supply is important in an era of increased access to publicly provided and subsidized insurance. Although government expansion of health insurance to older workers leads to direct labor supply reductions for recipients, there may be spillover effects on the labor supply of uncovered spouses. While the most basic model predicts a decrease in overall household work hours, financial incentives such as credit constraints, target income levels, and the need for own health insurance suggest that spousal labor supply might increase. In contrast, complementarities of spousal leisure would predict a decrease in labor supply for both spouses. Utilizing a mid-1990s expansion of health insurance for U.S. veterans, we provide evidence on the effects of public insurance availability on the labor supply of spouses. Using data from the Current Population Survey and Health and Retirement Study, we employ a difference-in-differences strategy to compare the labor market behavior of the wives of older male veterans and non-veterans before and after the VA health benefits expansion. Although husbands' labor supply decreases, wives' labor supply increases, suggesting that financial incentives dominate complementarities of spousal leisure. This effect is strongest for wives with lower education levels and lower levels of household wealth and those who were not previously employed full-time. These findings have implications for government programs such as Medicare and Social Security and the Affordable Care Act.

Effects of antenatal testing laws on infant mortality

- Journal of Health Economics---2016---Winnie Fung,Omar Robles

Even though syphilis can be prevented effectively and treated inexpensively, it has remained a global public health problem. Untreated congenital syphilis results in neonatal death, stillbirth, preterm birth, or congenital deformities. Many developing countries have recently instituted syphilis prevention programs in antenatal care, but there has not been a systematic study of the effects of such programs. This paper is the first to study antenatal testing laws initiated in the U.S. in 1938–1947 which mandated physicians and other persons permitted by law to attend to a pregnant woman to test her for syphilis. We use the variation in the timing of state antenatal testing laws to estimate the laws' effect on neonatal mortality rates and deaths due to preterm birth. Using 1931–1947 Vital Statistics data, we find that these laws decreased neonatal mortality rates of nonwhites by 3.15 per 1000 live births (a 8.6% reduction) while having no discernible impact on whites. The laws contributed to an 18% narrowing of the white-nonwhite neonatal mortality gap by 1947. Using 1950 U.S. Census data, we find that mandatory antenatal testing led to a 7% increase in the cohort size of nonwhite poor, which is consistent with the neonatal mortality results. We find universal antenatal testing to be very cost-effective, with an estimated $7600 cost (in 2013 dollars) per life-year saved.

Time to burn (calories)? The impact of retirement on physical activity among mature Americans

- Journal of Health Economics---2016---Fabrice Kämpfen,Jürgen Maurer

Physical activity is crucial for maintaining and improving health, especially at advanced ages. While retirement increases the amount of time available for physical activity, there is only limited evidence regarding the causal effect of retirement on recommended levels of physical activity. Addressing this gap in the literature, we use data from the U.S. Health and Retirement Study to estimate the causal impact of retirement on meeting the federal government's 2008 Physical Activity Guidelines for Americans. Using official early and normal retirement ages as instruments for retirement, our causal IV analyses suggest significant positive effects of retirement on meeting the Guidelines. These effects are robust with regard to the treatment of unobserved

individual-specific heterogeneity, the measurement of guideline compliance, the definition of retirement and respondents' health insurance status. We also show that the effects of retirement on physical activity are larger for persons with higher levels of education and wealth.

Employer-sponsored health insurance and the gender wage gap

- Journal of Health Economics---2016---Benjamin Cowan,Benjamin Schwab

During prime working years, women have higher expected healthcare expenses than men. However, employees' insurance rates are not gender-rated in the employer-sponsored health insurance (ESI) market. Thus, women may experience lower wages in equilibrium from employers who offer health insurance to their employees. We show that female employees suffer a larger wage gap relative to men when they hold ESI: our results suggest this accounts for roughly 10% of the overall gender wage gap. For a full-time worker, this pay gap due to ESI is on the order of the expected difference in healthcare expenses between women and men.

Patient cost sharing and medical expenditures for the Elderly

- Journal of Health Economics---2016---Kazuya Fukushima,Sou Mizuoka,Shunsuke Yamamoto,Toshiaki Iizuka

Despite the rapidly aging population, relatively little is known about how cost sharing affects the elderly's medical spending. Exploiting longitudinal claims data and the drastic reduction of coinsurance from 30% to 10% at age 70 in Japan, we find that the elderly's demand responses are heterogeneous in ways that have not been previously reported. Outpatient services by orthopedic and eye specialties, which will continue to increase in an aging society, are particularly price responsive and account for a large share of the spending increase. Lower cost sharing increases demand for brand-name drugs but not for generics. These high price elasticities may call for different cost-sharing rules for these services. Patient health status also matters: receiving medical services appears more discretionary for the healthy than the sick in the outpatient setting. Finally, we found no evidence that additional medical spending improved short-term health outcomes.

Genetic markers as instrumental variables

- Journal of Health Economics---2016---Stephanie von Hinke,George Davey Smith,Debbie A. Lawlor,Carol Propper,Frank Windmeijer

The use of genetic markers as instrumental variables (IV) is receiving increasing attention from economists, statisticians, epidemiologists and social scientists. Although IV is commonly used in economics, the appropriate conditions for the use of genetic variants as instruments have not been well defined. The increasing availability of biomedical data, however, makes understanding of these conditions crucial to the successful use of genotypes as instruments. We combine the econometric IV literature with that from genetic epidemiology, and discuss the biological conditions and IV assumptions within the statistical potential outcomes framework. We review this in the context of two illustrative applications.

Does home care for dependent elderly people improve their mental health?

- Journal of Health Economics---2016---Thomas Barnay,Sandrine Juin

While theoretical models on long-term care decisions assume that the health production function of dependent elderly depends positively on the care received, it has not received much attention in the empirical literature. We estimate the effects of both informal and formal home care on the mental health of elderly individuals in France needing help with daily activities. We adjust for the endogeneity of care with instrumental variables, using characteristics of adult children and geographical disparities in access to public long-term care coverage. The results show that informal care reduces the risk of

depression of dependent elderly and that formal care increases their general mental health.

The long-term impacts of Medicaid exposure in early childhood: Evidence from the program's origin

- Journal of Health Economics---2016---Michel H. Boudreaux,Ezra Golberstein,Donna D. McAlpine

This paper examines the long-term impact of exposure to Medicaid in early childhood on adult health and economic status. The staggered timing of Medicaid's adoption across the states created meaningful variation in cumulative exposure to Medicaid for birth cohorts that are now in adulthood. Analyses of the Panel Study of Income Dynamics suggest exposure to Medicaid in early childhood (age 0–5) is associated with statistically significant and meaningful improvements in adult health (age 25–54), and this effect is only seen in subgroups targeted by the program. Results for economic outcomes are imprecise and we are unable to come to definitive conclusions. Using separate data we find evidence of two mechanisms that could plausibly link Medicaid's introduction to long-term outcomes: contemporaneous increases in health services utilization for children and reductions in family medical debt.

Trans fat and cardiovascular disease mortality: Evidence from bans in restaurants in New York

- Journal of Health Economics---2016---Brandon Restrepo,Matthias Rieger

This paper analyzes the impact of trans fat bans on cardiovascular disease (CVD) mortality rates. Several New York State jurisdictions have restricted the use of ingredients containing artificial trans fat in food service establishments. The resulting within-county variation over time and the differential timing of the policy's rollout is used in estimation. The results indicate that the policy caused a 4.5% reduction in CVD mortality rates, or 13 fewer CVD deaths per 100,000 persons per year. The averted deaths can be valued at about $3.9 million per 100,000 persons annually.

The effect of early-life education on later-life mortality

- Journal of Health Economics---2015---Dan Black,Yu-Chieh Hsu,Lowell J. Taylor

Many studies link cross-state variation in compulsory schooling laws to early-life educational attainment, thereby providing a plausible way to investigate the causal impact of education on various lifetime outcomes. We use this strategy to estimate the effect of education on older-age mortality of individuals born in the early twentieth century U.S. Our key innovation is to combine U.S. Census data and the complete Vital Statistics records to form precise mortality estimates by sex, birth cohort, and birth state. In turn we find that virtually all of the variation in these mortality rates is captured by cohort effects and state effects alone, making it impossible to reliably tease out any additional impact due to changing educational attainment induced by state-level changes in compulsory schooling.

Medicaid reimbursement, prenatal care and infant health

- Journal of Health Economics---2015---Lyudmyla Sonchak

This paper evaluates the impact of state-level Medicaid reimbursement rates for obstetric care on prenatal care utilization across demographic groups. It also uses these rates as an instrumental variable to assess the importance of prenatal care on birth weight. The analysis is conducted using a unique dataset of Medicaid reimbursement rates and 2001–2010 Vital Statistics Natality data. Conditional on county fixed effects, the study finds a modest, but statistically significant positive relationship between Medicaid reimbursement rates and the number of prenatal visits obtained by pregnant women. Additionally, higher rates are associated with an increase in the probability of obtaining adequate care, as well as a reduction in the incidence of going without any prenatal care. However, the effect of an additional prenatal visit on birth weight is virtually zero for black disadvantaged mothers, while

an additional visit yields a substantial increase in birth weight of over 20g for white disadvantaged mothers.

Do financial incentives trump clinical guidance? Hip Replacement in England and Scotland

- Journal of Health Economics---2015---Irene Papanicolas,Alistair McGuire

Following devolution in 1999 England and Scotland's National Health Services diverged, resulting in major differences in hospital payment. England introduced a case payment mechanism from 2003/4, while Scotland continued to pay through global budgets. We investigate the impact this change had on activity for Hip Replacement. We examine the financial reimbursement attached to uncemented Hip Replacement in England, which has been more generous than for its cemented counterpart, although clinical guidance from the National Institute for Clinical Excellence recommends the later. In Scotland this financial differential does not exist. We use a difference-in-difference estimator, using Scotland as a control, to test whether the change in reimbursement across the two countries had an influence on treatment. Our results indicate that financial incentives are directly linked to the faster uptake of the more expensive, uncemented Hip Replacement in England, which ran against the clinical guidance.

Can Walmart make us healthier? Prescription drug prices and health care utilization

- Journal of Health Economics---2015---Florencia Borrescio-Higa

This paper analyzes how prices in the retail pharmaceutical market affect health care utilization. Specifically, I study the impact of Walmart's $4 Prescription Drug Program on utilization of antihypertensive drugs and on hospitalizations for conditions amenable to drug therapy. Identification relies on the change in the availability of cheap drugs introduced by Walmart's program, exploiting variation in the distance to the nearest Walmart across ZIP codes in a difference-in-differences framework. I find that living close to a source of cheap drugs increases utilization of antihypertensive medications by 7 percent and decreases the probability of an avoidable hospitalization by 6.2 percent.

Does health plan generosity enhance hospital market power?

- Journal of Health Economics---2015---Laurence C. Baker,M. Kate Bundorf,Daniel P. Kessler

We test whether the generosity of employer-sponsored health insurance facilitates the exercise of market power by hospitals. We construct indices of health plan generosity and the price and volume of hospital services using data from Truven MarketScan for 601 counties from 2001 to 2007. We use variation in the industry and union status of covered workers within a county over time to identify the causal effects of generosity. Although OLS estimates fail to reject the hypothesis that generosity facilitates the exercise of hospital market power, IV estimates show a statistically significant and economically important positive effect of plan generosity on hospital prices in uncompetitive markets, but not in competitive markets. Our results suggest that most of the aggregate effect of hospital market structure on prices found in previous work may be coming from areas with generous plans.

Premium copayments and the trade-off between wages and employer-provided health insurance

- Journal of Health Economics---2015---Darren Lubotsky,Craig A. Olson

This paper estimates the trade-off between salary and health insurance costs using data on Illinois school teachers between 1991 and 2008 that allow us to address several common empirical challenges in this literature. Teachers paid about 17 percent of the cost of individual health insurance and about 46 percent of the cost of their family members' plans through premium contributions, but we find no evidence that teachers' salaries respond to changes in insurance costs. Consistent with a higher willingness to pay for insurance, we find that premium contributions are higher in districts that employ a higher-tenured workforce. We find no

evidence that school districts respond to higher health insurance costs by reducing the number of teachers.

Mandatory universal drug plan, access to health care and health: Evidence from Canada

- Journal of Health Economics---2015---Chao Wang,Qing Li,Arthur Sweetman,Jeremiah Hurley

This paper examines the impacts of a mandatory, universal prescription drug insurance program on health care utilization and health outcomes in a public health care system with free physician and hospital services. Using the Canadian National Population Health Survey from 1994 to 2003 and implementing a difference-in-differences estimation strategy, we find that the mandatory program substantially increased drug coverage among the general population. The program also increased medication use and general practitioner visits but had little effect on specialist visits and hospitalization. Findings from quantile regressions suggest that there was a large improvement in the health status of less healthy individuals. Further analysis by pre-policy drug insurance status and the presence of chronic conditions reveals a marked increase in the probability of taking medication and visiting a general practitioner among the previously uninsured and those with a chronic condition.

Maternal education and child mortality in Zimbabwe

- Journal of Health Economics---2015---Karen A. Grépin,Prashant Bharadwaj

In 1980, Zimbabwe rapidly expanded access to secondary schools, providing a natural experiment to estimate the impact of increased maternal secondary education on child mortality. Exploiting age specific exposure to these reforms, we find that children born to mothers most likely to have benefited from the policies were about 21% less likely to die than children born to slightly older mothers. We also find that increased education leads to delayed age at marriage, sexual debut, and first birth and that increased education leads to better economic opportunities for women. We find little evidence supporting other channels through which increased education might affect child mortality. Expanding access to secondary schools may greatly accelerate declines in child mortality in the developing world today.

Malaria eradication and economic outcomes in sub-Saharan Africa: Evidence from Uganda

- Journal of Health Economics---2015---Jeremy Barofsky,Tobenna D. Anekwe,Claire Chase

This study evaluates the economic consequences of a 1959–1960 malaria eradication campaign in southwestern Uganda. The effort constitutes a rare, large-scale, and well-documented attempt to eliminate malaria in sub-Saharan Africa and produced an immediate disease reduction. We use this quasi-experimental health shock to identify long-term changes in educational and economic outcomes. Comparing the treatment district to a similar synthetic control, we find malaria eradication raised educational attainment by about a half year for both males and females, increased primary school completion among females and generated an almost 40% rise in the likelihood of male wage employment.

The effects of merit-based financial aid on drinking in college

- Journal of Health Economics---2015---Benjamin W. Cowan,Dustin R. White

We study the effect of state-level merit aid programs (such as Georgia's HOPE scholarship) on alcohol consumption among college students. Such programs have the potential to affect drinking through a combination of channels – such as raising students' disposable income and increasing the incentive to maintain a high GPA – that could theoretically raise or lower alcohol use. We find that the presence of a merit-aid program in one's state generally leads to an overall increase in (heavy) drinking. This effect is concentrated among men, students with lower parental education, older students, and students with high college GPA's. Our findings are robust to several alternative empirical specifications including event-study analyses by year

of program adoption. Furthermore, no difference in high-school drinking is observed for students attending college in states with merit-aid programs.

An anatomy of old-age disability: Time use, affect and experienced utility

- Journal of Health Economics---2015---Gabriela Flores,Michael Ingenhaag,Jürgen Maurer

Complementing the commonly used concepts of evaluative wellbeing and decision utility, emotional wellbeing and experienced utility are important welfare criteria to assess individuals' subjective wellbeing, especially for valuing health and disability. Yet, almost all empirical evidences on the link between disability and experienced wellbeing come from developed countries. This paper studies the relationship between old-age disability and experienced utility in five low- and middle-income countries. Using data on individual time use and activity-specific affective experiences from an abbreviated version of the Day Reconstruction Method, we document a strong negative association between disability and experienced utility. These differences in experienced utility by disability status are exclusively due to worse activity-specific affective experiences among persons with disabilities. By contrast, disability-related differences in time use provide small compensating effects. Interventions or technologies that facilitate daily life hold most promise to improve experienced utility among persons with disabilities in the developing world.

Parental health shocks, child labor and educational outcomes: Evidence from Tanzania

- Journal of Health Economics---2015---Shamma Adeeb Alam

This paper examines the impact of parental illness on children's education. We find that only father's illness decreases children's school attendance. Father's illness also has long-term impacts on child education, as it decreases children's likelihood of completing primary school and leads to fewer years of schooling. However, we find no evidence that father's illness affects schooling through increased child labor. Instead, father's illness decreases household's income and reduces school attendance possibly because of the reduced ability of the family to afford education. In contrast, mother's illness and illness of other household members have no effect on children's schooling.

Smoking bans, cigarette prices and life satisfaction

- Journal of Health Economics---2015---Reto Odermatt,Alois Stutzer

The consequences of tobacco control policies for individual welfare are difficult to assess, even more so when related consumption choices challenge people's willpower. We therefore evaluate the impact of smoking bans and cigarette prices on subjective well-being by analyzing data for 40 European countries and regions between 1990 and 2011. We exploit the staggered introduction of bans and apply an imputation strategy to study the effect of anti-smoking policies on people with different propensities to smoke. We find that higher cigarette prices reduce the life satisfaction of likely smokers. Overall, smoking bans are barely related to subjective well-being, but increase the life satisfaction of smokers who would like to quit smoking. The latter finding is consistent with cue-triggered models of addiction and the idea of bans as self-control devices.

The indirect impact of antiretroviral therapy: Mortality risk, mental health, and HIV-negative labor supply

- Journal of Health Economics---2015---Victoria Baranov,Daniel Bennett,Hans-Peter Kohler

To reduce the burden of the HIV/AIDS epidemic, international donors recently began providing free antiretroviral therapy (ART) in parts of Sub-Saharan Africa. ART dramatically prolongs life and reduces infectiousness for people with HIV. This paper shows that ART availability increases work time for HIV-negative people without caretaker obligations, who do not directly benefit from the medicine. A difference-in-difference design compares people living near and far from ART,

before and after treatment becomes available. Next we explore the possible reasons for this pattern. Although we cannot pinpoint the mechanism, we find that ART availability substantially reduces subjective mortality risk and improves mental health. These results show an undocumented economic consequence of the HIV/AIDS epidemic and an important externality of medical innovation. They also provide the first evidence of a link between the disease environment and mental health.

Do Medicaid benefit expansions have teeth? The effect of Medicaid adult dental coverage on the use of dental services and oral health

- Journal of Health Economics---2015---Sandra L. Decker,Brandy J. Lipton

This article examines the effect of Medicaid adult dental coverage on use of dental care and dental health outcomes using state-level variation in dental coverage during 2000–2012. Our findings imply that dental coverage is associated with an increase in the likelihood of a recent dental visit, with the size of the effect increasing with Medicaid payment rates to dentists, and a reduction in the likelihood of untreated dental caries. We are among the first to detect an effect of Medicaid coverage on a clinical health outcome other than mortality. These findings may have implications for states expanding Medicaid coverage to adults with incomes of up to 138% of the federal poverty threshold under the Affordable Care Act as most of these states offer an adult dental benefit.

Did you get your shots? Experimental evidence on the role of reminders

- Journal of Health Economics---2015---Matias Busso,Julian Cristia,Sarah Humpage

Many families fail to vaccinate their children despite the supply of these services at no cost. This study tests whether personal reminders can increase demand for vaccination. A field experiment was conducted in rural Guatemala in which timely reminders were provided to families whose children were due for a vaccine. The six-month intervention increased the probability of vaccination completion by 2.2 percentage points among all children in treatment communities. Moreover, for children in treatment communities who were due to receive a vaccine, and whose parents were expected to be reminded about that due date, the probability of vaccination completion increased by 4.6 percentage points. The cost of an additional child with complete vaccination due to the intervention is estimated at about $7.50.

The effect of Health Savings Accounts on group health insurance coverage

- Journal of Health Economics---2015---Jinqi Ye

This paper presents new empirical evidence on the impact of tax subsidies for Health Savings Accounts (HSAs) on group insurance coverage. HSAs are tax-free health care expenditure savings accounts. Coupled with high deductible health insurance plans (HDHPs), they together represent new health insurance options. The tax advantage of HSAs expands the group health insurance market by making health care more affordable. Using individual level data from the Current Population Survey and exploiting policy variation by state and year from 2004 to 2012, I find that HSA tax subsidies increase small-group coverage by a statistically significant 2.5 percentage points, although not coverage in larger firms. Moreover, if the tax price of HSA contribution decreases by 10 cents, small-group insurance coverage increases by almost 2 percentage points. I also find that for older workers or less-educated workers, HSA subsidies are associated with 2–3 percentage point increase in their group insurance coverage.

The consumer welfare implications of governmental policies and firm strategy in markets for medicines

- Journal of Health Economics---2015---Chirantan Chatterjee,Kensuke Kubo,Viswanath Pingali

This paper empirically examines the consumer welfare implications of changes in government policies related to patent protection and compulsory licensing in the

Indian market for oral anti-diabetic (OAD) medicines. In contrast to previous studies on the impact of pharmaceutical patents in India, we observe, and estimate the welfare effects accruing from differential pricing and voluntary licensing strategies of patent-holding innovator firms. Three novel molecules belonging to the dipeptidyl peptidase-4 (DPP-4) inhibitor class of OADs have been launched in India by the patent holders, at lower prices than those prevailing in the developed countries. Using aggregate market transaction data, we structurally estimate demand and supply and use the parameter estimates in our model to simulate consumer welfare under various counterfactual scenarios. Our results suggest that the introduction of DPP-4 inhibitors generated a consumer surplus gain of around 7.6 cents per day for a typical DPP-4 inhibitor user under the existing differential pricing and voluntary licensing strategies. If the innovators decide to price at developed-country levels, this surplus is eliminated almost entirely. The issuance of compulsory licensing does not always improve consumer welfare because if innovators defer or delay the introduction of new drugs in response, the loss in consumer welfare could be substantial.

Is an early retirement offer good for your health? Quasi-experimental evidence from the army

- Journal of Health Economics---2015---Daniel Hallberg,Per Johansson,Malin Josephson

This paper studies empirically the consequences on health of an early retirement offer. To this end we use a targeted retirement offer to military officers 55 years of age or older. Before the offer was implemented, the normal retirement age in the Swedish defense was 60 years of age. Estimating the effect of the offer on individuals' health within the age range 56–70, we find support for a reduction in both mortality and in inpatient care as a consequence of the early retirement offer. Increasing the mandatory retirement age may thus not only have positive government income effects but also negative effects on increasing government health care expenditures.

Comparing the effectiveness of individualistic, altruistic, and competitive incentives in motivating completion of mental exercises

- Journal of Health Economics---2015---Heather Schofield,George Loewenstein,Jessica Kopsic,Kevin G. Volpp

This study examines the impact of individually oriented, purely altruistic, and a hybrid of competitive and cooperative monetary reward incentives on older adults' completion of cognitive exercises and cognitive function. We find that all three incentive structures approximately double the number of exercises completed during the six-week active experimental period relative to a no incentive control condition. However, the altruistic and cooperative/competitive incentives led to different patterns of participation, with significantly higher inter-partner correlations in utilization of the software, as well as greater persistence once incentives were removed. Provision of all incentives significantly improved performance on the incentivized exercises. However, results of an independent cognitive testing battery suggest no generalizable gains in cognitive function resulted from the training.

How does electronic cigarette access affect adolescent smoking?

- Journal of Health Economics---2015---Abigail S. Friedman

Understanding electronic cigarettes' effect on tobacco smoking is a central economic and policy issue. This paper examines the causal impact of e-cigarette access on conventional cigarette use by adolescents. Regression analyses consider how state bans on e-cigarette sales to minors influence smoking rates among 12 to 17 year olds. Such bans yield a statistically significant 0.9 percentage point increase in recent smoking in this age group, relative to states without such bans. Results are robust to multiple specifications as well as several falsification and placebo checks. This effect is both consistent with e-cigarette access reducing smoking among minors, and large: banning electronic cigarette sales to minors counteracts 70 percent of the downward

pre-trend in teen cigarette smoking for a given two-year period.

Investment subsidies and the adoption of electronic medical records in hospitals

- Journal of Health Economics---2015---David Dranove,Craig Garthwaite,Bingyang Li,Christopher Ody

In February 2009 the U.S. Congress unexpectedly passed the Health Information Technology for Economic and Clinical Health Act (HITECH). HITECH provides up to $27 billion to promote adoption and appropriate use of Electronic Medical Records (EMR) by hospitals. We measure the extent to which HITECH incentive payments spurred EMR adoption by independent hospitals. Adoption rates for all independent hospitals grew from 48 percent in 2008 to 77 percent by 2011. Absent HITECH incentives, we estimate that the adoption rate would have instead been 67 percent in 2011. When we consider that HITECH funds were available for all hospitals and not just marginal adopters, we estimate that the cost of generating an additional adoption was $48 million. We also estimate that in the absence of HITECH incentives, the 77 percent adoption rate would have been realized by 2013, just 2 years after the date achieved due to HITECH.

The effect of health insurance coverage on medical care utilization and health outcomes: Evidence from Medicaid adult vision benefits

- Journal of Health Economics---2015---Brandy J. Lipton,Sandra L. Decker

Increasing the proportion of adults that have regular, comprehensive eye exams and reducing visual impairment due to uncorrected refractive error and other common eye health problems are federal health objectives. We examine the effect of vision insurance on eye care utilization and vision health outcomes by taking advantage of quasi-experimental variation in Medicaid coverage of adult vision care. Using a difference-in-difference-in-difference approach, we find that Medicaid beneficiaries with vision coverage are 4.4 percentage points ($p<0.01$) more likely to have seen an eye doctor in the past year, 5.3 percentage points ($p<0.01$) less likely to report needing but not purchasing eyeglasses or contacts due to cost, 2.0 percentage points ($p<0.05$) less likely to report difficulty seeing with usual vision correction, and 1.2 percentage points ($p<0.01$) less likely to have a functional limitation due to vision.

Understanding the effect of retirement on health: Mechanisms and heterogeneity

- Journal of Health Economics---2015---Peter Eibich

This paper investigates the mechanisms behind the health effects of retirement. Using a Regression Discontinuity Design to exploit financial incentives in the German pension system for identification, I find that retirement improves subjective health status and mental health, while also reducing outpatient care utilization. I explore a wide range of health behaviors, time use, and effect heterogeneity as potential mechanisms. Relief from work-related stress and strain, increased sleep duration as well as more frequent physical exercise seem to be key mechanisms through which retirement affects health.

What explains DRG upcoding in neonatology? The roles of financial incentives and infant health

- Journal of Health Economics---2015---Hendrik Jürges,Juliane Köberlein,Hendrik Juerges

We use the introduction of diagnosis related groups (DRGs) in German neonatology to study the determinants of upcoding. Since 2003, reimbursement is based inter alia on birth weight, with substantial discontinuities at eight thresholds. These discontinuities create incentives to upcode preterm infants into classes of lower birth weight. Using data from the German birth statistics 1996–2010 and German hospital data from 2006 to 2011, we show that (1) since the introduction of DRGs, hospitals have upcoded at least 12,000 preterm infants and gained additional reimbursement in excess of 100 million Euro; (2) upcoding rates are systematically higher at thresholds with larger reimbursement hikes and in hospitals that subsequently treat preterm

infants, i.e. where the gains accrue; (3) upcoding is systematically linked with newborn health conditional on birth weight. Doctors and midwives respond to financial incentives by not upcoding newborns with low survival probabilities, and by upcoding infants with higher expected treatment costs.

Mandatory labels, taxes and market forces: An empirical evaluation of fat policies

- Journal of Health Economics---2015---Olivier Allais,Fabrice Etilé,Sébastien Lecocq

The public-health community views mandatory Front-of-Pack (FOP) nutrition labels and nutritional taxes as promising tools to control the growth of food-related chronic diseases. This paper uses household scanner data to propose an ex-ante evaluation and comparison of these two policy options for the fromage blanc and dessert yogurt market. In most markets, labelling is voluntary and firms display fat labels only on the FOP of low-fat products to target consumers who do not want to eat fat. We here separately identify consumer preferences for fat and for FOP fat labels by exploiting an exogenous difference in legal labelling requirements between these two product categories. Estimates of demand curves are combined with a supply model of oligopolistic price competition to simulate policies. We find that a feasible ad valorem fat tax dominates a mandatory FOP-label policy from an economic perspective, but both are equally effective in reducing average fat purchases.

Social security income and the utilization of home care: Evidence from the social security notch

- Journal of Health Economics---2015---Yuping Tsai

This paper exploits Social Security law changes to identify the effect of Social Security income on the use of formal and informal home care by the elderly. Results from an instrumental variables estimation strategy show that as retirement income increases, elderly individuals increase their use of formal home care and become less likely to rely on informal home care provided to them by their children. This negative effect on informal home care is most likely driven by male children withdrawing from their caregiving roles. The empirical results also suggest that higher Social Security benefits would encourage the use of formal home care by those who would not have otherwise used any type of home care and would also encourage the use of both types of home care services among elderly individuals.

Old boys' network in general practitioners' referral behavior?

- Journal of Health Economics---2015---Franz Hackl,Michael Hummer,Gerald J. Pruckner

We analyzed the impact of social networks on general practitioners' (GPs) referral behavior based on administrative panel data from 2,684,273 referrals to specialists made between 1998 and 2007. For the definition of social networks, we used information on the doctors' place and time of study and their hospital work history. We found that GPs referred more patients to specialists within their personal networks and that patients referred within a social network had fewer follow-up consultations and less inpatient days thereafter. The effects on patient outcomes (e.g. waiting periods, days in hospital) of referrals within personal networks and affinity-based networks differed. Specifically, whereas empirical evidence showed a concentration on high-quality specialists for referrals within the personal network, suggesting that referrals within personal networks overcome information asymmetry with respect to specialists' abilities, the empirical evidence for affinity-based networks was different and less clear. Same-gender networks tended to refer patients to low-quality specialists.

Heterogeneity and the effect of mental health parity mandates on the labor market

- Journal of Health Economics---2015---Martin Andersen

Health insurance benefit mandates are believed to have

adverse effects on the labor market, but efforts to document such effects for mental health parity mandates have had limited success. I show that one reason for this failure is that the association between parity mandates and labor market outcomes vary with mental distress. Accounting for this heterogeneity, I find adverse labor market effects for non-distressed individuals, but favorable effects for moderately distressed individuals and individuals with a moderately distressed family member. On net, I conclude that the mandates are welfare increasing for moderately distressed workers and their families, but may be welfare decreasing for non-distressed individuals.

The effects of paid maternity leave: Evidence from Temporary Disability Insurance

- Journal of Health Economics---2015---Jenna Stearns

This paper investigates the effects of a large-scale paid maternity leave program on birth outcomes in the United States. In 1978, states with Temporary Disability Insurance (TDI) programs were required to start providing wage replacement benefits to pregnant women, substantially increasing access to antenatal and postnatal paid leave for working mothers. Using natality data, I find that TDI paid maternity leave reduces the share of low birth weight births by 3.2 percent, and the estimated treatment-on-the-treated effect is over 10 percent. It also decreases the likelihood of early term birth by 6.6 percent. Paid maternity leave has particularly large impacts on the children of unmarried and black mothers.

Financial incentives for kidney donation: A comparative case study using synthetic controls

- Journal of Health Economics---2015---Firat Bilgel,Brian Galle

Although many commentators called for increased efforts to incentivize organ donations, theorists and some evidence suggest these efforts will be ineffective. Studies examining the impact of tax incentives generally report zero/negative coefficients, but these studies incorrectly define their tax variables and rely on difference-in-differences despite likely failures of the parallel trends assumption. We identify the causal effect of tax legislation to serve as an organ donor on living kidney donation rates in the U.S. states using more precise tax data and allowing for heterogeneous time-variant causal effects. Employing a synthetic control method, we find that the passage of tax incentive legislation increased living unrelated kidney donation rates by 52 percent in New York relative to a comparable synthetic New York in the absence of legislation. It is possible that New York is unique, but our methodology does not allow us to measure accurately effects in other states.

Hospital sector choice and support for public hospital care in New Zealand: Results from a labeled discrete choice survey

- Journal of Health Economics---2015---Paul Brown,Laura Panattoni,Linda Cameron,Stephanie Knox,Toni Ashton,Tim Tenbensel,John Windsor

This study uses a discrete choice experiment (DCE) to measure patients' preferences for public and private hospital care in New Zealand. A labeled DCE was administered to 583 members of the general public, with the choice between a public and private hospital for a non-urgent surgery. The results suggest that cost of surgery, waiting times for surgery, option to select a surgeon, convenience, and conditions of the hospital ward are important considerations for patients. The most important determinant of hospital choice was whether it was a public or private hospital, with respondents far more likely to choose a public hospital than a private hospital. The results have implications for government policy toward using private hospitals to clear waiting lists in public hospitals, with these results suggesting the public might not be indifferent to policies that treat private hospitals as substitutes for public hospitals.

Immigration policy and birth weight: Positive externalities in Italian law

- Journal of Health Economics---2015---Luca Salmasi,Luca Pieroni

A decade ago, the political party of the Italian center-right voted a law restricting immigration. The law became effective in early 2005, when the Italian parliament approved the decree for its application, but one of its articles, granting amnesty for illegal immigrant workers, became immediately effective in July 2002. As a result, 650,000 immigrants were granted the status of foreign nationals in Italy. In this paper, we examine whether the increase in the prevalence of "regular immigrants" has led to an improvement in health outcomes of babies born to migrant women, measured in terms of birth weight. Two hitherto unexploited birth sample surveys published by Italian Institute of Statistics were used for this study. Our estimates show that regularized immigration reduced the probability of low birth weight.

Do immigrants improve the health of natives?

- Journal of Health Economics---2015---Osea Giuntella,Fabrizio Mazzonna

This paper studies the effects of immigration on health. Specifically, we merge information on individual characteristics from the German Socio-Economic Panel (1984–2009) with detailed local labour market characteristics, and we then exploit the longitudinal component of the data to determine how immigration affects the health of both immigrants and natives over time. We find that immigrants to Germany are healthier than natives upon their arrival (the healthy immigrant effect) but that immigrants' health deteriorates over time. We show that the convergence in health is heterogeneous across immigrants and occurs more rapidly among those working in more physically demanding jobs. Because immigrants are significantly more likely to work in strenuous occupations, we investigate whether changes in the spatial concentration of immigrants affect the health of the native population. Our results suggest that immigration reduces the likelihood that residents will report negative health outcomes. We show that these effects are concentrated in blue-collar occupations and are stronger among low-educated natives. Improvements in natives' average working conditions and workloads help explain the positive effects of immigration on the health of the native population.

Financial incentives in health: New evidence from India's Janani Suraksha Yojana

- Journal of Health Economics---2015---Timothy Powell-Jackson,Sumit Mazumdar,Anne Mills

This paper studies the health effects of one of the world's largest demand-side financial incentive programmes—India's Janani Suraksha Yojana. Our difference-in-difference estimates exploit heterogeneity in the implementation of the financial incentive programme across districts. We find that cash incentives to women were associated with increased uptake of maternity services but there is no strong evidence that the JSY was associated with a reduction in neonatal or early neonatal mortality. The positive effects on utilisation are larger for less educated and poorer women, and in places where the cash payment was most generous. We also find evidence of unintended consequences. The financial incentive programme was associated with a substitution away from private health providers, an increase in breastfeeding and more pregnancies. These findings demonstrate the potential for financial incentives to have unanticipated effects that may, in the case of fertility, undermine the programme's own objective of reducing mortality.

Workplace health promotion and labour market performance of employees

- Journal of Health Economics---2015---Martin Huber,Michael Lechner,Conny Wunsch

This paper investigates the average effects of firm-provided workplace health promotion measures on labour market outcomes of the firms' employees. Exploiting linked employer–employee panel data that consist of rich survey-based and administrative informa-

tion on firms, workers and regions, we apply a flexible propensity score matching approach that controls for selection on observables and time-constant unobserved factors. While the effects of analysing sickness absenteeism appear to be rather limited, our results suggest that health circles/courses increase tenure and job stability across various age groups. A key finding is that health circles/courses strengthen the labour force attachment of elderly employees (51–60), implying potential cost savings for public transfer schemes such as unemployment insurance or early retirement schemes.

Short-run effects of job loss on health conditions, health insurance, and health care utilization

- Journal of Health Economics---2015---Jessamyn Schaller,Ann Stevens

Job loss in the United States is associated with reductions in income and long-term increases in mortality rates. This paper examines the short-run changes in health, health care access, and health care utilization after job loss that lead to these long-term effects. Using a sample with more than 10,000 individual job losses and longitudinal data on a wide variety of health-related outcomes, we show that job loss results in worse self-reported health, activity limitations, and worse mental health, but is not associated with statistically significant increases in a variety of specific chronic conditions. Among the full sample of workers, we see reductions in insurance coverage, but little evidence of reductions in health care utilization after job loss. Among the subset of displaced workers with chronic conditions and those for whom the lost job was their primary source of insurance we do see reductions in doctor's visits and prescription drug usage.

The effect of health insurance on workers' compensation filing: Evidence from the affordable care act's age-based threshold for dependent coverage

- Journal of Health Economics---2015---Marcus Dillender

This paper identifies the effect of health insurance on workers' compensation (WC) filing for young adults by implementing a regression discontinuity design using WC medical claims data from Texas. The results suggest health insurance factors into the decision to have WC pay for discretionary care. The implied instrumental variables estimates suggest a ten-percentage-point decrease in health insurance coverage increases WC bills by 15.3 percent. Despite the large impact of health insurance on the number of WC bills, the additional cost to WC at age 26 appears to be small as most of the increase comes from small bills.

Estimating sign-dependent societal preferences for quality of life

- Journal of Health Economics---2015---Arthur Attema,Werner Brouwer,l' Haridon, Olivier,Jose Luis Pinto,Olivier l'Haridon

This paper is the first to apply prospect theory to societal health-related decision making. In particular, we allow for utility curvature, equity weighting, sign-dependence, and loss aversion in choices concerning quality of life of other people. We find substantial inequity aversion, both for gains and losses, which can be attributed to both diminishing marginal utility and differential weighting of better-off and worse-off. There are also clear framing effects, which violate expected utility. Moreover, we observe loss aversion, indicating that subjects give more weight to one group's loss than another group's gain of the same absolute magnitude. We also elicited some information on the effect of the age of the studied group. The amount of inequity aversion is to some extent influenced by the age of the considered patients. In particular, more inequity aversion is observed for gains of older people than gains of younger people.

An economy of scales: A selective review of obesity's economic causes, consequences, and solutions

- Journal of Health Economics---2015---John Cawley

This paper reviews the economic research on obesity,

covering topics such as the measurement of, and trends in, obesity, the economic causes of obesity (e.g. the monetary price and time cost of food, food assistance programs, income, education, macroeconomic conditions, and peer effects), and the economic consequences of obesity (e.g. lower wages, a lower probability of employment, and higher medical care costs). It also examines the extent to which obesity imposes negative externalities, and economic interventions that could potentially internalize such externalities, such as food taxes, subsidies for school-based physical activity programs, and financial rewards for weight loss. It discusses other economic rationales for government intervention with respect to obesity, such as imperfect information, time inconsistent preferences, and irrational behavior. It concludes by proposing a research agenda for the field.

Information disclosure and peer effects in the use of antibiotics

- Journal of Health Economics---2015---Illoong Kwon,Daesung Jun

Mandatory information disclosure may allow sellers to observe and respond to other sellers' attributes (seller peer effects) as well as informing consumers of the sellers' attributes (consumer learning effect). Using the data from mandatory information disclosure of antibiotic prescription rates for the common cold in Korea, this paper shows that while average prescription rates decreased after the disclosure, more than 30% of the clinics increased their antibiotic prescriptions. Moreover, clinics that were prescribing relatively fewer antibiotics than other local clinics before the disclosure requirement were more likely to increase their prescription rate. The average prescription rates also declined less in markets with stronger clinic competition. These results are consistent with seller peer effects.

Recessions, healthy no more?

- Journal of Health Economics---2015---Christopher Ruhm

Over the 1976–2010 period, total mortality shifted from strongly procyclical to being weakly or unrelated to macroeconomic conditions. The association is likely to be poorly measured when using short (less than 15 year) analysis periods. Deaths from cardiovascular disease and transport accidents continue to be procyclical; however, countercyclical patterns have emerged for fatalities from cancer mortality and external causes. Among the latter, non-transport accidents, particularly accidental poisonings, play an important role.

Education and health: The role of cognitive ability

- Journal of Health Economics---2015---Govert Bijwaard,Hans van Kippersluis,Justus Veenman

We aim to disentangle the relative impact of (i) cognitive ability and (ii) education on health and mortality using a structural equation model suggested by Conti et al. (2010). We extend their model by allowing for a duration dependent variable (mortality), and an ordinal educational variable. Data come from a Dutch cohort born between 1937 and 1941, including detailed measures of cognitive ability and family background in the final grade of primary school. The data are linked to the mortality register 1995–2011, such that we observe mortality between ages 55 and 75. The results suggest that at least half of the unconditional survival differences between educational groups are due to a 'selection effect', primarily on the basis of cognitive ability. Conditional survival differences across those having finished just primary school and those entering secondary education are still substantial, and amount to a 4 years gain in life expectancy, on average.

The intensive margin of technology adoption – Experimental evidence on improved cooking stoves in rural Senegal

- Journal of Health Economics---2015---Gunther Bensch,Jörg Peters

Today, almost 3 billion people in developing countries rely on biomass as primary cooking fuel, with profound negative implications for their well-being. Improved biomass cooking stoves are alleged to counteract these

adverse effects. This paper evaluates take-up and impacts of low-cost improved stoves through a randomized controlled trial. The randomized stove is primarily designed to curb firewood consumption, but not smoke emissions. Nonetheless, we find considerable effects not only on firewood consumption, but also on smoke exposure and, consequently, smoke-related disease symptoms. The reduced smoke exposure results from behavioural changes in terms of increased outside cooking and a reduction in cooking time. We conclude that in order to assess the effectiveness of a technology-oriented intervention, it is critical to not only account for the incidence of technology adoption – the extensive margin – but also for the way the new technology is used – the intensive margin.

The effect of medical marijuana laws on adolescent and adult use of marijuana, alcohol, and other substances

- Journal of Health Economics---2015---Hefei Wen,Jason Hockenberry,Janet R. Cummings

We estimate the effect of medical marijuana laws (MMLs) in ten states between 2004 and 2012 on adolescent and adult use of marijuana, alcohol, and other psychoactive substances. We find increases in the probability of current marijuana use, regular marijuana use and marijuana abuse/dependence among those aged 21 or above. We also find an increase in marijuana use initiation among those aged 12–20. For those aged 21 or above, MMLs further increase the frequency of binge drinking. MMLs have no discernible impact on drinking behavior for those aged 12–20, or the use of other psychoactive substances in either age group.

The interaction of direct and indirect risk selection

- Journal of Health Economics---2015---Normann Lorenz

This paper analyzes the interaction of direct and indirect risk selection in health insurance markets. It is shown that direct risk selection – using measures unrelated to the benefit package like selective advertising or 'losing' applications of high risk individuals – nevertheless has an influence on the distortions of the benefit package caused by indirect risk selection. Direct risk selection (DRS) may either increase or decrease these distortions, depending on the type of equilibrium (pooling or separating), the type of DRS (positive or negative) and the type of cost for DRS (individual-specific or not). Regulators who succeed in reducing DRS by, e.g., banning excessive advertising or implementing fines for 'losing' applications, may therefore (unintendedly) mitigate or exacerbate the distortions of the benefit package caused by indirect risk selection. It is shown that the interaction of direct and indirect risk selection also alters the formula for optimal risk adjustment.

Environmental regulations on air pollution in China and their impact on infant mortality

- Journal of Health Economics---2015---Shinsuke Tanaka

This study explores the impact of environmental regulations in China on infant mortality. In 1998, the Chinese government imposed stringent air pollution regulations, in one of the first large-scale regulatory attempts in a developing country. We find that the infant mortality rate fell by 20 percent in the treatment cities designated as "Two Control Zones." The greatest reduction in mortality occurred during the neonatal period, highlighting an important pathophysiologic mechanism, and was largest among infants born to mothers with low levels of education. The finding is robust to various alternative hypotheses and specifications. Further, a falsification test using deaths from causes unrelated to air pollution supports these findings.

How do health insurer market concentration and bargaining power with hospitals affect health insurance premiums?

- Journal of Health Economics---2015---Erin Trish,Bradley Herring

The US health insurance industry is highly concentrated, and health insurance premiums are high and rising rapidly. Policymakers have focused on the possible link between the two, leading to ACA provisions to increase insurer competition. However, while market power may enable insurers to include higher profit margins in their premiums, it may also result in stronger bargaining leverage with hospitals to negotiate lower payment rates to partially offset these higher premiums. We empirically examine the relationship between employer-sponsored fully-insured health insurance premiums and the level of concentration in local insurer and hospital markets using the nationally-representative 2006–2011 KFF/HRET Employer Health Benefits Survey. We exploit a unique feature of employer-sponsored insurance, in which self-insured employers purchase only administrative services from managed care organizations, to disentangle these different effects on insurer concentration by constructing one concentration measure representing fully-insured plans' transactions with employers and the other concentration measure representing insurers' bargaining with hospitals. As expected, we find that premiums are indeed higher for plans sold in markets with higher levels of concentration relevant to insurer transactions with employers, lower for plans in markets with higher levels of insurer concentration relevant to insurer bargaining with hospitals, and higher for plans in markets with higher levels of hospital market concentration.

Does women's education affect breast cancer risk and survival? Evidence from a population based social experiment in education

- Journal of Health Economics---2015---Mårten Palme,Emilia Simeonova

Breast cancer is a notable exception to the well documented positive education gradient in health. A number of studies have found that highly educated women are more likely to be diagnosed with the disease. Breast cancer is therefore often labeled as a "welfare disease". However, it has not been established whether the strong positive correlation holds up when education is exogenously determined. We estimate the causal effect of education on the probability of being diagnosed with breast cancer by exploiting an education reform that extended compulsory schooling and was implemented as a social experiment. We find that the incidence of breast cancer increased for those exposed to the reform.

Peer effects, fast food consumption and adolescent weight gain

- Journal of Health Economics---2015---Bernard Fortin,Myra Yazbeck

This paper aims at opening the black box of peer effects in adolescent weight gain. Using Add Health data on secondary schools in the U.S., we investigate whether these effects partly flow through the eating habits channel. Adolescents are assumed to interact through a friendship social network. We propose a two-equation model. The first equation provides a social interaction model of fast food consumption. To estimate this equation we use a quasi maximum likelihood approach that allows us to control for common environment at the network level and to solve the simultaneity (reflection) problem. Our second equation is a panel dynamic weight production function relating an individual's Body Mass Index z-score (zBMI) to his fast food consumption and his lagged zBMI, and allowing for irregular intervals in the data. Results show that there are positive but small peer effects in fast food consumption among adolescents belonging to a same friendship school network. Based on our preferred specification, the estimated social multiplier is 1.15. Our results also suggest that, in the long run, an extra day of weekly fast food restaurant visits increases zBMI by 4.45% when ignoring peer effects and by 5.11%, when they are taken into account.

Unintended effects of reimbursement schedules in mental health care

- Journal of Health Economics---2015---Rudy Douven,Minke Remmerswaal,Ilaria Mosca

We evaluate the introduction of a reimbursement schedule for self-employed mental health care providers in the Netherlands in 2008. The reimbursement schedule follows a discontinuous discrete step function—once the provider has passed a treatment duration threshold the fee is flat until a next threshold is reached. We use administrative mental health care data of the total Dutch population from 2008 to 2010. We find an "efficiency" effect: on the flat part of the fee schedule providers reduce treatment duration by 2 to 7% compared to a control group. However, we also find unintended effects: providers treat patients longer to reach a next threshold and obtain a higher fee. The data shows gaps and bunches in the distribution function of treatment durations, just before and after a threshold. About 11 to 13% of treatments are shifted over a next threshold, resulting in a cost increase of approximately 7 to 9%.

Health and agricultural productivity: Evidence from Zambia

- Journal of Health Economics---2015---Günther Fink,Felix Masiye

We evaluate the productivity effects of investment in preventive health technology through a randomized controlled trial in rural Zambia. In the experiment, access to subsidized bed nets was randomly assigned at the community level; 516 farmers were followed over a one-year farming period. We find large positive effects of preventative health investment on productivity: among farmers provided with access to free nets, harvest value increased by US$ 76, corresponding to about 14.7% of the average output value. While only limited information was collected on farming inputs, shifts in the extensive and the intensive margins of labor supply appear to be the most likely mechanism underlying the productivity improvements observed.

Welfare implications of learning through solicitation versus diversification in health care

- Journal of Health Economics---2015---Anirban Basu

Using Roy's model of sorting behavior, I study welfare implications of learning about medical care quality through the current health care data production infrastructure that relies on solicitation of research subjects. Due to severe adverse-selection issues, I show that such learning could be biased and welfare decreasing. Direct diversification of treatment receipt may solve these issues but is infeasible. Unifying Manski's work on diversified treatment choice under ambiguity and Heckman's work on estimating heterogeneous treatment effects, I propose a new infrastructure based on temporary diversification of access that resolves the prior issues and can identify nuanced effect heterogeneity.

Short- and medium-term effects of informal care provision on female caregivers' health

- Journal of Health Economics---2015---Hendrik Schmitz,Matthias Westphal

In this paper, we present estimates of the effect of informal care provision on female caregivers' health. We use data from the German Socio-Economic Panel and assess effects up to seven years after care provision. The results suggest that there is a considerable negative short-term effect of informal care provision on mental health which fades out over time. Five years after care provision the effect is still negative but smaller and insignificant. Both short- and medium-term effects on physical health are virtually zero throughout. A simulation analysis is used to assess the sensitivity of the results with respect to potential deviations from the conditional independence assumption in the regression adjusted matching approach.

Tobacco control campaign in Uruguay: Impact on smoking cessation during pregnancy and birth weight

- Journal of Health Economics---2015---Jeffrey E. Harris,Ana Balsa,Patricia Triunfo

We analyzed a nationwide registry of all pregnancies in Uruguay during 2007–2013 to assess the impact of three types of tobacco control policies: (1) provider-level

interventions aimed at the treatment of nicotine dependence, (2) national-level increases in cigarette taxes, and (3) national-level non-price regulation of cigarette packaging and marketing. We estimated models of smoking cessation during pregnancy at the individual, provider and national levels. The rate of smoking cessation during pregnancy increased from 15.4% in 2007 to 42.7% in 2013. National-level non-price policies had the largest estimated impact on cessation. The price response of the tobacco industry attenuated the effects of tax increases. While provider-level interventions had a significant effect, they were adopted by relatively few health centers. Quitting during pregnancy increased birth weight by an estimated 188g. Tobacco control measures had no effect on the birth weight of newborns of non-smoking women.

Financing and funding health care: Optimal policy and political implementability

- Journal of Health Economics---2015---Robert Nuscheler,Kerstin Roeder

Health care financing and funding are usually analyzed in isolation. This paper combines the corresponding strands of the literature and thereby advances our understanding of the important interaction between them. We investigate the impact of three modes of health care financing, namely, optimal income taxation, proportional income taxation, and insurance premiums, on optimal provider payment and on the political implementability of optimal policies under majority voting. Considering a standard multi-task agency framework we show that optimal health care policies will generally differ across financing regimes when the health authority has redistributive concerns. We show that health care financing also has a bearing on the political implementability of optimal health care policies. Our results demonstrate that an isolated analysis of (optimal) provider payment rests on very strong assumptions regarding both the financing of health care and the redistributive preferences of the health authority.

Did the Affordable Care Act's dependent coverage mandate increase premiums?

- Journal of Health Economics---2015---Briggs Depew,James Bailey

We investigate the impact of the Affordable Care Act's dependent coverage mandate on insurance premiums. The expansion of dependent coverage under the ACA allows young adults to remain on their parent's private health insurance plans until the age of 26. We find that the mandate has led to a 2.5–2.8 percent increase in premiums for health insurance plans that cover children, relative to single-coverage plans. We are able to conclude that employers did not pass on the entire premium increase to employees through higher required plan contributions.

Investigating recent trends in the U.S. teen birth rate

- Journal of Health Economics---2015---Melissa S. Kearney,Phillip Levine

We investigate trends in the U.S. rate of teen childbearing between 1981 and 2010, focusing specifically on the sizable decline since 1991. We focus on establishing the role of state-level demographic changes, economic conditions, and targeted policies in driving recent aggregate trends. We offer three main observations. First, the recent decline cannot be explained by the changing racial and ethnic composition of teens. Second, the only targeted policies that have had a statistically discernible impact on aggregate teen birth rates are declining welfare benefits and expanded access to family planning services through Medicaid, but these policies can account for only 12.6 percent of the observed decline since 1991. Third, higher unemployment rates lead to lower teen birth rates and can account for 16 percent of the decline in teen birth rates since the Great Recession began.

Where have all the young men gone? Using sex ratios to measure fetal death rates

- Journal of Health Economics---2015---Nicholas Sanders,Charles Stoecker

Fetal health is an important consideration in policy formation. Unfortunately, a complete census of fetal deaths, an important measure of overall fetal health, is infeasible, and available data are selectively observed. We consider this issue in the context of the Clean Air Act Amendments of 1970 (CAAA), one of the largest and most influential environmental regulations in the history of the United States. We discuss a model of potential bias in measuring observed fetal deaths, and present the sex ratio of live births as an alternative fetal health endpoint, taking advantage of the finding that males are more vulnerable to side effects of maternal stress in utero. We find the CAAA caused substantial improvements in fetal health, in addition to previously identified reductions in post-natal mortality.

Does prescription drug coverage improve mental health? Evidence from Medicare Part D

- Journal of Health Economics---2015---Padmaja Ayyagari,Dan M. Shane

The introduction of the Medicare Prescription Drug program (Part D) in 2006 resulted in a significant increase in access to coverage for older adults in the U.S. Several studies have documented the impact of this program on prescription drug utilization, expenditures and medication adherence among older adults. However, few studies have evaluated the extent to which these changes have affected the health of seniors. In this study we use data from the Health and Retirement Study to identify the impact of the Medicare Part D program on mental health. Using a difference-in-difference approach, we find that the program significantly reduced depressive symptoms among older adults. We explore the mechanisms through which this effect operates and evaluate heterogeneity in impact.

The price elasticity of demand for heroin: Matched longitudinal and experimental evidence

- Journal of Health Economics---2015---Todd A. Olmstead,Sheila M. Alessi,Brendan Kline,Rosalie Liccardo Pacula,Nancy M. Petry

This paper reports estimates of the price elasticity of demand for heroin based on a newly constructed dataset. The dataset has two matched components concerning the same sample of regular heroin users: longitudinal information about real-world heroin demand (actual price and actual quantity at daily intervals for each heroin user in the sample) and experimental information about laboratory heroin demand (elicited by presenting the same heroin users with scenarios in a laboratory setting). Two empirical strategies are used to estimate the price elasticity of demand for heroin. The first strategy exploits the idiosyncratic variation in the price experienced by a heroin user over time that occurs in markets for illegal drugs. The second strategy exploits the experimentally induced variation in price experienced by a heroin user across experimental scenarios. Both empirical strategies result in the estimate that the conditional price elasticity of demand for heroin is approximately -0.80.

Do maximum waiting times guarantees change clinical priorities for elective treatment? Evidence from Scotland

- Journal of Health Economics---2015---Silviya Nikolova,Arthur Sinko,Matt Sutton

The level and distribution of patient waiting times for elective treatment are a major concern in publicly funded health care systems. Strict targets, which have specified maximum waiting times, have been introduced in the NHS over the last decade and have been criticised for distorting existing clinical priorities in scheduling hospital treatment. We demonstrate the usefulness of conditional density estimation (CDE) in the evaluation of the reform using data for Scotland for 2002 and 2007. We develop a modified goodness of fit test to discriminate between models with different numbers of bins. We document a change in prioritisation between different patient groups with longer waiting patients benefiting at the expense of those who previously waited less. Our results contribute to understanding the response of publicly funded health systems to enforced targets for maximum waiting times.

Optimal health insurance for multiple goods and time periods

- Journal of Health Economics---2015---Randall Ellis,Shenyi Jiang,Willard Manning

We examine the efficiency-based arguments for second-best optimal health insurance with multiple treatment goods and multiple time periods. Correlated shocks across health care goods and over time interact with complementarity and substitutability to affect optimal cost sharing. Health care goods that are substitutes or have positively correlated demand shocks should have lower optimal patient cost sharing. Positive serial correlations of demand shocks and uncompensated losses that are positively correlated with covered health services also reduce optimal cost sharing. Our results rationalize covering pharmaceuticals and outpatient spending more fully than is implied by static, one good, or one period models.

Understanding heterogeneity in the effects of birth weight on adult cognition and wages

- Journal of Health Economics---2015---Justin Cook,Jason Fletcher

A large economics literature has shown long term impacts of birth weight on adult outcomes, including IQ and earnings that are often robust to sibling or twin fixed effects. We examine potential mechanisms underlying these effects by incorporating findings from the genetics and neuroscience literatures. We use a sample of siblings combined with an "orchids and dandelions hypothesis", where the IQ of genetic dandelions is not affected by in utero nutrition variation but genetic orchids thrive under advantageous conditions and wilt in poor conditions. Indeed, using variation in three candidate genes related to neuroplasticity (APOE, BDNF, and COMT), we find substantial heterogeneity in the associations between birth weight and adult outcomes, where part of the population (i.e., "dandelions") is not affected by birth weight variation. Our results help uncover why birth weight affects adult outcomes.

Fear itself: The effects of distressing economic news on birth outcomes

- Journal of Health Economics---2015---Kyle Carlson

I use new administrative data on mass layoffs and plant closings to study the effects of distressing economic news. Exposure to stressful events during pregnancy can impair fetal development. I find that announcement of impending job losses leads to a transient decrease in the mean birth weight within the firm's county one to four months before the job losses. A loss of 500 jobs corresponds roughly to a decrease of 15–20g and 16 percent greater risk of low birth weight. Layoffs announced late in pregnancy are most strongly linked to decreased birth outcomes.

Staffing subsidies and the quality of care in nursing homes

- Journal of Health Economics---2015---Andrew Foster,Yong Suk Lee

Concerns about the quality of state-financed nursing home care has led to the wide-scale adoption by states of pass-through subsidies, in which Medicaid reimbursement rates are directly tied to staffing expenditure. We examine the effects of Medicaid pass-through on nursing home staffing and quality of care by adapting a two-step FGLS method that addresses clustering and state-level temporal autocorrelation. We find that pass-through subsidies increases staffing by about 1% on average and 2.7% in nursing homes with a low share of Medicaid patients. Furthermore, pass-through subsidies reduce the incidences of pressure ulcer worsening by about 0.9%.

Using provider performance incentives to increase HIV testing and counseling services in Rwanda

- Journal of Health Economics---2015---Damien de Walque,Paul Gertler,Sergio Bautista-Arredondo,Ada Kwan,Christel Vermeersch,Jean de Dieu Bizimana,Agnès Binagwaho,Jeanine Condo

Paying for performance provides financial rewards to medical care providers for improvements in performance measured by utilization and quality of care indicators. In 2006, Rwanda began a pay for performance scheme to improve health services delivery, including HIV/AIDS services. Using a prospective quasi-experimental design, this study examines the scheme's impact on individual and couples HIV testing. We find a positive impact of pay for performance on HIV testing among married individuals (10.2 percentage points increase). Paying for performance also increased testing by both partners by 14.7 percentage point among discordant couples in which only one of the partners is an AIDS patient.

Public health insurance and disparate eligibility of spouses: The Medicare eligibility gap

- Journal of Health Economics---2015---Allison Witman

I exploit the age-based eligibility structure of Medicare and the age gap between spouses to examine the impact of Medicare eligibility of an older spouse on the insurance coverage of younger, Medicare-ineligible spouses. Using a regression discontinuity framework, I find that Medicare eligibility of an older spouse can crowd-out the health insurance coverage of a younger spouse. Medicare eligibility of older wives increases the likelihood that younger husbands are uninsured. Younger wives are less likely to be covered through an employer-based plan and more likely to have non-group coverage after an older husband turns 65.

The heterogeneity of concentrated prescribing behavior: Theory and evidence from antipsychotics

- Journal of Health Economics---2015---Ernst R. Berndt,Robert Gibbons,Anton Kolotilin,Anna Levine Taub

We present two new findings based on annual antipsychotic US prescribing data from IMS Health on 2867 psychiatrists who wrote 50 or more prescriptions in 2007. First, many of these psychiatrists have prescription patterns that are statistically significantly different than random draws from national market shares for prescriptions by psychiatrists. For example, many have prescription patterns that are significantly more concentrated than such draws. Second, among psychiatrists who are the most concentrated, different prescribers often concentrate on distinct drugs. Motivated by these two findings, we then construct a model of physician learning-by-doing that fits these facts and generates two further predictions: both concentration (on one or a few drugs) and deviation (from the prescription patterns of others) should be smaller for high-volume physicians. We find empirical support for these predictions. Furthermore, our model outperforms an alternative theory concerning detailing by pharmaceutical representatives.

Hungry today, unhappy tomorrow? Childhood hunger and subjective wellbeing later in life

- Journal of Health Economics---2015---Marco Bertoni

I use anchoring vignettes to show that, on data for eleven European countries, exposure to episodes of hunger in childhood leads people to adopt lower subjective standards to evaluate satisfaction with life in adulthood. I also show that, as a consequence, estimates of the association between childhood starvation and late-life wellbeing that do not allow for reporting heterogeneity are biased towards finding a positive correlation. These results highlight the need to consider rescaling when drawing inference on subjective outcomes.

Impacts of the Affordable Care Act dependent coverage provision on health-related outcomes of young adults

- Journal of Health Economics---2015---Silvia Barbaresco,Charles Courtemanche,Yanling Qi

The first major insurance expansion of the Affordable Care Act – a provision requiring insurers to allow dependents to remain on parents' health insurance until

turning 26 – took effect in September 2010. We estimate this mandate's impacts on numerous outcomes related to health care access, preventive care utilization, risky behaviors, and self-assessed health. We estimate difference-in-differences models with 23–25 year olds as the treatment group and 27–29 year olds as the control group. For the full sample, the dependent coverage provision increased the probabilities of having health insurance, a primary care doctor, and excellent self-assessed health, while reducing body mass index. However, the mandate also increased risky drinking and did not lead to any significant increases in preventive care utilization. Subsample analyses reveal particularly large gains for men and college graduates.

Medicaid expansions for the working age disabled: Revisiting the crowd-out of private health insurance

- Journal of Health Economics---2015---Kathryn Wagner

Disabled individuals under 65 years old account for 15% of Medicaid recipients but half of all Medicaid spending. Despite their large cost, few studies have investigated the effects of Medicaid expansions for disabled individuals on insurance coverage and crowd-out of private insurance. Using an eligibility expansion that allowed states to provide Medicaid to disabled individuals with incomes less than 100% of the federal poverty level, I address these issues. Crowd-out estimates range from 49% using an ordinary least squares procedure to 100% using two-stage least-squares analysis. This potentially large degree of crowd-out could have fiscal implications for the Affordable Care Act which has greatly expanded Medicaid eligibility in 2014.

Aggregation and the estimated effects of economic conditions on health

- Journal of Health Economics---2015---Jason Lindo

This paper considers the relationship between economic conditions and health with a focus on different approaches to geographic aggregation. After reviewing the tradeoffs associated with more- and less-disaggregated analyses, I update earlier state-level analyses of mortality and infant health and then consider how the estimated effects vary when the analysis is conducted at differing levels of geographic aggregation. This analysis reveals that the results are sensitive to the level of geographic aggregation with more-disaggregated analyses—particularly county-level analyses—routinely producing estimates that are smaller in magnitude. Further analyses suggest this is due to spillover effects of economic conditions on health outcomes across counties.

Physician responses to rising local unemployment rates: Healthcare provision to Medicare and privately insured patients

- Journal of Health Economics---2015---Daifeng He,Melissa McInerney,Jennifer Mellor

Prior studies suggest that hospital care is countercyclical among Medicare beneficiaries, and if anything, procyclical among the non-elderly. In this paper, we provide the first physician-level analysis of changes in healthcare provision to Medicare and privately insured patients across the business cycle. Using Florida discharge data aggregated to the physician level, we find that as county unemployment rates increase, physicians treat fewer privately insured patients in both inpatient and outpatient settings. In contrast, physicians who are more exposed to income losses during recessions provide more care to Medicare patients as the unemployment rate rises. Further analysis suggests that easing capacity constraints may contribute to this rise in Medicare volume; however, even in areas that are not capacity constrained, care provided to Medicare patients remains countercyclical among physicians with a large share of privately insured patients. This pattern is consistent with demand inducement in response to a negative income shock.

Who joins the network? Physicians' resistance to take budgetary co-responsibility

- Journal of Health Economics---2015---Maurus Rischatsch

Managed Care (MC) is expected to provide health care at a lower cost than conventional provision. Therefore, Switzerland intends to promote MC by forcing health insurers to write MC contracts and introducing budgetary co-responsibility for ambulatory care physicians. A discrete choice experiment conducted in 2011 including 872 physicians reveals a strong preference heterogeneity with respect to network participation and alternative remuneration schemes. The number of physicians working in networks is unlikely to rise on a voluntary basis, while general practitioners are more likely to join networks than specialists with surgical activities. For physicians considering joining networks, cost savings are predicted to be higher than the estimated willingness-to-accept payments.

Long-term care insurance: Does experience matter?

- Journal of Health Economics---2015---Norma Coe,Meghan Skira,Courtney Van Houtven

We examine whether long-term care (LTC) experience helps explain the low demand for long-term care insurance (LTCI). We test if expectations about future informal care receipt, expectations about inheritance receipt, and LTCI purchase decisions vary between individuals whose parents or in-laws have used LTC versus those who have not. We find parental use of a nursing home decreases expectations that one's children will provide informal care, consistent with the demonstration effect. Nursing home use by in-laws does not have the same impact, suggesting that individuals are responding to information gained about their own aging trajectory. Nursing home use by either a parent or in-law increases LTCI purchase probability by 0.8 percentage points, with no significant difference in response between parents' and in-laws' use. The estimated increase in purchase probability from experience with LTC is about half the previously estimated increase from tax policy-induced price decreases.

Allergy test: Seasonal allergens and performance in school

- Journal of Health Economics---2015---Dave Marcotte

Seasonal pollen allergies affect approximately 1 in 5 school age children. Clinical research has established that these allergies result in large and consistent decrements in cognitive functioning, problem solving ability and speed, focus and energy. However, compared to air pollution, the impact of pollen and seasonal allergies on achievement in schools has received less attention from economists. Here, I use data on daily pollen counts merged with school district data to assess whether variation in the airborne pollen that induces seasonal allergies is associated with performance on state reading and math assessments. I find substantial and robust effects: A one standard deviation in ambient pollen levels reduces the percent of 3rd graders passing ELA assessments by between 0.2 and 0.3 standard deviations, and math assessments by between about 0.3 and 0.4 standard deviations. I discuss the empirical limitations as well as policy implications of this reduced-form estimate of pollen levels in a community setting.

The role of marriage in the causal pathway from economic conditions early in life to mortality

- Journal of Health Economics---2015---Gerard van den Berg,Sumedha Gupta

This paper analyzes the interplay between early-life conditions and marital status, as determinants of adult mortality. We use individual data from Dutch registers (years 1815–2000), combined with business cycle conditions in childhood as indicators of early-life conditions. The empirical analysis estimates bivariate duration models of marriage and mortality, allowing for unobserved heterogeneity. Results show that conditions around birth and school going ages are important for marriage and mortality. Men typically enjoy a protective effect of marriage, whereas women suffer during childbearing ages. However, having been born under favorable economic conditions reduces female mortality during childbearing ages.

Racial segregation and quality of care disparity in US nursing homes

- Journal of Health Economics---2015---Momotazur Rahman,Andrew Foster

In this paper, we examine the contributions of travel distance and preferences for racial homogeneity as sources of nursing home segregation and racial disparities in nursing home quality. We first theoretically characterize the distinctive implications of these mechanisms for nursing home racial segregation. We then use this model to structure an empirical analysis of nursing home sorting. We find little evidence of differential willingness to pay for quality by race among first-time nursing home entrants, but do find significant distance and race-based preference effects. Simulation exercises suggest that both effects contribute importantly to racial disparities in nursing home quality.

Long-run effects of gestation during the Dutch Hunger Winter famine on labor market and hospitalization outcomes

- Journal of Health Economics---2015---Robert S. Scholte,Gerard van den Berg,Maarten Lindeboom

The Dutch Hunger Winter (1944/45) is the most-studied famine in the literature on long-run effects of malnutrition in utero. Its temporal and spatial demarcations are clear, it was severe, it was not anticipated, and nutritional conditions in society were favorable and stable before and after the famine. This is the first study to analyze effects of in utero exposure on labor market outcomes and hospitalization late in life, and the first to use register data covering the full Dutch population to examine long-run effects of this famine. We provide results of famine exposure by sub-interval of gestation. We find a significantly negative effect of exposure during the first trimester of gestation on employment outcomes 53 or more years after birth. Hospitalization rates in the years before retirement are higher after middle or late gestational exposure.

Civil conflict, gender-specific fetal loss, and selection: A new test of the Trivers–Willard hypothesis

- Journal of Health Economics---2015---Christine Valente

A sizeable economics literature explores the effect of prenatal shocks on later health or socioeconomic status. Work in other disciplines, following the seminal contribution of Trivers and Willard (1973), suggests that prenatal shocks may increase fetal loss and reduce the number of boys relative to girls at birth. This has been largely ignored in the economics literature and could affect the interpretation of estimates of the effect of prenatal shocks and that of gender in other applied economics contexts. This paper analyzes the effect of in utero exposure to a shock – civil conflict in Nepal – on (i) fetal loss, and (ii) gender and (iii) health at birth. Maternal fixed effects estimates show that exposed pregnancies are more likely to result in a miscarriage and in a female birth, but exposed newborns are neither smaller nor more subject to neonatal mortality.

Can health-insurance help prevent child labor? An impact evaluation from Pakistan

- Journal of Health Economics---2015---Andreas Landmann,Markus Frölich

Child labor is a common consequence of economic shocks in developing countries. We show that reducing vulnerability can affect child labor outcomes. We exploit the extension of a health and accident insurance scheme by a Pakistani microfinance institution that was set up as a randomized controlled trial and accompanied by household panel surveys. Together with increased coverage the microfinance institution offered assistance with claim procedures in treatment branches. We find lower incidence of child labor, hazardous occupations and child labor earnings caused by the innovation. Boys are more often engaged in child labor in our sample, but also seem to profit more from the insurance innovation.

Risk perceptions and smoking decisions of adult Chinese men

- Journal of Health Economics---2015---Wanchuan Lin,Frank Sloan

This study analyzes effects of changes in risk perceptions of smoking's health harms on actual and attempted quits and quitting intentions of male smokers in China. Our survey of 5000+ male smokers was conducted two years after their neighbor's lung cancer diagnosis. We use proximity to a lung cancer neighbor as an exogenous determinant of individual's smoking risk perception. We show that learning of a neighbor's lung cancer diagnosis substantially affects smokers' subjective beliefs about smoking's harms, which in turn affects decisions about continued smoking and intentions to quit. Our study findings offer important public policy implications in indicating the importance of designing health-warning messages that fit smokers' personal circumstances as opposed to warnings solely based on edicts from scientific experts and/or epidemiological evidence.

Willingness to pay for public health policies to treat illnesses

- Journal of Health Economics---2015---Ryan Bosworth,Trudy Cameron,J.R. DeShazo

As the US pursues health care reform, it is important to understand the patterns in demand for, and opposition to, public provision of medical treatments. Using data from a nationally representative survey, we develop and estimate a utility-theoretic choice model to quantify demand for publicly provided medical treatment policies. We find diminishing marginal utility for increased recoveries and avoided premature deaths. We also show how the utility associated with different types of treatment policies varies with the socio-demographic group that would benefit (e.g. men, women, children, and seniors) and the program's duration and scope. Our model further permits utility, and hence willingness to pay, to vary with each respondent's own gender, age, race, income, community ethnic fractionalization and immigrant composition, as well as the respondent's expected private benefits from the policy and attitude toward government interventions and overall health care funding allocations. Self-interest is a prevailing finding.

Physician payments under health care reform

- Journal of Health Economics---2015---Abe Dunn,Adam Shapiro

This study examines the impact of major health insurance reform on payments made in the health care sector. We study the prices of services paid to physicians in the privately insured market during the Massachusetts health care reform. The reform increased the number of insured individuals as well as introduced an online marketplace where insurers compete. We estimate that, over the reform period, physician payments increased at least 11 percentage points relative to control areas. Payment increases began around the time legislation passed the House and Senate—the period in which their was a high probability of the bill eventually becoming law. This result is consistent with fixed-duration payment contracts being negotiated in anticipation of future demand and competition.

Micro-marketing healthier choices: Effects of personalized ordering suggestions on restaurant purchases

- Journal of Health Economics---2015---Kelly Bedard,Peter Kuhn

We study the effects of the Nutricate receipt, which makes personalized recommendations to switch from unhealthy to healthier items at a restaurant chain. We find that the receipts shifted the mix of items purchased toward the healthier alternatives. For example, the share of adult main dishes requesting "no sauce" increased by 6.8 percent, the share of kids' meals with apples (instead of fries) rose by 7.0 percent and the share of breakfast sandwiches without sausage increased by 3.8 percent. The results illustrate the potential of emerging information technologies, which allow retailers to tailor product marketing to individual consumers, to generate healthier choices.

The effect of state dependent mandate laws on the labor supply decisions of young adults

- Journal of Health Economics---2015---Briggs Depew

Prior to the Affordable Care Act, the majority of states in the U.S. had already implemented state laws that extended the age that young adults could enroll as dependents on their parent's employer-based health insurance plans. Because of the fundamental link between health insurance and employment in the U.S., such policies may effect the labor supply decisions of young adults. Although the interaction between labor supply and health insurance has been extensively studied for other subpopulations, little is known about the role of health insurance in the labor supply decisions of young adults. I use the variation from the implementation and changes in state policies that expanded dependent health insurance coverage to examine how young adults adjusted their labor supply when they were able to be covered as a dependent on their parent's plan. I find that these state mandates led to a decrease in labor supply on the intensive margin.

The behavioralist as nutritionist: Leveraging behavioral economics to improve child food choice and consumption

- Journal of Health Economics---2015---John List,Anya Samek

We leverage behavioral economics to explore new approaches to tackling child food choice and consumption. Using a field experiment with >1500 children, we report several key insights. We find that incentives have large influences: in the control, 17% of children prefer the healthy snack, whereas introduction of small incentives increases take-up of the healthy snack to 75%. There is some evidence that the effects continue post-treatment, consistent with a model of habit formation. We find little evidence that the framing of incentives (loss vs. gain) matters. Educational messaging alone has little effect, but we observe a combined effect of messaging and incentives: together they provide an important influence on food choice.

Inequity in long-term care use and unmet need: Two sides of the same coin

- Journal of Health Economics---2015---Pilar Garcia-Gomez,Cristina Hernández-Quevedo,Dolores Jiménez-Rubio,Juan Oliva,Dolores Jiménez Rubio

We investigate the determinants of several LTC services and unmet need using data from a representative sample of the non-institutionalised disabled population in Spain in 2008. We measure the level of horizontal inequity and compare results using self-reported versus a more objective indicator of unmet needs. Evidence suggests that after controlling for a wide set of need variables, there is not an equitable distribution of use and unmet need of LTC services in Spain; formal services are concentrated among the better-off, while intensive informal care is concentrated among the worst-off. The distribution of unmet needs for LTC services depends on the service considered and on whether we focus on subjective or objective measures. In 2008, only individuals with the highest dependency level had universal coverage. Our results show that inequities in most LTC services and unmet needs among this group either remain or even increase for formal services.

Competition, gatekeeping, and health care access

- Journal of Health Economics---2015---Geir Godager,Tor Iversen,Ching-to Ma

We study gatekeeping physicians' referrals of patients to specialty care. We derive theoretical results when competition in the physician market intensifies. First, due to competitive pressure, physicians refer patients to specialty care more often. Second, physicians earn more by treating patients themselves, so refer patients to specialty care less often. We assess empirically the overall effect of competition with data from a 2008–2009 Norwegian survey, National Health Insurance Administration, and Statistics Norway. From the data we construct three measures of competition: the number of open primary physician practices with and without population adjustment, and the Herfindahl–Hirschman index. The empirical results suggest

that competition has negligible or small positive effects on referrals overall. Our results do not support the policy claim that increasing the number of primary care physicians reduces secondary care.

Access to health insurance and the use of inpatient medical care: Evidence from the Affordable Care Act young adult mandate

- Journal of Health Economics---2015---Yaa Akosa Antwi,Asako S. Moriya,Kosali I. Simon

The Affordable Care Act of 2010 expanded coverage to young adults by allowing them to remain on their parent's private health insurance until they turn 26 years old. While there is evidence on insurance effects, we know very little about use of general or specific forms of medical care. We study the implications of the expansion on inpatient hospitalizations. Given the prevalence of mental health needs for young adults, we also specifically study mental health related inpatient care. We find evidence that compared to those aged 27–29 years, treated young adults aged 19–25 years increased their inpatient visits by 3.5 percent while mental illness visits increased 9.0 percent. The prevalence of uninsurance among hospitalized young adults decreased by 12.5 percent; however, it does not appear that the intensity of inpatient treatment changed despite the change in reimbursement composition of patients.

Economic assessment of nutritional recommendations

- Journal of Health Economics---2015---Xavier Irz,Pascal Leroy,Vincent Réquillart,Louis-Georges Soler

The effect of consumers' compliance with nutritional recommendations is uncertain because of potentially complex substitutions. To lift this uncertainty, we adapt a model of consumer behaviour under rationing to the case of linear nutritional constraints. Dietary adjustments are derived from information on consumer preferences, consumption levels, and nutritional contents of foods. A calibration exercise simulates, for different income groups, how the French diet would respond to various nutrition recommendations, and those behavioural adjustments are translated into health outcomes through the DIETRON epidemiological model. This allows for the ex-ante comparison of the efficiency, equity and health effects of ten nutritional recommendations. Although most recommendations impose significant taste costs on consumers, they are highly cost-effective, with the recommendations targeting salt, saturated fat, and fruits and vegetables (F&V) ranking highest in terms of efficiency. Most recommendations are also economically progressive, with the exception of that targeting F&V.

Alone but better off? Adult child migration and health of elderly parents in Moldova

- Journal of Health Economics---2015---Marcus Böhme,Ruth Persian,Tobias Stöhr

Increasing labor migration and simultaneous aging of societies are two important demographic developments many poor countries face. Elderly people who are left behind may experience a decrease in welfare when their children migrate. This paper investigates the effect of migration on various dimensions of elderly health using unique data from Moldova, which has one of the highest emigration rates in the world. We find positive migration effects on body mass index (BMI), mobility and self-reported health. No effects are found on depression and cognitive capacity. We find evidence that these positive outcomes are linked to an income effect which leads to improvements in diet and identify a reallocation of time use from subsistence farming to leisure and sleep which may have further beneficial effects. These positive effects seem to compensate the elderly for decreasing social contact with their migrant family members.

Employer contribution and premium growth in health insurance

- Journal of Health Economics---2015---Yiyan Liu,Ginger Zhe Jin

We study whether employer premium contribution

schemes could impact the pricing behavior of health plans and contribute to rising premiums. Using 1991–2011 data before and after a 1999 premium subsidy policy change in the Federal Employees Health Benefits Program (FEHBP), we find that the employer premium contribution scheme has a differential impact on health plan pricing based on two market incentives: 1) consumers are less price sensitive when they only need to pay part of the premium increase, and 2) each health plan has an incentive to increase the employer's premium contribution to that plan. Both incentives are found to contribute to premium growth. Counterfactual simulation shows that average premium would have been 10% less than observed and the federal government would have saved 15% per year on its premium contribution had the subsidy policy change not occurred in the FEHBP. We discuss the potential of similar incentives in other government-subsidized insurance systems such as the Medicare Part D and the Health Insurance Marketplace under the Affordable Care Act.

Pro-cyclical mortality across socioeconomic groups and health status

- Journal of Health Economics---2015---Venke Furre Haaland,Kjetil Telle

Using variation across geographic regions, a number of studies from the U.S. and other developed countries have found more deaths in economic upturns and less deaths in economic downturns. We use data from regions in Norway for 1977–2008 and find the same pro-cyclical patterns. Using individual-level register data for the identical population, we find that disadvantaged socioeconomic groups are not hit harder by pro-cyclical mortality than advantaged groups. We also find that other indicators of deteriorated health (than death), like becoming disabled, are pro-cyclical. Overall, our analysis suggests that pro-cyclical mortality is rather related to deaths of people already in deteriorated health than to people of low socioeconomic status.

Does seeing the doctor more often keep you out of the hospital?

- Journal of Health Economics---2015---Robert Kaestner,Anthony T. Lo Sasso

By exploiting a unique health insurance benefit design, we provide novel evidence on the causal association between outpatient and inpatient care. Our results indicate that greater outpatient spending was associated with more hospital admissions: a $100 increase in outpatient spending was associated with a 1.9% increase in the probability of having an inpatient event and a 4.6% increase in inpatient spending among enrollees in our sample. Moreover, we present evidence that the increase in hospital admissions associated with greater outpatient spending was for conditions in which it is plausible to argue that the physician and patient could exercise discretion.

The impact of tort reform on intensity of treatment: Evidence from heart patients

- Journal of Health Economics---2015---Ronen Avraham,Max Schanzenbach

This paper analyzes the effect of non-economic damage caps on the treatment intensity of heart attack victims. We focus on whether a patient receives a major intervention in the form of either a coronary artery by-pass or angioplasty. We find strong evidence that treatment intensity declines after a cap on non-economic damages. The probability of receiving a major intervention in the form of either an angioplasty or bypass declines by 1.25–2 percentage points after non-economic damage caps are enacted, and this effect is larger a year or two after reform. However, we also find clear evidence of substitution between major interventions. When doctors have discretion to perform a by-pass and patients have insurance coverage, caps on non-economic damages increase the probability that a by-pass is performed. The effect of non-economic damage caps on costs is not always statistically significant, but in models with state-specific trends, total costs decline by as much as four percent. We conclude that tort reform reduces treatment intensity overall, even though

it changes the mix of treatments. Using the Center for Disease Control's Vital Statistics data, we find that tort reform is not associated with an increase in mortality from coronary heart disease; if anything, mortality declines.

Can Caesarean section improve child and maternal health? The case of breech babies

- Journal of Health Economics---2015---Vibeke Jensen,Miriam Wüst

This paper examines the health effects of Caesarean section (CS) for children and their mothers. We use exogenous variation in the probability of CS in a fuzzy regression discontinuity design. Using administrative Danish data, we exploit an information shock for obstetricians that sharply altered CS rates for breech babies. We find that CS decreases the child's probability of having a low APGAR score and the number of family doctor visits in the first year of life. We find no significant effects for severe neonatal morbidity or hospitalizations. While mothers are hospitalized longer after birth, we find no effects of CS for maternal post-birth complications or infections. Although the change in mode of delivery for the marginal breech babies increases direct costs, the health benefits show that CS is the safest option for these children.

Price regulation and relative delays in generic drug adoption

- Journal of Health Economics---2014---Joan Costa-Font,Alistair McGuire,Nebibe Varol,Joan Costa-i-Font

Increasing the adoption of generic drugs has the potential to improve static efficiency in a health system without harming pharmaceutical innovation. However, very little is known about the timing of generic adoption and diffusion. No prior study has empirically examined the differential launch times of generics across a comprehensive set of markets, or more specifically the delays in country specific adoption of generics relative to the first country of (generic) adoption. Drawing on data containing significant country and product variation across a lengthy time period (1999–2008), we use duration analysis to examine relative delays, across countries, in the adoption of generic drugs. Our results suggest that price regulation has a significant effect on reducing the time to launch of generics, with faster adoption in higher priced markets. The latter result is dependent on the degree of competition and the expected market size.

Elimination and selection by aspects in health choice experiments: Prioritising health service innovations

- Journal of Health Economics---2014---Seda Erdem,Danny Campbell,Carl Thompson

Priorities for public health innovations are typically not considered equally by all members of the public. When faced with a choice between various innovation options, it is, therefore, possible that some respondents eliminate and/or select innovations based on certain characteristics. This paper proposes a flexible method for exploring and accommodating situations where respondents exhibit such behaviours, whilst addressing preference heterogeneity. We present an empirical case study on the public's preferences for health service innovations. We show that allowing for elimination-by-aspects and/or selection-by-aspects behavioural rules leads to substantial improvements in model fit and, importantly, has implications for willingness to pay estimates and scenario analysis.

Air pollution, avoidance behaviour and children's respiratory health: Evidence from England

- Journal of Health Economics---2014---Katharina Janke

Despite progress in air pollution control, concerns remain over the health impact of poor air quality. Governments increasingly issue air quality information to enable vulnerable groups to avoid exposure. Avoidance behaviour potentially biases estimates of the health effects of air pollutants. But avoidance behaviour imposes a cost on individuals and therefore may not be taken in all circumstances. This paper exploits panel

data at the English local authority level to estimate the relationship between children's daily hospital emergency admissions for respiratory diseases and common air pollutants, while allowing for avoidance behaviour in response to air pollution warnings. A 1% increase in nitrogen dioxide or ozone concentrations increases hospital admissions by 0.1%. For the subset of asthma admissions – where avoidance is less costly – there is evidence of avoidance behaviour. Ignoring avoidance behaviour, however, does not result in statistically significant underestimation of the health effect of air pollution.

The effects of medical marijuana laws on illegal marijuana use

- Journal of Health Economics---2014---Yu-Wei Chu

More and more states have passed laws that allow individuals to use marijuana for medical purposes. There is an ongoing, heated policy debate over whether these laws have increased marijuana use among non-patients. In this paper, I address that question empirically by studying marijuana possession arrests in cities from 1988 to 2008. I estimate fixed effects models with city-specific time trends that can condition on unobserved heterogeneities across cities in both their levels and trends. I find that these laws increase marijuana arrests among adult males by about 15–20%. These results are further validated by findings from data on treatment admissions to rehabilitation facilities: marijuana treatments among adult males increased by 10–20% after the passage of medical marijuana laws.

Who pays for public employee health costs?

- Journal of Health Economics---2014---Jeffrey Clemens,David M. Cutler

We analyze the incidence of public-employee health benefits. Because these benefits are negotiated through the political process, relevant labor market institutions deviate significantly from the competitive, private-sector benchmark. Empirically, we find that roughly 15 percent of the cost of recent benefit growth was passed onto school district employees through reductions in wages and salaries. Strong teachers' unions were associated with relatively strong linkages between benefit growth and growth in total compensation. Our analysis is consistent with the view that the costs of public workers' benefits are difficult to monitor, contributing to benefit oriented, and often under-funded, compensation schemes.

Compensating wage differentials and the impact of health insurance in the public sector on wages and hours

- Journal of Health Economics---2014---Paige Qin,Michael Chernew

This paper examines the trade-off between wages and employer spending on health insurance for public sector workers, and the relationship between coverage and hours worked. Our primary approach compares trends in wages and hours for public employees with and without state/local government provided health insurance using individual-level micro-data from the 1992–2011 CPS. To adjust for differences between insured and uninsured public sector employees, we create a matched sample based on an employee's propensity to receive health insurance. We assess the relationship between state contribution to the health plan premium, state-level healthcare spending, and the wages and hours of state and local government employees. We find modest reductions in wages are associated with having employer-sponsored health insurance (ESHI), although this effect is not precisely measured. The reduction in wages associated with having ESHI is larger among non-unionized workers. Further, we find little evidence that provision of health insurance increases hours worked.

Retiree health insurance for public school employees: Does it affect retirement?

- Journal of Health Economics---2014---Maria Fitzpatrick

Despite the widespread provision of retiree health insurance for public sector workers, little attention has been paid to its effects on employee retirement. This is

in contrast to the large literature on health-insurance-induced "job-lock" in the private sector. I use the introduction of retiree health insurance for public school employees in combination with administrative data on their retirement to identify the effects of retiree health insurance. As expected, the availability of retiree health insurance for older workers allows employees to retire earlier. These behavioral changes have budgetary implications, likely making the programs self-financing rather than costly to taxpayers.

The role of retiree health insurance in the early retirement of public sector employees

- Journal of Health Economics---2014---John B. Shoven,Sita Slavov

Most government employees have access to retiree health coverage, which provides them with group health coverage even if they retire before Medicare eligibility. We study the impact of retiree health coverage on the labor supply of public sector workers between the ages of 55 and 64. We find that retiree health coverage raises the probability of stopping full time work by 4.3 percentage points (around 38 percent) over two years among public sector workers aged 55–59, and by 6.7 percentage points (around 26 percent) over two years among public sector workers aged 60–64. In the younger age group, retiree health insurance mostly seems to facilitate transitions to part-time work rather than full retirement. However, in the older age group, it increases the probability of stopping work entirely by 4.3 percentage points (around 22 percent).

How does retiree health insurance influence public sector employee saving?

- Journal of Health Economics---2014---Robert L. Clark,Olivia Mitchell

Economic theory predicts that employer-provided retiree health insurance (RHI) benefits have a crowd-out effect on household wealth accumulation, not dissimilar to the effects reported elsewhere for employer pensions, Social Security, and Medicare. Nevertheless, we are unaware of any similar research on the impacts of retiree health insurance per se. Accordingly, the present paper utilizes a unique data file on respondents to the Health and Retirement Study, to explore how employer-provided retiree health insurance may influence net household wealth among public sector employees, where retiree healthcare benefits are still quite prevalent. Key findings include the following:-Most full-time public sector employees anticipate having employer-provided health insurance coverage in retirement, unlike most private sector workers.-Public sector employees covered by RHI had substantially less wealth than similar private sector employees without RHI. In our data, Federal workers had about $82,000 (18%) less net wealth than private sector employees lacking RHI; state/local workers with RHI accumulated about $69,000 (or 15%) less net wealth than their uninsured private sector counterparts.-After controlling on socioeconomic status and differences in pension coverage, net household wealth for Federal employees was $116,000 less than workers without RHI and the result is statistically significant; the state/local difference was not.

The effects of retiree health insurance plan characteristics on retirees' choice and employers' costs

- Journal of Health Economics---2014---Robert L. Clark,Melinda Morrill,David Vanderweide

To moderate the rate of growth of retiree health insurance costs, employers can modify plans and move retirees into less expensive plans. We examine policy modifications implemented by the North Carolina State Health Plan. We investigate whether incentives produce the desired plan elections and whether these changes, along with cost shifting, produce the expected reductions in cost growth. Using individual-level administrative data, along with aggregated data on expenditures for retirees, we estimate the effects of the introduction and subsequent repeal of a Comprehensive Wellness Initiative for non-Medicare eligible retirees, as well as increases in coinsurance and copayments and the introduction of a premium for all retirees. Over a third of non-Medicare retirees shifted into the least

generous plan between June 2009 and December 2012. The level effects on annual costs and unfunded accrued liabilities were relatively modest, but growth rates were diminished. Increases in the retiree premiums reduced the state's projected costs.

The fiscal stress arising from state and local retiree health obligations

- Journal of Health Economics---2014---Byron Lutz,Louise Sheiner

A major factor weighing down the long-term finances of state and local governments is the obligation to fund retiree benefits. While state and local government pension obligations have been analyzed in great detail, much less attention has been paid to the costs of the other major retiree benefit provided by these governments: retiree health insurance. The first portion of the paper uses the information contained in the annual actuarial reports for public retiree health plans to reverse engineer the cash flows underlying the liabilities given in the report. Obtaining the cash flows allows us to construct liability estimates which are consistent across governments in terms of the discount rate, actuarial method and assumptions concerning medical cost inflation and mortality. We find that the total unfunded accrued liability of state and local governments for the provision of retiree health care exceeds $1 trillion, or about of total state and local government revenue. Relative to pension obligations discounted at the same rate, we find that unfunded retiree health care liabilities are $\frac{1}{2}$ the size of unfunded pension obligations. We also find that using assumptions concerning the growth in health care costs that are arguably more realistic than those employed by most states actually reduces the size of the liability in most cases. Pushing in the opposite direction, we find that using plausibly more realistic mortality assumptions increases the size of liability. The second portion of the paper places retiree health care obligations into context by examining the budget pressures associated with retiree health on a continuing, largely pay-as-you go basis. We find that much of the projected increase in retiree health obligations as a share of revenue is the result of health care cost growth. On average, states could put their retiree health obligations into long-run fiscal balance by contributing an additional $\frac{3}{4}$ percent of total revenue toward the benefit each year. There is, however, wide variation across the states, with the majority of states requiring little in the way of additional financing, but some states requiring a significantly larger increase.

Active and retired public employees' health insurance: Potential data sources

- Journal of Health Economics---2014---Melinda Morrill

Employer-provided health insurance for public sector workers is a significant public policy issue. Underfunding and the growing costs of benefits may hinder the fiscal solvency of state and local governments. Findings from the private sector may not be applicable because many public sector workers are covered by union contracts or salary schedules and often benefit modifications require changes in legislation. Research has been limited by the difficulty in obtaining sufficiently large and representative data on public sector employees. This article highlights data sources researchers might utilize to investigate topics concerning health insurance for active and retired public sector employees.

The effect of Medicaid premiums on enrollment: A regression discontinuity approach

- Journal of Health Economics---2014---Laura Dague

This paper estimates the effect that premiums in Medicaid have on the length of enrollment of program beneficiaries. Whether and how low income-families will participate in the exchanges and in states' Medicaid programs depends crucially on the structure and amounts of the premiums they will face. I take advantage of discontinuities in the structure of Wisconsin's Medicaid program to identify the effects of premiums on enrollment for low-income families. I use a 3-year administrative panel of enrollment data to estimate these effects. I find an increase in the premium from

0 to 10 dollars per month results in 1.4 fewer months enrolled and reduces the probability of remaining enrolled for a full year by 12 percentage points, but other discrete changes in premium amounts do not affect enrollment or have a much smaller effect. I find no evidence of program enrollees intentionally decreasing labor supply in order to avoid the premiums.

Revisiting the relationship between nurse staffing and quality of care in nursing homes: An instrumental variables approach

- Journal of Health Economics---2014---Haizhen Lin

This paper revisits the relationship between nurse staffing and quality of care in nursing homes using an instrumental variables approach. Most prior studies rely on cross-sectional evidence, which renders causal inference problematic and policy recommendations inappropriate. We exploit legislation changes regarding minimum staffing requirements in eight states between 2000 and 2001 as exogenous shocks to nurse staffing levels. We find that registered nurse staffing has a large and significant impact on quality of care, and that there is no evidence of a significant association between nurse aide staffing and quality of care. A comparison of the IV estimation to the OLS estimation of the first-difference model suggests that ignoring endogeneity would lead to an underestimation of how nurse staffing affects quality of care in nursing homes.

Adolescent health and adult labor market outcomes

- Journal of Health Economics---2014---Petter Lundborg,Anton Nilsson,Dan-Olof Rooth

Whereas a large literature has shown the importance of early life health for adult socioeconomic outcomes, there is little evidence on the importance of adolescent health. We contribute to the literature by studying the impact of adolescent health status on adult labor market outcomes using a unique and large-scale dataset covering almost the entire population of Swedish males. We show that most types of major conditions have long-run effects on future outcomes, and that the strongest effects result from mental conditions. Including sibling fixed effects or twin pair fixed effects reduces the magnitudes of the estimates, but they remain substantial.

Family investment responses to childhood health conditions: Intrafamily allocation of resources

- Journal of Health Economics---2014---Maria Fernanda Rosales-Rueda

The onset of a health condition during childhood impairs skill formation. A number of studies have investigated the long-lasting effects of poor health during childhood on later-in-life outcomes. However, this evidence ignores how parents respond to the onset of health conditions. Do their investments reinforce the health condition? Or compensate, or behave neutrally? If parents change their investments, the relationship between early health and later outcomes combines the biological effect and the investment responses. To address this question, I use within-sibling variation in the incidence of health conditions to control for selection from unobserved household heterogeneity. Parents invest, on average, 0.16 standard deviations less in children with mental conditions relative to their healthy siblings, using a measure of investment that includes time and resources. On the contrary, when children have a physical condition, parental investments do not differ across siblings. Results are robust to alternative measures of health conditions and the inclusion of child fixed effects.

Do stimulant medications improve educational and behavioral outcomes for children with ADHD?

- Journal of Health Economics---2014---Janet Currie,Mark Stabile,Lauren Jones

We examine the effects of a policy change in the province of Quebec, Canada which greatly expanded insurance coverage for prescription medications. We show that the change was associated with a sharp increase in the use of stimulant medications commonly prescribed for ADHD in Quebec relative to the rest of Canada. We ask whether this increase in medication

use was associated with improvements in emotional functioning or academic outcomes among children with ADHD. We find little evidence of improvement in either the medium or the long run. Our results are silent on the effects on optimal use of medication for ADHD, but suggest that expanding medication in a community setting had little positive benefit and may have had harmful effects given the average way these drugs are used in the community.

The nature of surgeon human capital depreciation

- Journal of Health Economics---2014---Jason Hockenberry,Lorens A. Helmchen

To test how practice interruptions affect worker productivity, we estimate how temporal breaks affect surgeons' performance of coronary artery bypass grafting (CABG). Examining 188 surgeons who performed 56,315 CABG surgeries in Pennsylvania between 2006 and 2010, we find that a surgeon's additional day away from the operating room raised patients' inpatient mortality by up to 0.067 percentage points (2.4% relative effect) but reduced total hospitalization costs by up to 0.59 percentage points. Among emergent patients treated by high-volume providers, where temporal distance is most plausibly exogenous, an additional day away raised mortality risk by 0.398 percentage points (11.4% relative effect) but reduced cost by up to 1.4 percentage points. This is consistent with the hypothesis that as temporal distance increases, surgeons are less likely to recognize and address life-threatening complications. Our estimates imply additional intraprocedural treatment intensity has a cost per life-year preserved of $7871–18,500, well within conventional cost-effectiveness cutoffs.

Hips and hearts: The variation in incentive effects of insurance across hospital procedures

- Journal of Health Economics---2014---Denise Doiron,Denzil Fiebig,Agne Suziedelyte

The separate identification of effects due to incentives, selection and preference heterogeneity in insurance markets is the topic of much debate. In this paper, we investigate the presence and variation in moral hazard across health care procedures. The key motivating hypothesis is the expectation of larger causal effects in the case of more discretionary procedures. The empirical approach relies on an extremely rich and extensive dataset constructed by linking survey data to administrative data for hospital medical records. Using this approach we are able to provide credible evidence of large moral hazard effects but for elective surgeries only.

The heterogeneous effects of HIV testing

- Journal of Health Economics---2014---Sarah Baird,Erick Gong,Craig McIntosh,Berk Özler

An extensive multi-disciplinary literature examines the effects of learning one's HIV status on subsequent risky sexual behaviors. However, many of these studies rely on non-experimental designs; use self-reported outcome measures; or both. In this study, we investigate the effects of a randomly assigned home based HIV testing and counseling (HTC) intervention on risky sexual behaviors and schooling investments among school-age females in Malawi. We find no overall effects on HIV, Herpes Simplex Virus (HSV-2), or achievement test scores at follow-up. However, among the small group of individuals who tested positive for HIV, we find a large increase in the probability of HSV-2 infection, with this effect being stronger among those surprised by their test results. Similarly, those surprised by HIV-negative test results have significantly higher achievement test scores at follow-up, consistent with increased returns to investments in human capital.

The welfare value of FDA's mercury-in-fish advisory: A dynamic reanalysis

- Journal of Health Economics---2014---Christoph Rheinberger,James Hammitt

Assessing the welfare impact of consumer health advisories is a thorny task. Recently, Shimshack and Ward (2010) studied how U.S. households responded to FDA's 2001 mercury-in-fish advisory. They found that

the average at-risk household reduced fish consumption by 21%, resulting in a 17%-reduction in mercury exposure at the cost of a 21%-reduction in cardioprotective omega-3 fatty acids. Based on a static assessment of the health costs and benefits Shimshack and Ward concluded that the advisory policy resulted in an overall consumer welfare loss. In this note, we propose a dynamic assessment that links the long-term cardiovascular health effects of the advisory to life-cycle consumption. We find that under reasonable assumptions the welfare loss might be much larger than suggested. Our analysis highlights the importance of accounting for dynamic effects when evaluating persistent changes in exposure to environmental health risks.

Bargaining for health: A case study of a collective agreement-based health program for manual workers

- Journal of Health Economics---2014---Morten Saaby,Jacob Arendt

This paper examines the short- and medium-term effects of the PensionDanmark Health Scheme, the largest privately administered health program for workers in Denmark, which provides prevention and early management of work-related injuries. We use a difference-in-differences approach that exploits a natural variation in the program rollout across collective agreement areas in the construction sector and over time. The results show only little evidence of an effect on the prevention of injuries requiring medical attention in the first 3 years after the program was introduced. Despite this, we find evidence of significant positive effects on several labor market outcomes, suggesting that the program enables some work-injured individuals to maintain their work and earnings capacity. In view of its low costs, the program appears to be cost-effective overall.

Consequences of ADHD medication use for children's outcomes

- Journal of Health Economics---2014---Søren Dalsgaard,Helena Nielsen,Marianne Simonsen

This paper estimates effects of early ADHD medication use on key human capital outcomes for children diagnosed with ADHD while using rarely available register based data on diagnoses and prescription drug purchases. Our main identification strategy exploits plausible exogenous assignment of children to hospitals with specialist physicians, while our analysis of health outcomes also allows for an individual level panel data strategy. We find that the behavior of specialist physicians varies considerably across hospitals and that the prescribing behavior does affect the probability that a given child is treated. Results show that children diagnosed with ADHD in pharmacological treatment have fewer hospital contacts if treated and that treatment to some extent protects against criminal behavior.

Does in utero exposure to Illness matter? The 1918 influenza epidemic in Taiwan as a natural experiment

- Journal of Health Economics---2014---Ming-Jen Lin,Elaine Liu,林明仁(Ming-Jen Lin)

This paper tests whether in utero conditions affect long-run developmental outcomes using the 1918 influenza pandemic in Taiwan as a natural experiment. Combining several historical and current datasets, we find that cohorts in utero during the pandemic are shorter as children/adolescents and less educated compared to other birth cohorts. We also find that they are more likely to have serious health problems including kidney disease, circulatory and respiratory problems, and diabetes in old age. Despite possible positive selection on health outcomes due to high infant mortality rates during this period (18%), our paper finds a strong negative impact of in utero exposure to influenza.

Foreign nurse importation and the supply of native nurses

- Journal of Health Economics---2014---Patricia Cortés,Jessica Pan

The importation of foreign registered nurses has been used as a strategy to ease nursing shortages in the United States. The effectiveness of this policy depends

critically on the long-run response of native nurses. We examine the effects of immigration of foreign-born registered nurses on the long-run employment and occupational choice of native nurses. Using a variety of empirical strategies that exploit the geographical distribution of immigrant nurses across US cities, we find evidence of large displacement effects – over a ten-year period, for every foreign nurse that migrates to a city, between 1 and 2 fewer native nurses are employed in the city. We find similar results using data on nursing board exam-takers at the state level – an increase in the flow of foreign nurses significantly reduces the number of natives sitting for licensure exams in more dependent states relative to less dependent states. Using data on self-reported workplace satisfaction among a sample of California nurses, we find suggestive evidence that part of the displacement effects could be driven by a decline in the perceived quality of the workplace environment.

HIV, wages, and the skill premium

- Journal of Health Economics---2014---Ioana Marinescu

The HIV epidemic has dramatically decreased labor supply among prime-age adults in Sub-Saharan Africa. Using within-country variation in regional HIV prevalence and a synthetic panel, I find that HIV significantly increases the capital–labor ratio in urban manufacturing firms. The impact of HIV on average wages is positive but imprecisely estimated. In contrast, HIV has a large positive impact on the skill premium. The impact of HIV on the wages of low skilled workers is insignificantly different from 0, and is strongly dampened by competition from rural migrants. The HIV epidemic disproportionately increases the incomes of high-skilled survivors, thus increasing inequality.

Do hospitals cross-subsidize?

- Journal of Health Economics---2014---Guy David,Richard Lindrooth,Lorens A. Helmchen,Lawton R. Burns

Despite its salience as a regulatory tool to ensure the delivery of unprofitable medical services, cross-subsidization of services within hospital systems has been notoriously difficult to detect and quantify. We use repeated shocks to a profitable service in the market for hospital-based medical care to test for cross-subsidization of unprofitable services. Using patient-level data from general short-term hospitals in Arizona and Colorado before and after entry by cardiac specialty hospitals, we study how incumbent hospitals adjusted their provision of three uncontested services that are widely considered to be unprofitable. We estimate that the hospitals most exposed to entry reduced their provision of psychiatric, substance-abuse, and trauma care services at a rate of about one uncontested-service admission for every four cardiac admissions they stood to lose. Although entry by single-specialty hospitals may adversely affect the provision of unprofitable uncontested services, these findings warrant further evaluation of service-line cross-subsidization as a means to finance them.

Air pollution and infant mortality: A natural experiment from power plant desulfurization

- Journal of Health Economics---2014---Simon Luechinger

The paper estimates the effect of SO2 pollution on infant mortality in Germany, 1985–2003. To avoid endogeneity problems, I exploit the natural experiment created by the mandated desulfurization at power plants and power plants' location and prevailing wind directions, which together determine treatment intensity for counties. Estimates translate into an elasticity of 0.07–0.13 and the observed reduction in pollution implies an annual gain of 826–1460 infant lives. There is no evidence for disproportionate effects on neonatal mortality, but for an increase in the number of infants with comparatively low birth weight and length.

The importance of parental knowledge: Evidence from weight report cards in Mexico

- Journal of Health Economics---2014---Silvia Prina,Heather Royer

The rise of childhood obesity in less developed countries is often overlooked. We study the impact of body weight report cards in Mexico. The report cards increased parental knowledge and shifted parental attitudes about children's weight. We observe no meaningful changes in parental behaviors or children's body mass index. Interestingly, parents of children in the most obese classrooms were less likely to report that their obese child weighed too much relative to those in the least obese classrooms. As obesity rates increase, reference points for appropriate body weights may rise, making it more difficult to lower obesity rates.

The impact of the 1918 Spanish flu epidemic on economic performance in Sweden

- Journal of Health Economics---2014---Martin Karlsson,Therese Nilsson,Stefan Pichler

We study the impact of the 1918 influenza pandemic on short- and medium-term economic performance in Sweden. The pandemic was one of the severest and deadliest pandemics in human history, but it has hitherto received only scant attention in the economic literature – despite representing an unparalleled labour supply shock. In this paper, we exploit seemingly exogenous variation in incidence rates between Swedish regions to estimate the impact of the pandemic. The pandemic led to a significant increase in poorhouse rates. There is also evidence that capital returns were negatively affected by the pandemic. However, contrary to predictions, we find no discernible effect on earnings.

Does liberalizing cannabis laws increase cannabis use?

- Journal of Health Economics---2014---Jenny Williams,Anne Line Bretteville-Jensen

A key question in the ongoing policy debate over cannabis' legal status is whether liberalizing cannabis laws leads to an increase in cannabis use. This paper provides new evidence on the impact of a specific type of liberalization, decriminalization, on initiation into cannabis use. Our identification strategy exploits variation in the timing of cannabis policy reforms and our estimation framework marries a difference-in-difference approach with a discrete time duration model. Our results reveal evidence of both heterogeneity and dynamics in the response of cannabis uptake to decriminalization. Overall, we find that the impact of decriminalization is concentrated amongst minors, who have a higher rate of uptake in the first five years following its introduction.

Can technology help to reduce underage drinking? Evidence from the false ID laws with scanner provision

- Journal of Health Economics---2014---Barış Yörük

Underage drinkers often use false identification to purchase alcohol or gain access into bars. In recent years, several states have introduced laws that provide incentives to retailers and bar owners who use electronic scanners to ensure that the customer is 21 years or older and uses a valid identification to purchase alcohol. This paper is the first to investigate the effects of these laws using confidential data from the National Longitudinal Survey of Youth, 1997 Cohort (NLSY97). Using a difference-in-differences methodology, I find that the false ID laws with scanner provision significantly reduce underage drinking, including up to a 0.22 drink decrease in the average number of drinks consumed by underage youth per day. This effect is observed particularly in the short-run and more pronounced for non-college students and those who are relatively younger. These results are also robust under alternative model specifications. The findings of this paper highlight the importance of false ID laws in reducing alcohol consumption among underage youth.

A tale of two cities? The heterogeneous impact of medicaid managed care

- Journal of Health Economics---2014---James Marton,Aaron Yelowitz,Jeffery C. Talbert

Evaluating Accountable Care Organizations is difficult because there is a great deal of heterogeneity in terms of their reimbursement incentives and other programmatic features. We examine how variation in reim-

bursement incentives and administration among two Medicaid managed care plans impacts utilization and spending. We use a quasi-experimental approach exploiting the timing and county-specific implementation of Medicaid managed care mandates in two contiguous regions of Kentucky. We find large differences in the relative success of each plan in reducing utilization and spending that are likely driven by important differences in plan design. The plan that capitated primary care physicians and contracted out many administrative responsibilities to an experienced managed care organization achieved significant reductions in outpatient and professional utilization. The plan that opted for a fee-for-service reimbursement scheme with a group withhold and handled administration internally saw a much more modest reduction in outpatient utilization and an increase in professional utilization.

The effect of relationship status on health with dynamic health and persistent relationships

- Journal of Health Economics---2014---Jennifer L. Kohn,Susan L. Averett

The dynamic evolution of health and persistent relationship status pose econometric challenges to disentangling the causal effect of relationships on health from the selection effect of health on relationship choice. Using a new econometric strategy we find that marriage is not universally better for health. Rather, cohabitation benefits the health of men and women over 45, being never married is no worse for health, and only divorce marginally harms the health of younger men. We find strong evidence that unobservable health-related factors can confound estimates. Our method can be applied to other research questions with dynamic dependent and multivariate endogenous variables.

Do more health insurance options lead to higher wages? Evidence from states extending dependent coverage

- Journal of Health Economics---2014---Marcus Dillender

Little is known about how health insurance affects labor market decisions for young adults. This is despite the fact that expanding coverage for people in their early 20s is an important component of the Affordable Care Act. This paper studies how having an outside source of health insurance affects wages by using variation in health insurance access that comes from states extending dependent coverage to young adults. Using American Community Survey and Census data, I find evidence that extending health insurance to young adults raises their wages. The increases in wages can be explained by increases in human capital and the increased flexibility in the labor market that comes from people no longer having to rely on their own employers for health insurance. The estimates from this paper suggest the Affordable Care Act will lead to wage increases for young adults.

Access to treatment and educational inequalities in cancer survival

- Journal of Health Economics---2014---Jon Fiva,Torbjørn Hægeland,Marte Rønning,Astri Syse

The public health care systems in the Nordic countries provide high quality care almost free of charge to all citizens. However, social inequalities in health persist. Previous research has, for example, documented substantial educational inequalities in cancer survival. We investigate to what extent this may be driven by differential access to and utilization of high quality treatment options. Quasi-experimental evidence based on the establishment of regional cancer wards indicates that (i) highly educated individuals utilized centralized specialized treatment to a greater extent than less educated patients and (ii) the use of such treatment improved these patients' survival.

Physician payment mechanisms, hospital length of stay and risk of readmission: Evidence from a natural experiment

- Journal of Health Economics---2014---Damien Échevin,Bernard Fortin

We provide an analysis of the effect of physician payment methods on their hospital patients' length of stay and risk of readmission. To do so, we exploit a major reform implemented in Quebec (Canada) in 1999. The Quebec Government introduced an optional mixed compensation (MC) scheme for specialist physicians working in hospital. This scheme combines a fixed per diem with a reduced fee for services provided, as an alternative to the traditional fee-for-service system. We develop a model of a physician's decision to choose the MC scheme. We show that a physician who adopts this system will have incentives to increase his time per clinical service provided. We demonstrate that as long as this effect does not improve his patients' health by more than a critical level, they will stay more days in hospital over the period. At the empirical level, we estimate a model of transition between spells in and out of hospital analog to a difference-in-differences approach. We find that the hospital length of stay of patients treated in departments that opted for the MC system increased on average by 4.2% (0.28 days). However, the risk of readmission to the same department with the same diagnosis does not appear to be overall affected by the reform.

Cross-border health and productivity effects of alcohol policies

- Journal of Health Economics---2014---Per Johansson,Tuomas Pekkarinen,Jouko Verho

This paper studies the cross-border health and productivity effects of alcohol taxes. We estimate the effect of a large cut in the Finnish alcohol tax on mortality, alcohol-related illnesses and work absenteeism in Sweden. This tax cut led to large differences in the prices of alcoholic beverages between these two countries and to a considerable increase in cross-border shopping. The effect is identified using differences-in-differences strategy where changes in these outcomes in regions near the Finnish border are compared to changes in other parts of northern Sweden. We use register data where micro level data on deaths, hospitalisations and absenteeism is merged to population-wide micro data on demographics and labour market outcomes. Our results show that the Finnish tax cut did not have any clear effect on mortality or alcohol-related hospitalisations in Sweden. However, we find that workplace absenteeism increased by 9% for males and by 15% for females near the Finnish border as a result of the tax cut.

The causal effect of family income on child health in the UK

- Journal of Health Economics---2014---Daniel Kuehnle

Recent studies examining the effect of family income on child health have been unable to account for the endogeneity of income. Using data from a British cohort study, we address this gap by exploiting exogenous variation in local labour market characteristics to instrument for family income. We estimate the causal effect of family income on different measures of child health and explore the role of potential transmission mechanisms. We find that income has a very small but significant causal effect on subjective child health and no significant effect on chronic health conditions, apart from respiratory illnesses. Using the panel structure, we show that the timing of income does not matter for young children. Moreover, our results provide further evidence that parental health does not drive a spurious relationship between family income and child health. Our study implies that financial transfers are unlikely to deliver substantial improvements in child health.

Are investments in disease prevention complements? The case of statins and health behaviors

- Journal of Health Economics---2014---Robert Kaestner,Michael Darden,Darius Lakdawalla

We obtain estimates of associations between statin use and health behaviors. Statin use is associated with a small increase in BMI and moderate (20–33%) increases in the probability of being obese. Statin use was also associated with a significant (e.g., 15% of mean) increase in moderate alcohol use among men.

There was no consistent evidence of a decrease in smoking associated with statin use, and exercise worsened somewhat for females. Statin use was associated with increased physical activity among males. Finally, there was evidence that statin use increased the use of blood pressure medication and aspirin for both males and females, although estimates varied considerably in magnitude. These results are consistent with the hypothesis that healthy diet is a strong substitute for statins, but there is only uneven evidence for the hypothesis that investments in disease prevention are complementary.

Aversion to health inequalities in healthcare prioritisation: A multicriteria optimisation perspective

- Journal of Health Economics---2014---Alec Morton

In this paper we discuss the prioritisation of healthcare projects where there is a concern about health inequalities, but the decision maker is reluctant to make explicit quantitative value judgements and the data systems only allow the measurement of health at an aggregate level. Our analysis begins with a standard welfare economic model of healthcare resource allocation. We show how – under the assumption that the healthcare projects under consideration have a small impact on individual health – the problem can be reformulated as one of finding a particular subset of the class of efficient solutions to an implied multicriteria optimisation problem. Algorithms for finding such solutions are readily available, and we demonstrate our approach through a worked example of treatment for clinical depression.

Regulation of pharmaceutical prices: Evidence from a reference price reform in Denmark

- Journal of Health Economics---2014---Ulrich Kaiser,Susan J. Mendez,Thomas Rønde,Hannes Ullrich

Reference price systems for prescription drugs constitute widely adopted cost containment tools. Under these regimes, patients co-pay a fraction of the difference between a drug's pharmacy retail price and a reference price that is set by the government. Reference prices are either externally (based on drug prices in other countries) or internally (based on domestic drug prices) determined. We study the effects of a change from external to internal reference pricing in Denmark in 2005. We find that the reform led to substantial reductions in retail prices, reference prices and patient co-payments as well as to sizable decreases in overall producer revenues and health care expenditures. The reform induced consumers to substitute away from branded drugs for which we estimate strong preferences. The increase in consumer welfare due to the reform therefore depends on whether or not we take perceived quality differences into account in its calculation.

The child health implications of privatizing africa's urban water supply

- Journal of Health Economics---2014---Katrina Kosec

Can private sector participation (PSP) in the piped water sector improve child health? I use child-level data from 39 African countries during 1986–2010 to show that PSP decreases diarrhea among urban-dwelling, under-five children by 2.6 percentage points, or 16% of its mean prevalence. Children from the poorest households benefit most. PSP is also associated with a 7.8 percentage point increase in school attendance of 7–17 year olds. Importantly, PSP increases usage of piped water by 9.7 percentage points, suggesting a possible causal channel explaining health improvements. To attribute causality, I exploit time-variation in the private water market share controlled by African countries' former colonizers. A placebo analysis reveals that PSP does not affect respiratory illness, nor does it affect a control group of rural children.

International migration and the propagation of HIV in sub-Saharan Africa

- Journal of Health Economics---2014---Frédéric Docquier,Chrysovalantis Vasilakis,D. Tamfutu Munsi

In this paper, we identify and quantify the role of international migration in the propagation of HIV across sub-Saharan African countries. We use panel data on bilateral migration flows and HIV prevalence rates covering 44 countries after 1990. Controlling for unobserved heterogeneity, reverse causality, reflection issues, incorrect treatment of country fixed effects and spatial autocorrelation, we find evidence of a highly robust emigration-induced propagation mechanism. On the contrary, immigration has no significant effect. Numerical experiments reveal that the long-run effect of emigration accounts for more than 4 percent of the number of HIV cases in 15 countries (and more than 20 percent in 6 countries).

Forgetting to remember or remembering to forget: A study of the recall period length in health care survey questions

- Journal of Health Economics---2014---Gustav Kjellsson,Philip Clarke,Ulf-G. Gerdtham

Self-reported data on health care use is a key input in a range of studies. However, the length of recall period in self-reported health care questions varies between surveys, and this variation may affect the results of the studies. This study uses a large survey experiment to examine the role of the length of recall periods for the quality of self-reported hospitalization data by comparing registered with self-reported hospitalizations of respondents exposed to recall periods of one, three, six, or twelve months. Our findings have conflicting implications for survey design, as the preferred length of recall period depends on the objective of the analysis. For an aggregated measure of hospitalization, longer recall periods are preferred. For analysis oriented more to the micro-level, shorter recall periods may be considered since the association between individual characteristics (e.g., education) and recall error increases with the length of the recall period.

Assessing incentives for service-level selection in private health insurance exchanges

- Journal of Health Economics---2014---Thomas G. McGuire,Joseph Newhouse,Sharon-Lise Normand,Julie Shi,Samuel Zuvekas

Even with open enrollment and mandated purchase, incentives created by adverse selection may undermine the efficiency of service offerings by plans in the new health insurance Exchanges created by the Affordable Care Act. Using data on persons likely to participate in Exchanges drawn from five waves of the Medical Expenditure Panel Survey, we measure plan incentives in two ways. First, we construct predictive ratios, improving on current methods by taking into account the role of premiums in financing plans. Second, relying on an explicit model of plan profit maximization, we measure incentives based on the predictability and predictiveness of various medical diagnoses. Among the chronic diseases studied, plans have the greatest incentive to skimp on care for cancer, and mental health and substance abuse.

The behavioral economics of drunk driving

- Journal of Health Economics---2014---Frank Sloan,Lindsey M. Eldred,Yanzhi Xu

This study investigates whether drinker-drivers attributes are associated with imperfect rationality or irrationality. Using data from eight U.S. cities, we determine whether drinker-drivers differ from other drinkers in cognitive ability, ignorance of driving while intoxicated (DWI) laws, have higher rates of time preference, are time inconsistent, and lack self-control on other measures. We find that drinker-drivers are relatively knowledgeable about DWI laws and do not differ on two of three study measures of cognitive ability from other drinkers. Drinker-drivers are less prone to plan events involving drinking, e.g., selecting a designated driver in advance of drinking, and are more impulsive. Furthermore, we find evidence in support of hyperbolic discounting. In particular, relative to non-drinker-drivers, the difference between short- and long-term discount rates is much higher for drinker-drivers than for other drinkers. Implications of our findings for public policy, including incapacitation, treatment, and educational interventions, are discussed.

The social value of mortality risk reduction: VSL versus the social welfare function approach

- Journal of Health Economics---2014---Matthew D. Adler,James Hammitt,Nicolas Treich

We examine how different welfarist frameworks evaluate the social value of mortality risk reduction. These frameworks include classical, distributively unweighted cost–benefit analysis—i.e., the "value per statistical life" (VSL) approach—and various social welfare functions (SWFs). The SWFs are either utilitarian or prioritarian, applied to policy choice under risk in either an "ex post" or "ex ante" manner. We examine the conditions on individual utility and on the SWF under which these frameworks display sensitivity to wealth and to baseline risk. Moreover, we discuss whether these frameworks satisfy related properties that have received some attention in the literature, namely equal value of risk reduction, preference for risk equity, and catastrophe aversion. We show that the particular manner in which VSL ranks risk-reduction measures is not necessarily shared by other welfarist frameworks.

Parental health and child schooling

- Journal of Health Economics---2014---Massimiliano Bratti,Mariapia Mendola

This paper provides new empirical evidence on the impact of parental health shocks on investments in children's education using detailed longitudinal data from Bosnia and Herzegovina. Our study controls for individual unobserved heterogeneity by using child fixed effects, and it accounts for potential misreporting of self-reported health by employing several, more precise, health indicators. Results show that co-living children of ill mothers, but not of ill fathers, are significantly less likely to be enrolled in education at ages 15–24. Moreover, there is some evidence that mother's negative health shocks are likely to raise the employment probability of children due to the need to cover higher health expenditures.

Keep it simple? Predicting primary health care costs with clinical morbidity measures

- Journal of Health Economics---2014---Samuel L. Brilleman,Hugh Gravelle,Sandra Hollinghurst,Sarah Purdy,Chris Salisbury,Frank Windmeijer

Models of the determinants of individuals' primary care costs can be used to set capitation payments to providers and to test for horizontal equity. We compare the ability of eight measures of patient morbidity and multimorbidity to predict future primary care costs and examine capitation payments based on them. The measures were derived from four morbidity descriptive systems: 17 chronic diseases in the Quality and Outcomes Framework (QOF); 17 chronic diseases in the Charlson scheme; 114 Expanded Diagnosis Clusters (EDCs); and 68 Adjusted Clinical Groups (ACGs). These were applied to patient records of 86,100 individuals in 174 English practices. For a given disease description system, counts of diseases and sets of disease dummy variables had similar explanatory power. The EDC measures performed best followed by the QOF and ACG measures. The Charlson measures had the worst performance but still improved markedly on models containing only age, gender, deprivation and practice effects. Comparisons of predictive power for different morbidity measures were similar for linear and exponential models, but the relative predictive power of the models varied with the morbidity measure. Capitation payments for an individual patient vary considerably with the different morbidity measures included in the cost model. Even for the best fitting model large differences between expected cost and capitation for some types of patient suggest incentives for patient selection. Models with any of the morbidity measures show higher cost for more deprived patients but the positive effect of deprivation on cost was smaller in better fitting models.

Well-being losses due to care-giving

- Journal of Health Economics---2014---Bernard van den Berg,Denzil Fiebig,Jane Hall

This paper estimates the impact of informal caregiving on self-reported well-being. It uses a sample of 23,285 respondents of the first eleven waves of the Household, Income and Labour Dynamics in Australia (HILDA).

Genetic mechanisms in the intergenerational transmission of health

- Journal of Health Economics---2014---Owen Thompson

This paper uses a sample of adoptees to study the genetic mechanisms underlying intergenerational associations in chronic health conditions. I begin by estimating baseline intergenerational models with a sample of approximately 125,000 parent–child pairs, and find that children with a parent who has a specific chronic health condition are at least 100% more likely to have the same condition themselves. To assess the role of genetic mechanisms in generating these strong correlations, I estimate models using a sample of approximately 2400 adoptees, and find that genetic transmission accounts for only 20–30% of the baseline associations. As falsification tests, I repeat this exercise using health measures with externally established levels of genetic determination (height and chicken pox), and the results suggest that comparisons of biological and adopted children are a valid method of isolating genetic effects in this sample. Finally, to corroborate these adoptee-based estimates, I examine health correlations among monozygotic twins, which provide an upper bound estimate of genetic influences, and find a similarly modest role for genetic transmission. I conclude that intergenerational health transmission is an important hindrance to overall socioeconomic mobility, but that the majority of transmission occurs through environmental factors or gene–environment interactions, leaving scope for interventions to effectively mitigate health persistence.

Preventing dengue through mobile phones: Evidence from a field experiment in Peru

- Journal of Health Economics---2014---Ana Dammert,Jose Galdo,Virgilio Galdo

Dengue is the most rapidly spreading mosquito-borne viral disease in the world (WHO, 2009). During the last two decades, the dramatic rise in the number of dengue infections has been particularly evident in Latin American and the Caribbean countries. This paper examines the experimental evidence of the effectiveness of mobile phone technology in improving households' health preventive behavior in dengue-endemic areas. The main results suggest that repeated exposure to health information encourages households' uptake of preventive measures against dengue. As a result, the Breteau Index in treatment households, an objective measure of dengue risk transmission, is 0.10 standard deviations below the mean of the control group, which shows a reduction in the number of containers per household that test positive for dengue larvae.

Supplier-induced demand for newborn treatment: Evidence from Japan

- Journal of Health Economics---2014---Hitoshi Shigeoka,Kiyohide Fushimi

We estimate the degree of supplier-induced demand for newborn treatment by exploiting changes in reimbursement arising from the introduction of the partial prospective payment system (PPS) in Japan. Under the partial PPS, neonatal intensive care unit (NICU) utilization became relatively more profitable than other procedures, since it was excluded from prospective payments. We find that hospitals have responded to PPS adoption by increasing NICU utilization and by more frequently manipulating infants' reported birth weights which in large part determine their maximum allowable stay in the NICU. This induced demand substantially increases the reimbursements received by hospitals.

Plan choice, health insurance cost and premium sharing

- Journal of Health Economics---2014---Vasilios Kosteas,Francesco Renna

We develop a model of premium sharing for firms that offer multiple insurance plans. We assume that firms

offer one low quality plan and one high quality plan. Under the assumption of wage rigidities we found that the employee's contribution to each plan is an increasing function of that plan's premium. The effect of the other plan's premium is ambiguous. We test our hypothesis using data from the Employer Health Benefit Survey. Restricting the analysis to firms that offer both HMO and PPO plans, we measure the amount of the premium passed on to employees in response to a change in both premiums. We find evidence of large and positive effects of the increase in the plan's premium on the amount of the premium passed on to employees. The effect of the alternative plan's premium is negative but statistically significant only for the PPO plans.

Did liberalising bar hours decrease traffic accidents?

- Journal of Health Economics---2014---Colin Green,John Heywood,María Navarro Paniagua

Legal bar closing times in England and Wales have historically been early and uniform. Recent legislation liberalised closing times with the object of reducing social problems thought associated with drinking to "beat the clock." Indeed, using both difference in difference and synthetic control approaches we show that one consequence of this liberalisation was a decrease in traffic accidents. This decrease is heavily concentrated among younger drivers. Moreover, we provide evidence that the effect was most pronounced in the hours of the week directly affected by the liberalisation: late nights and early mornings on weekends. This evidence survives a series of robustness checks and suggests at least one socially positive consequence of extending bar hours.

Effects of Medicare payment reform: Evidence from the home health interim and prospective payment systems

- Journal of Health Economics---2014---Peter J. Huckfeldt,Neeraj Sood,José J. Escarce,David C. Grabowski,Joseph Newhouse

Medicare continues to implement payment reforms that shift reimbursement from fee-for-service toward episode-based payment, affecting average and marginal payment. We contrast the effects of two reforms for home health agencies. The home health interim payment system in 1997 lowered both types of payment; our conceptual model predicts a decline in the likelihood of use and costs, both of which we find. The home health prospective payment system in 2000 raised average but lowered marginal payment with theoretically ambiguous effects; we find a modest increase in use and costs. We find little substantive effect of either policy on readmissions or mortality.

The effects of health information technology on the costs and quality of medical care

- Journal of Health Economics---2014---Leila Agha

Information technology has been linked to productivity growth in a wide variety of sectors, and health information technology (HIT) is a leading example of an innovation with the potential to transform industry-wide productivity. This paper analyzes the impact of health information technology (HIT) on the quality and intensity of medical care. Using Medicare claims data from 1998 to 2005, I estimate the effects of early investment in HIT by exploiting variation in hospitals' adoption statuses over time, analyzing 2.5 million inpatient admissions across 3900 hospitals. HIT is associated with a 1.3% increase in billed charges (p-value: 5.6%), and there is no evidence of cost savings even five years after adoption. Additionally, HIT adoption appears to have little impact on the quality of care, measured by patient mortality, adverse drug events, and readmission rates.

Managing genetic tests, surveillance, and preventive medicine under a public health insurance system

- Journal of Health Economics---2014---Lilia Filipova-Neumann,Michael Hoy

There is a prospect in the medium to long term future of substantial advancements in the understanding of

the relationship between disease and genetics. We consider the implications of increased information from genetic tests about predisposition to diseases from the perspective of managing health care provision under a public health insurance scheme. In particular, we consider how such information may potentially improve the targeting of medical surveillance (or prevention) activities to improve the chances of early detection of disease onset. We show that the moral hazard implications inherent in surveillance and prevention decisions that are chosen to be privately rather than socially optimal may be exacerbated by increased information about person-specific predisposition to disease.

Competition and the impact of online hospital report cards

- Journal of Health Economics---2014---Shin-Yi Chou,Mary E. Deily,Suhui Li,Yi Lu

Information on the quality of healthcare gives providers an incentive to improve care, and this incentive should be stronger in more competitive markets. We examine this hypothesis by studying Pennsylvanian hospitals during the years 1995–2004 to see whether those hospitals located in more competitive markets increased the quality of the care provided to Medicare patients after report cards rating the quality of their Coronary Artery Bypass Graft programs went online in 1998. We find that after the report cards went online, hospitals in more competitive markets used more resources per patient, and achieved lower mortality among more severely ill patients.

Does privatisation of vocational rehabilitation improve labour market opportunities? Evidence from a field experiment in Sweden

- Journal of Health Economics---2014---Lisa Laun,Peter Skogman Thoursie

This paper analyses if privatisation of vocational rehabilitation can improve labour market opportunities for individuals on long-term sickness absence. We use a field experiment performed by the Public Employment Service and the Social Insurance Agency in Sweden during 2008–2010, in which over 4000 participants were randomly offered private and public rehabilitation. We find no differences in employment rates following rehabilitation between individuals who received rehabilitation by private and public providers. Also the average cost of rehabilitation was essentially equal for the two types of providers. This suggests that there are no large efficiency gains from privatising vocational rehabilitation.

The impact of competition on quality and prices in the English care homes market

- Journal of Health Economics---2014---Julien Forder,Stephen Allan

This study assesses the impact of competition on quality and price in the English care/nursing homes market. Considering the key institutional features, we use a theoretical model to assess the conditions under which further competition could increase or reduce quality. A dataset comprising the population of 10,000 care homes was used. We constructed distance/travel-time weighted competition measures. Instrumental variable estimations, used to account for the endogeneity of competition, showed quality and price were reduced by greater competition. Further analyses suggested that the negative quality effect worked through the effect on price – higher competition reduces revenue which pushes down quality.

Measuring socioeconomic health inequalities in presence of multiple categorical information

- Journal of Health Economics---2014---Paul Makdissi,Myra Yazbeck

While many of the measurement approaches in health inequality measurement assume the existence of a ratio-scale variable, most of the health information available in population surveys is given in the form of categorical variables. Therefore, the well-known inequality indices may not always be readily applicable to measure health inequality as it may result in the arbitrariness of the health concentration index's value. In this paper, we address this problem by changing the dimension in

which the categorical information is used. We therefore exploit the multi-dimensionality of this information, define a new ratio-scale health status variable and develop positional stochastic dominance conditions that can be implemented in a context of categorical variables. We also propose a parametric class of population health and socioeconomic health inequality indices. Finally we provide a twofold empirical illustration using the Joint Canada/United States Surveys of Health 2004 and the National Health Interview Survey 2010.

Estimation of own and cross price elasticities of alcohol demand in the UK—A pseudo-panel approach using the Living Costs and Food Survey 2001–2009

- Journal of Health Economics---2014---Yang Meng,Alan Brennan,Robin Purshouse,Daniel Hill-McManus,Colin Angus,John Holmes,Petra Sylvia Meier

The estimation of price elasticities of alcohol demand is valuable for the appraisal of price-based policy interventions such as minimum unit pricing and taxation. This study applies a pseudo-panel approach to the cross-sectional Living Cost and Food Survey 2001/2–2009 to estimate the own- and cross-price elasticities of off- and on-trade beer, cider, wine, spirits and ready-to-drinks in the UK. A pseudo-panel with 72 subgroups defined by birth year, gender and socioeconomic status is constructed. Estimated own-price elasticities from the base case fixed effect models are all negative and mostly statically significant ($p<0.05$). Off-trade cider and beer are most elastic (1.27 and 0.98) and off-trade spirits and on-trade ready-to-drinks are least elastic (0.08 and 0.19). Estimated cross-price elasticities are smaller in magnitude with a mix of positive and negative signs. The results appear plausible and robust and could be used for appraising the estimated impact of price-based interventions in the UK.

The role of GP's compensation schemes in diabetes care: Evidence from panel data

- Journal of Health Economics---2014---Elisa Iezzi,Matteo Lippi Bruni,Cristina Ugolini

We investigate the impact of the implementation of Diabetes Management Programs with financial incentives in the Italian Region Emilia-Romagna between 2003 and 2005. We focus on avoidable hospitalisations for diabetic patients for whom GPs receive additional payments exceeding capitation. We estimate a panel count data model to test the hypothesis that those patients under the responsibility of GPs receiving a higher share of their income through ad-hoc payments, are less likely to experience avoidable hospitalisations. Our findings indicate that financial transfers may help improve the quality of care, even when they are not based on the ex-post verification of performance. The estimated effect indicates that, at sample averages, an increase of 100 Euros of the financial incentives paid to GPs (around 17% of the yearly payment received by GPs for diabetes programmes) is expected to reduce the number of diabetic ACSCs by 1%, around 100 cases when projected on the entire region.

Tax incentives and the demand for private health insurance

- Journal of Health Economics---2014---Olena Stavrunova,Oleg Yerokhin

We analyze the effect of an individual insurance mandate (Medicare Levy Surcharge) on the demand for private health insurance (PHI) in Australia. With administrative income tax return data, we show that the mandate has several distinct effects on taxpayers' behavior. First, despite the large tax penalty for not having PHI coverage relative to the cost of the cheapest eligible insurance policy, compliance with mandate is relatively low: the proportion of the population with PHI coverage increases by 6.5 percentage points (15.6%) at the income threshold where the tax penalty starts to apply. This effect is most pronounced for young taxpayers, while the middle aged seem to be least responsive to this specific tax incentive. Second, the discontinuous increase in the average tax rate at the income threshold created by the policy generates a strong incentive for tax avoidance which manifests itself through bunching in the taxable income distribution below the threshold. Finally, after imposing some

plausible assumptions, we extrapolate the effect of the policy to other income levels and show that this policy has not had a significant impact on the overall demand for private health insurance in Australia.

Effects of occupational regulations on the cost of dental services: Evidence from dental insurance claims

- Journal of Health Economics---2014---Coady Wing,Allison Marier

In the United States, occupational regulations influence the work tasks that may legally be performed by dentists and dental hygienists. Only a dentist may legally perform most dental procedures; however, a smaller list of basic procedures may be provided by either a dentist or a dental hygienist. Since dentists and hygienists possess different levels of training and skill and receive very different wages, it is plausible that these regulations could distort the optimal allocation of skills to work tasks. We present simple theoretical framework that shows different ways that such regulations might affect the way that dentists and dental hygienists are used in the production of dental services. We then use a large database of dental insurance claims to study the effects of the regulations on the prevailing prices of a set of basic dental services. Our empirical analysis exploits variation across states and over time in the list of services that may be provided by either type of worker. Our main results suggest that the task-specific occupational regulations increase prices by about 12%. We also examine the effects of related occupational regulations on the utilization of basic dental services. We find that allowing insurers to directly reimburse hygienists for their work increases one year utilization rates by 3–4 percentage points.

How does provider supply and regulation influence health care markets? Evidence from nurse practitioners and physician assistants

- Journal of Health Economics---2014---Kevin Stange

Nurse practitioners (NPs) and physician assistants (PAs) now outnumber family practice doctors in the United States and are the principal providers of primary care to many communities. Recent growth of these professions has occurred amidst considerable cross-state variation in their regulation, with some states permitting autonomous practice and others mandating extensive physician oversight. I find that expanded NP and PA supply has had minimal impact on the office-based healthcare market overall, but utilization has been modestly more responsive to supply increases in states permitting greater autonomy. Results suggest the importance of laws impacting the division of labor, not just its quantity.

Health information exchange, system size and information silos

- Journal of Health Economics---2014---Amalia Miller,Catherine Tucker

There are many technology platforms that bring benefits only when users share data. In healthcare, this is a key policy issue, because of the potential cost savings and quality improvements from 'big data' in the form of sharing electronic patient data across medical providers. Indeed, one criterion used for federal subsidies for healthcare information technology is whether the software has the capability to share data. We find empirically that larger hospital systems are more likely to exchange electronic patient information internally, but are less likely to exchange patient information externally with other hospitals. This pattern is driven by instances where there may be a commercial cost to sharing data with other hospitals. Our results suggest that the common strategy of using 'marquee' large users to kick-start a platform technology has an important drawback of potentially creating information silos. This suggests that federal subsidies for health data technologies based on 'meaningful use' criteria, that are based simply on the capability to share data rather than actual sharing of data, may be misplaced.

Removing financial barriers to organ and bone marrow donation: The effect of leave and tax legislation in the U.S

- Journal of Health Economics---2014---Nicola Lacetera,Mario Macis,Sarah Stith

Many U.S. states have passed legislation providing leave to organ and bone marrow donors and/or tax benefits for live and deceased organ and bone marrow donations and to employers of donors. We exploit cross-state variation in the timing of such legislation to analyze its impact on organ donations by living and deceased persons, on measures of the quality of the transplants, and on the number of bone marrow donations. We find that these provisions do not have a significant impact on the quantity of organs donated. The leave laws, however, do have a positive impact on bone marrow donations, and the effect increases with the size of the population of beneficiaries and with the generosity of the legislative provisions. Our results suggest that this legislation works for moderately invasive procedures such as bone marrow donation, but these incentives may be too low for organ donation, which is riskier and more burdensome.

The impact of patient cost-sharing on low-income populations: Evidence from Massachusetts

- Journal of Health Economics---2014---Amitabh Chandra,Jonathan Gruber,Robin McKnight

Greater patient cost-sharing could help reduce the fiscal pressures associated with insurance expansion by reducing the scope for moral hazard. But it is possible that low-income recipients are unable to cut back on utilization wisely and that, as a result, higher cost-sharing will lead to worse health and higher downstream costs through increased use of inpatient and outpatient care. We use exogenous variation in the copayments faced by low-income enrollees in the Massachusetts Commonwealth Care program to study these effects. We estimate separate price elasticities of demand by type of service. Overall, we find price elasticities of about 0.16 for this low-income population — similar to elasticities calculated for higher-income populations in other settings. These elasticities are somewhat smaller for the chronically sick, especially for those with asthma, diabetes, and high cholesterol. These lower elasticities are attributable to lower responsiveness to prices across all categories of service, and to some statistically insignificant increases in inpatient care.

Publication selection and the income elasticity of the value of a statistical life

- Journal of Health Economics---2014---Chris Doucouliagos,T. Stanley,W Viscusi

Estimates of the value of a statistical life (VSL) establish the price government agencies use to value fatality risks. Transferring these valuations to other populations often utilizes the income elasticity of the VSL, which typically draw on estimates from meta-analyses. Using a data set consisting of 101 estimates of the income elasticity of VSL from 14 previously reported meta-analyses, we find that after accounting for potential publication bias the income elasticity of value of a statistical life is clearly and robustly inelastic, with a value of approximately 0.25–0.63. There is also clear evidence of the importance of controlling for levels of risk, differential publication selection bias, and the greater income sensitivity of VSL from stated preference surveys.

In utero exposure to the Korean War and its long-term effects on socioeconomic and health outcomes

- Journal of Health Economics---2014---Chulhee Lee

Prenatal exposure to the disruptions caused by the Korean War (1950–1953) negatively affected the individual socioeconomic and health outcomes at older ages. The educational attainment, labor market performance, and other socioeconomic outcomes of the subjects of the 1951 birth cohort, who were in utero during the worst time of the war, were significantly lower in 1990 and in 2000. The results of difference-in-difference estimations suggest that the magnitude

of the negative cohort effect is significantly larger for individuals who were more seriously traumatized by the war. Whereas the 1950 male birth cohort exhibited significantly higher disability and mortality rates at older age, the health outcomes of females are unaffected by the war. Different aspects of human capital (e.g., health and cognitive skills) were impaired by in utero exposure to the war, depending on the stage of pregnancy when the negative shocks were experienced.

Nurses' labour supply elasticities: The importance of accounting for extensive margins

- Journal of Health Economics---2014---Barbara Hanel,Guyonne Kalb,Anthony Scott,Barbara Broadway

We estimate a multi-sector model of nursing qualification holders' labour supply in different occupations. A structural approach allows us to model the labour force participation decision, the occupational and shift-type choice, and the decision about hours worked as a joint outcome following from maximising a utility function. Disutility from work is allowed to vary by occupation and also by shift type in the utility function. Our results suggest that average wage elasticities might be higher than previous research has found. This is mainly due to the effect of wages on the decision to enter or exit the profession, which was not included in the previous literature, rather than from its effect on increased working hours for those who already work in the profession.

A mass phenomenon: The social evolution of obesity

- Journal of Health Economics---2014---Holger Strulik

This paper proposes a theory for the social evolution of obesity. It considers a society in which individuals experience utility from consumption of food and non-food, the state of their health, and the evaluation of their appearance by others. The theory explains under which conditions poor persons are more prone to be overweight although eating is expensive and it shows how obesity occurs as a social phenomenon such that body mass continues to rise long after the initial cause (e.g. a lower price of food) is gone. The paper investigates the determinants of a steady state at which the median person is overweight and how an originally lean society arrives at such a steady state. Extensions of the theory towards dietary choice and the possibility to exercise in order to lose weight demonstrate robustness of the basic mechanism and provide further interesting results.

Peer effects on risky behaviors: New evidence from college roommate assignments

- Journal of Health Economics---2014---Daniel Eisenberg,Ezra Golberstein,Janis L. Whitlock

Social scientists continue to devote considerable attention to spillover effects for risky behaviors because of the important policy implications and the persistent challenges in identifying unbiased causal effects. We use the natural experiment of assigned college roommates to estimate peer effects for several measures of health risks: binge drinking, smoking, illicit drug use, gambling, having multiple sex partners, suicidal ideation, and non-suicidal self-injury. We find significant peer effects for binge drinking but little evidence of effects for other outcomes, although there is tentative evidence that peer effects for smoking may be positive among men and negative among women. In contrast to prior research, the peer effects for binge drinking are significant for all subgroups defined by sex and prior drinking status. We also find that pre-existing risky behaviors predict the closeness of friendships, which underscores the significance of addressing selection biases in studies of peer effects.

What a difference a day makes: Quantifying the effects of birth timing manipulation on infant health

- Journal of Health Economics---2014---Lisa Schulkind,Teny Shapiro

Scheduling births for non-medical reasons has become an increasingly common practice in the United States

and around the world. We exploit a natural experiment created by child tax benefits, which rewards births that occur just before the new year, to better understand the full costs of elective c-sections and inductions. Using data on all births in the U.S. from 1990 to 2000, we first confirm that expectant parents respond to the financial incentives by electing to give birth in December rather than January. We find that most of the manipulation comes from changes in the timing of c-sections. Small birth timing changes, even at full-term, lead to lower birthweight, a lower Apgar score, and an increase in the likelihood of being low birthweight.

Measuring the effects of reducing subsidies for private insurance on public expenditure for health care

- Journal of Health Economics---2014---Terence Chai Cheng

This paper investigates the effects of reducing subsidies for private health insurance on public sector expenditure for hospital care. An econometric framework using simultaneous equation models is developed to analyse the interrelated decisions on the intensity and type of health care use and private insurance. The framework is applied to the context of the mixed public–private system in Australia. The simulation projections show that reducing premium subsidies is expected to generate net cost savings. This arises because the cost savings achieved from reducing subsidies are larger than the potential increase in public expenditure on hospital care.

Estimating the price elasticity of beer: Meta-analysis of data with heterogeneity, dependence, and publication bias

- Journal of Health Economics---2014---Jon Nelson

Precise estimates of price elasticities are important for alcohol tax policy. Using meta-analysis, this paper corrects average beer elasticities for heterogeneity, dependence, and publication selection bias. A sample of 191 estimates is obtained from 114 primary studies. Simple and weighted means are reported. Dependence is addressed by restricting number of estimates per study, author-restricted samples, and author-specific variables. Publication bias is addressed using funnel graph, trim-and-fill, and Egger's intercept model. Heterogeneity and selection bias are examined jointly in meta-regressions containing moderator variables for econometric methodology, primary data, and precision of estimates. Results for fixed- and random-effects regressions are reported. Country-specific effects and sample time periods are unimportant, but several methodology variables help explain the dispersion of estimates. In models that correct for selection bias and heterogeneity, the average beer price elasticity is about 0.20, which is less elastic by 50% compared to values commonly used in alcohol tax policy simulations.

The long-term cognitive consequences of early childhood malnutrition: The case of famine in Ghana

- Journal of Health Economics---2013---Samuel K. Ampaabeng,Chih Ming Tan

We examine the role of early childhood health in human capital accumulation. Using a unique data set from Ghana with comprehensive information on individual, family, community, school quality characteristics and a direct measure of intelligence together with test scores, we examine the long-term cognitive effects of the 1983 famine on survivors. We show that differences in intelligence test scores can be robustly explained by the differential impact of the famine in different parts of the country and the impacts are most severe for children under two years of age during the famine. We also account for model uncertainty by using Bayesian Model Averaging.

Effects of breast and colorectal cancer on labour market outcomes—Average effects and educational gradients

- Journal of Health Economics---2013---Eskil Heinesen,Christophe Kolodziejczyk

We estimate causal effects of breast and colorectal cancer on labour market outcomes 1–3 years after

the diagnosis. Based on Danish administrative data we estimate average treatment effects on the treated by propensity score weighting methods using persons with no cancer diagnosis as control group. We conduct robustness checks using matching, difference-in-differences methods and an alternative control group of later cancer patients. The different methods give approximately the same results. Cancer increases the risks of leaving the labour force and receiving disability pension, and the effects are larger for the less educated. Effects on income are small and mostly insignificant. We investigate some of the mechanisms which may be important in explaining the educational gradient in effects of cancer on labour market attachment.

Does health insurance improve health?

- Journal of Health Economics---2013---Günther Fink,Paul Jacob Robyn,Ali Sié,Rainer Sauerborn

From 2004 to 2006, a community-based health insurance (CBI) scheme was rolled out in Nouna District, Burkina Faso, with the objective of improving access to health services and population health. We explore the random timing of the insurance rollout generated by the stepped wedge cluster-randomized design to evaluate the welfare and health impact of the insurance program. Our results suggest that the insurance had limited effects on average out-of-pocket expenditures in the target areas, but substantially reduced the likelihood of catastrophic health expenditure. The introduction of the insurance scheme did not have any effect on health outcomes for children and young adults, but appears to have increased mortality among individuals aged 65 and older. The negative health effects of the program appear to be primarily driven by the adverse provider incentives generated by the scheme and the resulting decline in the quality of care received by patients.

Prospect theory in the health domain: A quantitative assessment

- Journal of Health Economics---2013---Arthur Attema,Werner Brouwer,l' Haridon, Olivier,Olivier l'Haridon

It is well-known that expected utility (EU) has empirical deficiencies. Cumulative prospect theory (CPT) has developed as an alternative with more descriptive validity. However, CPT's full function had not yet been quantified in the health domain. This paper is therefore the first to simultaneously measure utility of life duration, probability weighting, and loss aversion in this domain.

Useful beautiful minds—An analysis of the relationship between schizophrenia and employment

- Journal of Health Economics---2013---Jane Greve,Louise Herrup Nielsen

This paper examines the relationship between schizophrenia and employment. We use longitudinal register data and show a considerable drop in the employment rate for people with schizophrenia six years before the first treatment at a psychiatric facility. After the first treatment, the employment rate stabilizes at 18%.

Exploring the intergenerational persistence of mental health: Evidence from three generations

- Journal of Health Economics---2013---David Johnston,Stefanie Schurer,Michael Shields

This paper uses data from the 1970 British Cohort Study to quantify the intergenerational persistence of mental health, and the long-run economic costs associated with poor parental mental health. We find a strong and significant intergenerational correlation that is robust to different covariate sets, sample restrictions, model specifications and potential endogeneity. Importantly, the intergenerational persistence is economically relevant, with maternal mental health associated with lasting effects on the child's educational attainment, future household income and the probability of having criminal convictions. These results do not disappear after controlling for children's own childhood and adulthood mental health.

Recession depression: Mental health effects of the 2008 stock market crash

- Journal of Health Economics---2013---Melissa McInerney,Jennifer Mellor,Lauren Nicholas

Do sudden, large wealth losses affect mental health? We use exogenous variation in the interview dates of the 2008 Health and Retirement Study to assess the impact of large wealth losses on mental health among older U.S. adults. We compare cross-wave changes in wealth and mental health for respondents interviewed before and after the October 2008 stock market crash. We find that the crash reduced wealth and increased feelings of depression and use of antidepressant drugs, and that these effects were largest among respondents with high levels of stock holdings prior to the crash. These results suggest that sudden wealth losses cause immediate declines in subjective measures of mental health. However, we find no evidence that wealth losses lead to increases in clinically-validated measures of depressive symptoms or indicators of depression.

Profit or patients' health benefit? Exploring the heterogeneity in physician altruism

- Journal of Health Economics---2013---Geir Godager,Daniel Wiesen

This paper investigates physician altruism toward patients' health benefit using behavioral data from Hennig-Schmidt et al.'s (2011) laboratory experiment. In the experiment, medical students in the role of physicians decide on the provision of medical services. The experimental setup allows us to identify the influence of profits and patients' health benefit on the choice of medical treatment. We estimate physician altruism, the weight individuals attach to patients' health benefit, by fitting mixed logit and multinomial logit regression models to the experimental data. Estimation results provide evidence for physician altruism. We find, however, substantial variation in the degree of physician altruism. We also discuss some implications of our results for the design of physician payment schemes in the light of the theoretical literature.

Increasing organ donation via changes in the default choice or allocation rule

- Journal of Health Economics---2013---Danyang Li,Zackary Hawley,Kurt Schnier

This research utilizes a laboratory experiment to evaluate the effectiveness of alternative public policies targeted at increasing the rate of deceased donor organ donation. The experiment includes treatments across different default choices and organ allocation rules inspired by the donor registration systems applied in different countries. Our results indicate that the opt-out with priority rule system generates the largest increase in organ donation relative to an opt-in only program. However, sizeable gains are achievable using either a priority rule or opt-out program separately, with the opt-out rule generating approximately 80% of the benefits achieved under a priority rule program.

Excise tax avoidance: The case of state cigarette taxes

- Journal of Health Economics---2013---Philip DeCicca,Donald Kenkel,Feng Liu,Philip DeCicca

We conduct an applied welfare economics analysis of cigarette tax avoidance. We develop an extension of the standard formula for the optimal Pigouvian corrective tax to incorporate the possibility that consumers avoid the tax by making purchases in nearby lower tax jurisdictions. To provide a key parameter for our formula, we estimate a structural endogenous switching regression model of border-crossing and cigarette prices. In illustrative calculations, we find that for many states, after taking into account tax avoidance the optimal tax is at least 20% smaller than the standard Pigouvian tax that simply internalizes external costs. Our empirical estimate that tax avoidance strongly responds to the price differential is the main reason for this result. We also use our results to examine the benefits of replacing avoidable state excise taxes with a harder-to-avoid federal excise tax on cigarettes.

Life expectancy and human capital: Evidence from the international epidemiological transition

- Journal of Health Economics---2013---Casper Hansen

Exploiting preintervention variation in mortality from various infectious diseases, together with the time variation arising from medical breakthroughs in the late 1940s and the 1950s, this study examines how a large positive shock to life expectancy influenced the formation of human capital within countries during the second half of the 20th century. The results establish that the rise in life expectancy was behind a significant part of the increase in human capital over this period. According to the baseline estimate, for one additional year of life expectancy, years of schooling increase by 0.17 year. Moreover, the evidence suggests that declines in pneumonia mortality are the underlying cause of this finding, indicating that improved childhood health increases human capital investments.

Geographic variation in commercial medical-care expenditures: A framework for decomposing price and utilization

- Journal of Health Economics---2013---Abe Dunn,Adam Shapiro,Eli Liebman

This study introduces a new framework for measuring and analyzing medical-care expenditures. The framework focuses on expenditures at the disease level that are decomposed between price and utilization. We find that both price and utilization differences are important contributors to expenditure differences across commercial markets. Further examination shows that for some diseases utilization drives variation while for others price is more important. Finally, when disease-specific measures are aggregated across diseases, much of the important disease-specific variation is masked, leading to much smaller measures of aggregate variation.

The use of alternative preference elicitation methods in complex discrete choice experiments

- Journal of Health Economics---2013---Hong Il Yoo,Denise Doiron

We analyse stated preference data over nursing jobs collected from two different discrete choice experiments: a multi-profile case best-worst scaling experiment (BWS) prompting selection of the best and worst among alternative jobs, and a profile case BWS wherein the respondents choose the best and worst job attributes. The latter allows identification of additional utility parameters and is believed to be cognitively easier. Results suggest that respondents place greater value on pecuniary over non-pecuniary gains in the multi-profile case. There is little evidence that this discrepancy is induced by the extra cognitive burden of processing several profiles at once in the multi-profile case. We offer thoughts on other likely mechanisms.

Financial protection of patients through compensation of providers: The impact of Health Equity Funds in Cambodia

- Journal of Health Economics---2013---Gabriela Flores,Por Ir,Chean R. Men,O' Donnell, Owen,Eddy Van Doorslaer,Owen O'Donnell

Public providers have no financial incentive to respect their legal obligation to exempt the poor from user fees. Health Equity Funds (HEFs) aim to make exemptions effective by giving NGOs responsibility for assessing eligibility and compensating providers for lost revenue. We use the geographic spread of HEFs over time in Cambodia to identify their impact on out-of-pocket (OOP) payments. Among households with some OOP payment, HEFs reduce the amount paid by 35%, on average. The effect is larger for households that are poorer and mainly use public health care. Reimbursement of providers through a government operated scheme also reduces household OOP payments but the effect is not as well targeted on the poor. Both compensation models raise household non-medical consumption but have no impact on health-related debt. HEFs reduce the probability of primarily seeking care in the private sector.

Exploiting subjective information to understand impoverished children's use of health care

- Journal of Health Economics---2013---Begoña Álvarez,Marcos Vera-Hernandez

Understanding what drives households to seek medical services is challenging because the factors affecting the perceived benefits and costs of professional health care can be the same. In this paper, we disentangle the channels through which different factors affect the use of medical services, whether through perceived benefits and/or costs. We do this by exploiting data on why individuals have not visited a health care professional. Amongst a sample of impoverished Colombian households, we find that health knowledge reduces the use of medical services through decreasing mothers' perceived benefits of seeking professional care for ill children; birth parity, distance to health facilities and violent shocks all decrease medical care use due to increasing the perceived costs; and education decreases both the perceived benefits and costs, with no overall effect on use. We propose two specification tests, both of which our model passes, as well as a series of robustness checks.

The impact of the partnership long-term care insurance program on private coverage

- Journal of Health Economics---2013---Haizhen Lin,Jeffrey Prince

We examine the impact of U.S. states' adoption of the partnership long-term care (LTC) insurance program on households' purchases of private coverage. Targeting middle-class households, this program increases the benefits of privately insuring via a higher asset threshold for Medicaid eligibility for LTC coverage. We find that the program generates few new purchases of LTC insurance, and that those it generates are almost entirely by wealthy individuals.

Rising inequalities in income and health in China: Who is left behind?

- Journal of Health Economics---2013---Steef Baeten,Tom Van Ourti,Eddy Van Doorslaer

In recent decades, China has experienced double-digit economic growth rates and rising inequality. This paper implements a new decomposition approach using the China Health and Nutrition Survey (1991–2006) to examine the extent to which changes in level and distribution of incomes and in income mobility are related to health disparities between rich and poor. We find that health disparities in China relate to rising income inequality and in particular to the adverse health and income experience of older (wo)men, but not to the growth rate of average incomes over the last decades. These findings suggest that replacement incomes and pensions at older ages may be one of the most important policy levers for reducing health disparities between rich and poor Chinese.

The changing of the guards

- Journal of Health Economics---2013---Simen Markussen,Knut Røed,Ole Rogeberg

Using administrative data from Norway, we examine the extent to which family doctors influence their clients' propensity to claim sick-pay. The analysis exploits exogenous switches of family doctors occurring when physicians quit, retire, or for other reasons sell their patient lists. We find that family doctors have significant influence on their clients' absence behavior, particularly on absence duration. Their influence is stronger in geographical areas with weaker competition between physicians. We conclude that it is possible for family doctors to contain sick-pay expenditures to some extent, and that there is a considerable variation in the way they perform this task.

Practice budgets and the patient mix of physicians – The effect of a remuneration system reform on health care utilisation

- Journal of Health Economics---2013---Hendrik Schmitz

This study analyses the effect of a change in the remuneration system for physicians on the treatment lengths as measured by the number of doctor visits using data from the German Socio-Economic Panel

over the period 1995–2002. Specifically, I analyse the introduction of a remuneration cap (so called practice budgets) for physicians who treat publicly insured patients in 1997. I find evidence that the reform of 1997 did not change the extensive margin of doctor visits but strongly affected the intensive margin. The conditional number of doctor visits among publicly insured decreased while it increased among privately insured. This can be seen as evidence that physicians respond to the change in incentives induced by the reform by altering their patient mix.

Testing the rate of preference reversal in personal and social decision-making

- Journal of Health Economics---2013---Adam Oliver

Classic preference reversal, where choice and valuation procedures generate inconsistent preference orderings, has rarely been tested in hypothetical health care treatment scenarios. Two studies – the first non-incentivised and the second incentivised – are reported in this article. In both studies, respondents are asked to make decisions that affect themselves (a personal decision making frame) and those for whom they are responsible (a social decision making frame). The results show non-negligible and systematic rates of preference reversal in both frames, although these rates are slightly, but non-significantly, lower in the incentivised condition. Moreover, in both studies, the rate of predicted preference reversal was somewhat higher in the social than in the personal decision making frame, a finding that is explained by greater risk aversion when choosing treatment options for others than when choosing treatments for oneself.

Integrating risk adjustment and enrollee premiums in health plan payment

- Journal of Health Economics---2013---Thomas G. McGuire,Jacob Glazer,Joseph Newhouse,Sharon-Lise Normand,Julie Shi,Anna D. Sinaiko,Samuel H. Zuvekas

In two important health policy contexts – private plans in Medicare and the new state-run "Exchanges" created as part of the Affordable Care Act (ACA) – plan payments come from two sources: risk-adjusted payments from a Regulator and premiums charged to individual enrollees. This paper derives principles for integrating risk-adjusted payments and premium policy in individual health insurance markets based on fitting total plan payments to health plan costs per person as closely as possible. A least squares regression including both health status and variables used in premiums reveals the weights a Regulator should put on risk adjusters when markets determine premiums. We apply the methods to an Exchange-eligible population drawn from the Medical Expenditure Panel Survey (MEPS).

Do Medicare Advantage plans select enrollees in higher margin clinical categories?

- Journal of Health Economics---2013---Joseph Newhouse,J. Michael McWilliams,Mary Price,Jie Huang,Bruce Fireman,John Hsu

The CMS-HCC risk adjustment system for Medicare Advantage (MA) plans calculates weights, which are effectively relative prices, for beneficiaries with different observable characteristics. To do so it uses the relative amounts spent per beneficiary with those characteristics in Traditional Medicare (TM). For multiple reasons one might expect relative amounts in MA to differ from TM, thereby making some beneficiaries more profitable to treat than others. Much of the difference comes from differences in how TM and MA treat different diseases or diagnoses. Using data on actual medical spending from two MA-HMO plans, we show that the weights calculated from MA costs do indeed differ from those calculated using TM spending. One of the two plans (Plan 1) is more typical of MA-HMO plans in that it contracts with independent community providers, while the other (Plan 2) is vertically integrated with care delivery. We calculate margins, or average revenue/average cost, for Medicare beneficiaries in the two plans who have one of 48 different combinations of medical conditions. The two plans' margins for these 48 conditions are correlated ($r=0.39$, $p<0.01$).

Both plans have margins that are more positive for persons with conditions that are managed by primary care physicians and where medical management can be effective. Conversely they have lower margins for persons with conditions that tend to be treated by specialists with greater market power than primary care physicians and for acute conditions where little medical management is possible. The two plan's margins among beneficiaries with different observable characteristics vary over a range of 160 and 98 percentage points, respectively, and thus would appear to offer substantial incentive for selection by HCC. Nonetheless, we find no evidence of overrepresentation of beneficiaries in high margin HCC's in either plan. Nor, using the margins from Plan 1, the more typical plan, do we find evidence of overrepresentation of high margin HCC's in Medicare more generally. These results do not permit a conclusion on overall social efficiency, but we note that selection according to margin could be socially efficient. In addition, our findings suggest there are omitted interaction terms in the risk adjustment model that Medicare currently uses.

The spillover effects of Medicare managed care: Medicare Advantage and hospital utilization

- Journal of Health Economics---2013---Katherine Baicker,Michael E. Chernew,Jacob A. Robbins

More than a quarter of Medicare beneficiaries are enrolled in Medicare Advantage, which was created in large part to improve the efficiency of health care delivery by promoting competition among private managed care plans. This paper explores the spillover effects of the Medicare Advantage program on the traditional Medicare program and other patients, taking advantage of changes in Medicare Advantage payment policy to isolate exogenous increases in Medicare Advantage enrollment and trace out the effects of greater managed care penetration on hospital utilization and spending throughout the health care system. We find that when more seniors enroll in Medicare managed care, hospital costs decline for all seniors and for commercially insured younger populations. Greater managed care penetration is not associated with fewer hospitalizations, but is associated with lower costs and shorter stays per hospitalization. These spillovers are substantial – offsetting more than 10% of increased payments to Medicare Advantage plans.

Competitive bidding in Medicare Advantage: Effect of benchmark changes on plan bids

- Journal of Health Economics---2013---Zirui Song,Mary Beth Landrum,Michael E. Chernew

Bidding has been proposed to replace or complement the administered prices that Medicare pays to hospitals and health plans. In 2006, the Medicare Advantage program implemented a competitive bidding system to determine plan payments. In perfectly competitive models, plans bid their costs and thus bids are insensitive to the benchmark. Under many other models of competition, bids respond to changes in the benchmark. We conceptualize the bidding system and use an instrumental variable approach to study the effect of benchmark changes on bids. We use 2006–2010 plan payment data from the Centers for Medicare and Medicaid Services, published county benchmarks, actual realized fee-for-service costs, and Medicare Advantage enrollment. We find that a $1 increase in the benchmark leads to about a $0.53 increase in bids, suggesting that plans in the Medicare Advantage market have meaningful market power.

Suit the action to the word, the word to the action: Hypothetical choices and real decisions in Medicare Part D

- Journal of Health Economics---2013---Iris Kesternich,Florian Heiss,Daniel McFadden,Joachim Winter

In recent years, consumer choice has become an important element of public policy. One reason is that consumers differ in their tastes and needs, which they can express most easily through their own choices. Elements that strengthen consumer choice feature prominently in the design of public insurance markets, for instance in the United States in the recent introduction of prescription drug coverage for older individuals

via Medicare Part D. For policy makers who design such a market, an important practical question in the design phase of such a new program is how to deduce enrollment and plan selection preferences prior to its introduction. In this paper, we investigate whether hypothetical choice experiments can serve as a tool in this process. We combine data from hypothetical and real plan choices, elicited around the time of the introduction of Medicare Part D. We first analyze how well the hypothetical choice data predict willingness to pay and market shares at the aggregate level. We then analyze predictions at the individual level, in particular how insurance demand varies with observable characteristics. We also explore whether the extent of adverse selection can be predicted using hypothetical choice data alone.

Plan selection in Medicare Part D: Evidence from administrative data

- Journal of Health Economics---2013---Florian Heiss,Adam Leive,Daniel McFadden,Joachim Winter

We study the Medicare Part D prescription drug insurance program as a bellwether for designs of private, non-mandatory health insurance markets, focusing on the ability of consumers to evaluate and optimize their choices of plans. Our analysis of administrative data on medical claims in Medicare Part D suggests that fewer than 25% of individuals enroll in plans that are ex ante as good as the least cost plan specified by the Plan Finder tool made available to seniors by the Medicare administration, and that consumers on average have expected excess spending of about $300 per year, or about 15% of expected total out-of-pocket cost for drugs and Part D insurance. These numbers are hard to reconcile with decision costs alone; it appears that unless a sizeable fraction of consumers place large values on plan features other than cost, they are not optimizing effectively.

Digesting the doughnut hole

- Journal of Health Economics---2013---Geoffrey F. Joyce,Julie Zissimopoulos,Dana Goldman

Despite its success, Medicare Part D has been widely criticized for the gap in coverage, the so-called “doughnut hole”. We compare the use of prescription drugs among beneficiaries subject to the coverage gap with usage among beneficiaries who are not exposed to it. We find that the coverage gap does, indeed, disrupt the use of prescription drugs among seniors with diabetes. But the declines in usage are modest and concentrated among higher cost, brand-name medications. Demand for high cost medications such as antipsychotics, antiasthmatics, and drugs of the central nervous system decline by 8–18% in the coverage gap, while use of lower cost medications with high generic penetration such as beta blockers, ACE inhibitors and antidepressants decline by 3–5% after reaching the gap. More importantly, lower adherence to medications is not associated with increases in medical service use.

Pharmaceutical advertising and Medicare Part D

- Journal of Health Economics---2013---Darius Lakdawalla,Neeraj Sood,Qian Gu

We explore how and to what extent prescription drug insurance expansions affect incentives for pharmaceutical advertising. When insurance expansions make markets more profitable, firms respond by boosting advertising. Theory suggests this effect will be magnified in the least competitive drug classes, where firms internalize a larger share of the benefits from advertising. Empirically, we find that the implementation of Part D coincides with a 14–19% increase in total advertising expenditures. This effect is indeed concentrated in the least competitive drug classes. The additional advertising raised utilization among non-elderly patients outside the Part D program by about 3.6%. This is roughly half of the direct utilization effect of Part D on elderly beneficiaries. The results suggest the presence of considerable spillover effects from publicly subsidized prescription drug insurance on the utilization and welfare of consumers outside the program.

Preference heterogeneity and selection in private health insurance: The case of Australia

- Journal of Health Economics---2013---Thomas Buchmueller,Denzil Fiebig,Glenn Jones,Elizabeth Savage

A basic prediction of theoretical models of insurance is that if consumers have private information about their risk of suffering a loss there will be a positive correlation between risk and the level of insurance coverage. We test this prediction in the context of the market for private health insurance in Australia. Despite a universal public system that provides comprehensive coverage for inpatient and outpatient care, roughly half of the adult population also carries private health insurance, the main benefit of which is more timely access to elective hospital treatment. Like several studies on different types of insurance in other countries, we find no support for the positive correlation hypothesis. Because strict underwriting regulations create strong information asymmetries, this result suggests the importance of multi-dimensional private information. Additional analyses suggest that the advantageous selection observed in this market is driven by the effect of risk aversion, the ability to make complex financial decisions and income.

Genetic testing with primary prevention and moral hazard

- Journal of Health Economics---2013---David Bardey,Philippe De Donder

We develop a model where a genetic test reveals whether an individual has a low or high probability of developing a disease. Testing is not mandatory, but agents have to reveal their test results to the insurers, facing a discrimination risk. A costly prevention effort allows agents with a genetic predisposition to decrease their probability to develop the disease. We study the individual decisions to take the test and to undertake the prevention effort as a function of the effort cost and of its efficiency. If effort is observable by insurers, agents undertake the test only if the effort cost is neither too large nor too small. If the effort cost is not observable by insurers, moral hazard increases the value of the test if the effort cost is low. We offer several policy recommendations, from the optimal breadth of the tests to policies to do away with the discrimination risk.

The demand for health insurance among uninsured Americans: Results of a survey experiment and implications for policy

- Journal of Health Economics---2013---Alan Krueger,Ilyana Kuziemko

Most existing work on the demand for health insurance focuses on employees' decisions to enroll in employer-provided plans. Yet any attempt to achieve universal coverage must focus on the uninsured, the vast majority of whom are not offered employer-sponsored insurance. In the summer of 2008, we conducted a survey experiment to assess the willingness to pay for a health plan among a large sample of uninsured Americans. The experiment yields price elasticities of around one, substantially greater than those found in most previous studies. We use these results to estimate coverage expansion under the Affordable Care Act, with and without an individual mandate. We estimate that 35 million uninsured individuals would gain coverage and find limited evidence of adverse selection.

A case study of a workplace wellness program that offers financial incentives for weight loss

- Journal of Health Economics---2013---John Cawley,Joshua Price

Employers are increasingly adopting workplace wellness programs designed to improve employee health and decrease employer costs associated with health insurance and job absenteeism. This paper examines the outcomes of 2635 workers across 24 worksites who were offered financial incentives for weight loss that took various forms, including fixed payments and forfeitable bonds.

Abortion before & after Roe

- Journal of Health Economics---2013---Ted Joyce,Ruoding Tan,Yuxiu Zhang

We use unique data on abortions performed in New York State from 1971 to 1975 to demonstrate that women traveled hundreds of miles for a legal abortion before Roe. A 100-mile increase in distance for women who live approximately 183miles from New York was associated with a decline in abortion rates of 12.2 percent whereas the same change for women who lived 830miles from New York lowered abortion rates by 3.3 percent. The abortion rates of nonwhites were more sensitive to distance than those of whites. We found a positive and robust association between distance to the nearest abortion provider and teen birth rates but less consistent estimates for other ages. Our results suggest that even if some states lost all abortion providers due to legislative policies, the impact on population measures of birth and abortion rates would be small as most women would travel to states with abortion services.

The poverty-reducing effect of Medicaid

- Journal of Health Economics---2013---Benjamin D. Sommers,Donald Oellerich

Medicaid provides health insurance for 54 million Americans. Using the Census Bureau's Supplemental Poverty Measure (which subtracts out-of-pocket medical expenses from family resources), we estimated the impact of eliminating Medicaid. In our counterfactual, Medicaid beneficiaries would become uninsured or gain other insurance. Counterfactual medical expenditures were drawn stochastically from propensity-score-matched individuals without Medicaid. While this method captures the importance of risk protection, it likely underestimates Medicaid's impact due to unobserved differences between Medicaid and non-Medicaid individuals. Nonetheless, we find that Medicaid reduces out-of-pocket medical spending from $871 to $376 per beneficiary, and decreases poverty rates by 1.0% among children, 2.2% among disabled adults, and 0.7% among elderly individuals. When factoring in institutionalized populations, an additional 500,000 people were kept out of poverty. Overall, Medicaid kept at least 2.6 million—and as many as 3.4 million—out of poverty in 2010, making it the U.S.' s third largest anti-poverty program.

Does employer-provided health insurance constrain labor supply adjustments to health shocks? New evidence on women diagnosed with breast cancer

- Journal of Health Economics---2013---Cathy J. Bradley,David Neumark,Scott Barkowski

Employment-contingent health insurance may create incentives for ill workers to remain employed at a sufficient level (usually full-time) to maintain access to health insurance coverage. We study employed married women, comparing the labor supply responses to new breast cancer diagnoses of women dependent on their own employment for health insurance with the responses of women who are less dependent on their own employment for health insurance, because of actual or potential access to health insurance through their spouse's employer. We find evidence that women who depend on their own job for health insurance reduce their labor supply by less after a diagnosis of breast cancer. In the estimates that best control for unobservables associated with health insurance status, the hours reduction for women who continue to work is 8 to 11% smaller. Women's subjective responses to questions about working more to maintain health insurance are consistent with the conclusions from observed behavior.

Consumers' misunderstanding of health insurance

- Journal of Health Economics---2013---George Loewenstein,Joelle Y. Friedman,Barbara McGill,Sarah Ahmad,Suzanne Linck,Stacey Sinkula,John Beshears,James Choi,Jonathan Kolstad,David Laibson,Brigitte Madrian,John List,Kevin G. Volpp

We report results from two surveys of representative

samples of Americans with private health insurance. The first examines how well Americans understand, and believe they understand, traditional health insurance coverage. The second examines whether those insured under a simplified all-copay insurance plan will be more likely to engage in cost-reducing behaviors relative to those insured under a traditional plan with deductibles and coinsurance, and measures consumer preferences between the two plans. The surveys provide strong evidence that consumers do not understand traditional plans and would better understand a simplified plan, but weaker evidence that a simplified plan would have strong appeal to consumers or change their healthcare choices.

Girls' education and HIV risk: Evidence from Uganda

- Journal of Health Economics---2013---Marcella Alsan,David M. Cutler

Uganda is widely viewed as a public health success for curtailing its HIV/AIDS epidemic in the early 1990s. The period of rapid HIV decline coincided with a dramatic rise in girls' secondary school enrollment. We instrument for this enrollment with distance to school, conditional on a rich set of demographic and locational controls, including distance to market center. We find that girls' enrollment in secondary education significantly increased the likelihood of abstaining from sex. Using a triple-difference estimator, we find that some of the schooling increase among young women was in response to a 1990 affirmative action policy giving women an advantage over men on University applications.

Do parental involvement laws deter risky teen sex?

- Journal of Health Economics---2013---Silvie Colman,Thomas Dee,Ted Joyce

Parental involvement (PI) laws require that physicians notify or obtain consent from a parent(s) of a minor seeking an abortion before performing the procedure. Several studies suggest that PI laws curb risky sexual behavior because teens realize that they would be compelled to discuss a subsequent pregnancy with a parent. We show that prior evidence based on gonorrhea rates overlooked the frequent under-reporting of gonorrhea by race and ethnicity, and present new evidence on the effects of PI laws using more current data on the prevalence of gonorrhea and data that are novel to this literature (i.e., chlamydia rates and data disaggregated by year of age). We improve the credibility of our estimates over those in the existing literature using an event-study design in addition to standard difference-in-difference-in-differences (DDD) models. Our findings consistently suggest no association between PI laws and rates of sexually transmitted infections or measures of sexual behavior.

Do cost-sharing and entry deregulation curb pharmaceutical innovation?

- Journal of Health Economics---2013---Volker Grossmann

This paper examines the role of both cost-sharing schemes in health insurance systems and the regulation of entry into the pharmaceutical sector for pharmaceutical R&D expenditure and drug prices. The analysis suggests that both an increase in the coinsurance rate and stricter price regulations adversely affect R&D spending in the pharmaceutical sector. In contrast, entry deregulation may lead to higher R&D spending of pharmaceutical companies. The relationship between R&D spending per firm and the number of firms may be hump-shaped. In this case, the number of rivals which maximizes R&D expenditure per firm is decreasing in the coinsurance rate and increasing in labor productivity.

Doctors, patients and the racial mortality gap

- Journal of Health Economics---2013---Emilia Simeonova

Research in the health sciences reports persistent racial differences in health care access, utilization, and outcomes. This study investigates three potential sources of these disparities – differential quality of care, physician discrimination, and patient response to therapy.

It uses a unique panel dataset of physician–patient encounters, the resulting medication therapies and the patients' adherence to those medical recommendations. Equalizing access to quality health care will not erase the racial differences in mortality among chronically ill patients. Targeted programs aimed at improving adherence with medication therapy among disadvantaged groups must be an integral part of any policy aimed at achieving equality in health outcomes.

Hospital readmission rates: Signal of failure or success?

- Journal of Health Economics---2013---Mauro Laudicella,Paolo Li Donni,Peter C. Smith

Hospital readmission rates are increasingly used as signals of hospital performance and a basis for hospital reimbursement. However, their interpretation may be complicated by differential patient survival rates. If patient characteristics are not perfectly observable and hospitals differ in their mortality rates, then hospitals with low mortality rates are likely to have a larger share of un-observably sicker patients at risk of a readmission. Their performance on readmissions will then be underestimated. We examine hospitals' performance relaxing the assumption of independence between mortality and readmissions implicitly adopted in many empirical applications. We use data from the Hospital Episode Statistics on emergency admissions for fractured hip in 290,000 patients aged 65 and over from 2003 to 2008 in England. We find evidence of sample selection bias that affects inference from traditional models. We use a bivariate sample selection model to allow for the selection process and the dichotomous nature of the outcome variables.

Longitudinal methods to investigate the role of health determinants in the dynamics of income-related health inequality

- Journal of Health Economics---2013---Paul Allanson,Dennis Petrie

The usual starting point for understanding changes in income-related health inequality (IRHI) over time has been regression-based decomposition procedures for the health concentration index. However the reliance on repeated cross-sectional analysis for this purpose prevents both the appropriate specification of the health function as a dynamic model and the identification of important determinants of the transition processes underlying IRHI changes such as those relating to mortality. This paper overcomes these limitations by developing alternative longitudinal procedures to analyse the role of health determinants in driving changes in IRHI through both morbidity changes and mortality, with our dynamic modelling framework also serving to identify their contribution to long-run or structural IRHI. The approach is illustrated by an empirical analysis of the causes of the increase in IRHI in Great Britain between 1999 and 2004.

Informality and the expansion of social protection programs: Evidence from Mexico

- Journal of Health Economics---2013---Oliver Azuara,Ioana Marinescu

Many countries are moving from employer-based to universal health coverage, which can generate crowd out. In Mexico, Seguro Popular provides public health coverage to the uninsured. Using the gradual roll-out of the system at the municipality level, we estimate that Seguro Popular had no effect on informality in the overall population. Informality did increase by 1.7% for less educated workers, but the wage gains for workers who switch between the formal and the informal sector were not significantly affected. This suggests that marginal workers do not choose between formal and informal jobs on the basis of health insurance coverage.

The health effects of leaving school in a bad economy

- Journal of Health Economics---2013---Johanna Maclean

This study investigates the lasting health effects of leaving school in a bad economy. Three empirical patterns motivate this study: Leaving school in a bad economy has persistent and negative career effects,

career and health outcomes are correlated, and fluctuations in contemporaneous economic conditions affect health in the short-run. I draw data from the National Longitudinal Survey of Youth 1979 Age 40 Health Supplement. Members of my sample left school between 1976 and 1992. I find that men who left school when the school-leaving state unemployment rate was high have worse health at age 40 than otherwise similar men, while leaving school in a bad economy lowers depressive symptoms at age 40 among women. A 1 percentage point increase in the school-leaving state unemployment rate leads to a 0.5% to 18% reduction in the measured health outcomes among men and a 6% improvement in depressive symptoms among women.

The effect of prospective payment on admission and treatment policy: Evidence from inpatient rehabilitation facilities

- Journal of Health Economics---2013---Neeraj Sood,Peter J. Huckfeldt,David C. Grabowski,Joseph Newhouse,José J. Escarce

We examine provider responses to the Medicare inpatient rehabilitation facility (IRF) prospective payment system (PPS), which simultaneously reduced marginal reimbursement and increased average reimbursement. IRFs could respond to the PPS by changing the number of patients admitted, admitting different types of patients, or changing the intensity of care. We use Medicare claims data to separately estimate each type of provider response. We also examine changes in patient outcomes and spillover effects on other post-acute care providers. We find that costs of care initially fell following the PPS, which we attribute to changes in treatment decisions rather than the characteristics of patients admitted to IRFs within the diagnostic categories we examine. However, the probability of admission to IRFs increased after the PPS due to the expanded admission policies of providers. We find modest spillover effects in other post-acute settings and negative health impacts for only one of three diagnostic groups studied.

An instrumental variables approach to post-acute care nursing home quality: Is there a dime's worth of evidence that continuing care retirement communities provide higher quality?

- Journal of Health Economics---2013---John Bowblis,Heather S. McHone

For the affluent elderly, continuing care retirement communities (CCRCs) have become a popular option for long term care and other health care needs related to aging. While CCRCs have experienced significant growth over the last few decades, very little is known about the quality of care CCRCs provide. This paper is the first to rigorously study CCRCs on a national scale and the only study that focuses on nursing home quality. Using a national sample from 2005, we determine if the quality of post-acute care provided by CCRC nursing homes is superior to traditional nursing homes. To mimic randomization of patients, instrumental variables analysis is used with relative distance as an exclusion restriction to handle the endogeneity of the type of facility where care is provided. After adjusting for endogeniety, we find that CCRC nursing homes provide post-acute care quality that is similar or lower to traditional nursing homes, depending on the quality measure.

Does HIV increase the risk of spousal violence in sub-Saharan Africa?

- Journal of Health Economics---2013---Yoo-Mi Chin

Although a positive association is found between HIV prevalence and intimate partner violence, a causal interpretation is hard to establish due to the endogeneity of HIV prevalence. Using the distance from the origin of the virus as an instrument, I find that an exogenous increase in HIV prevalence in a cluster has a sizable positive effect on the risk of physical and sexual violence against women within marriage. The results of this study confirm a gender-specific negative externality of the disease and encourage policy efforts to incorporate services for violence against women into existing HIV programs.

Health-related externalities: Evidence from a choice experiment

- Journal of Health Economics---2013---Jeremiah Hurley,Emmanouil Mentzakis

Health-related external benefits are of potentially large importance for public policy. This paper investigates health-related external benefits using a stated-preference discrete-choice experiment framed in a health care context and including choice scenarios defined by six attributes related to a recipient and the recipient's condition: communicability, severity, medical necessity, relationship to respondent, location, and amount of contribution requested. Subjects also completed a set of own-treatment scenarios and a values-orientation instrument. We find evidence of substantial health-related external benefits that vary as expected with the scenario attributes and subjects' value orientations. The results are consistent with a number of hypotheses offered by the general theoretical analysis of health-related externalities and the analysis of externalities specific to health care.

Demand for smokeless tobacco: Role of advertising

- Journal of Health Economics---2013---Dhaval Dave,Henry Saffer

While the prevalence of smokeless tobacco (ST) is low relative to smoking, the distribution of ST use is highly skewed with consumption concentrated among certain segments of the population (rural residents, males, whites, low-educated individuals). Furthermore, there is suggestive evidence that use has trended upwards recently for groups that have traditionally been at low risk of using ST, and thus started to diffuse across demographics. This study provides the first estimates, at the national level, of the effects of magazine advertising on ST use. The focus on magazine advertising is significant given that ST manufacturers have been banned from using other conventional media since the 1986 Comprehensive ST Act and the 1998 ST Master Settlement Agreement. This study is based on the 2003–2009 waves of the National Consumer Survey (NCS), a unique data source that contains extensive information on the reading habits of individuals, matched with magazine-specific advertising information over the sample period. This allows detailed and salient measures of advertising exposure at the individual level and addresses potential bias due to endogeneity and selective targeting. We find consistent and robust evidence that exposure to ST ads in magazines raises ST use, especially among males, with an estimated elasticity of 0.06. There is suggestive evidence that both ST taxes and cigarette taxes reduce ST use, indicating contemporaneous complementarity between these tobacco products. Sub-analyses point to some differences in the advertising and tax response across segments of the population. The effects from this study inform the debate on the cost and benefits of ST use and its potential to be a tool in overall tobacco harm reduction.

The effects of medical school on health outcomes: Evidence from admission lotteries

- Journal of Health Economics---2013---Edwin Leuven,Hessel Oosterbeek,Inge de Wolf

This paper estimates the effects of attending medical school on health outcomes by exploiting that admission to medical school in the Netherlands is determined by a lottery. Among the applicants for medical school, people who attended medical school have on average 1.5 more years of completed education than people who did not. They are also more likely to have been exposed to a health-related education curriculum. The results show only modest impacts on health outcomes. Attending medical school reduces alcohol consumption and being underweight somewhat, and has a small positive impact on self-reported health status. It has, however, a small negative effect on the frequency of physical exercise and no significant impact on smoking, and being overweight or obese. Attending medical school does have a large positive impact on the probability of being registered for donations of organs.

Sick but satisfied: The impact of life and health satisfaction on choice between health scenarios

- Journal of Health Economics---2013---Paul Dolan,Georgios Kavetsos,Aki Tsuchiya

Preference elicitation methods require respondents to predict the impact a change in health might have on their future selves. The focus on the change in health is at the possible expense of other experiences of life once in that health state. We analyse personal preferences to a pairwise choice task involving trade-offs between quality and length of life, where satisfaction levels with life or health are introduced in the description of the health states. We find that a health scenario including low levels of satisfaction increases the likelihood of preferring to die sooner in full health, whereas scenarios including high levels of satisfaction increase the likelihood of preferring to live for longer in poor health. The differences highlight the sensitivity of preferences to what is described in health states and therefore show the importance of on-going discussions about precisely what respondents should be asked to consider in preference elicitation studies.

Family income and child health in the UK

- Journal of Health Economics---2013---Bénédicte Apouey,Pierre Geoffard

Recent studies examining the relationship between family income and child health in the UK have produced mixed findings. We re-examine the income gradient in child general health and its evolution with child age in this country, using a very large sample of British children. We find that there is no correlation between income and child general health at ages 0–1, that the gradient emerges around age 2 and is constant from age 2 to age 17. In addition, we show that the gradient remains large and significant when we reduce the endogeneity of income. Furthermore, our results indicate that the gradient in general health reflects a greater prevalence of chronic conditions among low-income children and a greater severity of these conditions. Taken together, these findings suggest that income does matter for child health in the UK and may play a role in the intergenerational transmission of socioeconomic status.

Maternal employment and childhood obesity – A European perspective

- Journal of Health Economics---2013---Wencke Gwozdz,Alfonso Sousa-Poza,Lucia A. Reisch,Wolfgang Ahrens,Gabriele Eiben,Juan M. Fernandéz-Alvira,Charalampos Hadjigeorgiou,Stefaan De Henauw,Eva Kovács,Fabio Lauria,Toomas Veidebaum,Garrath Williams,Karin Bammann

The substantial increase in female employment rates in Europe over the past two decades has often been linked in political and public rhetoric to negative effects on child development, including obesity. We analyse this association between maternal employment and childhood obesity using rich objective reports of various anthropometric and other measures of fatness from the IDEFICS study of children aged 2–9 in 16 regions of eight European countries. Based on such data as accelerometer measures and information from nutritional diaries, we also investigate the effects of maternal employment on obesity's main drivers: calorie intake and physical activity. Our analysis provides little evidence for any association between maternal employment and childhood obesity, diet or physical activity.

The impact of physical education on obesity among elementary school children

- Journal of Health Economics---2013---John Cawley,David Frisvold,Chad Meyerhoefer

In response to the dramatic rise in childhood obesity, the Centers for Disease Control (CDC) and other organizations have advocated increasing the amount of time that elementary school children spend in physical education (PE) classes. However, little is known about the effect of PE on child weight. This paper measures that effect by instrumenting for child PE time with the state's mandated minimum number of minutes of PE, using data from the Early Childhood Longitudinal Study, Kindergarten Cohort (ECLS-K) for 1998–2004.

Results from IV models indicate that PE lowers BMI z-score and reduces the probability of obesity among 5th graders. This effect is concentrated among boys; we find evidence that this gender difference is partly attributable to PE being a complement with other physical activity for boys, whereas they are substitutes for girls. This represents some of the first evidence of a causal effect of PE on youth obesity, and thus offers at least some support for the assumptions behind the CDC recommendations. We find no evidence that increased PE time crowds out time in academic courses or has spillovers to achievement test scores.

Weathering the storm: Hurricanes and birth outcomes

- Journal of Health Economics---2013---Janet Currie,Maya Rossin-Slater

A growing literature suggests that stressful events in pregnancy can have negative effects on birth outcomes. Some of the estimates in this literature may be affected by small samples, omitted variables, endogenous mobility in response to disasters, and errors in the measurement of gestation, as well as by a mechanical correlation between longer gestation and the probability of having been exposed. We use millions of individual birth records to examine the effects of exposure to hurricanes during pregnancy, and the sensitivity of the estimates to these econometric problems. We find that exposure to a hurricane during pregnancy increases the probability of abnormal conditions of the newborn such as being on a ventilator more than 30min and meconium aspiration syndrome (MAS). Although we are able to reproduce previous estimates of effects on birth weight and gestation, our results suggest that measured effects of stressful events on these outcomes are sensitive to specification and it is preferable to use more sensitive indicators of newborn health.

Feasible methods to estimate disease based price indexes

- Journal of Health Economics---2013---Ralph Bradley

There is a consensus that statistical agencies should report medical data by disease rather than by service. This study computes price indexes that are necessary to deflate nominal disease expenditures and to decompose their growth into price, treated prevalence and output per patient growth. Unlike previous studies, it uses methods that can be implemented by the Bureau of Labor Statistics (BLS). For the calendar years 2005–2010, I find that these feasible disease based indexes are approximately 1% lower on an annual basis than indexes computed by current methods at BLS. This gives evidence that traditional medical price indexes have not accounted for the more efficient use of medical inputs in treating most diseases.

A new axiomatic approach to the evaluation of population health

- Journal of Health Economics---2013---Jens Hougaard,Juan Moreno-Ternero,Lars Peter Østerdal

In this paper we explore the implications of normative principles for the evaluation of population health. We formalize those principles as axioms for social preferences over distributions of health for a given population. We single out several focal population health evaluation functions, which represent social preferences, as a result of combinations of those axioms. Our results provide new rationale for popular theories in health economics, such as the unweighted aggregation of quality-adjusted life years (QALYs) or healthy years equivalents (HYEs) and generalizations of the two, aimed to capture concerns for distributive justice, without resorting to controversial assumptions on individual preferences.

Cannabis use and suicidal ideation

- Journal of Health Economics---2013---Jan C. van Ours,Jenny Williams,David Fergusson,L. John Horwood

Globally, suicide has emerged as the second leading cause of death among youth aged 10–24 years old. In order to better understand the causes of this phenomenon, we investigate the relationship between suici-

dal ideation and cannabis use. Our empirical analysis is based on a 30-year longitudinal study of a birth cohort. We find that intensive cannabis use – at least several times per week – leads to a higher transition rate into suicidal ideation for males. We find no evidence that suicidal ideation leads to cannabis use for either males or females.

School meal crowd out in the 1980s

- Journal of Health Economics---2013---Stephanie von Hinke

This paper explores whether the state provision of school meals in the 1980s crowded out private provision by examining two policy reforms that radically altered the UK school meal service. Both reforms effectively increased the cost of school meals for one group (the treated), leaving another unaffected (the controls). I find strong evidence of crowd out: the reforms reduced school meal take-up among the treated by 20–30 percentage points, with no difference among the controls. I then examine whether this affected children's body weights, using a large, unique, longitudinal dataset of primary school children from 1972 to 1994. The findings show no evidence of any effects on child body weight.

The effect of unemployment on the mental health of spouses – Evidence from plant closures in Germany

- Journal of Health Economics---2013---Jan Marcus

Studies on health effects of unemployment usually neglect spillover effects on spouses. This study specifically investigates the effect of an individual's unemployment on the mental health of their spouse. In order to allow for causal interpretation of the estimates, it focuses on plant closure as entry into unemployment, and combines difference-in-difference and matching based on entropy balancing to provide robustness against observable and time-invariant unobservable heterogeneity. Using German Socio-Economic Panel Study data the paper reveals that unemployment decreases the mental health of spouses almost as much as for the directly affected individuals. The findings highlight that previous studies underestimate the public health costs of unemployment as they do not account for the potential consequences for spouses.

Treatment decisions under ambiguity

- Journal of Health Economics---2013---Loïc Berger,Han Bleichrodt,Louis Eeckhoudt

Many health risks are ambiguous in the sense that reliable and credible information about these risks is unavailable. In health economics, ambiguity is usually handled through sensitivity analysis, which implicitly assumes that people are neutral towards ambiguity. However, empirical evidence suggests that people are averse to ambiguity and react strongly to it. This paper studies the effects of ambiguity aversion on two classical medical decision problems. If there is ambiguity regarding the diagnosis of a patient, ambiguity aversion increases the decision maker's propensity to opt for treatment. On the other hand, in the case of ambiguity regarding the effects of treatment, ambiguity aversion leads to a reduction in the propensity to choose treatment.

Health consequences of easier access to alcohol: New Zealand evidence

- Journal of Health Economics---2013---Emily Conover,Dean Scrimgeour

We evaluate the health effects of a reduction in New Zealand's minimum legal purchase age for alcohol. Difference-in-differences (DD) estimates show a substantial increase in alcohol-related hospitalizations among those newly eligible to purchase liquor, around 24.6% (s.e.=5.5%) for males and 22% (s.e.=8.1%) for females. There is less evidence of an effect among ineligible younger cohorts. There is little evidence of alcohol either complementing or substituting for drugs. We do not find evidence that earlier access to alcohol is associated with learning from experience. We also present regression discontinuity estimates, but emphasize DD estimates since in a simulation of a rational

addiction model DD estimates are closer than regression discontinuity estimates to the policy's true effect.

Does retirement age impact mortality?

- Journal of Health Economics---2013---Erik Hernaes,Simen Markussen,John Piggott,Ola Vestad

The relationship between retirement and mortality is studied with a unique administrative data set covering the full population of Norway. A series of retirement policy changes in Norway reduced the retirement age for a group of workers but not for others. Difference-in-differences estimation based on monthly birth cohorts and treatment group status show that the early retirement programme significantly reduced the retirement age; this holds true also when we account for programme substitution, for example into the disability pension. Instrumental variables estimation results show no effect on mortality of retirement age; neither do estimation results from a hazard rate model.

Using RD design to understand heterogeneity in health insurance crowd-out

- Journal of Health Economics---2013---Thomas G. Koch

Crowd-out, the switching from private to public insurance, is often found, but estimates are rarely consistent with prior measurements. Cutler and Gruber (1996) found crowd-out in up to half of the newly eligible children, while Card and Shore-Sheppard (2004) found almost none. This paper exploits many regression discontinuity (RD) designs to estimate heterogeneous effects of public insurance eligibility. Crowd-out and its impact on spending and utilization is documented across the income spectrum, but effects are smaller at higher income levels. These differences vary by state and correspond to changes in the reimbursement rates of public insurance plans.

Malaria: An early indicator of later disease and work level

- Journal of Health Economics---2013---Sok Chul Hong

This study investigates the effect of early-life exposure to malaria on disease and work level in old age over the past one and a half centuries. Using longitudinal lifetime records of Union Army veterans, I first estimate that exposure to a malarial environment in early life (c.1840) substantially increased the likelihood of having various chronic diseases and not working in old age (c.1900). Second, from data on US cohorts born between 1891 and 1960, I find that those exposed to a higher level of the anti-malaria campaign, which began in 1921, had lower levels of work disability in old age. Third, I seek the same implications for the modern period by linking WHO's country statistics on DALYs among older populations in 2004 to country-level malaria risk in pre-eradication era. In the paper, I discuss possible mechanisms and propose the significance of malaria eradication and early-life conditions from a long-term perspective.

Does hospital ownership affect patient experience? An investigation into public–private sector differences in England

- Journal of Health Economics---2013---Virginie Pérotin,Bernarda Zamora,Rachel Reeves,Will Bartlett,Pauline Allen

Using patient experience survey data, the paper investigates whether hospital ownership affects the level of quality reported by patients whose care is funded by the National Health Service in areas other than clinical quality. We estimate a switching regression model that accounts for (i) some observable characteristics of the patient and the hospital episode; (ii) selection into private hospitals; and (iii) unmeasured hospital characteristics captured by hospital fixed effects.

Does widowhood explain gender differences in out-of-pocket medical spending among the elderly?

- Journal of Health Economics---2013---Gopi Goda,John B. Shoven,Sita Slavov

Despite the presence of Medicare, out-of-pocket medical spending is a large expenditure risk facing the

elderly. While women live longer than men, elderly women incur higher out-of-pocket medical spending than men at each age. In this paper, we examine whether differences in marital status and living arrangements can explain this difference. We find that out-of-pocket medical spending is approximately 24 percent higher when an individual becomes widowed, a large portion of which is spending on nursing homes. Our results suggest a substantial role of living arrangements in out-of-pocket medical spending. Our estimates combined with differences in rates of widowhood across gender suggest that marital status can explain about one third of the gender difference in total out-of-pocket medical spending, leaving a large portion unexplained. On the other hand, gender differences in widowhood more than explain the observed gender difference in out-of-pocket spending on nursing homes.

On correcting the concentration index for binary variables

- Journal of Health Economics---2013---Gustav Kjellsson,Ulf-G. Gerdtham

This article discusses measurement of socioeconomic inequalities in the prevalence of a health condition, in response to the recent exchange between Guido Erreygers and Adam Wagstaff, in which they discuss the merits of their own corrections to the frequently used concentration index. We first reconcile their debate and discuss the value judgments implicit in their indices. Next, we provide a formal definition of the previously undefined value judgment in Wagstaff's correction. Finally, we show empirically that the choice of index matters, as illustrated by comparisons between countries using data from the European Survey of Health, Ageing and Retirement.

The impact of medical errors on physician behavior: Evidence from malpractice litigation

- Journal of Health Economics---2013---Ity Shurtz

How do medical errors affect physician behavior? Despite the importance of this question empirical evidence about it remains limited. This paper studies the impact of obstetricians' medical errors that resulted in malpractice litigation on their subsequent choice of whether to perform a C-section, a common procedure that is thought to be sensitive to physician incentives. The main result is that C-section rates jumped discontinuously by 4% after a medical error, establishing an association between medical errors and treatment patterns. C-section rates continued to increase afterwards, bringing the cumulative increase 2.5 years after a medical error to 8%.

Shipping out instead of shaping up: Rehospitalization from nursing homes as an unintended effect of public reporting

- Journal of Health Economics---2013---R. Tamara Konetzka,Daniel Polsky,Rachel M. Werner

Public reporting of health care quality has become a popular tool for incenting quality improvement. A fundamental question about public reporting is whether it causes providers to select healthier patients for treatment. In the nursing home post-acute setting, where patients must achieve a minimum length of stay to be included in quality measures, selection may take the form of discharge from the nursing home using rehospitalization, a particularly costly and undesirable outcome. We study the population of post-acute patients of skilled nursing facilities nationwide during 1999–2005 to assess whether selective rehospitalization occurred when public reporting was instituted in 2002, using multiple quasi-experimental designs to identify effects. We find that after public reporting was implemented, rehospitalizations before the length-of-stay cutoff increased. We conclude that nursing homes rehospitalize higher-risk post-acute patients to improve scores, providing evidence for selection behavior on the part of nursing home providers in the presence of public reporting.

Reducing underage alcohol and tobacco use: Evidence from the introduction of vertical identification cards

- Journal of Health Economics---2013---Andriana Bellou,Rachana Bhatt

From 1994 to 2009, forty-three states changed the design of their driver's license/state identification cards in an effort to reduce underage access to and consumption of alcohol and tobacco. In these states, individuals under the age of 21 are issued licenses that are vertically oriented, whereas licenses for individuals 21 and older retain a traditional horizontal shape. This paper examines the effect of this design change on underage alcohol and tobacco use. Using a difference-in-differences methodology, we find a reduction in drinking and smoking for 16 year olds. These results are upheld in a triple difference model that uses a within state control group of teens that did not receive a vertical license to control for state-specific unobserved factors. Interestingly, we find that the effects of the design change are concentrated in the 1–2 years after a state begins issuing vertical licenses. We consider various explanations for our findings: teen learning, the availability of false identification, and changes in retailer behavior.

Does information on health status lead to a healthier lifestyle? Evidence from China on the effect of hypertension diagnosis on food consumption

- Journal of Health Economics---2013---Meng Zhao,Yoshifumi Konishi,Paul Glewwe

We examine the role of information in understanding the differential effects of income on the demand for health. In the health capital framework of Grossman (JPE, 1972), we derive the testable hypotheses that individuals adjust their diet in a healthier direction upon receiving negative health information, and that the effect is greater for richer individuals. Based on unique Chinese longitudinal data and a regression discontinuity design that exploits the exogenous cutoff of systolic blood pressure in the diagnosis of hypertension, we find that, upon receiving hypertension diagnosis, individuals reduce fat intake significantly, and richer individuals reduce more. Our results also indicate that among the rich, hypertension diagnosis is more effective for individuals with lower education.

Does the U.S. health care sector suffer from Baumol's cost disease? Evidence from the 50 states

- Journal of Health Economics---2013---Laurie J. Bates,Rexford Santerre

This study examines if health care costs in the United States are affected by Baumol's cost disease. It relies on an empirical test proposed by Hartwig (2008) and extended by Colombier (2010) and uses a panel data set of 50 states over the 1980–2009 period. The results suggest that health care costs grow more rapidly when economy-wide wage increases exceed productivity gains. The findings are fairly robust with respect to time- and state-fixed effects, individual state time trends, and two-stage least square estimation. Consequently, this study suggests that the U.S. health care sector suffers from Baumol's cost disease.

Do medical doctors respond to economic incentives?

- Journal of Health Economics---2013---Leif Andreassen,Maria Di Tommaso,Steinar Strøm

A longitudinal analysis of married physicians labor supply is carried out on Norwegian data from 1997 to 1999. The model utilized for estimation implies that physicians can choose among 10 different job packages which are a combination of part time/full time, hospital/primary care, private/public sector, and not working. Their current choice is influenced by past available options due to a habit persistence parameter in the utility function. In the estimation we take into account the budget constraint, including all features of the tax system. Our results imply that an overall wage increase or less progressive taxation moves married physicians toward full time job packages, in particular to full time jobs in the private sector. But the overall

and aggregate labor supply elasticities in the population of employed doctors are rather low compared to previous estimates.

Does hospital competition harm equity? Evidence from the English National Health Service

- Journal of Health Economics---2013---Richard Cookson,Mauro Laudicella,Paolo Li Donni

Increasing evidence shows that hospital competition under fixed prices can improve quality and reduce cost. Concerns remain, however, that competition may undermine socio-economic equity in the utilisation of care. We test this hypothesis in the context of the pro-competition reforms of the English National Health Service progressively introduced from 2004 to 2006. We use a panel of 32,482 English small areas followed from 2003 to 2008 and a difference in differences approach. The effect of competition on equity is identified by the interaction between market structure, small area income deprivation and year. We find a negative association between market competition and elective admissions in deprived areas. The effect of pro-competition reform was to reduce this negative association slightly, suggesting that competition did not undermine equity.

Modeling the relationship between health and health care expenditures using a latent Markov model

- Journal of Health Economics---2013---Bram Wouterse,Martijn Huisman,Bert R. Meijboom,Dorly J.H. Deeg,Johan J. Polder

We investigate the dynamic relationship between several dimensions of health and health care expenditures for older individuals. Health data from the Longitudinal Aging Survey Amsterdam is combined with data on hospital and long term care use. We estimate a latent variable based jointly on observed health indicators and expenditures. Annual transition probabilities between states of the latent variable are estimated using a Markov model. States associated with good current health and low annual health care expenditures are not associated with lower cumulative health care expenditures over remaining lifetime. We conclude that, although the direct health care cost saving effect is limited, the considerable gain in healthy lifeyears can make investing in the improvement of health of the older population worthwhile.

Economic considerations for social distancing and behavioral based policies during an epidemic

- Journal of Health Economics---2013---Eli P. Fenichel

Public policies intended to induce behavioral change, specifically incentives to reduce interpersonal contacts or to "social distance," increasingly play a prominent role in public disease response strategies as governments plan for and respond to major epidemics. I compare social distancing incentives and outcomes under decentralized, full control social planner, and constrained social planner, without health class specific control, decision making scenarios. Constrained social planner decision making, based on non-health class specific controls, can in some instances make society worse off than decentralized decision making (i.e. no intervention). The oft neglected behavior of recovered and immune individuals is important for welfare and health outcomes.

The effect of Medicaid physician fees on take-up of public health insurance among children in poverty

- Journal of Health Economics---2013---Youjin Hahn

I investigate how changes in fees paid to Medicaid physicians affect take-up among children in low-income families. The existing literature suggests that the low level of Medicaid fee payments to physicians reduces their willingness to see Medicaid patients, thus creating an access-to-care problem for these patients. For the identical service, current Medicaid reimbursement rates are only about 65 percent of those covered by Medicare.

Increasing the relative payments of Medicaid would increase its perceived value, as it would provide better access to health care for Medicaid beneficiaries. Using variation in the timing of the changes in Medicaid payment across states, I find that increasing Medicaid generosity is associated with both an increase in take-up and a reduction in uninsured rate. These results provide a partial answer to the puzzling question of why many low-income children who are eligible for Medicaid remain uninsured.

Making Medicare advantage a middle-class program

- Journal of Health Economics---2013---Jacob Glazer,Thomas G. McGuire

This paper studies the role of Medicare's premium policy in sorting beneficiaries between traditional Medicare (TM) and managed care plans in the Medicare advantage (MA) program. Beneficiaries vary in their demand for care. TM fully accommodates demand but creates a moral hazard inefficiency. MA rations care but disregards some elements of the demand. We describe an efficient assignment of beneficiaries to these two options, and argue that efficiency requires an MA program oriented to serve the large middle part of the distribution of demand: the "middle class." Current Medicare policy of a "single premium" for MA plans cannot achieve efficient sorting. We characterize the demand-based premium policy that can implement the efficient assignment of enrollees to plans. If only a single premium is feasible, the second-best policy involves too many of the low-demand individuals in MA and a too low level of services relative to the first best. We identify approaches to using premium policy to revitalize MA and improve the efficiency of Medicare.

The impact of minimum legal drinking age laws on alcohol consumption, smoking, and marijuana use revisited

- Journal of Health Economics---2013---Barış Yörük,Ceren Ertan Yoruk

In volume 30, issue 4 of this journal, we used data from the National Longitudinal Study of Youth, 1997 cohort (NLSY97) to estimate the impact of the minimum legal drinking age (MLDA) laws on alcohol consumption, smoking, and marijuana use among young adults. In our analysis, we used a restricted sample of young adults and considered only those who have consumed alcohol, smoked cigarettes, or used marijuana at least once since the date of their last interview. In this paper, we revisit our original study using the full sample. We show that our results for alcohol consumption in the full sample are similar to those from the restricted sample. However, the effect of the MLDA on smoking and marijuana use is smaller and often statistically insignificant.

Personality and the education–health gradient: A note on "Understanding differences in health behaviors by education"

- Journal of Health Economics---2013---Gabriella Conti,Christopher Hansman

We test the robustness of the results of Cutler and Lleras-Muney (2010) on the role of personality in explaining the education–health gradient by using alternative measures of child personality available in the National Child Development Study. We show that, alternatively to the authors, conclusions, personality contributes to the education–health gradient to an extent nearly as large as that of cognition.

Health in the cities: When the neighborhood matters more than income

- Journal of Health Economics---2013---Marcel Bilger,Vincenzo Carrieri

Using a rich Italian cross-sectional dataset, we estimate the effect of a neighborhood problems aggregate (including pollution, crime, and noise) on self-assessed health, presence of chronic conditions and limitations in daily activities. We address the self-selection of the residents in their neighborhoods, as well as the possible endogeneity of income with respect to health, through instrumental variable methods and several endogeneity tests. The main novelty is the sound estimation of the

neighborhood effect on health using observational data, which has the advantage of providing general results that are not dependent on any experimental design. This allows us to fully compare the neighborhood effect with the traditional socioeconomic determinants of health. Our main findings are that low quality neighborhoods are strongly health damaging. This effect is comparable to the primary/upper secondary education health differential and is even higher than the impact that poor economic circumstances have on health.

Effect of nursing home ownership on the quality of post-acute care: An instrumental variables approach

- Journal of Health Economics---2013---David C. Grabowski,Zhanlian Feng,Richard Hirth,Momotazur Rahman,Vincent Mor

Given the preferential tax treatment afforded nonprofit firms, policymakers and researchers have been interested in whether the nonprofit sector provides higher nursing home quality relative to its for-profit counterpart. However, differential selection into for-profits and nonprofits can lead to biased estimates of the effect of ownership form. By using "differential distance" to the nearest nonprofit nursing home relative to the nearest for-profit nursing home, we mimic randomization of residents into more or less "exposure" to nonprofit homes when estimating the effects of ownership on quality of care. Using national Minimum Data Set assessments linked with Medicare claims, we use a national cohort of post-acute patients who were newly admitted to nursing homes within an 18-month period spanning January 1, 2004 and June 30, 2005. After instrumenting for ownership status, we found that post-acute patients in nonprofit facilities had fewer 30-day hospitalizations and greater improvement in mobility, pain, and functioning.

Alcohol and student performance: Estimating the effect of legal access

- Journal of Health Economics---2013---Jason Lindo,Isaac D. Swensen,Glen R. Waddell

We consider the effect of legal access to alcohol on student achievement. Our preferred approach identifies the effect through changes in one's performance after gaining legal access to alcohol, controlling flexibly for the expected evolution of grades as one makes progress towards their degree. We also report RD-based estimates but argue that an RD design is not well suited to the research question in our setting. We find that students' grades fall below their expected levels upon being able to drink legally, but by less than previously documented. We also show that there are effects on women and that the effects are persistent. Using the 1997 National Longitudinal Survey of Youth, we show that students drink more often after legal access but do not consume more drinks on days on which they drink.

Marriage, bereavement and mortality: The role of health care utilization

- Journal of Health Economics---2013---Emilia Simeonova

There is ample evidence that bereavement is associated with heightened mortality. Regardless of whether this strong association is truly causal, little is known about the factors contributing to it. This study begins to unpack the black box of the bereavement–mortality puzzle by investigating the extent to which heath behaviors and health care utilization patterns vary among chronically ill elderly males living with a spouse and those who are widowed, and by asking whether these differences contribute to the well-documented correlation between widowhood and health deterioration. In order to separate the effect of health care utilization from other potential channels it uses a unique dataset of doctor–patient encounters that allows in-depth analysis of the organization and effectiveness of medical care. Changes in health care utilization attributable to bereavement have a negative effect on survival but account for a small part of the overall negative effect of widowhood on longevity.

The psychological costs of war: Military combat and mental health

- Journal of Health Economics---2013---Resul Cesur,Joseph J. Sabia,Erdal Tekin

We exploit plausibly exogenous variation in overseas deployment assignment to estimate the effect of combat exposure on psychological well-being. Controlling for pre-deployment mental health, we find that active-duty soldiers deployed to combat zones are more likely to suffer from post-traumatic stress disorder (PTSD) than their counterparts deployed outside the United States in non-combat zones. Among those deployed to combat zones, those deployed to locales where they engage in enemy firefight or witness allied or civilian deaths are at an increased risk for suicidal ideation and PTSD relative to their active-duty counterparts deployed to combat zones without enemy firefight.

A theoretical approach to dual practice regulations in the health sector

- Journal of Health Economics---2013---Paula González,Ines Macho-Stadler

Internationally, there is wide cross-country heterogeneity in government responses to dual practice in the health sector. This paper provides a uniform theoretical framework to analyze and compare some of the most common regulations. We focus on three interventions: banning dual practice, offering rewarding contracts to public physicians, and limiting dual practice (including both limits to private earnings of dual providers and limits to involvement in private activities). An ancillary objective of the paper is to investigate whether regulations that are optimal for developed countries are adequate for developing countries as well. Our results offer theoretical support for the desirability of different regulations in different economic environments.

Health expenditure growth: Looking beyond the average through decomposition of the full distribution

- Journal of Health Economics---2013---Claudine de Meijer,O' Donnell, Owen,Marc Koopmanschap,Eddy Van Doorslaer,Owen O'Donnell

Explanations of growth in health expenditures have restricted attention to the mean. We explain change throughout the distribution of expenditures, providing insight into how expenditure growth and its explanation differ along the distribution. We analyse Dutch data on actual health expenditures linked to hospital discharge and mortality registers. Full distribution decomposition delivers findings that would be overlooked by examination of changes in the mean alone. The growth rate of hospital expenditures is greatest at the middle of the distribution and is driven mainly by changes in the distributions of determinants. Pharmaceutical expenditures increase most rapidly at the top of the distribution and are mainly attributable to structural changes, including technological progress, making treatment of the highest cost cases even more expensive. Changes in hospital practice styles make the largest contribution of all determinants to increased spending not only on hospital care but also on pharmaceuticals, suggesting important spill over effects.

Mergers and innovation in the pharmaceutical industry

- Journal of Health Economics---2013---William S. Comanor,F.M. Scherer

Conflicting trends confound the pharmaceutical industry. The productivity of pharmaceutical innovation has declined in recent years. At the same time, the cohort of large companies who are the leading engines of pharmaceutical R&D has become increasingly concentrated. The concurrent presence of these trends is not sufficient to determine causation. In response to lagging innovation prospects, some companies have sought refuge in mergers and acquisitions to disguise their dwindling prospects or gain R&D synergies. On the other hand, the increased concentration brought on by recent mergers may have contributed to the declining rate of innovation. In this paper, we consider the second of these causal relationships: the likely impact of the recent merger wave among the largest pharmaceutical companies on the rate of innovation. In other

words, have recent mergers, which may have been taken in response to lagging innovation, represented a self-defeating strategy that only made industry outcomes worse?

Smoking initiation and the iron law of demand

- Journal of Health Economics---2013---Dean R. Lillard,Eamon Molloy,Andrew Sfekas

We show, with three longitudinal datasets, that cigarette taxes and prices affect smoking initiation decisions. Evidence from longitudinal studies is mixed but generally find that initiation does not vary with price or tax. We show that the lack of statistical significance partly results because of limited policy variation in the time periods studied, truncated behavioral windows, or mis-assignment of price and tax rates in retrospective data (which occurs when one has no information about respondents' prior state or region of residence). Our findings highlight issues relevant to initiation behavior generally, particularly those for which individuals' responses to policy changes may be noisy or small in magnitude.

Capabilities as menus: A non-welfarist basis for QALY evaluation

- Journal of Health Economics---2013---Han Bleichrodt,John Quiggin

Quality-Adjusted Life Years (QALYs) are the most widely used measure of health in economic evaluations of health care. Within a welfarist framework QALYs are consistent with people's preferences under stringent assumptions. Several authors have argued that QALYs are a valid measure of health within an extra-welfarist framework. This paper studies the applicability of QALYs within the best-known extra-welfarist framework, Sen's capability approach. We propose a procedure to value capability sets and provide a foundation for QALYs within Sen's capability approach. We show that, under appropriate conditions, the ranking of capabilities can be represented locally by a QALY measure and that a willingness to pay for QALYs can be defined. The validity of QALYs as a general measure of health requires the same stringent conditions as in a welfarist framework.

Do smoke-free car laws work? Evidence from a quasi-experiment

- Journal of Health Economics---2013---Hai V. Nguyen

In response to increased risks of second-hand smoke exposure for children travelling in cars and its resulting deleterious health impacts, several jurisdictions passed legislation that bans smoking in private vehicles when children are present. In this study, I exploit a unique quasi-experiment from Canada and employ the difference-in-differences and triple-differences techniques to empirically evaluate this legislation. I find that the legislation reduces exposure to second-hand smoke inside cars for children. Further, there appears no marked increase in smoking at home after the implementation of the legislation.

Firm-sponsored general education and mobility frictions: Evidence from hospital sponsorship of nursing schools and faculty

- Journal of Health Economics---2013---Alan Benson

This study asks why hospitals provide direct financial support to nursing schools and faculty. This support is striking because nursing education is clearly general, clearly paid by the firm, and information asymmetries appear minimal. Using AHA and survey data, I find hospitals employing a greater share of their MSA's registered nurses are more likely to provide direct financial support to nursing schools and faculty, net of size and other institutional controls. Given the institutional context, I interpret this result as unusually specific evidence that technologically general skill training may be made de facto-specific by imperfect and costly mobility.

Participation and crowd out: Assessing the effects of parental Medicaid expansions

- Journal of Health Economics---2013---Sarah Hamersma,Matthew Kim

In this paper, we examine the effects of recent parental Medicaid eligibility expansions on Medicaid participation and private insurance coverage. We present a new approach for estimating these policy effects that explicitly models the particular policy instrument over which legislators have control–income eligibility thresholds. Our approach circumvents estimation problems stemming from misclassification or measurement error. Moreover, it allows us to assess how the policy effects may vary at different initial threshold levels. Using data from the Survey of Income and Program Participation, we find three main results. First, the eligibility expansions result in significant increases in Medicaid participation; a "typical" expansion increases Medicaid participation by about four percent of baseline coverage rates. Second, the participation effect is larger for lower initial thresholds and the effect decreases as Medicaid thresholds increase. Third, we find no statistically significant evidence of crowd out regardless of initial threshold level.

Endogenous cost-effectiveness analysis and health care technology adoption

- Journal of Health Economics---2013---Anupam B. Jena,Tomas J. Philipson

Increased health care spending has placed pressure on public and private payers to prioritize spending. Cost-effectiveness (CE) analysis is the main tool used by payers to prioritize coverage of new therapies. We argue that reimbursement based on CE is subject to a form of the "Lucas critique"; the goals of CE policies may not materialize when firms affected by the policies respond optimally to them. For instance, because 'costs' in CE analysis reflect prices set optimally by firms rather than production costs, observed CE levels will depend on how firm pricing responds to CE policies. Observed CE is therefore endogenous. When CE is endogenously determined, policies aimed at lowering spending and improving overall CE may paradoxically raise spending and lead to the adoption of more resource-costly treatments. We empirically illustrate whether this may occur using data on public coverage decisions in the United Kingdom.

Discrimination in a universal health system: Explaining socioeconomic waiting time gaps

- Journal of Health Economics---2013---Meliyanni Johar,Glenn Jones,Michael Keane,Elizabeth Savage,Olena Stavrunova

One of the core goals of a universal health care system is to eliminate discrimination on the basis of socioeconomic status. We test for discrimination using patient waiting times for non-emergency treatment in public hospitals. Waiting time should reflect patients' clinical need with priority given to more urgent cases. Using data from Australia, we find evidence of prioritisation of the most socioeconomically advantaged patients at all quantiles of the waiting time distribution. These patients also benefit from variation in supply endowments. These results challenge the universal health system's core principle of equitable treatment.

The effects of housing and neighborhood conditions on child mortality

- Journal of Health Economics---2013---Brian A. Jacob,Jens Ludwig,Douglas Miller

In this paper we estimate the causal effects on child mortality from moving into less distressed neighborhood environments. We match mortality data covering the period from 1997 to 2009 with information on every child in public housing that applied for a housing voucher in Chicago in 1997 (N=11,680). Families were randomly assigned to the voucher wait list, and only some families were offered vouchers. The odds ratio for the effects of being offered a housing voucher on overall mortality rates is equal to 1.13 for all children (95% CI 0.73–1.70), 1.34 for boys (95% CI 0.85–2.05) and 0.21 for girls (95% CI 0.01–1.04).

What is the price of prevention? New evidence from a field experiment

- Journal of Health Economics---2013---Edward N. Okeke,Clement A. Adepiti,Kayode O. Ajenifuja

How does increasing access to treatment affect the demand for preventive testing? In this paper we present

results from a field experiment in Nigeria in which we offered cervical cancer screening to women at randomly chosen prices. To test our hypothesis, we also offered women a lottery where the payoff was a subsidy towards the cost of cervical cancer treatment (conditional upon a diagnosis of cervical cancer). We find that women randomly selected to receive the conditional cancer treatment subsidy were about 4 percentage points more likely to take up screening than those in the control group. We also show that reducing the price of screening by 10 cents increased take-up by about 1 percentage point. These results offer compelling evidence that the optimal set of subsidies to increase take-up of preventive testing in developing countries, must include subsidies towards treatment costs (in addition to price subsidies).

Implications of a sugar-sweetened beverage (SSB) tax when substitutions to non-beverage items are considered

- Journal of Health Economics---2013---Eric A. Finkelstein,Chen Zhen,Marcel Bilger,James Nonnemaker,Assad M. Farooqui,Jessica Todd

Using the 2006 Homescan panel, we estimate the changes in energy, fat and sodium purchases resulting from a tax that increases the price of sugar-sweetened beverages (SSBs) by 20% and the effect of such a tax on body weight. In addition to substitutions that may arise with other beverages, we account for substitutions between SSBs and 12 major food categories. Our main findings are that the tax would result in a decrease in store-bought energy of 24.3kcal per day per person, which would translate into an average weight loss of 1.6 pounds during the first year and a cumulated weight loss of 2.9 pounds in the long run. We do not find evidence of substitution to sugary foods and show that complementary foods could contribute to decreasing energy purchases. Despite their significantly lower price elasticity, the tax has a similar effect on calories for the largest purchasers of SSBs.

The effect of informal care on work and wages

- Journal of Health Economics---2013---Courtney Van Houtven,Norma Coe,Meghan Skira

Cross-sectional evidence in the United States finds that informal caregivers have less attachment to the labor force. The causal mechanism is unclear: do children who work less become informal caregivers, or are children who become caregivers working less? Using longitudinal data from the Health and Retirement Study, we identify the relationship between informal care and work in the United States, both on the intensive and extensive margins, and examine wage effects. We control for time-invariant individual heterogeneity; rule out or control for endogeneity; examine effects for men and women separately; and analyze heterogeneous effects by task and intensity. We find modest decreases—2.4 percentage points—in the likelihood of working for male caregivers providing personal care. Female chore caregivers, meanwhile, are more likely to be retired. For female care providers who remain working, we find evidence that they decrease work by 3–10hours per week and face a 3 percent lower wage than non-caregivers. We find little effect of caregiving on working men's hours or wages. These estimates suggest that the opportunity costs to informal care providers are important to consider when making policy recommendations about the design and funding of public long-term care programs.

The role of regret minimisation in lifestyle choices affecting the risk of coronary heart disease

- Journal of Health Economics---2013---Marco Boeri,Alberto Longo,José M. Grisolía,W. George Hutchinson,Frank Kee

This paper introduces the discrete choice model-paradigm of Random Regret Minimisation (RRM) to the field of health economics. The RRM is a regret-based model that explores a driver of choice different from the traditional utility-based Random Utility Maximisation (RUM). The RRM approach is based on the idea that, when choosing, individuals aim to minimise

their regret–regret being defined as what one experiences when a non-chosen alternative in a choice set performs better than a chosen one in relation to one or more attributes. Analysing data from a discrete choice experiment on diet, physical activity and risk of a fatal heart attack in the next ten years administered to a sample of the Northern Ireland population, we find that the combined use of RUM and RRM models offer additional information, providing useful behavioural insights for better informed policy appraisal.

The virtuous tax: Lifesaving and crime-prevention effects of the 1991 federal alcohol-tax increase

- Journal of Health Economics---2013---Philip J. Cook,Christine Piette Durrance

The last time that federal excise taxes on alcoholic beverages were increased was 1991. The changes were larger than the typical state-level changes that have been used to study price effects, but the consequences have not been assessed due to the lack of a control group. Here we develop and implement a novel method for utilizing interstate heterogeneity to estimate the aggregate effects of a federal tax increase on rates of injury fatality and crime. We provide evidence that the relative importance of alcohol in violence and injury rates is directly related to per capita consumption, and build on that finding to generate estimates. A conservative estimate is that the federal tax (which increased alcohol prices by 6% initially) reduced injury deaths by 4.5% (6480 deaths), in 1991, and had a still larger effect on violent crime.

Competition in the pharmaceutical industry: How do quality differences shape advertising strategies?

- Journal of Health Economics---2013---Maria-Angeles de Frutos,Carmine Ornaghi,Georges Siotis

We present a Hotelling model of price and advertising competition between prescription drugs that differ in quality/side effects. Promotional effort results in the endogenous formation of two consumer groups: brand loyal and non-brand loyal ones. We show that advertising intensities are strategic substitutes, with the better quality drugs being the ones that are most advertised. This positive association stems from the higher rents that firms can extract from consumers whose brand loyalty is endogenously determined by promotional effort. The model's main results on advertising and pricing strategies are taken to the data. The latter consists of product level data on prices and quantities, product level advertising data, as well as the qualitative information on drug quality contained in the Orange Book compiled by the Food and Drug Administration (FDA). The empirical results provide strong support to the model's predictions.

Collateral damage: The German food crisis, educational attainment and labor market outcomes of German post-war cohorts

- Journal of Health Economics---2013---Hendrik Jürges,Hendrik Juerges

Using the German 1970 census to study educational and labor market outcomes of cohorts born during the German food crisis after World War II, I document that those born between November 1945 and May 1946 have significantly lower educational attainment and occupational status than cohorts born shortly before or after. Several alternative explanations for this finding are tested. Most likely, a short spell of severe undernutrition around the end of the war has impaired intrauterine conditions in early pregnancies and resulted in long-term detriments among the affected cohorts. This conjecture is corroborated by evidence from Austria.

Cash transfers and domestic violence

- Journal of Health Economics---2013---Melissa Hidrobo,Lia Fernald

Violence against women is a major health and human rights problem yet there is little rigorous evidence as to how to reduce it. We take advantage of the randomized roll-out of Ecuador's cash transfer program to mothers to investigate how an exogenous increase

in a woman's income affects domestic violence. We find that the effect of a cash transfer depends on a woman's education and on her education relative to her partner's. Our results show that for women with greater than primary school education a cash transfer significantly decreases psychological violence from her partner. For women with primary school education or less, however, the effect of a cash transfer depends on her education relative to her partner's. Specifically, the cash transfer significantly increases emotional violence in households where the woman's education is equal to or more than her partner's.

Older people's participation in extra-cost disability benefits

- Journal of Health Economics---2013---Francesca Zantomio

The targeting of an UK extra-cost disability benefit for older people, Attendance Allowance, is analyzed using longitudinal data from the British Household Panel Survey. First, a binary model of benefit participation is used to investigate whether receipt is responsive to the onset of disability. Second, matching estimators are used to evaluate the consequences of missed participation on later financial wellbeing. Results indicate that participation is highly responsive to the onset of disability, although the chance of delays in receipt emerges. Personal characteristics unrelated to eligibility also appear to influence benefit receipt, translating into sizeable differences in the amount of cash support received. The comparison of recipients with observationally equivalent non-recipients confirms that timely participation reduces disabled older people's financial strain.

Understanding overeating and obesity

- Journal of Health Economics---2012---Christopher Ruhm

The combination of economic and biological factors is likely to result in overeating in the current environment of cheap and readily available food. This propensity is shown using a "dual decision" approach where choices reflect the interaction of a "deliberative" system, operating as in standard economic models, and an "affective" system that responds rapidly to stimuli without considering long-term consequences. This framework is characterized by excess food consumption and body weight, in that individuals prefer both ex-ante and ex-post to eat and weigh less than they actually do, with weight loss attempts being common but often unsuccessful or only partially successful. As in the standard model, weight is related to prices. However, another potentially important reason for rising obesity is that food producers have incentives to engineer products to stimulate the affective system so as to encourage overeating. Data from several sources are used to investigate predictions of the dual decision model, with the evidence providing broad support for at least some irrationality in food consumption. Most importantly, there is little indication that the large secular increases in body mass index have been accompanied by corresponding growth in utility-maximizing weight. One result is that efforts to reduce weight have become more common as obesity has increased.

Economic booms and risky sexual behavior: Evidence from Zambian copper mining cities

- Journal of Health Economics---2012---Nicholas Wilson

Existing studies suggest that individual and household level economic shocks affect the demand for and supply of risky sex. However, little evidence exists on the effects of an aggregate shock on equilibrium risky sexual behavior. This paper examines the effects of the early twenty-first century copper boom on risky sexual behavior in Zambian copper mining cities. The results suggest that the copper boom substantially reduced rates of transactional sex and multiple partnerships in copper mining cities. These effects were partly concentrated among young adults and copper boom induced in-migration to mining cities appears to have contributed to these reductions.

Junior doctors' preferences for specialty choice

- Journal of Health Economics---2012---Peter Sivey,Anthony Scott,Julia Witt,Catherine Joyce,John Humphreys

A number of studies suggest that there is an over-supply of specialists and an under-supply of general practitioners in many developed countries. Previous econometric studies of specialty choice from the US suggest that although income plays a role, other non-pecuniary factors may be important. This paper presents a novel application of a choice experiment to identify the effects of expected future earnings and other attributes on specialty choice. We find the implied marginal wage estimated from our discrete choice model is close to the actual wages of senior specialists, but much higher than those of senior GPs. In a policy simulation we find that increasing GPs' earnings by $50,000, or increasing opportunities for procedural or academic work can increase the number of junior doctors choosing general practice by between 8 and 13 percentage points. The simulation implies an earnings elasticity of specialty choice of 0.95.

Price elasticity of expenditure across health care services

- Journal of Health Economics---2012---Fabián Duarte

Policymakers in countries around the world are faced with rising health care costs and are debating ways to reform health care to reduce expenditures. Estimates of price elasticity of expenditure are a key component for predicting expenditures under alternative policies. Using unique individual-level data compiled from administrative records from the Chilean private health insurance market, I estimate the price elasticity of expenditures across a variety of health care services. I find elasticities that range between zero for the most acute service (appendectomy) and 2.08 for the most elective (psychologist visit). Moreover, the results show that at least one third of the elasticity is explained by the number of visits; the rest is explained by the intensity of each visit. Finally, I find that high-income individuals are five times more price sensitive than low-income individuals and that older individuals are less price-sensitive than young individuals.

On insuring and caring for parents' long-term care needs

- Journal of Health Economics---2012---Christophe Courbage,Louis Eeckhoudt

When adult children are financially responsible for their parents, they can take considerable interest in the amount of their parents' long-term care (LTC) insurance. In this paper, we look at the optimal levels of LTC insurance and of informal care, and at the link between these two decisions when the child, who provides informal care, is also the decision-maker with regard to LTC insurance. Interestingly, results differ depending on the degree of both parental and child altruism and indicate either complementarity or substitutability between insurance and informal care. In particular, we show in the presence of child altruism that insurance stimulates the offer of informal care, contrary to the case where the insurance decision is made by the elderly parent. We also investigate how exogenous shocks with respect to the opportunity cost of informal care, initial wealth levels and bequests modify simultaneously the optimal level of insurance and informal care.

What U.S. data should be used to measure the price elasticity of demand for alcohol?

- Journal of Health Economics---2012---Christopher Ruhm,Alison Jones,Kerry Anne McGeary,William C. Kerr,Joseph Terza,Thomas K. Greenfield,Ravi S. Pandian

This paper examines how estimates of the price elasticity of demand for beer vary with the choice of alcohol price series examined. Our most important finding is that the commonly used ACCRA price data are unlikely to reliably indicate alcohol demand elasticities —estimates obtained from this source vary drastically and unpredictably. As an alternative, researchers often use beer taxes to proxy for alcohol prices. While the

estimated beer taxes elasticities are more stable, there are several problems with using taxes, including difficulties in accounting for cross-price effects. We believe that the most useful estimates reported in this paper are obtained using annual Uniform Product Code (UPC) "barcode" scanner data on grocery store alcohol prices. These estimates suggest relatively low demand elasticity, probably around 0.3, with evidence that the elasticities are considerably overstated in models that control for beer but not wine or spirits prices.

The effect of expanding access to health insurance on the health and mortality of Social Security Disability Insurance beneficiaries

- Journal of Health Economics---2012---Robert R. Weathers,Michelle Stegman

We use a social experiment to estimate the impact of expanding health insurance coverage on the health and mortality of newly entitled SSDI beneficiaries who lacked health insurance. Our intent-to-treat estimates show that expanding health insurance has significant effects on self-reported health at one year following health insurance enrollment, positive effects on mental health and physical health at one year following health insurance enrollment, and no significant effects on mortality within our observation period. About 30% of control group members obtained health insurance coverage within one year following enrollment. We use two-stage least square models to estimate the impact on those who would not have obtained health insurance coverage without the demonstration project and find larger effects on self-reported health and mental health among these SSDI beneficiaries. Finally, we examine distributional impacts to show that mean impacts miss meaningful effects.

Time to death and the forecasting of macro-level health care expenditures: Some further considerations

- Journal of Health Economics---2012---Pieter H. van Baal,Albert Wong

Although the effect of time to death (TTD) on health care expenditures (HCE) has been investigated using individual level data, the most profound implications of TTD have been for the forecasting of macro-level HCE. Here we estimate the TTD model using macro-level data from the Netherlands consisting of mortality rates and age- and gender-specific per capita health expenditures for the years 1981–2007. Forecasts for the years 2008–2020 of this macro-level TTD model were compared to forecasts that excluded TTD. Results revealed that the effect of TTD on HCE in our macro model was similar to those found in micro-econometric studies. As the inclusion of TTD pushed growth rate estimates from unidentified causes upwards, however, the two models' forecasts of HCE for the 2008–2020 were similar. We argue that including TTD, if modeled correctly, does not lower forecasts of HCE.

The regulation of health care providers' payments when horizontal and vertical differentiation matter

- Journal of Health Economics---2012---David Bardey,Chiara Canta,Jean-Marie Lozachmeur

This paper analyzes the regulation of payment schemes for health care providers competing in both quality and product differentiation of their services. The regulator uses two instruments: a prospective payment per patient and a cost reimbursement rate. When the regulator can only use a prospective payment, the optimal price involves a trade-off between the level of quality provision and the level of horizontal differentiation. If this pure prospective payment leads to underprovision of quality and overdifferentiation, a mixed reimbursement scheme allows the regulator to improve the allocation efficiency. This is true for a relatively low level of patients' transportation costs. We also show that if the regulator cannot commit to the level of the cost reimbursement rate, the resulting allocation can dominate the one with full commitment. This occurs when the transportation cost is low or high enough, and the full commitment solution either implies full or zero cost reimbursement.

The impact of direct-to-consumer television and magazine advertising on antidepressant use

- Journal of Health Economics---2012---Rosemary J. Avery,Matthew D. Eisenberg,Kosali I. Simon

We examine whether exposure to direct-to-consumer advertising (DTCA) for antidepressant drugs affects individual use of these medications among those suffering from depression. Prior studies have almost exclusively relied on making connections between national or market-level advertising volume/expenditures and national or individual-level usage of medications. This is the first study to: estimate the impact of individual-level exposure to DTCA on individual-level use of antidepressants; estimate the impact of individual-level exposure to television DTCA on individual-level use in any drug class; consider the relative and interactive impact of DTCA in two different media in any drug class; and, consider the heterogeneity of impact among different populations in an econometric framework in the antidepressant market. There are also important limitations to note. Unlike prior market level studies that use monthly data, we are limited to aggregated annual data. Our measures of potential advertising exposure are constructed assuming that media consumption patterns are stable during the year. We are also not able to study the impact of advertising on use of antidepressants for conditions other than depression, such as anxiety disorders. We find that: DTCA impacts antidepressant use in a statistically and economically significant manner; that these effects are present in both television and magazine advertising exposure but do not appear to have interactive effects; are stronger for women than for men in the magazine medium, but are about equally strong for men and women in the TV medium; and, are somewhat stronger for groups suffering from more severe forms of depression. The overall size of the effect is a 6–10 percentage point increase in antidepressant use from being exposed to television advertising; the corresponding magazine effects are between 3 and 4 percentage points.

The heterogeneity of the cigarette price effect on body mass index

- Journal of Health Economics---2012---George L. Wehby,Charles Courtemanche

Previous studies estimate the average effect of cigarette price on body mass index (BMI), with recent research showing that their different methodologies all point to a negative effect after several years. This literature, however, ignores the possibility that the effect could vary throughout the BMI distribution or across socioeconomic and demographic groups due to differences in underlying obesity risks or preferences for health. We evaluate heterogeneity in the long-run impact of cigarette price on BMI by performing quantile regressions and stratifying the sample by race, education, age, and sex. Cigarette price has a highly heterogeneous negative effect that is more than three times as strong at high BMI levels – where weight loss is most beneficial for health – than at low levels. The effects are also strongest for blacks, college graduates, middle-aged adults, and women. We also assess the implications for disparities, conduct robustness checks, and evaluate potential mechanisms.

Hospital volume responses to Medicare's Outpatient Prospective Payment System: Evidence from Florida

- Journal of Health Economics---2012---Daifeng He,Jennifer Mellor

Effective in 2000, Medicare's Outpatient Prospective Payment System (OPPS) sets pre-determined reimbursement rates for hospital outpatient services, replacing the prior cost-based methods of reimbursement. Using Florida outpatient discharge data, we study the effect of OPPS on hospital outpatient volume. We find that on average Medicare rate cuts either decreased or had no significant effect on Medicare volume, but increased private fee-for-service (FFS) volume. We also find that responses vary with the hospital's "exposure" to Medicare payment changes, where exposure is measured as the baseline Medicare patient share. Compared to less exposed hospitals, highly

exposed hospitals responded with larger increases in private FFS volume and with smaller decreases (in some cases, even increases) in Medicare volume when payment rates fell. Our results are consistent with provider demand inducement.

Recessions and seniors' health, health behaviors, and healthcare use: Analysis of the Medicare Current Beneficiary Survey

- Journal of Health Economics---2012---Melissa McInerney,Jennifer Mellor

A number of studies report that U.S. state mortality rates, particularly for the elderly, decline during economic downturns. Further, several prior studies use microdata to show that as state unemployment rates rise, physical health improves, unhealthy behaviors decrease, and medical care use declines. We use data on elderly mortality rates and data from the Medicare Current Beneficiary Survey from a time period that encompasses the start of the Great Recession. We find that elderly mortality is countercyclical during most of the 1994–2008 period. Further, as unemployment rates rise, seniors report worse mental health and are no more likely to engage in healthier behaviors. We find suggestive evidence that inpatient utilization increases perhaps because of an increased physician willingness to accept Medicare patients. Our findings suggest that either elderly individuals respond differently to recessions than do working age adults, or that the relationship between unemployment and health has changed.

The toll of fertility on mothers' wellbeing

- Journal of Health Economics---2012---Julio Caceres-Delpiano,Marianne Simonsen

Using multiple births as source of variation, we study the impact of fertility on the overall wellbeing of mothers. First, using US Census data for the year 1980, we study the impact of number of children on family arrangements, welfare participation and poverty status. Second, using the National Health Interview Survey (NHIS) for the period 1982–2003, we study the impact on a series of health risk factors. The findings reveal, first, that an increase in family size increases the likelihood of marital breakdown. Second, we find evidence that mothers facing an increase in family size are not only more likely to live with other family members such as grandparents, aunts and uncles, they are also more likely to receive help from welfare programs. Third, consistent with an increase in welfare participation, families (mothers) are more likely to fall below the poverty line, and they face a reduction in total family income. The results using NHIS confirm a negative impact of fertility on marriage stability and an increase in welfare participation measured by the likelihood of using Medicaid and for some samples a reduction in the take-up of private health insurance. Finally, we find evidence that a shock in fertility increases the likelihood of mothers suffering from high blood pressure and becoming obese.

Early life exposure to malaria and cognition in adulthood: Evidence from Mexico

- Journal of Health Economics---2012---Atheendar Venkataramani

This study examines the impact of early life malaria exposure on cognition in sample of Mexican adults, using the nationwide introduction of malaria eradication efforts to identify causal impacts. The core findings are that birth year exposure to malaria eradication was associated with increases in Raven Progressive Matrices test scores and consumption expenditures, but not schooling. Additionally, cohorts born after eradication both entered and exited school earlier than their pre-eradication counterparts. These effects were only seen for men and explanations for this are assessed. Collectively, these findings suggest that improvements in infant health help explain secular increases in cognitive test scores, that better cognition may link early life health to adulthood earnings, and that human capital investments through childhood and young adulthood respond sensitively to market returns to early life endowment shocks.

Does uninsurance affect the health outcomes of the insured? Evidence from heart attack patients in California

- Journal of Health Economics---2012---N. Meltem Daysal

In this paper, I examine the impact of uninsured patients on the in-hospital mortality rate of insured heart attack patients. I employ panel data models using patient discharge and hospital financial data from California (1999–2006). My results indicate that uninsured patients have an economically significant effect that increases the mortality rate of insured heart attack patients. I show that these results are not driven by alternative explanations, including reverse causality, patient composition effects, sample selection or unobserved trends and that they are robust to a host of specification checks. The primary channel for the observed spillover effects is increased hospital uncompensated care costs. Although data limitations constrain my capacity to check how hospitals change their provision of care to insured heart attack patients in response to reduced revenues, the evidence I have suggests a modest increase in the quantity of cardiac services without a corresponding increase in hospital staff.

The effects of cannabis use on physical and mental health

- Journal of Health Economics---2012---Jan C. van Ours,Jenny Williams

This paper investigates whether cannabis use affects physical and mental health. To do so, information on prime aged individuals living in Amsterdam in 1994 is used. Dutch data offer a clear advantage in estimating the health impacts of cannabis use because the legal status of cannabis in the Netherlands ensures that estimates are free from confounding with the physical and psychological effects of engaging in a criminal activity. Accounting for selection into cannabis use and shared frailties in mental and physical health, the results suggest that cannabis use reduces the mental wellbeing of men and women and the physical wellbeing of men. Although statistically significant, the magnitude of the effect of using cannabis on mental and physical health is found to be small.

Proposing indicators to measure achievement and shortfall inequality consistently

- Journal of Health Economics---2012---Casilda Lasso de la Vega,Oihana Aristondo

In several economic fields, such as those related to health or education, the individuals' characteristics are measured by bounded variables. Accordingly, these characteristics may be indistinctly represented by achievements or shortfalls. A difficulty arises when inequality needs to be assessed. One may focus either on achievements or on shortfalls but the respective inequality rankings may lead to contradictory results. In this note we propose a procedure to define indicators that measure equally the achievement and shortfall inequality. Specifically, we derive measures which are invariant under ratio-scale or translation transformations, and a decomposable measure is also obtained. As the indicators proposed depend on the distribution bounds, families of indices that guarantee the same inequality rankings regardless of the distribution maximal levels are identified.

Does smoking affect schooling? Evidence from teenagers in rural China

- Journal of Health Economics---2012---Meng Zhao,Yoshifumi Konishi,Paul Glewwe

Youth smoking can biologically reduce learning productivity. It can also reduce youths' expected returns to education and lower their motivation to go to school, where smoking is forbidden. Using rich household survey data from rural China, this study investigates the effect of youth smoking on educational outcomes. Youth smoking is clearly an endogenous variable; to obtain consistent estimates of its impact, we use counts of registered alcohol vendors and a food price index as instrumental variables. Since the variable that measures smoking behavior is censored for non-smoking adolescents, we implement a two-step estimation strategy to account for the censored nature of this endogenous

regressor. The estimates indicate that smoking one cigarette per day during adolescence can lower students' scores on mathematics tests by about 0.08 standard deviations. However, we find no significant effect of youth smoking on either Chinese test scores or total years of schooling.

Effect of job loss due to plant closure on mortality and hospitalization

- Journal of Health Economics---2012---Martin Browning,Eskil Heinesen

We investigate whether job loss due to plant closure causes an increased risk of (cause-specific) mortality and hospitalization for male workers having strong labour market attachment. We use administrative data: a panel of all persons in Denmark in the period 1980–2006, containing records on health and work status, and a link from workers to plants. We use propensity score weighting combined with non-parametric duration analysis. We find that job loss increases the risk of overall mortality and mortality caused by circulatory disease; of suicide and suicide attempts; and of death and hospitalization due to traffic accidents, alcohol-related disease, and mental illness.

Income inequality and health: Lessons from a refugee residential assignment program

- Journal of Health Economics---2012---Hans Grönqvist,Per Johansson,Susan Niknami

This paper examines the effect of income inequality on health for a group of particularly disadvantaged individuals: refugees. Our analysis draws on longitudinal hospitalization records coupled with a settlement policy where Swedish authorities assigned newly arrived refugees to their first area of residence. The policy was implemented in a way that provides a source of plausibly random variation in initial location. The results reveal no statistically significant effect of income inequality on the risk of being hospitalized. This finding holds also for most population subgroups and when separating between different types of diagnoses. Our estimates are precise enough to rule out large effects of income inequality on health.

The value of medical and pharmaceutical interventions for reducing obesity

- Journal of Health Economics---2012---Pierre-Carl Michaud,Dana Goldman,Darius Lakdawalla,Yuhui Zheng,Adam H. Gailey

This paper attempts to quantify the social, private, and public-finance values of reducing obesity through pharmaceutical and medical interventions. We find that the total social value of bariatric surgery is large for treated patients, with incremental social cost-effectiveness ratios typically under $10,000 per life-year saved. On the other hand, pharmaceutical interventions against obesity yield much less social value with incremental social cost-effectiveness ratios around $50,000. Our approach accounts for: competing risks to life expectancy; health care costs; and a variety of non-medical economic consequences (pensions, disability insurance, taxes, and earnings), which account for 20% of the total social cost of these treatments. On balance, bariatric surgery generates substantial private value for those treated, in the form of health and other economic consequences. The net public fiscal effects are modest, primarily because the size of the population eligible for treatment is small. The net social effect is large once improvements in life expectancy are taken into account.

Does staying in school (and not working) prevent teen smoking and drinking?

- Journal of Health Economics---2012---Robert Jensen,Adriana Lleras-Muney

Previous work suggests but cannot prove that education improves health behaviors. We exploit a randomized intervention that increased schooling (and reduced working) among male students in the Dominican Republic, by providing information on the returns to schooling. We find that treated youths were much less likely to smoke at age 18 and had delayed onset of daily or regular drinking. The effects appear to be due to changes in peer networks and disposable income.

We find no evidence of a direct impact of schooling on rates of time preference, attitudes towards risk or perceptions that drinking or smoking are harmful to health, though our measures of these factors are more limited.

Diversify or focus? Spending to combat infectious diseases when budgets are tight

- Journal of Health Economics---2012---Soren Anderson,Ramanan Laxminarayan,Stephen Salant

We consider a health authority seeking to allocate annual budgets optimally over time to minimize the discounted social cost of infection(s) evolving in a finite set of groups. This optimization problem is challenging since the standard SIS epidemiological model describing the spread of the disease contains a nonconvexity. Neither optimal control nor standard discrete-time dynamic programming can be used to identify the optimal policy. We modify the standard dynamic programming algorithm and show how familiar, elementary arguments can be used to reach conclusions about the optimal policy. We show that under certain conditions it is optimal to focus the entire annual budget on one group at a time rather than divide it among several groups, as is often done in practice. We also show that under certain conditions it remains optimal to focus on one group when faced with a wealth constraint instead of an annual budget.

Measurement of inequity in health care with heterogeneous response of use to need

- Journal of Health Economics---2012---Ellen Van de Poel,Eddy Van Doorslaer,O' Donnell, Owen,Owen O'Donnell

We propose a method of measuring and decomposing inequity in health care utilisation that allows for heterogeneity in the use–need relationship. This makes explicit inequity that derives from unequal treatment response to variation in need, as well as that due to differential effects of non-need determinants. Under plausible conditions concerning heterogeneity in the use–need relationship and the distribution of need, existing methods that impose homogeneity will underestimate pro-rich inequity. This prediction is confirmed for four middle-income Asian countries. In those countries, around one half of the observed socioeconomic inequality is due to utilisation being more responsive to need among the higher wealth and urban dwelling individuals.

Incentive and selection effects of Medigap insurance on inpatient care

- Journal of Health Economics---2012---Valentino Dardanoni,Paolo Li Donni

The Medicare program, which provides insurance coverage to the elderly in the United States, does not protect them fully against high out-of-pocket costs. For this reason private supplementary insurance, named Medigap, has been available to cover Medicare gaps. This paper studies how Medigap affects the utilization of inpatient care, separating the incentive and selection effects of supplementary insurance. For this purpose, we use two alternative estimation methods: a standard recursive bivariate probit and a discrete multivariate finite mixture model. We find that estimated incentive effects are modest and quite similar across models. There seems to be very significant selection, with the presence of both adversely and advantageously selected individuals, stemming from the multidimensional nature of residual heterogeneity.

Regulation and competition in the Taiwanese pharmaceutical market under national health insurance

- Journal of Health Economics---2012---Ya-Ming Liu,Yea-Huei Kao Yang,Chee-Ruey Hsieh

This article investigates the determinants of the prices of pharmaceuticals and their impact on the demand for prescription drugs in the context of Taiwan's pharmaceutical market where medical providers earn profit directly from prescribing and dispensing drugs. Based on product-level data, we find evidence that the profit-seeking behavior of the medical providers in the prescription drug market transfers the force of competition

from the unregulated wholesale market to the regulated retail market and hence market competition still plays an important role in the determination of the regulated price. We also find that the profit-seeking behavior plays a similar role to advertising in that it increases the brand loyalty and hence lowers price elasticity. An important implication of our study is that the institutional features in the pharmaceutical market matter in shaping the nature of pharmaceutical competition and the responsiveness of pharmaceutical consumption with respect to changes in price.

Priority setting in health care and higher order degree change in risk

- Journal of Health Economics---2012---Christophe Courbage,Béatrice Rey

This paper examines how priority setting in health care expenditures is influenced by the presence of uncertainty about the severity of the illness and the effectiveness of medical treatment. We provide necessary and sufficient conditions on social preferences under which a social planner will allocate more health care resources to populations at higher risk. Changes in risk are defined by the concept of stochastic dominance up to order n. The shape of the social utility function and an equity weighting function are used to model the inequality aversion of the social planner. We show that for higher order risk changes, the usual conditions on preferences such as prudence or relative risk aversion are not necessarily required to prioritise health care when there are different levels of uncertainty associated with otherwise similar patient groups.

Does retirement affect cognitive functioning?

- Journal of Health Economics---2012---Eric Bonsang,Stéphane Adam,Sergio Perelman

This paper analyses the effect of retirement on cognitive functioning using a longitudinal survey among older Americans, which allows controlling for individual heterogeneity and endogeneity of the retirement decision by using the eligibility age for social security as an instrument. The results highlight a significant negative effect of retirement on cognitive functioning. Our findings suggest that reforms aimed at promoting labour force participation at an older age may not only ensure the sustainability of social security systems but may also create positive health externalities for older individuals.

Health investment decisions in response to diabetes information in older Americans

- Journal of Health Economics---2012---Alexander N. Slade

Diabetes is a very common and serious chronic disease, and one of the fastest growing disease burdens in the United States. Further, health behaviors, such as exercise, smoking, drinking, as well as weight status, are instrumental to diabetes management and the reduction of its medical consequences. Nine waves of the Health and Retirement Study are used to model the role of a recent diabetes diagnosis and medication on present and subsequent weight status, exercise, drinking and smoking activity. Several non-linear dynamic population average probit models are estimated. Results suggest that compared to non-diagnosed individuals at risk for high blood sugar, diagnosed diabetics respond initially in terms of increasing exercise, losing weight, and curbing smoking and drinking behavior, but the effect diminishes after diagnosis. Evidence of recidivism is also found in these outcomes, especially weight status and physical activity, suggesting that some behavioral responses to diabetes may be short-lived.

Is a QALY still a QALY at the end of life?

- Journal of Health Economics---2012---Jeff Round

Recent research into end of life and palliative care has focused on the development of a replacement for the quality adjusted life year (QALY) as an outcome measure. Reasons given range from the lack of anticipated survival benefit from treatment to the inappropriateness of death as an anchor for valuing health states, or the increased value of time to the individual at the end of life. The Palliative Care Yardstick, has been proposed as an alternative. In this paper, I argue that

the QALY should not be abandoned as an outcome measure in end of life and palliative care populations and suggest possible methods for generating empirical data to support or refute this. I show why the arguments made for replacement of the QALY are not supported by current evidence and how in some cases the abandonment of the QALY framework would lead to an unjustifiable inequitable distribution of resources.

Can governments do it better? Merger mania and hospital outcomes in the English NHS

- Journal of Health Economics---2012---Martin Gaynor,Mauro Laudicella,Carol Propper

The literature on mergers between private hospitals suggests that such mergers often produce little benefit. Despite this, the UK government has pursued an active policy of hospital mergers, arguing that such consolidations will bring improvements for patients. We examine whether this promise is met. We exploit the fact that between 1997 and 2006 in England around half the short term general hospitals were involved in a merger, but that politics means that selection for a merger may be random with respect to future performance. We examine the impact of mergers on a large set of outcomes including financial performance, productivity, waiting times and clinical quality and find little evidence that mergers achieved gains other than a reduction in activity. Given that mergers reduce the scope for competition between hospitals the findings suggest that further merger activity may not be the appropriate way of dealing with poorly performing hospitals.

Evergreening, patent challenges, and effective market life in pharmaceuticals

- Journal of Health Economics---2012---C. Scott Hemphill,Bhaven N. Sampat

Observers worry that generic patent challenges are on the rise and reduce the effective market life of drugs. A related concern is that challenges disproportionately target high-sales drugs, reducing market life for these "blockbusters."

The effect of a hospital nurse staffing mandate on patient health outcomes: Evidence from California's minimum staffing regulation

- Journal of Health Economics---2012---Andrew Cook,Martin Gaynor,Melvin Stephens,Lowell Taylor

We evaluate the impact of California Assembly Bill 394, which mandated maximum levels of patients per nurse in the hospital setting. When the law was passed, some hospitals already met the requirements, while others did not. Thus changes in staffing ratios from the pre- to post-mandate periods are driven in part by the legislation. We find persuasive evidence that AB394 had the intended effect of decreasing patient/nurse ratios in hospitals that previously did not meet mandated standards. However, these improvements in staffing ratios do not appear to be associated with relative improvements in measured patient safety in affected hospitals.

Watchfully waiting: Medical intervention as an optimal investment decision

- Journal of Health Economics---2012---Elisabeth Meyer,Ray Rees

Watchfully waiting involves monitoring a patient's health state over time and deciding whether to undertake a medical intervention, or to postpone it and continue observing the patient. In this paper, we consider the timing of medical intervention as an optimal stopping problem. The development of the patient's health state in the absence of intervention follows a stochastic process (geometric Brownian motion). Spontaneous recovery occurs in case the absorbing state of "good health" is reached. We determine optimal threshold values for initiating the intervention, and derive comparative statics results with respect to the model parameters. In particular, an increase in the degree of uncertainty over the patient's development in most cases makes waiting more attractive. However, this may not hold if the patient's health state has a tendency to improve. The model can be extended to

allow for risk aversion and for sudden, Poisson-type shocks to the patient's health state.

Hospital ownership type and treatment choices

- Journal of Health Economics---2012---Esra Eren Bayindir

In the face of increasing health care costs, taxing not-for-profit hospitals may be seen as the right choice to increase government revenues if not-for-profit hospitals are not different from their for-profit counterparts. This study investigates how hospital ownership type affects treatment choices to show whether ownership type and teaching status are correlated with choosing a procedure as the treatment and how these choices relate to patient insurance type. Not-for-profit hospitals significantly differ from for-profits in terms of treatment choices of less profitable patients and all hospitals are more likely to accord the procedure when the patient is privately insured than uninsured though teaching government hospitals are the most likely to accord the procedures for all insurance types. Considering treatment choices, not-for-profit hospitals have different objectives than for-profit and government hospitals and in terms of profit-seeking behavior, not-for-profit hospitals seem to lie between for-profit and government hospitals.

Do patients choose hospitals with high quality ratings? Empirical evidence from the market for angioplasty in the Netherlands

- Journal of Health Economics---2012---Marco Varkevisser,Stéphanie A. van der Geest,Frederik T. Schut

A necessary condition for competition to promote quality in hospital markets is that patients are sensitive to differences in hospital quality. In this paper we examine the relationship between hospital quality, as measured by publicly available quality ratings, and patient hospital choice for angioplasty using individual claims data from a large health insurer. We find that Dutch patients have a high propensity to choose hospitals with a good reputation, both overall and for cardiology, and a low readmission rate after treatment for heart failure. Relative to a mean readmission rate of 8.5% we find that a 1%-point lower readmission rate is associated with a 12% increase in hospital demand. Since readmission rates are not adjusted for case-mix they may not provide a correct signal of hospital quality. Insofar patients base their hospital choice on such imperfect quality information, this may result in suboptimal choices and risk selection by hospitals.

The utility of health and wealth

- Journal of Health Economics---2012---Moshe Levy,Adi Rizansky Nir

Tradeoffs between health and wealth are among the most important decisions individuals make, and are central to social and economic policy. Yet, only a few studies have investigated the utility of health and wealth empirically. This paper investigates this utility function both theoretically and empirically. We conduct detailed personal interviews with 180 cancer patients, and also obtain questionnaires from 132 diabetes patients. We find strong support for the utility function $U(h, w)=h \cdot \log(w)$, where h denotes health and w denotes wealth.

The effect of comprehensive state tobacco control programs on adult cigarette smoking

- Journal of Health Economics---2012---Jennifer K. Rhoads

This study is the second to use national survey data to assess the effect of comprehensive state tobacco control programs on adult cigarette smoking. Data are drawn from the Behavioral Risk Factor Surveillance System (1991–2006) and reveal consistent evidence that these programs have a statistically significant effect to reduce prevalence of cigarette smoking among adults. Simulations indicate that had all states spent the CDC recommended level of funding from 1991 to 2006 then cigarette smoking prevalence would have been 1.40–8.07% lower in 2006, translating to between 635,000 and 3.7 million fewer adult cigarette smokers.

Four decades of health economics through a bibliometric lens

- Journal of Health Economics---2012---Adam Wagstaff,Anthony Culyer

In this paper, we take a bibliometric tour of the last forty years of health economics using bibliographic "metadata" from EconLit supplemented by citation data from Google Scholar and our own topical classifications. We report the growth of health economics (we find 33,000 publications since 1969—12,000 more than in the economics of education) and list the 300 most-cited publications broken down by topic. We report the changing topical and geographic focus of health economics (the topics 'Determinants of health and ill-health' and 'Health statistics and econometrics' both show an upward trend, and the field has expanded appreciably into the developing world). We also compare authors, countries, institutions and journals in terms of the volume of publications and their influence as measured through various citation-based indices (Grossman, the US, Harvard and the JHE emerge close to or at the top on a variety of measures).

Pricing of drugs with heterogeneous health insurance coverage

- Journal of Health Economics---2012---Ida Ferrara,Paul Missios

In this paper, we examine the role of insurance coverage in explaining the generic competition paradox in a two-stage game involving a single producer of brand-name drugs and n quantity-competing producers of generic drugs. Independently of brand loyalty, which some studies rely upon to explain the paradox, we show that heterogeneity in insurance coverage may result in higher prices of brand-name drugs following generic entry. With market segmentation based on insurance coverage present in both the pre- and post-entry stages, the paradox can arise when the two types of drugs are highly substitutable and the market is quite profitable but does not have to arise when the two types of drugs are highly differentiated. However, with market segmentation occurring only after generic entry, the paradox can arise when the two types of drugs are weakly substitutable, provided, however, that the industry is not very profitable. In both cases, that is, when market segmentation is present in the pre-entry stage and when it is not, the paradox becomes more likely to arise as the market expands and/or insurance companies decrease deductibles applied on the purchase of generic drugs.

Does health insurance coverage lead to better health and educational outcomes? Evidence from rural China

- Journal of Health Economics---2012---Yuyu Chen,Ginger Zhe Jin

Using the 2006 China Agricultural Census (CAC), we examine whether the introduction of the New Cooperative Medical System (NCMS) has affected child mortality, maternal mortality, and school enrollment of 6–16year olds. Our data cover 5.9 million people living in eight low-income rural counties, of which four adopted the NCMS by 2006 and four did not adopt it until 2007.

Inequality decomposition by population subgroups for ordinal data

- Journal of Health Economics---2012---Martyna Kobus,Piotr Miłoś

We present a class of decomposable inequality indices for ordinal data (e.g. self-reported health survey). It is characterized by well-known inequality axioms (e.g. scale invariance) and a decomposability axiom which states that an index can be represented as a function of inequality values in subgroups and subgroup sizes. The only decomposable indices are strictly monotonic transformations of the weighted average of frequencies in categories. Among the indices proposed in the literature only the absolute value index (Abul Naga and Yalcin, 2008; Apouey, 2007) is decomposable. As an empirical illustration we calculate regional contributions to overall health inequality in Switzerland.

A test of independence of discounting from quality of life

- Journal of Health Economics---2012---Arthur Attema,Werner Brouwer

The quality-adjusted life-years (QALY) model assumes quality and quantity of life can be multiplied into a single index and requires quality and quantity to be mutually independent, which need not hold empirically. This paper proposes a new test for measuring independence of utility of life duration from quality of life in a riskless setting. We use a large representative sample of Dutch citizens and include two health states generally considered better than dead (BTD) and one health state considered worse than dead (WTD). Independence cannot be rejected when comparing the BTD health states, but is rejected when comparing the BTD states with the WTD state. In particular, utility of life duration becomes more concave for the WTD state. This may suggest that independence holds only for BTD health states. This has implications for the QALY model and would require using sign-dependent utility of life duration functions.

HIV and sexual behavior change: Why not Africa?

- Journal of Health Economics---2012---Emily Oster

Despite high rates of HIV in Sub-Saharan Africa, and the corresponding high mortality risk associated with risky sexual behavior, behavioral response has been limited. This paper explores three explanations for this: bias in OLS estimates, limited non-HIV life expectancy and limited knowledge. I find support for the first two. First, using a new instrumental variable strategy I find that OLS estimates of the relationship between risky sex and HIV are biased upwards, and IV estimates indicate reductions in risky behavior in response to the epidemic. Second, I find these reductions are larger for individuals who live in areas with higher life expectancy, suggesting high rates of non-HIV mortality suppress behavioral response; this is consistent with optimizing behavior. Using somewhat limited knowledge proxies, I find no evidence that areas with higher knowledge of the epidemic have greater behavior change.

Do consumers respond to publicly reported quality information? Evidence from nursing homes

- Journal of Health Economics---2012---Rachel M. Werner,Edward Norton,R. Tamara Konetzka,Daniel Polsky

Public reporting of quality information is designed to address information asymmetry in health care markets. Without public reporting, consumers may have little information to help them differentiate quality among providers, giving providers little incentive to compete on quality. Public reporting enables consumers to choose highly ranked providers. Using a four-year (2000–2003) panel dataset, we examine the relationship between report card scores and patient choice of nursing home after the Centers for Medicare and Medicaid Services began publicly reporting nursing home quality information on post-acute care in 2002. We find that the relationship between reported quality and nursing home choice is positive and statistically significant suggesting that patients were more likely to choose facilities with higher reported post-acute care quality after public reporting was initiated. However, the magnitude of the effect was small. We conclude that there has been minimal consumer response to information in the post-acute care market.

Using a discrete choice experiment to elicit the demand for a nutritious food: Willingness-to-pay for orange maize in rural Zambia

- Journal of Health Economics---2012---J.V. Meenakshi,A. Banerji,Victor Manyong,Keith Tomlins,Nitya Mittal,Priscilla Hamukwala

Using a discrete choice experiment, this paper estimates the willingness to pay for biofortified orange maize in rural Zambia. The study design has five treatment arms, which enable an analysis of the impact of nutrition information, comparing the use of simulated radio versus community leaders in transmitting the

nutrition message, on willingness to pay, and to account for possible novelty effects in the magnitude of premiums or discounts. The estimation strategy also takes into account lexicographic preferences of a subset of our respondents. The results suggest that (a) orange maize is not confused with yellow maize, and has the potential to compete with white maize in the absence of a nutrition campaign, (b) there is a premium for orange maize with nutrition information, and (c) different modes of nutritional message dissemination have the same impact on consumer acceptance.

Moral hazard and selection among the poor: Evidence from a randomized experiment

- Journal of Health Economics---2012---Jörg Spenkuch

Not only does economic theory predict high-risk individuals to be more likely to purchase insurance, but insurance coverage is also thought to crowd out precautionary activities. In spite of stark theoretical predictions, there is conflicting empirical evidence on adverse selection, and evidence on ex ante moral hazard is very scarce. Using data from the Seguro Popular Experiment in Mexico, this paper documents patterns of selection on observables into health insurance as well as the existence of non-negligible ex ante moral hazard. More specifically, the findings indicate that (i) agents in poor self-assessed health prior to the intervention have, all else equal, a higher propensity to take up insurance; and (ii) insurance coverage reduces the demand for self-protection in the form of preventive care. Curiously, however, individuals do not sort based on objective measures of their health.

An experimental test of the concentration index

- Journal of Health Economics---2012---Han Bleichrodt,Kirsten Rohde,Tom Van Ourti

The concentration index is widely used to measure income-related inequality in health. No insight exists, however, whether the concentration index connects with people's preferences about distributions of income and health and whether a reduction in the concentration index reflects an increase in social welfare. We explored this question by testing the central assumption underlying the concentration index and found that it was systematically violated. We also tested the validity of alternative health inequality measures that have been proposed in the literature. Our data showed that decreases in the spread of income and health were considered socially desirable, but decreases in the correlation between income and health not necessarily. Support for a condition implying that the inequality in the distribution of income and in the distribution of health can be considered separately was mixed.

Discrimination makes me sick! An examination of the discrimination–health relationship

- Journal of Health Economics---2012---David Johnston,Grace Lordan

The attitudes of the general British population towards Muslims changed post 2001, and this change led to a significant increase in Anti-Muslim discrimination. We use this exogenous attitude change to estimate the causal impact of increased discrimination on a range of objective and subjective health outcomes. The difference-in-differences estimates indicate that discrimination worsens blood pressure, cholesterol, BMI and self-assessed general health. Thus, discrimination is a potentially important determinant of the large racial and ethnic health gaps observed in many countries. We also investigate the pathways through which discrimination impacts upon health, and find that discrimination has a negative effect on employment, perceived social support, and health-producing behaviours. Crucially, our results hold for different control groups and model specifications.

The effect of alcohol availability on marijuana use: Evidence from the minimum legal drinking age

- Journal of Health Economics---2012---Benjamin Crost,Santiago Guerrero

This paper exploits the discontinuity created by the

minimum legal drinking age of 21 years to estimate the causal effect of increased alcohol availability on marijuana use. We find that consumption of marijuana decreases sharply at age 21, while consumption of alcohol increases, suggesting that marijuana and alcohol are substitutes. We further find that the substitution effect between alcohol and marijuana is stronger for women than for men. Our results suggest that policies designed to limit alcohol use have the unintended consequence of increasing marijuana use.

The impact of water quality on health: Evidence from the drinking water infrastructure program in rural China

- Journal of Health Economics---2012---Jing Zhang

This paper investigates the effect of a major water quality improvement program in rural China on the health of adults and children. Using panel data covering about 4500 households from 1989 to 2006, I estimate the impact of introducing village-level access to water from water plants on various measures of health. The regression results imply that the illness incidence of adults decreased by 11 percent and their weight-for-height increased by 0.835kg/m, and that children's weight-for-height and height itself both rose by 0.446kg/m and 0.962cm respectively, as a result of the program. And these estimates are quite stable across different robustness checks.

The other ex ante moral hazard in health

- Journal of Health Economics---2012---Jay Bhattacharya,Mikko Packalen

It is well-known that pooled insurance coverage can induce people to make inefficiently low investments in self-protective activities. We identify another ex ante moral hazard that runs in the opposite direction. Lower levels of self-protection and the associated chronic conditions and behavioral patterns such as obesity, smoking, and malnutrition increase the incidence of many diseases and consumption of treatments to those diseases. This increases the reward for innovation and thus benefits the innovator. It also increases treatment innovation which benefits all consumers. As individuals do not take these positive externalities into account, their investments in self-protection are inefficiently high. We quantify the lower bound of this externality for obesity. The lower bound is independent of how much additional innovation is generated. The results show that the externality we identify offsets the negative Medicare-induced insurance externality of obesity. The Medicare-induced obesity subsidy is thus not a sufficient rationale for "soda taxes", "fat taxes" or other penalties on obesity. The quantitative finding also implies that the other ex ante moral hazard that we identify can be as important as the ex ante moral hazard that has been a central concept in health economics for decades.

Marginal benefit incidence of public health spending: Evidence from Indonesian sub-national data

- Journal of Health Economics---2012---Ioana Kruse,Menno Pradhan,Robert Sparrow

We examine the marginal effects of decentralized public health spending by incorporating estimates of behavioural responses to changes in health spending in benefit incidence analysis. The analysis is based on a panel dataset of 207 Indonesian districts over the period from 2001 to 2004. We show that district public health spending is largely driven by central government transfers, with an elasticity of around 0.9. We find a positive effect of public health spending on utilization of outpatient care in the public sector for the poorest two quartiles. We find no evidence that public expenditures crowd out utilization of private services or household health spending. Our analysis suggests that increased public health spending improves targeting to the poor, as behavioural changes in public health care utilization are pro-poor. Nonetheless, most of the benefits of the additional spending accrued to existing users of services, as initial utilization shares outweigh the behavioural responses.

GET MORE, PAY MORE? An elaborate test of construct validity of willingness to pay per QALY estimates obtained through contingent valuation

- Journal of Health Economics---2012---Ana Bobinac,Job van Exel,Frans F.H. Rutten,Werner Brouwer

Estimates of WTP per QALY can be taken as an indication of the monetary value of health gains, which may carry information regarding the appropriate height of the cost-effectiveness threshold. Given the far-reaching consequences choosing a particular threshold, and thus the potential relevance of WTP per QALY estimates, it is important to address the validity of these estimates. This study addresses this issue. Our findings offer little support to the validity of WTP per QALY estimates obtained in this study. Implications for general WTP per QALY estimates and further research are discussed.

Static and dynamic efficiency of irreversible health care investments under alternative payment rules

- Journal of Health Economics---2012---Rosella Levaggi,Michele Moretto,Paolo Pertile

The paper studies the incentive for providers to invest in new health care technologies under alternative payment systems, when the patients' benefits are uncertain. If the reimbursement by the purchaser includes both a variable (per patient) and a lump-sum component, efficiency can be ensured both in the timing of adoption (dynamic) and the intensity of use of the technology (static). If the second instrument is unavailable, a trade-off may emerge between static and dynamic efficiency. In this context, we also discuss how the regulator could use control of the level of uncertainty faced by the provider as an instrument to mitigate the trade-off between static and dynamic efficiency. Finally, we calibrate the model to study a specific technology and estimate the cost of a regulatory failure.

Pollution exposure and child health: Evidence for infants and toddlers in Germany

- Journal of Health Economics---2012---Katja Coneus,Katharina Spiess

This paper examines the impact of outdoor pollution and parental smoking on children's health from birth until the age of three years in Germany. We use representative data from the German Socio-Economic Panel (SOEP), combined with five air pollution levels. These data were provided by the Federal Environment Agency and cover the years 2002–2007. Our work makes two important contributions. First, we use European data to replicate and extend an important US study by following the effects of pollution exposure and parental smoking on child health during the first four years of life. Second, we have health measures not only for infants but for toddlers as well. For infants, as well as for two- to three-year-olds, we are able to account for time-invariant and unobserved neighborhood and maternal characteristics. Our results suggest a significantly negative impact of some pollutants on infant health. High exposure to CO prior to birth causes, on average, a 289g lower birth weight. With respect to toddler health, we find that disorders and in particular those as bronchitis and respiratory illnesses are affected particularly by O3 levels.

Are estimates of the value of a statistical life exaggerated?

- Journal of Health Economics---2012---Chris Doucouliagos,T. Stanley,Margaret Giles

The magnitude of the value of a statistical life (VSL) is critical to the evaluation of many health and safety initiatives. To date, the large and rigorous VSL research literature has not explicitly accommodated publication selectivity bias (i.e., the reduced probability that insignificant or negative VSL values are reported). This study demonstrates that doing so is essential. For studies that employ hedonic wage equations to estimate VSL, correction for selection bias reduces the average value of a statistical life by 70–80%. Our meta-regression analysis also identifies several sources for

the wide heterogeneity found among reported VSL estimates.

Trajectories of health-related quality of life differ by age among adults: Results from an eight-year longitudinal study

- Journal of Health Economics---2012---Keiko Asakawa,Ambikaipakan Senthilselvan,David Feeny,Jeffrey Johnson,Darryl Rolfson

To date, only a few studies have assessed determinants of health trajectories using longitudinal health survey data.

The medical care costs of obesity: An instrumental variables approach

- Journal of Health Economics---2012---John Cawley,Chad Meyerhoefer

This paper is the first to use the method of instrumental variables (IV) to estimate the impact of obesity on medical costs in order to address the endogeneity of weight and to reduce the bias from reporting error in weight. Models are estimated using restricted-use data from the Medical Expenditure Panel Survey for 2000–2005. The IV model, which exploits genetic variation in weight as a natural experiment, yields estimates of the impact of obesity on medical costs that are considerably higher than the estimates reported in the previous literature. For example, obesity is associated with $656 higher annual medical care costs, but the IV results indicate that obesity raises annual medical costs by $2741 (in 2005 dollars). These results imply that the previous literature has underestimated the medical costs of obesity, resulting in underestimates of the economic rationale for government intervention to reduce obesity-related externalities.

Supply-side and demand-side cost sharing in deregulated social health insurance: Which is more effective?

- Journal of Health Economics---2012---Maria Trottmann,Peter Zweifel,Konstantin Beck

Microeconomic theory predicts that if patients are fully insured and providers are paid fee-for-service, utilization of medical services exceeds the efficient level ('moral hazard effect'). In Switzerland, both demand-side and supply-side cost sharing have been introduced to mitigate this problem. Analyzing a panel dataset of about 160,000 adults, we find both types of cost sharing to be effective in curtailing the use of medical services. However, when moral hazard mitigation is traded off against risk selection, the minimum-deductible, supply-side cost sharing option ranks first, followed by the medium-deductible demand-side alternative, making the supply-side option somewhat more effective.

Thinness and obesity: A model of food consumption, health concerns, and social pressure

- Journal of Health Economics---2012---Davide Dragone,Luca Savorelli

The increasing concern of the policy maker about eating behaviour has focused on the spread of obesity and on the evidence of people dieting despite being underweight. As the latter behaviour is often attributed to the social pressure to be thin, some governments have already taken actions to ban ultra-thin ideals and models. This paper proposes a theoretical framework to assess whether increasing the ideal body weight is socially desirable, both from a welfare and a health point of view. We first show that being underweight and being overweight are possible outcomes of a rational eating model. Then, assuming that people are heterogeneous in their healthy weights but exposed to the same ideal body weight, we show that increasing the thin ideal weight can be welfare improving, but may exacerbate the obesity epidemic.

"Mirror, mirror, on the wall, who in this land is fairest of all?"—Distributional sensitivity in the measurement of socioeconomic inequality of health

- Journal of Health Economics---2012---Guido Erreygers,Philip Clarke,Tom Van Ourti

This paper explores four alternative indices for measuring health inequalities in a way that takes into account attitudes towards inequality. First, we revisit the extended concentration index which has been proposed to make it possible to introduce changes into the distributional value judgements implicit in the standard concentration index. Next, we suggest an alternative index based on a different weighting scheme. In contrast to the extended concentration index, this new index has the 'symmetry' property. We also show how these indices can be generalized so that they satisfy the 'mirror' property, which may be seen as a desirable property when dealing with bounded variables. We compare the different indices empirically for under-five mortality rates and the number of antenatal visits in developing countries.

Financial incentives for maternal health: Impact of a national programme in Nepal

- Journal of Health Economics---2012---Timothy Powell-Jackson,Kara Hanson

Financial incentives are increasingly being advocated as an effective means to influence health-related behaviours. There is, however, limited evidence on whether they work in low-income countries, particularly when implemented at scale. This paper explores the impact of a national programme in Nepal that provides cash incentives to women conditional on them giving birth in a health facility. Using propensity score matching methods, we find that the programme had a positive, albeit modest, effect on the utilisation of maternity services. Women who had heard of the SDIP before childbirth were 4.2 percentage points (17 percent) more likely to deliver with a skilled attendant. The treatment effect is positively associated with the size of the financial package offered by the programme and the quality of care in facilities. Despite the positive effect on those exposed to the SDIP, low coverage of the programme suggests that few women actually benefited in the first few years.

When does weight matter most?

- Journal of Health Economics---2012---Alice Chen

Past empirical work establishes a wage penalty from being overweight. In this paper, I exploit variation in an individual's weight over time to determine the age when weight has the largest impact on labor market outcomes. For white men, controlling for weight at younger ages does not eliminate the effect of older adult weight on wage: being overweight as a young adult only adds an additional penalty to adult wages. However, for white women, what they weigh in their early twenties solely determines the existence of an adult wage penalty. The female early-twenties weight penalty has a persistent effect on wages, and differences in marital characteristics, occupation status, or education cannot explain it. It also is not a proxy for intergenerational unobservables.

Birds of a feather flock together: A study of doctor–patient matching

- Journal of Health Economics---2012---Geir Godager

In this paper we study individuals' choice of general practitioners (GPs) utilizing revealed preferences data from the introduction of a regular general practitioner scheme in Norway. Having information on relevant travel distances, we compute decision makers' travel costs associated with different modes of travel. Choice probabilities are estimated by means of nested logit regression on a representative sample of Oslo inhabitants. The results support the general hypothesis that patients prefer doctors who resemble themselves on observable characteristics. The hypothesis that GP gender has a stronger influence on females' GP choice than what is the case for males, is rejected.

Using a discrete choice experiment to estimate health state utility values

- Journal of Health Economics---2012---Nick Bansback,John Brazier,Aki Tsuchiya,Aslam Anis

In this study we explored a novel application of the discrete choice experiment (DCE) that resembles the time trade off (TTO) task to estimate values on the health utility scale for the EQ-5D. The DCE was tested

in a survey alongside the TTO in a sample of English-speaking Canadians recruited by a market research company. The study found that the DCE is able to derive logical and consistent values for health states valued on the full health – dead scale. The DCE overcame some issues identified in the version of TTO currently used to value EQ-5D, notably allowing for fewer data exclusions and incorporating values considered worse than dead without introducing a separate valuation procedure. This has important implications for providing robust values that represent the preferences of all respondents.

Competition and the Reference Pricing Scheme for pharmaceuticals

- Journal of Health Economics---2011---Simone Ghislandi

By introducing n (>1) firms with infinite cross-price elasticity (i.e. generic drugs), we explore the effects of competition on the optimal pricing strategies under a Reference Pricing Scheme (RPS). A two-stage model repeated infinite number of times is presented. When stage 1 is competitive, the equilibrium in pure strategies exists and is efficient only if the reference price (R) does not depend on the price of the branded product. When generics collude, the way R is designed is crucial for both the stability of the cartel among generics and the collusive prices in equilibrium. An optimally designed RPS must set R as a function only of the infinitely elastic side of the market and should provide the right incentives for competition.

Does price reveal poor-quality drugs? Evidence from 17 countries

- Journal of Health Economics---2011---Roger Bate,Ginger Zhe Jin,Aparna Mathur

Focusing on 8 drug types on the WHO-approved medicine list, we constructed an original dataset of 899 drug samples from 17 low- and median-income countries and tested them for visual appearance, disintegration, and analyzed their ingredients by chromatography and spectrometry. Fifteen percent of the samples fail at least one test and can be considered substandard. After controlling for local factors, we find that failing drugs are priced 13.6–18.7% lower than non-failing drugs but the signaling effect of price is far from complete, especially for non-innovator brands. The look of the pharmacy, as assessed by our covert shoppers, is weakly correlated with the results of quality tests. These findings suggest that consumers are likely to suspect low quality from market price, non-innovator brand and the look of the pharmacy, but none of these signals can perfectly identify substandard and counterfeit drugs.

State and self investments in health

- Journal of Health Economics---2011---Eleonora Fichera,Matt Sutton

In this paper we consider how State investments can crowd out or reinforce self-investments in health using a theoretical model of insurance and protection. We apply this model to the smoking cessation decision made by individuals diagnosed with a cardiovascular disease using data from the 1998, 2003 and 2006 waves of the Health Survey of England. Prescription of lipid-lowering drugs, which increased substantially over this period, is used as the measure of State investment. Using bivariate and trivariate probit models, we allow for the endogeneity of the doctor's decision to prescribe and offer smoking cessation advice. We find that unobservable characteristics affecting the prescription of drugs are positively correlated with those affecting smoking advice and negatively correlated with those affecting the propensity to quit. Our results indicate that prescription of lipid-lowering drugs to individuals with cardiovascular disease increases the probability of smoking cessation by 20–28 percentage points.

Rising educational gradients in mortality: The role of behavioral risk factors

- Journal of Health Economics---2011---David M. Cutler,Fabian Lange,Ellen Meara,Seth Richards-Shubik,Christopher Ruhm

The long-standing inverse relationship between education and mortality strengthened substantially at the end of the 20th century. This paper examines the reasons for this increase. We show that behavioral risk factors are not of primary importance. Smoking declined more for the better educated, but not enough to explain the trend. Obesity rose at similar rates across education groups, and control of blood pressure and cholesterol increased fairly uniformly as well. Rather, our results show that the mortality returns to risk factors, and conditional on risk factors, the return to education, have grown over time.

Payment contracts in a preventive health care system: A perspective from Operations Management

- Journal of Health Economics---2011---Reza Yaesoubi,Stephen D. Roberts

We consider a health care system consisting of two noncooperative parties: a health purchaser (payer) and a health provider, where the interaction between the two parties is governed by a payment contract. We determine the contracts that coordinate the health purchaser–health provider relationship; i.e. the contracts that maximize the population's welfare while allowing each entity to optimize its own objective function. We show that under certain conditions (1) when the number of customers for a preventive medical intervention is verifiable, there exists a gate-keeping contract and a set of concave piecewise linear contracts that coordinate the system, and (2) when the number of customers is not verifiable, there exists a contract of bounded linear form and a set of incentive-feasible concave piecewise linear contracts that coordinate the system.

Optimal public rationing and price response

- Journal of Health Economics---2011---Simona Grassi,Ching-to Ma

We study optimal public health care rationing and private sector price responses. Consumers differ in their wealth and illness severity (defined as treatment cost). Due to a limited budget, some consumers must be rationed. Rationed consumers may purchase from a monopolistic private market. We consider two information regimes. In the first, the public supplier rations consumers according to their wealth information (means testing). In equilibrium, the public supplier must ration both rich and poor consumers. Rationing some poor consumers implements price reduction in the private market. In the second information regime, the public supplier rations consumers according to consumers' wealth and cost information. In equilibrium, consumers are allocated the good if and only if their costs are below a threshold (cost effectiveness). Rationing based on cost results in higher equilibrium consumer surplus than rationing based on wealth.

Premium subsidies and social health insurance: Substitutes or complements?

- Journal of Health Economics---2011---Mathias Kifmann,Kerstin Roeder

Premium subsidies have been advocated as an alternative to social health insurance. These subsidies are paid if expenditure on health insurance exceeds a given share of income. In this paper, we examine whether this approach is superior to social health insurance from a welfare perspective. We show that the results crucially depend on the correlation of health and productivity. For a positive correlation, we find that combining premium subsidies with social health insurance is the optimal policy.

The impact of legalized abortion on child health outcomes and abandonment. Evidence from Romania

- Journal of Health Economics---2011---Andreea Mitrut,François-Charles Wolff

We use household survey data and a unique census of institutionalized children to analyze the impact of abortion legalization in Romania. We exploit the lift of the abortion ban in December 1989, when communist dictator Ceausescu and his regime were removed from power, to understand its impact on children's health

at birth and during early childhood and whether the lift of the ban had an immediate impact on child abandonment. We find insignificant estimates for health at birth outcomes and anthropometric z-scores at age 4 and 5, except for the probability of low birth weight which is slightly higher for children born after abortion became legal. Additionally, our findings suggest that the lift of the ban had decreased the number of abandoned children.

School quality and the education–health relationship: Evidence from Blacks in segregated schools

- Journal of Health Economics---2011---David Frisvold,Ezra Golberstein

In this paper, we estimate the effect of school quality on the relationship between schooling and health outcomes using the substantial improvements in the quality of schools attended by black students in the segregated southern states during the mid-1900s as a source of identifying variation. Using data from the National Health Interview Survey, our results suggest that improvements in school quality, measured as the pupil–teacher ratio, average teachers' wage, and length of the school year, amplify the beneficial effects of education on several measures of health in later life, including self-rated health, smoking, obesity, and mortality.

Long-term health effects on the next generation of Ramadan fasting during pregnancy

- Journal of Health Economics---2011---Reyn Van Ewijk

Each year, many pregnant Muslim women fast during Ramadan. Using Indonesian cross-sectional data and building upon work of Almond and Mazumder (2011), I show that people who were prenatally exposed to Ramadan fasting have a poorer general health than others. As predicted by medical theory, this effect is especially pronounced among older people, who also more often report symptoms indicative of coronary heart problems and type 2 diabetes. Among exposed Muslims the share of males is lower, which is most likely caused by death before birth. I show that these effects are unlikely the result of common health shocks correlated to the occurrence of Ramadan, or of fasting mainly occurring among women who would have had unhealthier children anyway.

A nonparametric vs. latent class model of general practitioner utilization: Evidence from Canada

- Journal of Health Economics---2011---Logan McLeod

Predicting health care utilization is the foundation of many health economics analyses, such as calculating risk-adjustment capitation payments or measuring equity in health care utilization. The most common econometric models of physician utilization are parametric count data models, since the most common metric of physician utilization is the number of physician visits.

Inverse probability weighted estimation of social tariffs: An illustration using the SF-6D value sets

- Journal of Health Economics---2011---Ildefonso Mendez,Jose M. Abellán Perpiñán,Fernando Ignacio Sanchez Martinez,Jorge E. Martínez Pérez,Jose-Maria Abellan-Perpiñan

This paper presents a novel approach to model health state valuations using inverse probability weighting techniques. Our approach makes no assumption on the distribution of health state values, accommodates covariates in a flexible way, eschews parametric assumptions on the relationship between the outcome and the covariates, allows for an undetermined amount of heterogeneity in the estimates and it formally tests and corrects for sample selection biases. The proposed model is semi-parametrically estimated and it is illustrated with health state valuation data collected for Spain using the SF-6D descriptive system. Estimation results indicate that the standard regression model underestimates the utility loss that the Spanish gen-

eral population assigns to departures from full health, particularly so for severe departures.

The impact of Chernobyl on health and labour market performance

- Journal of Health Economics---2011---Hartmut Lehmann,Jonathan Wadsworth

Using longitudinal data from Ukraine we examine the extent of any long-lasting effects of exposure to the Chernobyl disaster on the health and labour market performance of the adult workforce. Variation in the local area level of radiation fallout from the Chernobyl accident is considered as a random exogenous shock with which to try to establish its causal impact on poor health, labour force participation, hours worked and wages. There appears to be a significant positive association between local area-level radiation dosage and perception of poor health, though much weaker associations between local area-level dosage and other specific self-reported health conditions. There is also some evidence to suggest that those who lived in areas more exposed to Chernobyl-induced radiation have significantly lower levels of labour market performance 20 years on.

Psychiatric disorders and labor market outcomes: Evidence from the National Comorbidity Survey-Replication

- Journal of Health Economics---2011---Pinka Chatterji,Margarita Alegria,David Takeuchi

This paper uses the National Comorbidity Survey-Replication to estimate effects of recent psychiatric disorder on employment, hours worked, and earnings. We employ methods proposed in Altonji et al. (2005a) which use selection on observable traits to provide information regarding selection along unobservable factors. Among males, disorder is associated with reductions in labor force participation and employment. When selection on observed characteristics is set equal to selection on unobserved characteristics, the magnitudes of these effects for males are 9 and 14 percentage point reductions for participation and employment, respectively. Among females, we find negative associations between disorder and labor force participation and employment, but these estimates are more sensitive to assumptions about selection. There are no effects of disorder on earnings or hours worked among employed individuals.

Parental job loss and infant health

- Journal of Health Economics---2011---Jason Lindo

This paper is the first to explore the extent to which the health effects of job displacement extend to the children of displaced workers. Using detailed work and fertility histories from the Panel Study of Income Dynamics, estimates are identified by comparing the outcomes of children born after a displacement to the outcomes of those born before. This analysis reveals that husbands' job losses have significant negative effects on infant health. They reduce birth weights by approximately four and a half percent with suggestive evidence that the effect is concentrated on the lower half of the birth weight distribution.

Treatment and referral decisions under different physician payment mechanisms

- Journal of Health Economics---2011---Marie Allard,Izabela Jelovac,Pierre Thomas Léger

This paper analyzes and compares the incentive properties of some common payment mechanisms for GPs, namely fee for service (FFS), capitation and fundholding. It focuses on gatekeeping GPs and it specifically recognizes GPs heterogeneity in both ability and altruism. It also allows inappropriate care by GPs to lead to more serious illnesses. The results are as follows. Capitation is the payment mechanism that induces the most referrals to expensive specialty care. Fundholding may induce almost as much referrals as capitation when the expected costs of GPs care are high relative to those of specialty care. Although driven by financial incentives of different nature, the strategic behaviors associated with fundholding and FFS are very much alike. Finally, whether a regulator should use one or another payment mechanism for GPs will depend on (i) his priorities (either cost-containment or quality

enhancement) which, in turn, depend on the expected cost difference between GPs care and specialty care, and (ii) the distribution of profiles (diagnostic ability and altruism levels) among GPs.

Patient switching in general practice

- Journal of Health Economics---2011---Tor Iversen,Hilde Lurås

Patients switching physicians involves costs to the patients because of less continuity of care. From a theoretical model we derive that inferior physician quality as perceived by patients, implies patient shortage for the physician and more patients switching physicians. By means of a unique panel data set covering the entire population of Norwegian general practitioners (GPs) and estimation methods that adjust for potential endogeneities, we find that the occurrence of patient shortage increases the proportion of patients switching physicians by 50%. A competing hypothesis that GPs with a shortage of patients experience less switching because of superior access is rejected by data. To assist patients in making informed decisions, we suggest that the number of switches a physician experiences should be made public.

Physicians on board: An examination of physician financial interests in ASCs using longitudinal data

- Journal of Health Economics---2011---Christine A. Yee

This paper investigates physician financial interests in ambulatory surgery centers (ASCs) using novel, longitudinal data that identify board members (directors) of ASCs in Florida. Improving on prior research, the estimated models in this paper disentangle physician director selection effects from the causal impact of these financial interests. The data suggest that even prior to their financial interest, physician directors had larger procedure volumes than non-directors. Physician directors also referred more lower-risk patients. On average, ASC board membership led to a 27% increase in a physician's procedure volume and a 16% increase in a physician's colonoscopy volume. Simulations suggest that 5% of the colonoscopies performed in Florida between 1997 and 2004 may have been due to physician ASC board membership. The evidence also suggests that physician directors steered patients from hospitals to their affiliate ASCs. In addition, they referred and/or treated more lower-risk patients as a result of board membership.

Does better disease management in primary care reduce hospital costs? Evidence from English primary care

- Journal of Health Economics---2011---Mark Dusheiko,Hugh Gravelle,Stephen Martin,Nigel Rice,Peter C. Smith

We apply cross-sectional and panel data methods to a database of 5 million patients in 8000 English general practices to examine whether better primary care management of 10 chronic diseases is associated with reduced hospital costs. We find that only primary care performance in stroke care is associated with lower hospital costs. Our results suggest that the 10% improvement in the general practice quality of stroke care between 2004/5 and 2007/8 reduced 2007/8 hospital expenditure by about £130 million in England. The cost savings are due mainly to reductions in emergency admissions and outpatient visits, rather than to lower costs for patients treated in hospital or to reductions in elective admissions.

Patient knowledge and antibiotic abuse: Evidence from an audit study in China

- Journal of Health Economics---2011---Janet Currie,Wanchuan Lin,Wei Zhang

We conduct an audit study in which a pair of simulated patients with identical flu-like complaints visits the same physician. Simulated patient A is instructed to ask a question that showcases his/her knowledge of appropriate antibiotic use, whereas patient B is instructed to say nothing beyond describing his/her symptoms. We find that a patient who displays knowledge of appropriate antibiotics use reduces both antibi-

otic prescription rates and drug expenditures. Such knowledge also increases physicians' information provision about possible side effects, but has a negative impact on the quality of the physician–patient interactions. Our results suggest that antibiotics abuse in China is not driven by patients actively demanding antibiotics, but is largely a supply-side phenomenon.

Regulatory policy and the location of bio-pharmaceutical foreign direct investment in Europe

- Journal of Health Economics---2011---Pamina Koenig,Megan MacGarvie

This paper examines the relationship between cross-country differences in drug price regulation and the location of biopharmaceutical Foreign Direct Investment (FDI) in Europe. Simple theory predicts that price regulation in one country might affect total investment, but not the location of that investment, if sales are global. Nevertheless, some manufacturers threaten that the introduction of price regulation in a country will motivate them to move their investments to other countries. Are such threats cheap talk, or is there evidence that firms avoid price-controlling countries when making FDI location choices? We use data on 527 investments initiated in 27 European countries between 2002 and 2009 and find that investors are less likely to choose countries with price controls, after controlling for other determinants of investment. We also observe a relative decline in investment in countries that increased the stringency of regulatory regimes during our sample period. The effect is restricted to non-manufacturing investments and is most robust for those related to administrative functions.

Effectiveness of state-level vaccination mandates: Evidence from the varicella vaccine

- Journal of Health Economics---2011---Jason Abrevaya,Karen Mulligan

This paper utilizes longitudinal data on varicella (chickenpox) immunizations in order to estimate the causal effects of state-level school-entry and daycare-entry immunization mandates within the United States. We find significant causal effects of mandates upon vaccination rates among preschool children aged 19–35 months; these effects appear in the year of mandate adoption, peak two years after adoption, and show a minimal difference from the aggregate trend about six years after adoption. For a mandate enacted in 2000, the model and estimates imply that roughly 20% of the short-run increase in state-level immunization rates was caused by the mandate introduction. We find no evidence of differential effects for different socioeconomic groups. Combined with previous cost–benefit analyses of the varicella vaccine, the estimates suggest that state-level mandates have been effective from an economic standpoint.

Is being in school better? The impact of school on children's BMI when starting age is endogenous

- Journal of Health Economics---2011---Patricia Anderson,Kristin Butcher,Elizabeth Cascio,Diane Whitmore Schanzenbach

In this paper, we investigate the impact of attending school on body weight and obesity using a regression-discontinuity design. As is the case with academic outcomes, school exposure is related to unobserved determinants of weight outcomes because some families choose to have their child start school late (or early). If one does not account for this endogeneity, it appears that an additional year of school exposure results in a greater BMI and a higher probability of being overweight or obese. When we compare the weight outcomes of similar age children with one versus two years of school exposure due to regulations on school starting age, the significant positive effects disappear, and most point estimates become negative, but insignificant. However, additional school exposure appears to improve weight outcomes of children for whom the transition to elementary school represents a more dramatic change in environment (those who spent less time in childcare prior to kindergarten).

School buses, diesel emissions, and respiratory health

- Journal of Health Economics---2011---Timothy Beatty,Jay Shimshack

School buses contribute disproportionately to ambient air quality, pollute near schools and residential areas, and their emissions collect within passenger cabins. This paper examines the impact of school bus emissions reductions programs on health outcomes. A key contribution relative to the broader literature is that we examine localized pollution reduction programs at a fine level of aggregation. We find that school bus retrofits induced reductions in bronchitis, asthma, and pneumonia incidence for at-risk populations. Back of the envelope calculations suggest conservative benefit–cost ratios between 7:1 and 16:1.

Water accessibility and child health: Use of the leave-out strategy of instruments

- Journal of Health Economics---2011---Dirga Kumar Lamichhane,Eiji Mangyo

This paper investigates the leave-out strategy of instruments by using the leave-out community ratio of household access to in-yard water sources and community water infrastructure as instruments for hours in fetching water time, and the data on disease symptoms. The results show that community-level access to clean water is significantly associated with both water-relevant and irrelevant disease symptoms, which suggests that the correlation between community-level access to clean water and child health is at least partially due to endogenous project placement potentially with respect to unobserved community wealth. The paper concludes that the OLS estimates have a potential endogeneity bias problem and that IV estimates under this strategy is subject to endogenous project placement and is not valid. A policy implication of this study is that careful attention should be paid to both self-selection and endogenous project placement in studying the effect of water accessibility on child health.

Gold and Silver health plans: Accommodating demand heterogeneity in managed competition

- Journal of Health Economics---2011---Jacob Glazer,Thomas G. McGuire

New regulation of health insurance markets creates multiple levels of health plans, with designations like "Gold" and "Silver." The underlying rationale for the heavy-metal approach to insurance regulation is that heterogeneity in demand for health care is not only due to health status (sick demand more than the healthy) but also to other, "taste" related factors (rich demand more than the poor). This paper models managed competition with demand heterogeneity to consider plan payment and enrollee premium policies in relation to efficiency (net consumer benefit) and fairness (the European concept of "solidarity"). Specifically, this paper studies how to implement a "Silver" and "Gold" health plan efficiently and fairly in a managed competition context. We show that there are sharp tradeoffs between efficiency and fairness. When health plans cannot or may not (because of regulation) base premiums on any factors affecting demand, enrollees do not choose the efficient plan. When taste (e.g., income) can be used as a basis of payment, a simple tax can achieve both efficiency and fairness. When only health status (and not taste) can be used as a basis of payment, health status-based taxes and subsidies are required and efficiency can only be achieved with a modified version of fairness we refer to as "weak solidarity." An overriding conclusion is that the regulation of premiums for both the basic and the higher level plans is necessary for efficiency.

The impact of Medicaid insurance coverage on dental service use

- Journal of Health Economics---2011---Moonkyung Kate Choi

The new comprehensive health reform, beginning in 2014, will require Medicaid to expand all elements of coverage to individuals with incomes up to 133 percent of the federal poverty line. With millions more individuals gaining eligibility for adult Medicaid

dental benefits, generating an unbiased estimate of the elasticity of demand for dental services is critical.

Putting different price tags on the same health condition: Re-evaluating the well-being valuation approach

- Journal of Health Economics---2011---Nattavudh Powdthavee,Bernard van den Berg

Many recent writings in health policy have proposed that health be valued directly and in monetary terms using the new well-being valuation method. Yet there is no clear consensus on what the best measure of individual's experience may be for the evaluation process. To shed light on this issue, monetary values for a number of health problems are compared across different well-being measures within the same UK data set. We find that, whilst there is strong internal consistency of health impacts within each well-being measure, hugely different monetary valuations are obtained for the same health problem across different well-being measures. Our results, although should only viewed as illustrative, call for economists to rethink about which measure of well-being or experienced utility to be used in the well-being valuation method, should the approach ever be implemented in real policy contexts.

Grossman's missing health threshold

- Journal of Health Economics---2011---Titus Galama,Arie Kapteyn

We present a generalized solution to Grossman's model of health capital (1972), relaxing the widely used assumption that individuals can adjust their health stock instantaneously to an "optimal" level without adjustment costs. The Grossman model then predicts the existence of a health threshold above which individuals do not demand medical care. Our generalized solution addresses a significant criticism: the model's prediction that health and medical care are positively related is consistently rejected by the data. We suggest structural- and reduced-form equations to test our generalized solution and contrast the predictions of the model with the empirical literature.

Revisiting United States valuation of EQ-5D states

- Journal of Health Economics---2011---Benjamin M. Craig.,Jan J.V. Busschbach

In the original US valuation study of EQ-5D states, all worse-than-dead time trade-off responses (26% of the sample) were divided by 39 to increase the QALY estimates. This transformation has no theoretical justification and motivates this re-examination. Using the publically available dataset, we compared three alternative random utility models: instant (IRUM), angular (ARUM), and episodic (ERUM) models. Each leads to a distinct econometric estimator: mean ratio, ratio of means, and coefficient, respectively. IRUM suggests that 203 of the 243 EQ-5D states are worse-than-dead, which has little face validity compared to ARUM and ERUM (42 and 3 WTD states). ARUM and ERUM estimates are proportionally related such that losses in QALYs are approximately 37% larger under ARUM than ERUM. Compared to ERUM, economic evaluations using ARUM estimates emphasize quality of life, and this difference may influence policy decisions. Either ERUM or ARUM values sets are recommended over the original, transformed set.

"It's driving her mad": Gender differences in the effects of commuting on psychological health

- Journal of Health Economics---2011---Jennifer Roberts,Robert Hodgson,Paul Dolan

Commuting is an important component of time use for most working people. We explore the effects of commuting time on the psychological health of men and women. We use data from the British Household Panel Survey in a fixed effects framework that includes variables known to determine psychological health, as well as factors which may provide compensation for commuting such as income, job satisfaction and housing quality. Our results show that, even after these variables are considered, commuting has an important detrimental effect on the psychological health of women, but not men, and this result is robust to numerous different specifications. We explore explanations for

this gender difference and can find no evidence that it is due to women's shorter working hours or weaker occupational position. Rather women's greater sensitivity to commuting time seems to be a result of their larger responsibility for day-to-day household tasks, including childcare and housework.

Smoking persistence across countries: A panel data analysis

- Journal of Health Economics---2011---Dimitris Christelis,Anna Sanz-de-Galdeano

We provide new cross-country evidence on smoking persistence in Europe, which can be due to both true state dependence and individual unobserved heterogeneity. We distinguish between the two by using semiparametric nonlinear panel data methods, applied to both the smoking participation and the cigarette consumption decision, which we allow to be correlated. We find that for both smoking decisions true state dependence is generally much smaller, but still important, when unobserved individual heterogeneity is accounted for, regardless of residential location. We uncover large differences in true state dependence across countries and relate them to discrepancies in regulations, social norms on and tolerance towards smoking, and awareness of its health risks.

The incidence of the healthcare costs of smoking

- Journal of Health Economics---2011---Benjamin Cowan,Benjamin Schwab

Smokers earn less than non-smokers, but much is still unknown about the source(s) of the smoker's wage gap. We build on the work of Bhattacharya and Bundorf (2009), who provide evidence that obese workers receive lower wages on account of their higher expected healthcare costs. Similarly, we find that smokers who hold employer-sponsored health insurance (ESI) receive significantly lower wages than their non-smoking peers, while smokers who are not insured through their employer endure no such wage penalty. Our results have two implications: first, the incidence of smokers' elevated medical costs appears to be borne by smokers themselves in the form of lower wages. Second, differences in healthcare costs between smokers and non-smokers are a significant source of the smoker's wage gap.

Public employment and political pressure: The case of French hospitals

- Journal of Health Economics---2011---Andrew Clark,Carine Milcent

This paper uses an unusual administrative dataset covering the universe of French hospitals to consider hospital employment: this is consistently higher in public hospitals than in not-for-profit (NFP) or private hospitals, even controlling for a number of measures of hospital output. NFP hospitals serve as a benchmark, being very similar to public hospitals, but without political influence on their hiring. Public-hospital employment is positively correlated with the local unemployment rate, whereas no such relationship is found in other hospitals. This is consistent with public hospitals providing employment in depressed areas. We appeal to the Political Science literature and calculate local political allegiance, using expert evaluations on various parties' political positions and local election results. The relationship between public-hospital employment and local unemployment is stronger the more left-wing the local municipality. This latter result holds especially when electoral races are tight, consistent with a concern for re-election.

Accounting for the dead in the longitudinal analysis of income-related health inequalities

- Journal of Health Economics---2011---Dennis Petrie,Paul Allanson,Ulf-G. Gerdtham

This paper develops an accounting framework to consider the effect of deaths on the longitudinal analysis of income-related health inequalities. Ignoring deaths or using Inverse Probability Weights (IPWs) to reweight the sample for mortality-related attrition can produce misleading results. Incorporating deaths into

the longitudinal analysis of income-related health inequalities provides a more complete picture in terms of the evaluation of health changes in respect to socioeconomic status. We illustrate our work by investigating health mobility from 1999 till 2004 using the British Household Panel Survey (BHPS). We show that for Scottish males explicitly accounting for the dead rather than using IPWs to account for mortality-related attrition changes the direction of the relationship between relative health changes and initial income position, from negative to positive, while for other groups it significantly increases the strength of the positive relationship. Incorporating the dead may be vital in the longitudinal analysis of health inequalities.

Happy house: Spousal weight and individual well-being

- Journal of Health Economics---2011---Andrew Clark,Fabrice Etilé

We use life satisfaction and Body Mass Index (BMI) information from three waves of the GSOEP to test for social interactions in BMI between spouses. Social interactions require that the cross-partial effect of partner's weight and own weight in the utility function be positive. Using life satisfaction as a utility proxy, semi-parametric regressions show that the correlation between satisfaction and own BMI is initially positive, but turns negative after some threshold. Critically, this latter threshold increases with partner's BMI when the individual is overweight. The negative well-being impact of own BMI is thus lower when the individual's partner is heavier, which is consistent with social contagion effects in weight. However, this relationship may also reflect selection on the marriage market or omitted variables, and it is difficult to think of convincing instruments that would allow causality to be clearly established.

Opportunities and benefits as determinants of the direction of scientific research

- Journal of Health Economics---2011---Jay Bhattacharya,Mikko Packalen

Abstract Scientific research and private-sector technological innovation differ in objectives, constraints, and organizational forms. Scientific research may thus not be driven by the direct practical benefit to others in the way that private-sector innovation is. Alternatively, some - yet largely unexplored - mechanisms drive the direction of scientific research to respond to the expected public benefit. We test these two competing hypotheses of scientific research. This is important because any coherent specification of what constitutes the socially optimal allocation of research requires that scientists take the public practical benefit of their work into account in setting their agenda. We examine whether the composition of medical research responds to changes in disease prevalence, while accounting for the quality of available research opportunities. We match biomedical publications data with disease prevalence data and develop new methods for estimating the quality of research opportunities from textual information and structural productivity parameters.

Inequality and polarisation in health systems' responsiveness: A cross-country analysis

- Journal of Health Economics---2011---Andrew Jones,Nigel Rice,Silvana Robone,Pedro Rosa Dias

The World Health Report 2000 proposed three fundamental goals for health systems encompassing population health, health care finance and health systems responsiveness. The goals incorporate both an efficiency and equity dimension. While inequalities in population health and health care finance have motivated two important strands of research, inequalities in responsiveness have received less attention in health economics. This paper examines inequality and polarisation in responsiveness, bridging this gap in the literature and contributing towards an integrated analysis of health systems performance. It uses data from the World Health Survey to measure and compare inequalities in responsiveness across 25 European countries. In order to respect the inherently ordinal nature of the responsiveness data, median-based measures of inequality and polarisation are employed. The results suggest that, in the face of wide differences in the

health systems analysed, there exists large variability in inequality in responsiveness across countries.

Time is money: Outpatient waiting times and health insurance choices of elderly veterans in the United States

- Journal of Health Economics---2011---Steven D. Pizer,Julia C. Prentice

Growth in the number of days between an appointment request and the actual appointment reduces demand. Although such waiting times are relatively low in the US, current policy initiatives could cause them to increase. We estimate multiple-equation models of physician utilization and insurance plan choice for Medicare-eligible veterans. We find that a 10% increase in VA waiting times increases demand for Medigap insurance by 5%, implying that a representative patient would be indifferent between waiting an average of 5 more days for VA appointments and paying $300 more in annual premium.

How payment systems affect physicians' provision behaviour--An experimental investigation

- Journal of Health Economics---2011---Heike Hennig-Schmidt,Reinhard Selten,Daniel Wiesen

Abstract Understanding how physicians respond to incentives from payment schemes is a central concern in health economics research. We introduce a controlled laboratory experiment to analyse the influence of incentives from fee-for-service and capitation payments on physicians' supply of medical services. In our experiment, physicians choose quantities of medical services for patients with different states of health. We find that physicians provide significantly more services under fee-for-service than under capitation. Patients are overserved under fee-for-service and underserved under capitation. However, payment incentives are not the only motivation for physicians' quantity choices, as patients' health benefits are of considerable importance as well. We find that patients in need of a high (low) level of medical services receive larger health benefits under fee-for-service (capitation).

Genetic lotteries within families

- Journal of Health Economics---2011---Jason Fletcher,Steven Lehrer

Drawing on findings from the biomedical literature, this paper introduces the idea that specific exogenously inherited differences in the genetic code between full biological siblings can be used to test within-family estimators and potentially improve our understanding of economic relationships. These points are illustrated with an application to identify the causal impact of several poor health conditions on academic outcomes. We present evidence that family fixed effects estimators by themselves cannot fully account for the endogeneity of poor health when estimating education production functions. Further, our analysis elucidates the situations under which genetic markers can serve as instrumental variables for specific health conditions.

Measuring and testing for gender discrimination in physician pay: English family doctors

- Journal of Health Economics---2011---Hugh Gravelle,Arne Hole,Rita Santos

In 2008 the income of female GPs was 70%, and their wages (income per hour) were 89%, of those of male GPs. We estimate Oaxaca decompositions using OLS models of wages and 2SLS models of income and propose a set of new direct tests for within workplace gender discrimination. The direct tests are based on a comparison of the differences in income of female and male GPs in practices with varying proportions of female GPs and with female or male senior partners. These tests provide only weak evidence for discrimination. We also propose a set of indirect tests for discrimination, including a comparison of a GP's actual income with the income they report as an acceptable reward for their job. The indirect tests provide no evidence for gender discrimination within practices.

Medicare prospective payment and the volume and intensity of skilled nursing facility services

- Journal of Health Economics---2011---David C. Grabowski,Christopher C. Afendulis,Thomas G. McGuire

In 1998, Medicare adopted a per diem Prospective Payment System (PPS) for skilled nursing facility care, which was intended to deter the use of high-cost rehabilitative services. The average per diem decreased under the PPS, but because per diems increased for greater therapy minutes, the ability of the PPS to deter the use of high-intensity services was questionable. In this study, we assess how the PPS affected the volume and intensity of Medicare services. By volume we mean the product of the number of Medicare residents in a facility and the average length-of-stay, by intensity we mean the time per week devoted to rehabilitation therapy. Our results indicate that the number of Medicare residents decreased under PPS, but rehabilitative services and therapy minutes increased while length-of-stay remained relatively constant. Not surprisingly, when subsequent Medicare policy changes increased payment rates, Medicare volume far surpassed the levels seen in the pre-PPS period.

Measuring socioeconomic inequality in health, health care and health financing by means of rank-dependent indices: A recipe for good practice

- Journal of Health Economics---2011---Guido Erreygers,Tom Van Ourti

The tools to be used and other choices to be made when measuring socioeconomic inequalities with rank-dependent inequality indices have recently been debated in this journal. This paper adds to this debate by stressing the importance of the measurement scale, by providing formal proofs of several issues in the debate, and by lifting the curtain on the confusing debate between adherents of absolute versus relative health differences. We end this paper with a 'matrix' that provides guidelines on the usefulness of several rank-dependent inequality indices under varying circumstances.

The impact of comparative effectiveness research on health and health care spending

- Journal of Health Economics---2011---Anirban Basu,Anupam Jena,Tomas J. Philipson

Comparative effectiveness research (CER) is thought to identify what works and does not work in health care. We interpret CER as infusing evidence on product quality into markets, shifting the relative demand for products in CER studies. We analyze how shifts in demand affect health and health care spending and demonstrate that CER may raise or lower overall health when treatments have heterogeneous effects, but payers respond with product-specific coverage policies. Among patients with schizophrenia, we calibrate that subsidy policies based on the clinical trial CATIE may have reduced overall health by inducing some patients to switch away from schizophrenia treatments that were effective for them towards winners of the CER.

Analysis of the distributional impact of out-of-pocket health payments: Evidence from a public health insurance program for the poor in Mexico

- Journal of Health Economics---2011---Rocio Garcia-Diaz,Sandra G. Sosa-Rub

Abstract Many governments have health programs focused on improving health among the poor and these have an impact on out-of-pocket health payments made by individuals. Therefore, one of the objectives of these programs is to reach the poorest and reduce their out-of-pocket expenditure. In this paper we propose the distributional poverty impact approach to measure the poverty impact of out-of-pocket health payments of different health financing policies. This approach is comparable to the impoverishment methodology proposed by Wagstaff and van Doorslaer (2003) that compares poverty indices before and after out-of-pocket health payments. In order to escape the specification of a particular poverty index, we use the marginal dominance

approach that uses non-intersecting curves and can rank poverty reducing health financing policies. We present an empirical application of the out-of-pocket health payments for an innovative social financing policy implemented in Mexico named Seguro Popular. The paper finds evidence that Seguro Popular program has a better distributional poverty impact when families face illness when compared to other poverty reducing policies. The empirical dominance approach uses data from Mexico in 2006 and considers international poverty standards of $2 per person per day.

Income and the utilization of long-term care services: Evidence from the Social Security benefit notch

- Journal of Health Economics---2011---Gopi Goda,Ezra Golberstein,David C. Grabowski

This paper estimates the impact of income on the long-term care utilization of elderly Americans using a natural experiment that led otherwise similar retirees to receive significantly different Social Security payments based on their year of birth. Using data from the 1993 and 1995 waves of the AHEAD, we estimate instrumental variables models and find that a positive permanent income shock lowers nursing home use but increases the utilization of paid home care services. We find some suggestive evidence that the effects are due to substitution of home care for nursing home utilization. The magnitude of these estimates suggests that moderate reductions in post-retirement income would significantly alter long-term utilization patterns among elderly individuals.

A cost-benefit analysis of cataract surgery based on the English Longitudinal Survey of Ageing

- Journal of Health Economics---2011---Martin Weale

This paper uses the English Longitudinal Survey of Ageing to explore the self-reported effect of cataract operations on eye-sight. A non-parametric analysis shows clearly that most cataract patients report improved eye-sight after surgery and a parametric analysis provides further information: it shows that the beneficial effect is larger the worse was self-reported eye-sight preceding surgery so that those with very good or excellent eye-sight do not derive immediate benefit. Nevertheless, the long-run effect is suggested to be beneficial. Calibrating the results to existing studies of the effect of imperfect eye-sight on quality of life, the impact of cataract operations on Quality Adjusted Life Years is found to be similar to that established in previous studies and well above the costs of cataract operations in most circumstances.

The impact of minimum legal drinking age laws on alcohol consumption, smoking, and marijuana use: Evidence from a regression discontinuity design using exact date of birth

- Journal of Health Economics---2011---Barış Yörük,Ceren Ertan Yoruk

This paper uses a regression discontinuity design to estimate the impact of the minimum legal drinking age laws on alcohol consumption, smoking, and marijuana use among young adults. Using data from the National Longitudinal Survey of Youth (1997 Cohort), we find that granting legal access to alcohol at age 21 leads to an increase in several measures of alcohol consumption, including an up to a 13 percentage point increase in the probability of drinking. Furthermore, this effect is robust under several different parametric and non-parametric models. We also find some evidence that the discrete jump in alcohol consumption at age 21 has negative spillover effects on marijuana use but does not affect the smoking habits of young adults. Our results indicate that although the change in alcohol consumption habits of young adults following their 21st birthday is less severe than previously known, policies that are designed to reduce drinking among young adults may have desirable impacts and can create public health benefits.

The causal relationship between education, health and health related behaviour: Evidence from a natural experiment in England

- Journal of Health Economics---2011---Nils Braakmann

I exploit exogenous variation in the likelihood to obtain any sort of educational qualification between January- and February-born individuals for 13 academic cohorts in England. For these cohorts compulsory schooling laws interacted with the timing of the CSE and O-level exams to change the probability of obtaining a qualification by around 2-3 percentage points. I then use data on individuals born in these two months from the British Labour Force Survey and the Health Survey for England to investigate the effects of education on health using being February-born as an instrument for education. The results indicate neither an effect of education on various health related measures nor an effect on health related behaviour, e.g., smoking, drinking or eating various types of food.

Recessions are bad for workplace safety

- Journal of Health Economics---2011---Jan Boone,Jan C. van Ours,Jean-Philippe Wuellrich,Josef Zweimüller

Abstract Workplace accidents are an important economic phenomenon. Yet, the pro-cyclical fluctuations in workplace accidents are not well understood. They could be related to fluctuations in effort and working hours, but workplace accidents may also be affected by reporting behavior. Our paper uses unique data on workplace accidents from an Austrian matched worker-firm dataset to study in detail how economic incentives affect workplace accidents. We find that workers who reported an accident in a particular period of time are more likely to be fired later on. And, we find support for the idea that recessions influence the reporting of moderate workplace accidents: if workers think the probability of dismissals at the firm level is high, they are less likely to report a moderate workplace accident.

Conjugal bereavement effects on health and mortality at advanced ages

- Journal of Health Economics---2011---Gerard van den Berg,Maarten Lindeboom,France Portrait

Spousal bereavement at old ages may lead to dramatic changes in health. This paper investigates whether spousal bereavement has a causal effect on health and on mortality of the surviving spouse. We advance on the literature in two main ways. First, we model survivals of both spouses and the dynamic evolution of health jointly, allowing for potential endogeneity of timing of bereavement and health in explaining mortality of the surviving spouse. Second, we use a flexible non-parametric data dimensionality reduction method to thoroughly characterize health (using 22 health indicators) by a limited number of latent health indicators. This allows us to investigate the causal effect of spousal bereavement on mortality and on all aspects of health simultaneously. Our analyses are based on an ongoing longitudinal survey that follows a random sample of older individuals from 1992. We find strong instantaneous effects of bereavement on mortality and on certain aspects of health. Individuals lose on average 12% of residual life expectancy after conjugal bereavement. Conjugal bereavement affects the share of healthy years in residual lifetime, primarily because healthy years are replaced by years with chronic diseases. The strong direct effects of bereavement suggest that monitoring and/or interventions just after spousal bereavement are important for the length and quality of life of older bereaved individuals.

Optimal public provision of nursing homes and the role of information

- Journal of Health Economics---2011---Michael Kuhn,Robert Nuscheler

Abstract Increasing demand for long-term care poses at least five challenges to the policy-maker: (i) How should care be supplied, within a nursing home or within the family? (ii) What level of care should be provided in the different arrangements? (iii) How do the answers relate to the severity of dependence? (iv)

How can financial strain be mitigated for families with severely dependent members? (v) What is the role of information constraints for the nature and scope of optimal long-term care policy? We consider a theoretical model of long-term care provision under adverse selection to address these challenges. Our main - and remarkably robust - result is that nursing home care facilitates self selection and mitigates and possibly eliminates distortions in caring levels and transfers. Informational asymmetries may thus lead to care being provided too often within institutions rather than within a family context.

Schooling and smoking among the baby boomers - An evaluation of the impact of educational expansion in France

- Journal of Health Economics---2011---Fabrice Etilé,Andrew Jones

Post-war expansion of education in France transformed the distribution of schooling for the cohorts born between the 1940s and the 1970s. However, throughout this expansion the proportion with the highest levels of qualifications remained stable, providing a natural control group. We evaluate the impact of schooling on smoking, for the beneficiaries of the post-war expansion, by comparing changes in their outcomes across birth cohorts with changes within the control group. We uncover robust evidence that educational expansion contributed to a decline in smoking prevalence of 2.9 points of percentage for men and 3.2 points for women at the turn of the 21st century. Our results also suggest that the persistence of the schooling-smoking gradient is better explained by differences in the education-related opportunity costs of smoking than by differences in information about smoking dangers.

Where would you go for your next hospitalization?

- Journal of Health Economics---2011---Kyoungrae Jung,Roger Feldman,Dennis Scanlon

We examine the effects of diverse dimensions of hospital quality - including consumers' perceptions of unobserved attributes - on future hospital choice. We utilize consumers' stated preference weights to obtain hospital-specific estimates of perceptions about unmeasured attributes such as reputation. We report three findings. First, consumers' perceptions of reputation and medical services contribute substantially to utility for a hospital choice. Second, consumers tend to select hospitals with high clinical quality scores even before the scores are publicized. However, the effect of clinical quality on hospital choice is relatively small. Third, satisfaction with a prior hospital admission has a large impact on future hospital choice. Our findings suggest that including measures of consumers' experience in report cards may increase their responsiveness to publicized information, but other strategies are needed to overcome the large effects of consumers' beliefs about other quality attributes.

Erratum "Changing mix of medical care services: Stylized facts and implications for price indexes" [J. Health Econ. 30 (2011) 568-574]

- Journal of Health Economics---2011---Ana Aizcorbe,Nicole Nestoriak

2011

Effects of prenatal and early life malnutrition: Evidence from the Greek famine

- Journal of Health Economics---2011---Sven Neelsen,Thomas Stratmann

This paper examines the long run education and labor market effects from early-life exposure to the Greek 1941-1942 famine. Given the short duration of the famine, we can separately identify the famine effects for cohorts exposed in utero, during infancy and at 1 year of age. We find that adverse outcomes due to the famine are largest for infants. Further, in our regression analysis we exploit the fact that the famine was more severe in urban than in rural areas. Consistent with our prediction, we find that urban-born cohorts show larger negative impacts on educational outcomes than rural-born cohorts.

Healthy school meals and educational outcomes

- Journal of Health Economics---2011---Michèle Belot,Jonathan James

This paper provides field evidence on the effects of diet on educational outcomes, exploiting a campaign lead in the UK in 2004, which introduced drastic changes in the meals offered in the schools of one borough - Greenwich - shifting from low-budget processed meals towards healthier options. We evaluate the effect of the campaign on educational outcomes in primary schools using a difference in differences approach; comparing educational outcomes in primary schools (Key Stage 2 outcomes more specifically) before and after the reform, using the neighbouring Local Education Authorities as a control group. We find evidence that educational outcomes did improve significantly in English and Science. We also find that authorised absences - which are most likely linked to illness and health - fell by 14%.

Long-term employment effects of surviving cancer

- Journal of Health Economics---2011---John R. Moran,Pamela Farley Short,Christopher S. Hollenbeak

We compare employment and usual hours of work for prime-age cancer survivors from the Penn State Cancer Survivor Survey to a comparison group drawn from the Panel Study of Income Dynamics using cross-sectional and difference-in-differences regression and matching estimators. Because earlier research has emphasized workers diagnosed at older ages, we focus on employment effects for younger workers. We find that as long as two to six years after diagnosis, cancer survivors have lower employment rates and work fewer hours than other similarly aged adults.

Anatomy of a health scare: Education, income and the MMR controversy in the UK

- Journal of Health Economics---2011---Dan Anderberg,Arnaud Chevalier,Jonathan Wadsworth

Abstract The measles, mumps and rubella (MMR) controversy provides an interesting case where, for a short period of time, research publicized in the media, suggested a potential risk of serious side-effects associated with the vaccine, where there was also a sharp behavioral response from the public, and where the initial information was subsequently overturned. We consider the controversy from the perspective of health inequalities and the assimilation of information, focusing on whether and how vaccine uptake behavior in the wake of the controversy differed among groups of parents by education and income. Using panel data on the variation in the uptake of the MMR, and other childhood immunizations, across local Health Authority areas we find that the uptake rate of the MMR declined faster in areas where a larger fraction of parents had stayed in education past the age of 18 than in areas with less educated parents. We also find that the same areas reduced their relative uptake of other uncontroversial childhood immunizations, suggesting a "spillover" effect. Using a supplementary data source we find evidence of a corresponding positive income effect, indicating that wealthier parents avoided the MMR dilemma by purchasing single vaccines.

Medicaid's effect on single women's labor supply: Evidence from the introduction of Medicaid

- Journal of Health Economics---2011---Erin Strumpf

This paper examines the impact of the introduction of the Medicaid program on labor supply decisions among single women in the late 1960s and early 1970s. I use a differences-in-differences-in-differences methodology to estimate the effect of Medicaid on eligible women's labor force participation, using variation in the timing of Medicaid implementation across states and in eligibility across demographic groups. Using March supplements to the CPS from 1963 to 1975, I find no evidence that women who were eligible for Medicaid decreased their labor supply relative to ineligible women, in contrast to clear theoretical predictions of a negative supply response. Positive point estimates suggest that health benefits from health insurance coverage may

have contributed to relative increases in labor supply. These results add to an emerging consensus that public health insurance programs for low-income parents and children may be able to improve access to care without substantial indirect costs from labor supply distortions.

Economics of individualization in comparative effectiveness research and a basis for a patient-centered health care

- Journal of Health Economics---2011---Anirban Basu

The United States aspires to use information from comparative effectiveness research (CER) to reduce waste and contain costs without instituting a formal rationing mechanism or compromising patient or physician autonomy with regard to treatment choices. With such ambitious goals, traditional combinations of research designs and analytical methods used in CER may lead to disappointing results. In this paper, I study how alternate regimes of comparative effectiveness information help shape the marginal benefits (demand) curve in the population and how such perceived demand curves impact decision-making at the individual patient level and welfare at the societal level. I highlight the need to individualize comparative effectiveness research in order to generate the true (normative) demand curve for treatments. I discuss methodological principles that guide research designs for such studies. Using an example of the comparative effect of substance abuse treatments on crime, I use novel econometric methods to salvage individualized information from an existing dataset.

Smoking initiation among youth: The role of cigarette excise taxes and prices by race/ethnicity and gender

- Journal of Health Economics---2011---James M. Nonnemaker,Matthew C. Farrelly

Existing evidence for the role of cigarette excise taxes and prices as significant determinants of youth smoking initiation is mixed. A few studies have considered the possibility that the impact of cigarette taxes and prices might differ by gender or race/ethnicity. In this paper, we address the role of cigarette taxes and prices on youth smoking initiation using the National Longitudinal Survey of Youth 1997 cohort and discrete-time survival methods. We present results overall and by gender, race/ethnicity, and gender by race/ethnicity. We examine initiation over the age range during which youth are most at risk of initiation and over a period in which substantial changes have occurred in tax and price. The result for cigarette excise taxes is small and mixed across alternative specifications, with the effect strongest for black youth. Cigarette prices are more consistently a significant determinant of youth smoking initiation, especially for black youth.

Changing mix of medical care services: Stylized facts and implications for price indexes

- Journal of Health Economics---2011---Ana Aizcorbe,Nicole Nestoriak

The utilization of health care services has undergone several important shifts in recent years that have implications for the cost of medical care. We empirically document the presence of these shifts for a broad list of medical conditions and assess the implications for price indexes. Following the earlier literature, we compare the growth of two price measures: one that tracks expenditures for the services actually provided to treat conditions and another that holds the mix of those services fixed over time. Using retrospective claims data for a sample of commercially insured patients, we find that, on average, expenditures to treat diseases rose 11% from 2003Q1 to 2005Q4 and would have risen even faster, 18%, had the mix of services remained fixed at the 2003Q1 levels. This suggests that fixed-basket price indexes, as are used in the official statistics, could overstate true price growth significantly.

Why are health care report cards so bad (good)?

- Journal of Health Economics---2011---Yijuan Chen

Abstract This paper provides a signaling-game theoretical foundation for empirically testing the effects

of quality report cards in the U.S. health care industry. It shows that, when health care providers face an identical distribution of patient illness severities, the multidimensional measures in the existing report cards render them a mechanism that reveals the providers' qualities without causing them to select patients. However, non-identical patient type distributions between providers, attributed to the referring physician, may force the high-quality provider to shun patients in order to signal himself. Despite this imperfection, the existing report cards cause the minimum provider selection compared with alternative report mechanisms. Since the report cards not only may cause providers to select patients, but also cause patients to select providers, the single difference-in-differences estimates used in previous studies are not sufficient to indicate providers' selection behavior. In an updated empirical framework, a treatment effect shall be estimated once every period.

One last puff? Public smoking bans and smoking behavior

- Journal of Health Economics---2011---Silke Anger,Michael Kvasnicka,Thomas Siedler

This paper investigates the short-term effects of public smoking bans on individual smoking behavior. In 2007 and 2008, state-level smoking bans were gradually introduced in all of Germany's federal states. We exploit this variation to identify the effect that smoke-free policies had on individuals' smoking propensity and smoking intensity. Using rich longitudinal data from the German Socio-Economic Panel Study, our difference-in-differences estimates show that the introduction of smoke-free legislation in Germany did not change average smoking behavior within the population. However, our estimates point to important heterogeneous effects. Individuals who go out more often to bars and restaurants did adjust their smoking behavior. Following the ban, they became less likely to smoke and also smoked less.

The effects of maternity leave on children's birth and infant health outcomes in the United States

- Journal of Health Economics---2011---Maya Rossin

This paper evaluates the impacts of unpaid maternity leave provisions of the 1993 Family and Medical Leave Act (FMLA) on children's birth and infant health outcomes in the United States. My identification strategy uses variation in pre-FMLA maternity leave policies across states and variation in which firms are covered by FMLA provisions. Using Vital Statistics data and difference-in-difference-in-difference methodology, I find that maternity leave led to small increases in birth weight, decreases in the likelihood of a premature birth, and substantial decreases in infant mortality for children of college-educated and married mothers, who were most able to take advantage of unpaid leave. My results are robust to the inclusion of numerous controls for maternal, child, and county characteristics, state, year, and month fixed effects, and state-year interactions, as well as across several different specifications.

The effects of maternal employment on the health of school-age children

- Journal of Health Economics---2011---Melinda Morrill

The effects of maternal employment on children's health are theoretically ambiguous and challenging to identify. There are trade-offs between income and time, and a mother's decision to work reflects, in part, her children's health and her underlying preferences. I utilize exogenous variation in each child's youngest sibling's eligibility for kindergarten as an instrument. Using the restricted-access National Health Interview Survey (1985-2004), I identify the effects on overnight hospitalizations, asthma episodes, and injuries/poisonings for children ages 7-17. Maternal employment increases the probability of each adverse health event by nearly 200 percent. These effects are robust and do not reflect a non-representative local effect.

Insights on unemployment, unemployment insurance, and mental health

- Journal of Health Economics---2011---Nathan Tefft

This paper contributes to the growing literature on the relationship between business cycles and mental health. It is one of the first applications in the economics literature to incorporate data on web searches from Google Insights for Search, and these unique data allow the opportunity to estimate the association between weekly unemployment insurance (UI) claims, in addition to monthly unemployment rates, and search indexes for "depression" and "anxiety". Results from state fixed effects models yield (1) a positive relationship between the unemployment rate and the depression search index and (2) a negative relationship between initial UI claims on the one hand and the depression and anxiety search indexes on the other. A lag analysis also shows that an extended period of higher levels of continued UI claims is associated with a higher depression search index.

Unpacking the misery multiplier: How employability modifies the impacts of unemployment and job insecurity on life satisfaction and mental health

- Journal of Health Economics---2011---Francis Green

Employability strongly moderates the effects of unemployment and of job insecurity on life satisfaction and mental health. Using nationally representative panel data from Australia, I find that an increase in employability from zero to 100% cancels around three quarters, in some cases more, of the detrimental effect of unemployment. Employability also matters for employees: an increase in men's employability from zero to 100% reduces the detrimental effect of job insecurity by more than half. The effects of extreme job insecurity and of unemployment are large and of comparable magnitudes. The findings are used to compute estimates of the well-being trade-off between increases in job insecurity and increases in employability, relevant to the support of "flexicurity" policies, and of the "misery multiplier", the extent to which the effect of a rise in aggregate unemployment on those becoming unemployed is supplemented by the effects on others' insecurity and employability.

The anatomy of absenteeism

- Journal of Health Economics---2011---Simen Markussen,Knut Røed,Ole Rogeberg,Simen Gaure

Based on comprehensive administrative register data from Norway, we examine the determinants of sickness absence behavior; in terms of employee characteristics, workplace characteristics, panel doctor characteristics, and economic conditions. The analysis is based on a novel concept of a worker's steady state sickness absence propensity, computed from a multivariate hazard rate model designed to predict the incidence and duration of sickness absence for all workers. Key conclusions are that (i) most of the cross-sectional variation in absenteeism is caused by genuine employee heterogeneity; (ii) the identity of a person's panel doctor has a significant impact on absence propensity; (iii) sickness absence insurance is frequently certified for reasons other than sickness; and (iv) the recovery rate rises enormously just prior to the exhaustion of sickness insurance benefits.

Health and income: A robust comparison of Canada and the US

- Journal of Health Economics---2011---Jean-Yves Duclos,Damien Échevin

Abstract This paper uses sequential stochastic dominance procedures to compare the joint distribution of health and income across space and time. It is the first application of which we are aware of methods to compare multidimensional distributions of income and health using procedures that are robust to aggregation techniques. The paper's approach is more general than comparisons of health gradients and does not require the estimation of health equivalent incomes. We illustrate the approach by contrasting Canada and the

US using comparable data. Canada dominates the US over the bottom part of the bi-dimensional distribution of health and income, though not generally over the uni-dimensional distributions of health or income. The paper also finds that welfare for both Canadians and Americans has not unambiguously improved during the last decade over the joint distribution of income and health, in spite of the fact that the uni-dimensional distributions of income have clearly improved during that period.

Effect of large-scale social interactions on body weight

- Journal of Health Economics---2011---M. Christopher Auld

I estimate models of endogenous social interactions in body weight at the county and state levels. The results show that dispersion in body weight across time and space in the U.S. is not clearly excessive, and that much of this variation can be attributed to observable individual and regional characteristics. Models exploiting variants of methods proposed by Glaeser et al. (2003), fixed effects, instrumental variable and split-sample instrumental variable methods to address endogeneity suggest that there are not large social multipliers on body weight outcomes. The evidence suggests there may be small multipliers on BMI, obesity, and morbid obesity. There is no evidence that underweight is subject to a social multiplier. The results are sensitive to specification.

The effect of job loss on overweight and drinking

- Journal of Health Economics---2011---Partha Deb,William T. Gallo,Padmaja Ayyagari,Jason Fletcher,Jody L. Sindelar

This paper examines the impact of job loss due to business closings on body mass index (BMI) and alcohol consumption. We suggest that the ambiguous findings in the extant literature may be due in part to unobserved heterogeneity in response and in part due to an overly broad measure of job loss that is partially endogenous (e.g., layoffs). We improve upon this literature using: exogenously determined business closings, a sophisticated estimation approach (finite mixture models) to deal with complex heterogeneity, and national, longitudinal data from the Health and Retirement Study. For both alcohol consumption and BMI, we find evidence that individuals who are more likely to respond to job loss by increasing unhealthy behaviors are already in the problematic range for these behaviors before losing their jobs. These results suggest the health effects of job loss could be concentrated among "at risk" individuals and could lead to negative outcomes for the individuals, their families, and society at large.

Racial disparities in the cognition-health relationship

- Journal of Health Economics---2011---Owen Thompson

This paper investigates how the association between cognitive achievement and self-rated health in middle age differs by race, and attempts to explain these differences. The role of cognition in health determination has received only limited empirical attention, and even less is known about how race may affect this relationship. Using data from the NLSY, I find that while Whites with higher cognitive achievement scores tend to report substantially better general health, this relationship is far weaker or wholly absent among Blacks. Further tests suggest that about 35% of this racial difference can be explained by behavioral decisions during adulthood, and that another portion of the disparity may trace back to prenatal and early childhood experiences. The paper closes by noting that its results are broadly consistent with explanations of the racial health gap that emphasize entrenched forms of racial discrimination.

Changes in compulsory schooling and the causal effect of education on health: Evidence from Germany

- Journal of Health Economics---2011---Daniel Kemptner,Hendrik Jürges,Steffen Reinhold,Hendrik Juerges

In this paper we investigate the causal effect of years of schooling on health and health-related behavior in West Germany. We apply an instrumental variables approach using as natural experiments several changes in compulsory schooling laws between 1949 and 1969. These law changes generate exogenous variation in years of schooling both across states and over time. We find evidence for a strong and significant causal effect of years of schooling on long-term illness for men but not for women. Moreover, we provide somewhat weaker evidence of a causal effect of education on the likelihood of having weight problems for both sexes. On the other hand, we find little evidence for a causal effect of education on smoking behavior. Overall, our estimates suggest significant non-monetary returns to education with respect to health outcomes but not necessarily with respect to health-related behavior.

School accountability laws and the consumption of psychostimulants

- Journal of Health Economics---2011---Farasat Bokhari,Helen Schneider

Abstract Over the past decade, several states introduced varying degrees of accountability systems for schools, which became federal law with the passage of the No Child Left Behind Act of 2001. The intent of these accountability laws was to improve academic performance and to make school quality more observable. Nonetheless, schools have reacted to these pressures in several different ways, some of which were not intended. We make use of the variation across states and over time in specific provisions of these accountability laws and find that accountability pressures effect medical diagnoses and subsequent treatment options of school aged children. Specifically, children in states with more stringent accountability laws are more likely to be diagnosed with Attention Deficit/Hyperactivity Disorder (ADHD) and consequently prescribed psychostimulant drugs for controlling the symptoms. However, conditional on diagnosis, accountability laws do not further change the probability of receiving medication therapy.

The impact of emergency birth control on teen pregnancy and STIs

- Journal of Health Economics---2011---Sourafel Girma,David Paton

We use panel data from local authorities in England between 1998 and 2004 to examine the differential impact of increased access for teenagers to emergency birth control (EBC) at pharmacies on teenage pregnancies and sexually transmitted infections (STIs). We estimate both difference-in-difference (DD) and the more robust difference-in-difference-in-differences (DDD) models. The DD estimates provide some evidence that pharmacy EBC schemes are associated with higher teenage conception rates, but this result is not upheld in the DDD models. In contrast both the DD and DDD models provide consistent evidence that pharmacy EBC schemes are associated with higher teenage STI rates.

Physician division of labor and patient selection for outpatient procedures

- Journal of Health Economics---2011---Guy David,Mark D. Neuman

Little is known about the ability of incentives to influence decisions by physicians regarding choices of settings for care delivery. In the context of outpatient procedural care, the emergence of freestanding ambulatory surgery centers (ASCs) as alternatives to hospital-based outpatient departments (HOPDs) creates a unique opportunity to study this question. We advance a model where physicians' division of labor between ASCs and HOPDs affects the medical complexity of patients treated in low-acuity settings (i.e. ASCs). Analyses of outpatient surgical procedure data show that physicians working exclusively in low-acuity settings (i.e. ASCs) treat patients of significantly higher medical complexity in these settings than do physicians who also practice in higher-acuity settings (i.e. HOPDs). This discrepancy shrinks with increasing procedural risk and with increasing distance between ASCs and acute care hospitals.

Do bad report cards have consequences? Impacts of publicly reported provider quality information on the CABG market in Pennsylvania

- Journal of Health Economics---2011---Justin Wang,Jason Hockenberry,Shin-Yi Chou,Muzhe Yang

Since 1992, the Pennsylvania Health Care Cost Containment Council (PHC4) has published cardiac care report cards for coronary artery bypass graft (CABG) surgery providers. We examine the impact of CABG report cards on a provider's aggregate volume and volume by patient severity and then employ a mixed logit model to investigate the matching between patients and providers. We find a reduction in volume of poor performing and unrated surgeons' volume but no effect on more highly rated surgeons or hospitals of any rating. We also find that the probability that patients, regardless of severity of illness, receive CABG surgery from low-performing surgeons is significantly lower.

The effects of hospitals' governance on optimal contracts: Bargaining vs. contracting

- Journal of Health Economics---2011---Matteo Galizzi,Marisa Miraldo

We propose a two-stage model to study the impact of different hospitals' governance frameworks on the optimal contracts designed by third-party payers when patients' disease severity is the private information of the hospital. In the second stage, doctors and managers interact within either a bargaining or a contracting scenario. In the contracting scenario, managers offer a contract that determines the payment to doctors, and doctors decide how many patients to treat. In the bargaining scenario, doctors and managers strategically negotiate on both the payment to doctors and the number of patients to treat. We derive the equilibrium doctors' payments and number of treated patients under both scenarios. We then derive the optimal contract offered by the government to the hospital in the first stage. Results show that when the cost of capital is sufficiently low, the informational rent is lower, and the social welfare is higher, in the contracting scenario.

Determinants of long-term care spending: Age, time to death or disability?

- Journal of Health Economics---2011---Claudine de Meijer,Marc Koopmanschap,d' Uva, Teresa Bago,Eddy Van Doorslaer

In view of population aging, better understanding of what drives long-term care expenditure (LTCE) is warranted. Time-to-death (TTD) has commonly been used to project LTCE because it was a better predictor than age. We reconsider the roles of age and TTD by controlling for disability and co-residence and illustrate their relevance for projecting LTCE. We analyze spending on institutional and homecare for the entire Dutch 55+ population, conditioning on age, sex, TTD, cause-of-death and co-residence. We further examined homecare expenditures for a sample of non-institutionalized conditioning additionally on disability. Those living alone or deceased from diabetes, mental illness, stroke, respiratory or digestive disease have higher LTCE, while a cancer death is associated with lower expenditures. TTD no longer determines homecare expenditures when disability is controlled for. This suggests that TTD largely approximates disability. Nonetheless, further standardization of disability measurement is required before disability could replace TTD in LTCE projections models.

Pricing behaviour of nonprofit insurers in a weakly competitive social health insurance market

- Journal of Health Economics---2011---Rudy C.H.M. Douven,Frederik T. Schut

In this paper we examine the pricing behaviour of nonprofit health insurers in the Dutch social health insurance market. Since for-profit insurers were not allowed in this market, potential spillover effects from the presence of for-profit insurers on the behaviour of nonprofit insurers were absent. Using a panel data set for all health insurers operating in the Dutch social health insurance market over the period 1996-2004, we estimate a premium model to determine which factors explain the price setting behaviour of nonprofit health

insurers. We find that financial stability rather than profit maximisation offers the best explanation for health plan pricing behaviour. In the presence of weak price competition, health insurers did not set premiums to maximize profits. Nevertheless, our findings suggest that regulations on financial reserves are needed to restrict premiums.

Consumers, health insurance and dominated choices

- Journal of Health Economics---2011---Anna D. Sinaiko,Richard A. Hirth

We analyze employee health plan choices when the choice set offered by their employer includes a dominated plan. During our study period, one-third of workers were enrolled in the dominated plan. Some may have selected the plan before it was dominated and then failed to switch out of it. However, a substantial number actively chose the dominated plan when they had an unambiguously better choice. These results suggest limitations in the ability of health reform based solely on consumer choice to achieve efficient outcomes and that implementation of health reform should anticipate, monitor and account for this consumer behavior.

Impact of health savings accounts on precautionary savings, demand for health insurance and prevention effort

- Journal of Health Economics---2011---Petra Steinorth

Abstract The paper examines the influence of health savings accounts (HSAs) on optimal savings, insurance demand and prevention effort over the course of a lifetime. This paper adds to the literature by investigating HSAs as both a form of insurance and as saving vehicle in an expected utility framework. Assuming no regulatory constraints on the deductible, we show that individuals voluntarily choose a positive deductible and increase their savings with HSAs. If the government-imposed minimum deductible becomes too great, however, individuals may instead choose to remain in traditional insurance. We determine the effect of HSAs on prevention effort. We find that an increased tax subsidy may worsen moral hazard issues. Assuming partial risk aversion to be less than or equal to one, individuals will either invest less in the health preservation effort and more money in the HSA or vice versa. However, they will never increase both effort and savings simultaneously as was intended when HSAs were introduced.

Deriving distributional weights for QALYs through discrete choice experiments

- Journal of Health Economics---2011---Emily Lancsar,John Wildman,Cam Donaldson,Mandy Ryan,Rachel Baker

This paper presents the first attempt to use a discrete choice experiment to derive distributional weights for quality adjusted life years (QALYs), based on characteristics (age and severity) of the beneficiaries. A novel approach using the Hicksian compensating variation is applied. Advantages include derivation of weights for QALYs, not just for life or life years saved, and investigation of the impact of the size of the health gain by allowing the gain to be traded against other characteristics. Results suggest one would generally not weight QALYs, except in a small number of specific cases and in those cases the weights are relatively small. Methodological challenges are highlighted as is a future research agenda.

From Angela's ashes to the Celtic tiger: Early life conditions and adult health in Ireland

- Journal of Health Economics---2011---Liam Delaney,Mark McGovern,James Smith

We use data from the Irish census and exploit regional and temporal variation in infant mortality rates over the 20th century to examine effects of early life conditions on later life health. The urban mortality penalty collapsed in Ireland in the years right after World War II. Our main identification is public health interventions centered on improved sanitation and food safety, which we believed played a leading role in eliminating

the Irish urban infant mortality penalty. Our estimates suggest that a unit decrease in mortality rates at time of birth reduces the probability of being disabled as an adult by about 12-18%.

The evolution of health outcomes from childhood to adolescence

- Journal of Health Economics---2011---Paul Contoyannis,Jinhu Li

Using data from the Canadian National Longitudinal Survey of Children and Youth (NLSCY), this study examines how and why health outcomes exhibit persistence during the period from childhood to adolescence. We examine the distribution of health outcomes and health transitions using descriptive analysis and explore the determinants of these distributions by estimating the contributions of family SES, unobserved heterogeneity and state dependence and also allowing for heterogeneity of state dependence parameters across categories of neighborhood status. Our analysis indicates that children living in poorer neighborhoods, in neighborhoods with lower education levels and in neighborhoods with more families headed by lone-parents tend to experience poor health status for longer after a transition to it, while children tend to experience multiple health drops living in poorer neighborhoods, in neighborhoods with less educated people, in neighborhoods with more families headed by lone-parents and in neighborhoods with more families living in rental accommodation.

Heterogeneity in the intergenerational transmission of alcohol consumption: A quantile regression approach

- Journal of Health Economics---2011---Christoph Schmidt,Harald Tauchmann

This paper addresses the question of whether the effect of parental drinking on children's later consumption of alcohol - which is frequently found to be of positive sign - exhibits a certain pattern of heterogeneity. In particular, if this effect is more prominent in the upper tail than elsewhere in the distribution of children's alcohol consumption, conventional regression analyses that focus on the mean effect may substantially underrate parental drinking as a risk factor for children's later alcohol abuse. In our empirical application, we address this issue by applying censored quantile regression methods to German survey data. The supposed pattern of heterogeneity is indeed found in the data, at least for daily parental drinking. In addition, the intergenerational transmission of alcohol consumption exhibits gender-specific heterogeneity.

The role of education in complex health decisions: Evidence from cancer screening

- Journal of Health Economics---2011---Fabian Lange

Abstract This paper uses data on real and perceived cancer risks and cancer screening behavior to test the allocative efficiency theory. Specifically, it explores whether the educated make better-informed health decisions. I propose that (1) when educated individuals are better informed, they are more likely to incorporate variation in risk factors when they report their personal cancer risk, and (2) as risk varies, the better educated will react more strongly by adopting preventive behaviors such as cancer screening. The results support for both predictions. Further, using data on attitudes toward breast health, I explore a possible mechanism: educated women are more receptive to scientific evidence and hold fewer nonscientific beliefs.

Health awareness campaigns and diagnosis rates: Evidence from National Breast Cancer Awareness Month

- Journal of Health Economics---2011---Grant Jacobsen,Kathryn H. Jacobsen

Awareness campaigns are often used to encourage medical screening that allows for early detection of health problems, but much remains unknown about the effectiveness of these programs. This paper evaluates whether National Breast Cancer Awareness Month (NBCAM) has led to increased diagnosis of breast cancer. The analysis examines the number of diagnoses

made in November (1 month after NBCAM) during years before and after NBCAM was initiated. We find that from 1993 to 1995, the period when breast cancer advocacy was expanding rapidly into a nationwide movement, NBCAM led to an increase in the number of November diagnoses. During earlier periods (from the mid-1980s to the early-1990s), when breast cancer advocacy was still a nascent grassroots movement, and in later periods, when breast cancer advocacy had become a well-established nationwide cause, there is little evidence that October NBCAM events had an effect on November diagnoses.

Longevity, genes and efforts: An optimal taxation approach to prevention

- Journal of Health Economics---2011---Marie-Louise Leroux,Pierre Pestieau,Gregory Ponthiere

Abstract This paper applies the analytical tools of optimal taxation theory to the design of the optimal subsidy on preventive behaviours, in an economy where longevity varies across agents, and depends on preventive expenditures and on longevity genes. Public intervention can be here justified on three grounds: corrections for misperceptions of the survival process and for externalities related to individual preventive behaviour, and redistribution across both earnings and genetic dimensions. The optimal subsidy on preventive expenditures is shown to depend on the combined impacts of misperception, externalities and self-selection. It is generally optimal to subsidize preventive efforts to an extent depending on the degree of individual myopia, on how productivity and genes are correlated, and on the complementarity of genes and preventive efforts in the survival function.

Retirement effects on health in Europe

- Journal of Health Economics---2011---Norma Coe,Gema Zamarro

What are the health impacts of retirement? As talk of raising retirement ages in pensions and social security schemes continues around the world, it is important to know both the costs and benefits for the individual, as well as the governments' budgets. In this paper we use the Survey of Health, Ageing and Retirement in Europe (SHARE) dataset to address this question in a multi-country setting. We use country-specific early and full retirement ages as instruments for retirement behavior. These statutory retirement ages clearly induce retirement, but are not related to an individual's health. Exploiting the discontinuities in retirement behavior across countries, we find significant evidence that retirement has a health-preserving effect on overall general health. Our estimates indicate that retirement leads to a 35 percent decrease in the probability of reporting to be in fair, bad, or very bad health, and an almost one standard deviation improvement in the health index. While the self-reported health seems to be a temporary impact, the health index indicates there are long-lasting health differences.

Five-a-day, a price to pay: An evaluation of the UK program impact accounting for market forces

- Journal of Health Economics---2011---Sara Capacci,Mario Mazzocchi

We provide an ex-post assessment of the UK 5-a-day information campaign, where the positive effects of information are disentangled from potentially conflicting price dynamics. Using 4 years of data from the Expenditure and Food Survey between 2002 and 2006, we estimate that the 5-a-day program has lifted fruit and vegetable consumption by 0.3 portions, on average. We also provide quantitative evidence of a differentiated impact by income group, ranging from 0.2 to 0.7 portions. All impacts are larger than those observed by simply comparing pre-policy and post-policy intakes.

Enhanced fee-for-service model and physician productivity: Evidence from Family Health Groups in Ontario

- Journal of Health Economics---2011---Jasmin Kantarevic,Boris Kralj,Darrel Weinkauf

We study an enhanced fee-for-service model for primary care physicians in the Family Health Groups (FHG) in Ontario, Canada. In contrast to the traditional

fee-for-service (FFS) model, the FHG model includes targeted fee increases, extended hours, performance-based initiatives, and patient enrolment. Using a long panel of claims data, we find that the FHG model significantly increases physician productivity relative to the FFS model, as measured by the number of services, patient visits, and distinct patients seen. We also find that the FHG physicians have lower referral rates and treat slightly more complex patients than the comparable FFS physicians. These results suggest that the FHG model offers a promising alternative to the FFS model for increasing physician productivity.

Price adjustment in the hospital sector

- Journal of Health Economics---2011---Marisa Miraldo,Luigi Siciliani,Andrew Street

Abstract We analyse the properties of optimal price adjustment to hospitals when no lump-sum transfers are allowed and when prices differ to reflect observable exogenous differences in costs. We find that: (a) when the marginal benefit from treatment is decreasing and the cost function is the power function, price adjustment for hospitals with higher costs is positive but partial; if the marginal benefit is constant, the price is identical across providers; (b) if the cost function is exponential or it is separable in monetary and non-monetary costs (and linear in monetary costs), price adjustment is positive even when the marginal benefit is constant; (c) higher inequality aversion of the purchaser increases concentration in prices and lowers concentration in quantities; (d) if some dimensions of costs are private information, a higher correlation between the observable and unobservable cost component increases the optimal price for providers whose observable costs are above the average.

The effect of Paragraph IV decisions and generic entry before patent expiration on brand pharmaceutical firms

- Journal of Health Economics---2011---Laura E. Panattoni

Abstract This purpose of this paper is to investigate the impact of Paragraph IV patent infringement decisions on brand drug pharmaceutical firms. Paragraph IV decisions determine whether a generic firm can enter before the period of exclusivity ends. I construct a novel dataset of all Paragraph IV decisions and find that they disproportionately involve the highest revenue drugs, significant periods of patent protection, and a non-trivial portion of all brand drugs facing generic entry. I also estimate the impact of Paragraph IV decisions on brand firm profitability and find they have large value consequences.

Is employer-based health insurance a barrier to entrepreneurship?

- Journal of Health Economics---2011---Robert Fairlie,Kanika Kapur,Susan Gates

The focus on employer-provided health insurance in the United States may restrict business creation. We address the limited research on the topic of "entrepreneurship lock" by using recent panel data from matched Current Population Surveys. We use difference-in-difference models to estimate the interaction between having a spouse with employer-based health insurance and potential demand for health care. We find evidence of a larger negative effect of health insurance demand on business creation for those without spousal coverage than for those with spousal coverage. We also take a new approach in the literature to examine the question of whether employer-based health insurance discourages business creation by exploiting the discontinuity created at age 65 through the qualification for Medicare. Using a novel procedure of identifying age in months from matched monthly CPS data, we compare the probability of business ownership among male workers in the months just before turning age 65 and in the months just after turning age 65. We find that business ownership rates increase from just under age 65 to just over age 65, whereas we find no change in business ownership rates from just before to just after for other ages 55-75. We also do not find evidence from the previous literature and additional estimates that other confounding factors such as retirement, partial retirement, social security and pension

eligibility are responsible for the increase in business ownership in the month individuals turn 65. Our estimates provide some evidence that "entrepreneurship lock" exists, which raises concerns that the bundling of health insurance and employment may create an inefficient level of business creation.

Do expert patients get better treatment than others? Agency discrimination and statistical discrimination in obstetrics

- Journal of Health Economics---2011---Jostein Grytten,Irene Skau,Rune Sørensen

We address models that can explain why expert patients (obstetricians, midwives and doctors) are treated better than non-experts (mainly non-medical training). Models of statistical discrimination show that benevolent doctors treat expert patients better, since experts are better at communicating with the doctor. Agency theory suggests that doctors have an incentive to limit hospital costs by distorting information to non-expert patients, but not to expert patients. The hypotheses were tested on a large set of data, which contained information about the highest education of the parents, and detailed medical information about all births in Norway during the period 1967-2005 (Medical Birth Registry). The empirical analyses show that expert parents have a higher rate of Caesarean section than non-expert parents. The educational disparities were considerable 40 years ago, but have become markedly less over time. The analyses provide support for statistical discrimination theory, though agency theory cannot be totally excluded.

Designing the financial tools to promote universal access to AIDS care

- Journal of Health Economics---2011---Patrick Leoni,Stéphane Luchini

Abstract We argue that reluctance to invest in drug treatments to fight the AIDS epidemics in developing countries is largely motivated by severe losses occurring from the future albeit uncertain appearance of a curative vaccine. We design a set of securities generating full insurance coverage against such losses, while achieving full risk-sharing with vaccine development agencies. In a General Equilibrium framework, we show that those securities are demanded to improve social welfare in developing countries, to increase current investment in treatments and the provision of public goods. Even though designed for AIDS, those securities can also be applied to other epidemics such as malaria and tuberculosis, as well as any innovative treatment to fight orphan diseases.

Public vs. private provision of charity care? Evidence from the expiration of Hill-Burton requirements in Florida

- Journal of Health Economics---2011---Douglas Almond,Janet Currie,Emilia Simeonova

This paper explores the consequences of the expiration of charity care requirements imposed on private hospitals by the Hill-Burton Act. We examine delivery care and the health of newborns using the universe of Florida births from 1989 to 2003 combined with hospital data from the American Hospital Association. We find that charity care requirements were binding on hospitals, but that private hospitals under obligation "cream skimmed" the least risky maternity patients. Conditional on patient characteristics, they provided less intensive maternity services but without compromising patient health. When obligations expired, private hospitals quickly reduced their charity caseloads, shifting maternity patients to public hospitals. The results in this paper suggest, perhaps surprisingly, that requiring private providers to serve the underinsured can be effective.

Institutions, health shocks and labour market outcomes across Europe

- Journal of Health Economics---2011---Pilar Garcia-Gomez

This paper investigates the relationship between health shocks and labour market outcomes in 9 European countries using the European Community Household

Panel. Matching techniques are used to control for the non-experimental nature of the data. The results suggest that there is a significant causal effect from health on the probability of employment: individuals who incur a health shock are significantly more likely to leave employment and transit into disability. The estimates differ across countries, with the largest employment effects being found in The Netherlands, Denmark, Spain and Ireland, and the smallest in France and Italy. Differences in social security arrangements help to explain these cross-country differences.

On the consistent measurement of attainment and shortfall inequality

- Journal of Health Economics---2011---Peter Lambert,Buhong Zheng

In measuring inequality of a bounded variable such as health status, one can focus on attainments or shortfalls. However, rankings of social states by attainment and shortfall inequality do not necessarily mirror one another. We propose a requirement, that attainment inequality and shortfall inequality be measured consistently, and we examine the performance of partial orderings and indices of inequality in this respect. For relative inequality and all currently documented intermediate inequality concepts, the orderings fail our consistency requirement, as do all indices which respect these orderings. However, the absolute inequality partial ordering satisfies consistency. We identify two classes of indices of absolute inequality, one containing rank-independent and the other rank-dependent indices, which measure attainment and shortfall inequality consistently (in fact identically). The only subgroup decomposable inequality index, of any type, which measures attainment and shortfall inequality consistently is the variance. We discuss implications for the study of pure health inequality.

Effects of urban sprawl on obesity

- Journal of Health Economics---2010---Zhenxiang Zhao,Robert Kaestner

In this paper, we examine the effect of changes in population density--urban sprawl--between 1970 and 2000 on BMI and obesity of residents in metropolitan areas in the U.S. We address the possible endogeneity of population density by using a two-step instrumental variables approach. We exploit the plausibly exogenous variation in population density caused by the expansion of the U.S. Interstate Highway System, which largely followed the original 1947 plan for the Interstate Highway System. We find a negative association between population density and obesity, and estimates are robust across a wide range of specifications. Estimates indicate that if the average metropolitan area had not experienced the decline in the proportion of population living in dense areas over the last 30 years, the rate of obesity would have been reduced by approximately 13%.

The impact of casinos on fatal alcohol-related traffic accidents in the United States

- Journal of Health Economics---2010---Chad Cotti,Douglas Walker

Casinos have been introduced throughout the U.S. to spur economic development and generate tax revenues. Yet, casinos may also be associated with a variety of social ills. One issue that has not been empirically tested in the literature is whether there is a link between casino expansion and alcohol-related fatal traffic accidents. We suspect a link may exist since casinos often serve alcohol to their patrons and, by their dispersed nature, could impact driving distances after drinking. Using the variation in the timing and location of casino openings over a 10-year period, we isolate the impact of casino introduction on alcohol-related fatal accidents. Results indicate that there is a strong link between the presence of a casino in a county and the number of alcohol-related fatal traffic accidents. However, this relationship is negatively related to the local-area (county) population. Results prove durable, as we subject them to robustness checks.

The growth of public health expenditures in OECD countries: Do government ideology and electoral motives matter?

- Journal of Health Economics---2010---Niklas Potrafke

This paper empirically evaluates whether government ideology and electoral motives influenced the growth of public health expenditures in 18 OECD countries over the 1971-2004 period. The results suggest that incumbents behaved opportunistically and increased the growth of public health expenditures in election years. Government ideology did not have an influence. These findings indicate (1) the importance of public health in policy debates before elections and (2) the political pressure towards re-organizing public health policy platforms especially in times of demographic change.

Getting used to it: The adaptive global utility model

- Journal of Health Economics---2010---W. David Bradford,Paul Dolan

This paper expands the standard model of utility maximization to endogenize the ubiquitous phenomenon of adaptation. We assume that total utility is an aggregate function of the utility associated with different domains of life, with relative weights that are optimized according to the effort that the individual expends on producing utility in each domain. Comparative statics from the general maximization problem demonstrate that the traditional Slutsky equation should incorporate an additional response term to account for adaptation processes. Our adaptive global utility maximization model can be used to explain responses to changes in health.

Selection stories: Understanding movement across health plans

- Journal of Health Economics---2010---David Cutler,Bryan Lincoln,Richard Zeckhauser

This study assesses the factors influencing the movement of people across health plans. We distinguish three types of cost-related transitions: adverse selection, the movement of the less healthy to more generous plans; adverse retention, the tendency for people to stay where they are when they get sick; and aging in place, enrollees' inertia in plan choice, leading plans with older enrollees to increase in relative cost over time. Using data from the Group Insurance Commission in Massachusetts, we show that adverse selection and aging in place are both quantitatively important. Either can materially impact equilibrium enrollments, especially when premiums to enrollees reflect these costs.

The value of coverage in the medicare advantage insurance market

- Journal of Health Economics---2010---Abe Dunn

Abstract This paper examines the impact of coverage on demand for health insurance in the Medicare Advantage (MA) insurance market. Estimating the effects of coverage on demand poses a challenge for researchers who must consider both the hundreds of benefits that affect out-of-pocket costs (OOPC) to consumers, but also the endogeneity of coverage. These problems are addressed in a discrete choice demand model by employing a unique measure of OOPC that considers a consumer's expected payments for a fixed bundle of health services and applying instrumental variable techniques to address potential endogeneity bias. The results of the demand model show that OOPC have a significant effect on consumer surplus and that not instrumenting for OOPC results in a significant underestimate of the value of coverage.

Price and welfare effects of a pharmaceutical substitution reform

- Journal of Health Economics---2010---David Granlund

The price effects of the Swedish pharmaceutical substitution reform are analyzed using data for a panel of all pharmaceutical product sold in Sweden in 1997-2007.

The price reduction due to the reform was estimated to average 10% and was found to be significantly larger for brand-name pharmaceuticals than for generics. The results also imply that the reform amplified the effect that generic entry has on brand-name prices by a factor of 10. Results of a demand estimation imply that the price reductions increased total pharmaceutical consumption by 8% and consumer welfare by SEK 2.7 billion annually.

Returns to physician human capital: Evidence from patients randomized to physician teams

- Journal of Health Economics---2010---Joseph J. Doyle,Steven M. Ewer,Todd H. Wagner

Physicians play a major role in determining the cost and quality of healthcare, yet estimates of these effects can be confounded by patient sorting. This paper considers a natural experiment where nearly 30,000 patients were randomly assigned to clinical teams from one of two academic institutions. One institution is among the top medical schools in the U.S., while the other institution is ranked lower in the distribution. Patients treated by the two programs have similar observable characteristics and have access to a single set of facilities and ancillary staff. Those treated by physicians from the higher ranked institution have 10-25% less expensive stays than patients assigned to the lower ranked institution. Health outcomes are not related to the physician team assignment. Cost differences are most pronounced for serious conditions, and they largely stem from diagnostic-testing rates: the lower ranked program tends to order more tests and takes longer to order them.

Estimating the value of social care

- Journal of Health Economics---2010---Peter Burge,Ann Netten,Federico Gallo

Increasingly, health economists are required to work across sectors when evaluating options for improving health, health care and well-being. Social care is a key sector which is both influenced by and influences the use and outcomes of health services. This paper reports on a developing approach to measuring social care outcome, designed to reflect outcomes across client groups. In this process it is important that we reflect the relative importance or value of these domains of outcome. This paper reports on a pilot study that investigated the feasibility of using discrete choice experiments to identify a financial "willingness to accept" valuation of a large number of domains and investigated factors associated with variations in respondents' preferences. We conclude that, while the domains themselves need further work, the approach provides a helpful starting point in the difficult issue of reflecting population preferences for a large number of social care outcome domains.

Do they care too much to work? The influence of caregiving intensity on the labour force participation of unpaid caregivers in Canada

- Journal of Health Economics---2010---Meredith B. Lilly,Audrey Laporte,Peter C. Coyte

The recent growth of the home care sector combined with societal and demographic changes have given rise to concerns about the adequacy of the supply of family and friend caregivers. Potential caregivers face competing time pressures that pull them in the direction of the labour market on one hand, and towards unpaid caregiving duties on the other. This paper examines the influence of unpaid caregiving on the labour supply of a cohort of working-aged caregivers in Canada, with particular emphasis on caregiving intensity. Results suggest that caregivers are heterogeneous in both their caregiving inputs and associated labour market responses, thereby underscoring the importance of controlling for caregiving intensity when measuring labour supply. The negative influence of primary caregiving on labour supply appears to be at the level of labour force participation, rather than on hours of work or wages.

Long-run effects on longevity of a nutritional shock early in life: The Dutch Potato famine of 1846-1847

- Journal of Health Economics---2010---Maarten Lindeboom,France Portrait,Gerard van den Berg

Nutritional conditions in utero and during infancy may causally affect health and mortality during childhood, adulthood, and at old ages. This paper investigates whether exposure to a nutritional shock in early life negatively affects survival at older ages, using individual data. Nutritional conditions are captured by exposure to the Potato famine in the Netherlands in 1846-1847, and by regional and temporal variation in market prices of potato and rye. The data cover the lifetimes of a random sample of Dutch individuals born between 1812 and 1902 and provide individual information on life events and demographic and socioeconomic characteristics. First we non-parametrically compare the total and residual lifetimes of individuals exposed and not exposed to the famine in utero and/or until age 1. Next, we estimate survival models in which we control for individual characteristics and additional (early life) determinants of mortality. We find strong evidence for long-run effects of exposure to the Potato famine. The results are stronger for boys than for girls. Boys and girls lose on average 4, respectively 2.5 years of life after age 50 after exposure at birth to the Potato famine. Lower social classes appear to be more affected by early life exposure to the Potato famine than higher social classes. These results confirm the mechanism linking early life (nutritional) conditions to old-age mortality. Finally, higher food prices at birth appear to reduce later life mortality of children of farmers from higher social classes. We interpret this as an income effect.

Health, aging and childhood socio-economic conditions in Mexico

- Journal of Health Economics---2010---Franque Grimard,Sonia Laszlo,Wilfredo Lim

We investigate the long-term effect of childhood socio-economic conditions on the health of the elderly in Mexico. We utilize a panel of individuals aged 50 and above from the Mexican Health and Aging Survey and find that the conditions under which the individual lived at the age of 10 affect health in old age, even accounting for education and income. This paper contributes to the literature of the long-term effects of childhood socio-economic status by being the first, to our knowledge, to consider exclusively the case of the elderly in a developing country.

The importance of relative standards in ADHD diagnoses: Evidence based on exact birth dates

- Journal of Health Economics---2010---Todd Elder

This paper presents evidence that diagnoses of attention-deficit/hyperactivity disorder (ADHD) are driven largely by subjective comparisons across children in the same grade in school. Roughly 8.4 percent of children born in the month prior to their state's cutoff date for kindergarten eligibility - who typically become the youngest and most developmentally immature children within a grade - are diagnosed with ADHD, compared to 5.1 percent of children born in the month immediately afterward. A child's birth date relative to the eligibility cutoff also strongly influences teachers' assessments of whether the child exhibits ADHD symptoms but is only weakly associated with similarly measured parental assessments, suggesting that many diagnoses may be driven by teachers' perceptions of poor behavior among the youngest children in a classroom. These perceptions have long-lasting consequences: the youngest children in fifth and eighth grades are nearly twice as likely as their older classmates to regularly use stimulants prescribed to treat ADHD.

Measuring inappropriate medical diagnosis and treatment in survey data: The case of ADHD among school-age children

- Journal of Health Economics---2010---William Evans,Melinda Morrill,Stephen T. Parente

We exploit the discontinuity in age when children start kindergarten generated by state eligibility laws to ex-

amine whether relative age is a significant determinant of ADHD diagnosis and treatment. Using a regression discontinuity model and exact dates of birth, we find that children born just after the cutoff, who are relatively old-for-grade, have a significantly lower incidence of ADHD diagnosis and treatment compared with similar children born just before the cutoff date, who are relatively young-for-grade. Since ADHD is an underlying neurological problem where incidence rates should not change dramatically from one birth date to the next, these results suggest that age relative to peers in class, and the resulting differences in behavior, directly affects a child's probability of being diagnosed with and treated for ADHD.

Mercury advisories and household health trade-offs

- Journal of Health Economics---2010---Jay Shimshack,Michael Ward

The conventional economic wisdom is that improving consumer information will enhance welfare. Yet, some scientists speculate that the Food and Drug Administration's prominent mercury in fish advisory may have harmed public health. Lower mercury intakes reduce neurological toxicity risks. However, since seafood is the predominant dietary source of healthful omega-3 fatty acids, reduced fish consumption may have significant offsetting health impacts. We explore this risk trade-off using a rich panel of household-level seafood consumption data. To control for confounding factors, we use a non-parametric changes-in-changes approach. We find strong evidence that while the advisory reduced mercury loadings, it did so at the expense of substantial reductions in healthful omega-3s. We find this response pattern even for consumers with low fish consumption. Using advisory response patterns as inputs into a prominent risk assessment model, the central estimate is that net benefits from the advisory were negative.

Overworked? On the relationship between workload and health worker performance

- Journal of Health Economics---2010---Ottar Mæstad,Gaute Torsvik,Arild Aakvik

The shortage of health workers in many low-income countries poses a threat to the quality of health services. When the number of patients per health worker grows sufficiently high, there will be insufficient time to diagnose and treat all patients adequately. This paper tests the hypothesis that high caseload reduces the level of effort per patient in the diagnostic process. We observed 159 clinicians in 2095 outpatient consultations at 126 health facilities in rural Tanzania. Surprisingly, we find no association between caseload and the level of effort per patient. Clinicians appear to have ample amounts of idle time. We conclude that health workers are not overworked and that scaling up the number of health workers is unlikely to raise the quality of health services. Training has a positive effect on quality but is not in itself sufficient to raise quality to adequate levels.

Bribery in health care in Uganda

- Journal of Health Economics---2010---Jennifer Hunt

I examine the role of household permanent income in determining who bribes and how much they bribe in health care in Uganda. I find that rich patients are more likely than other patients to bribe in public health care: doubling household expenditure increases the bribery probability by 1.2 percentage points compared to a bribery rate of 17%. The income elasticity of the bribe amount is about 0.37. Bribes in the Ugandan public sector appear to be fees-for-service extorted from the richer patients amongst those exempted by government policy from paying the official fees. Bribes in the private sector appear to be flat-rate fees paid by patients who do not pay official fees. I do not find evidence that the public health care sector is able to price discriminate less effectively than public institutions with less competition from the private sector.

Individual discount rates and smoking: Evidence from a field experiment in Denmark

- Journal of Health Economics---2010---Glenn Harrison,Morten Lau,Elisabet Rutstrom

We elicit measures of individual discount rates from a representative sample of the Danish population and test two substantive hypotheses. The first hypothesis is that smokers have higher individual discount rates than non-smokers. The second hypothesis is that smokers are more likely to have time inconsistent preferences than non-smokers, where time inconsistency is indicated by a hyperbolic discounting function. We control for the concavity of the utility function in our estimates of individual discount rates and find that male smokers have significantly higher discount rates than male non-smokers. However, smoking has no significant association with discount rates among women. This result is robust across exponential and hyperbolic discounting functions. We consider the sensitivity of our conclusions to a statistical specification that allows each observation to potentially be generated by more than one latent data-generating process.

Effects of report cards on referral patterns to cardiac surgeons

- Journal of Health Economics---2010---Andrew J. Epstein

Patients' choices of specialist physicians may be guided by referring physicians and report cards. I examine referral patterns to cardiac surgeons to assess whether publication of the May 2002 edition of Pennsylvania's Guide to Coronary Artery Bypass Graft Surgery added information to what referring physicians already knew. To do so, I developed a counterfactual scenario, including a simulated analogue report card, based on comparable data from Florida, a state without CABG report cards. My analysis failed to detect a significant change in referral patterns to either low-mortality or high-mortality cardiac surgeons. At the same time, referring physicians on average appear to have been knowledgeable about the relative performance of cardiac surgeons without report cards. Future report card efforts might benefit from incorporating the quality signals contained in referral patterns.

Does information matter? The effect of the Meth Project on meth use among youths

- Journal of Health Economics---2010---D. Mark Anderson

Are demand-side interventions effective at curbing drug use? To the extent demand-side programs are successful, their cost effectiveness can be appealing from a policy perspective. Established in 2005, the Montana Meth Project (MMP) employs a graphic advertising campaign to deter meth use among teens. Due to the MMP's apparent success, seven other states have adopted Meth Project campaigns. Using data from the Youth Risk Behavior Surveys (YRBS), this paper investigates whether the MMP reduced methamphetamine use among Montana's youth. When accounting for a preexisting downward trend in meth use, effects on meth use are statistically indistinguishable from zero. These results are robust to using related changes of meth use among individuals without exposure to the campaign as controls in a difference-in-difference framework. A complementary analysis of treatment admissions data from the Treatment Episode Data Set (TEDS) confirms the MMP has had no discernable impact on meth use.

Is newer always better? Re-evaluating the benefits of newer pharmaceuticals

- Journal of Health Economics---2010---Michael R. Law,Karen A. Grépin

Whether newer pharmaceuticals justify their higher costs by reducing other health expenditures has generated significant debate. We replicate a frequently cited paper by Lichtenberg on drug "offsets" and find the results disappear using a more appropriate model or updated dataset. Further, we test the suitability of similar methods using newer hypertension drugs. We find our observational results run counter to well-established clinical evidence on comparative efficacy and conclude that our model, as well as other studies

that do not adequately control for unobserved characteristics that jointly determine drug choice and health expenditures, are likely subject to significant bias.

Competition in general practice: Prescriptions to the elderly in a list patient system

- Journal of Health Economics---2010---Inger Cathrine Kann,Erik Biorn,Hilde Lurås

Income motivation among general practitioners (GPs) is frequently discussed in the health economics literature. The question addressed in the present study on reimbursement drugs and addictive drugs is whether increased competition among GPs, which is part of a declared health policy to improve efficiency, contributes to more prescriptions for the elderly. The dataset comprises registered data of all prescribed drugs dispensed at pharmacies from the Norwegian Prescription Database merged with data on GPs. In choosing a method, particular attention is given to the fact that patients tend to be attracted to GPs who fit their preferences. Hence, we treat the composition of the patient list as endogenous. The results indicate that the stronger competition a GP faces, the more drugs are prescribed, which implies that GPs' prescription style may conflict with their role as gatekeepers, and even worse, it may be a hazard to patients' health.

Does competition from ambulatory surgical centers affect hospital surgical output?

- Journal of Health Economics---2010---Charles Courtemanche,Michael Plotzke

This paper estimates the effect of ambulatory surgical centers (ASCs) on hospital surgical volume using hospital and year fixed effects models with several robustness checks. We show that ASC entry only appears to influence a hospital's outpatient surgical volume if the facilities are within a few miles of each other. Even then, the average reduction in hospital volume is only 2-4%, which is not nearly large enough to offset the new procedures performed by an entering ASC. The effect is, however, stronger for large ASCs and the first ASCs to enter a market. Additionally, we find no evidence that entering ASCs reduce a hospital's inpatient surgical volume.

Body weight and smoking initiation: Evidence from Add Health

- Journal of Health Economics---2010---Daniel Rees,Joseph J. Sabia

In volume 23, issue 2 of this journal, Cawley, Markowitz and Tauras used data from the National Longitudinal Survey of Youth 1997 Cohort to estimate the relationship between body weight and smoking initiation. Using maternal obesity status as an instrument, they found strong evidence that overweight females between the ages of 12 and 21 were more likely to initiate smoking. Drawing on data from the National Longitudinal Study of Adolescent Health, we reexamine the relationship between body weight and smoking initiation. Our results are generally consistent with those of Cawley, Markowitz and Tauras.

Equity during an economic crisis: Financing of the Argentine health system

- Journal of Health Economics---2010---Eleonora Cavagnero,Marcel Bilger

This article analyses the redistributive effect caused by health financing and the distribution of healthcare utilization in Argentina before and during the severe 2001/2002 economic crisis. Both dramatically changed during this period: the redistributive effect became much more positive and utilization shifted from pro-poor to pro-rich. This clearly demonstrates that when utilization is contingent on financing, changes can occur rapidly; and that an integrated approach is required when monitoring equity. From a policy perspective, the Argentine health system appears vulnerable to economic downturns mainly due to high reliance on out-of-pocket payments and the strong link between health insurance and employment.

Risk adjustment in health insurance and its long-term effectiveness

- Journal of Health Economics---2010---Konstantin Beck,Maria Trottmann,Peter Zweifel

This paper seeks to create new insights when judging the impact different risk adjustment schemes may have on the incentive to select risks. It distinguishes risk types with high and low profit potential and estimates long-run profits associated with risk selection in four scenarios (no risk adjustment, demographic only, including prior hospitalization, and including prior hospitalization and Pharmaceutical Cost Groups). The database covers 180,000 Swiss individuals over 8 years, 3 of which are used for model building and 5, to estimate insurers' profits due to risk selection in the four scenarios. While these profits prove to be very high without risk adjustment and still substantial with demographic risk adjustment, they become surprisingly low when the crude morbidity indicator 'prior hospitalization' is included in the formula. These results clearly indicate the need for health status-related risk adjustment in insurance markets with community rating, taking into account insurers' planning horizon.

Capping risk adjustment?

- Journal of Health Economics---2010---Patrick Eugster,Michèle Sennhauser,Peter Zweifel

When premiums are community-rated, risk adjustment (RA) serves to mitigate competitive insurers' incentive to select favorable risks. However, unless fully prospective, it also undermines their incentives for efficiency. By capping its volume, one may try to counteract this tendency, exposing insurers to some financial risk. This in term runs counter the quest to refine the RA formula, which would increase RA volume. Specifically, the adjuster, "Hospitalization or living in a nursing home during the previous year" will be added in Switzerland starting 2012. This paper investigates how to minimize the opportunity cost of capping RA in terms of increased incentives for risk selection.

Competition and quality in health care markets: A differential-game approach

- Journal of Health Economics---2010---Kurt Brekke,Roberto Cellini,Luigi Siciliani,Odd Rune Straume

We investigate the effect of competition on quality in health care markets with regulated prices taking a differential game approach, in which quality is a stock variable. Using a Hotelling framework, we derive the open-loop solution (health care providers set the optimal investment plan at the initial period) and the feedback closed-loop solution (providers move investments in response to the dynamics of the states). Under the closed-loop solution competition is more intense in the sense that providers observe quality in each period and base their investment on this information. If the marginal provision cost is constant, the open-loop and closed-loop solutions coincide, and the results are similar to the ones obtained by static models. If the marginal provision cost is increasing, investment and quality are lower in the closed-loop solution (when competition is more intense). In this case, static models tend to exaggerate the positive effect of competition on quality.

Imperfect information in a quality-competitive hospital market

- Journal of Health Economics---2010---Hugh Gravelle,Peter Sivey

We examine the implications of policies to improve information about the qualities of profit-seeking duopoly hospitals which face the same regulated price and compete on quality. We show that if hospital costs of quality are similar then better information increases the quality of both hospitals. However, if the costs are sufficiently different improved information will reduce the quality of both hospitals. Moreover, even when quality increases, better information may increase or decrease patient welfare depending on whether an ex post or ex ante view of welfare is taken.

Implications of an economic model of health states worse than dead

- Journal of Health Economics---2010---Rajiv Sharma,Miron Stano

We introduce a formal definition of health equivalent to dead into a standard model to develop previously unrecognized insights. We find that the health state viewed as equivalent to dead will depend on an individual's health prognosis, probability of survival, and rate of time preference. Our work on maximum endurable time shows that using QALY scores based on long-run preferences to value health states that last for shorter periods can alter cardinal and ordinal valuations. Simulations show that errors of substantial magnitude in QALY scores can consequently result. We describe situations where biases are likely and identify possible corrections.

Increasing marginal utility of small increases in life-expectancy?: Results from a population survey

- Journal of Health Economics---2010---Maria Knoph Kvamme,Dorte Gyrd-Hansen,Jan Abel Olsen,Ivar Sønbø Kristiansen

The standard practice in cost-effectiveness analyses of health care is to assign a linear value to increasing lifetime gains. The aim of the current study was to examine the possible existence of non-linear utility for short life extensions. A representative sample of the Norwegian population, aged 40-59 years (nÂ =Â 2402), was asked to imagine that they had a limited remaining lifetime (1 year or 10 years) and were offered a treatment that would increase lifetime by a specified amount of time from 1 week to 1 year. In all scenarios, the price per week of life extension was held constant. The proportion of respondents that accepted the treatment increased with increasing extensions, indicating a convex utility function. The result suggests increasing marginal utility for life extensions up to 1 year.

Caring for and caring about: Disentangling the caregiver effect and the family effect

- Journal of Health Economics---2010---Ana Bobinac,Job van Exel,Frans F.H. Rutten,Werner Brouwer

Besides patients' health and well-being, healthcare interventions may affect the well-being of significant others. Such 'spill over effects' in significant others may be distinguished in two distinct effects: (i) the caregiving effect and (ii) the family effect. The first refers to the welfare effects of providing informal care, i.e., the effects of caring for someone who is ill. The second refers to a direct influence of the health of a patient on others' well-being, i.e., the effects of caring about other people. Using a sample of Dutch informal caregivers we found that both effects exist and may be comparable in size. Our results, while explorative, indicate that economic evaluations adopting a societal perspective should include both the family and the caregiving effects measured in the relevant individuals.

Toxic exposure in America: Estimating fetal and infant health outcomes from 14 years of TRI reporting

- Journal of Health Economics---2010---Nikhil Agarwal,Chanont Banternghansa,Linda Bui

We examine the effect of exposure to a set of toxic pollutants that are tracked by the Toxic Release Inventory (TRI) from manufacturing facilities on county-level infant and fetal mortality rates in the United States between 1989 and 2002. Unlike previous studies, we control for toxic pollution from both mobile sources and non-TRI reporting facilities. We find significant adverse effects of toxic air pollution concentrations on infant mortality rates. Within toxic air pollutants we find that releases of carcinogens are particularly problematic for infant health outcomes. We estimate that the average county-level decreases in various categories of TRI concentrations saved in excess of 13,800 infant lives from 1989 to 2002. Using the low end of the range for the value of a statistical life that is typically used

by the EPA of $1.8M, the savings in lives would be valued at approximately $25B.

The impacts of the rise of Paragraph IV challenges on startup alliance formation and firm value in the pharmaceutical industry

- Journal of Health Economics---2010---Darren Filson,Ahmed Oweis

Court decisions in 1998 encouraged generic producers to pursue Paragraph IV patent challenges. A follow-up decision in 2000 marked the first successful challenge involving a blockbuster and brought further attention to this pathway for generic entry. We consider the impacts of these decisions on R&D-based startups, and we focus on the propensity to form alliances as a primary channel of impact. We find substantial negative impacts on alliance formation and firm value, and only the first event's impacts are restricted to small molecules. The results suggest that policy analyses in settings with R&D-based startups should consider impacts on alliance formation.

System-wide impacts of hospital payment reforms: Evidence from Central and Eastern Europe and Central Asia

- Journal of Health Economics---2010---Rodrigo Moreno-Serra,Adam Wagstaff

While there is broad agreement that the way that health care providers are paid affects their performance, the empirical literature on the impacts of provider payment reforms is surprisingly thin. During the 1990s and early 2000s, many European and Central Asian (ECA) countries shifted from paying hospitals through historical budgets to fee-for-service (FFS) or patient-based payment (PBP) methods (mostly variants of diagnosis-related groups, or DRGs). Using panel data on 28 countries over the period 1990-2004, we exploit the phased shift from historical budgets to explore aggregate impacts on hospital throughput, national health spending, and mortality from causes amenable to medical care. We use a regression version of difference-in-differences (DID) and two variants that relax the DID parallel trends assumption. We find that FFS and PBP both increased national health spending, including private (i.e. out-of-pocket) spending. However, they had different effects on inpatient admissions (FFS increased them; PBP had no effect), and average length of stay (FFS had no effect; PBP reduced it). Of the two methods, only PBP appears to have had any beneficial effect on "amenable mortality", but we found significant impacts for only a couple of causes of death, and not in all model specifications.

Population density and racial differences in the performance of emergency medical services

- Journal of Health Economics---2010---Guy David,Scott E. Harrington

This paper analyzes the existence and scope of possible racial differences/disparities in the provision of emergency medical services (EMS) response capability (time from dispatch to arrival at the scene and level of training of the responding team) using data on approximately 120,000 cardiac incidents in the state of Mississippi during 1995-2004. The conceptual framework and empirical analysis focus on the likely effects of population density on the efficient production of EMS as a local public good subject to congestion, and on the need to control adequately for population density to avoid bias in testing for racial differences. Models that control for aggregate population density at the county-level indicate "reverse" disparities: faster estimated response times for African-Americans than for whites. When a refined county-level measure of population density is used that incorporates differences in African-American and white population density by Census tract, the reverse disparity in response times disappears. There also is little or no evidence of race-related differences in the certification level of EMS responders. However, there is evidence that, controlling for response time, African-Americans on average were significantly more likely to be deceased than whites upon EMS arrival at the scene. The overall results are germane to the debate over the scope of conditioning variables that should be included when testing for racial disparities in health care.

An economic evaluation of the war on cancer

- Journal of Health Economics---2010---Darius Lakdawalla,Eric Sun,Anupam Jena,Carolina M. Reyes,Dana Goldman,Tomas J. Philipson

For decades, the US public and private sectors have committed substantial resources towards cancer research, but the societal payoff has not been well-understood. We quantify the value of recent gains in cancer survival, and analyze the distribution of value among various stakeholders. Between 1988 and 2000, life expectancy for cancer patients increased by roughly four years, and the average willingness-to-pay for these survival gains was roughly $322,000. Improvements in cancer survival during this period created 23 million additional life-years and roughly $1.9 trillion of additional social value, implying that the average life-year was worth approximately $82,000 to its recipient. Health care providers and pharmaceutical companies appropriated 5-19% of this total, with the rest accruing to patients. The share of value flowing to patients has been rising over time. In terms of economic rates of return, R&D investments against cancer have been a success, particularly from the patient's point of view.

The economics of intense exercise

- Journal of Health Economics---2010---David O. Meltzer,Anupam Jena

Despite the well-known benefits of exercise, the time required for exercise is widely understood as a major reason for low levels of exercise in the US. Intensity of exercise can change the time required for a given amount of total exercise but has never been studied from an economic perspective. We present a simple model of exercise behavior which suggests that the intensity of exercise should increase relative to time spent exercising as wages increase, holding other determinants of exercise constant. Our empirical results identify an association between income and exercise intensity that is consistent with the hypothesis that people respond to increased time costs of exercise by increasing intensity. More generally, our results suggest that time costs may be an important determinant of exercise patterns and that factors that can influence the time costs of exercise, such as intensity, may be important concerns in designing interventions to promote exercise.

Maternal employment and the health of low-income young children

- Journal of Health Economics---2010---Lisa A. Gennetian,Heather D. Hill,Andrew S. London,Leonard M. Lopoo

This study examines whether maternal employment affects the health status of low-income, elementary-school-aged children using instrumental variables estimation and experimental data from a welfare-to-work program implemented in the early 1990s. Maternal report of child health status is predicted as a function of exogenous variation in maternal employment associated with random assignment to the experimental group. IV estimates show a modest adverse effect of maternal employment on children's health. Making use of data from another welfare-to-work program we propose that any adverse effect on child health may be tempered by increased family income and access to public health insurance coverage, findings with direct relevance to a number of current policy discussions. In a secondary analysis using fixed effects techniques on longitudinal survey data collected in 1998 and 2001, we find a comparable adverse effect of maternal employment on child health that supports the external validity of our primary result.

The effect of children on adult demands for health-risk reductions

- Journal of Health Economics---2010---Trudy Cameron,J.R. DeShazo,Erica H. Johnson

We examine patterns in adults' willingness to pay for health-risk reductions. We allow both their marginal utilities of income and their marginal disutilities from health risks to vary systematically with the structures of their households. Demand by adults for programs which reduce their own health risks is found to be influenced by (1) their parenthood status, (2) the numbers

of children in different age brackets currently in their households, (3) the ages of the adults themselves, (4) the latency period before they would fall ill, and (5) whether there will still be children in the household at that time. For younger adults, willingness to pay by parents is greater than for non-parents, and increases with each additional young child. For middle-aged adults, willingness to pay for corresponding risk reductions falls when teenagers are present and falls further with each additional teenager in the household.

Long term effects of childhood asthma on adult health

- Journal of Health Economics---2010---Jason Fletcher,Jeremy C. Green,Matthew J. Neidell

Childhood asthma is a major chronic condition affecting millions of children in this country, yet little is known about its potential long term consequences. In this paper, we estimate the relationship between childhood asthma and several outcomes as a young adult. To overcome many of the methodological issues plaguing earlier research on this topic, we estimate sibling fixed effect models that correct for measurement error using parental reports of asthma status. In our preferred specification, we find substantial long term impacts of childhood asthma on general health status, obesity, and missed work and school days as a young adult. Broadly, our findings contribute to the growing literature in social sciences on the impacts of early life health conditions on later life health and social outcomes and suggest early treatment of asthma may have long-run benefits on young adult health and socioeconomic outcomes.

Debt and depression

- Journal of Health Economics---2010---Sarah Bridges,Richard Disney

We examine the effect of household financial indebtedness on psychological well-being using a large household survey of families with children in Britain. Existing studies that find a link between debt and depression tend to utilise small and highly selective samples of people and only self-reported measures of financial stress, responses to which are likely to correlate with subjective measures of health. From additional household data, we can construct a variety of 'objective' quantitative measures of financial stress in order to validate self-reported measures. We show that, although there is a positive association between subjective measures of financial well-being and psychological well-being, individuals differ in their psychological response to objective household financial situations. We also examine how the potential simultaneity of financial and psychological health might be handled.

The role of education in the production of health: An empirical analysis of smoking behavior

- Journal of Health Economics---2010---Steven Tenn,Douglas A. Herman,Brett Wendling

We estimate the effect of education on smoking. Our estimation strategy "differences out" the impact of unobserved characteristics correlated with education by exploiting education differences between similarly selected groups 1 year apart in their life cycle. Individuals with a given age, education, and student status in the current and previous year are compared to their counterparts born 1 year later with the same age, education, and student status in the following and current year. We find that an additional year of education does not have a causal effect on smoking. Unobserved factors correlated with education entirely explain their cross-sectional relationship.

The effect of Medicare coverage for the disabled on the market for private insurance

- Journal of Health Economics---2010---John F. Cogan,R. Glenn Hubbard,Daniel P. Kessler

We investigate whether the removal of high-cost individuals from private insurance markets leads to greater coverage for individuals who are similar but not as high cost. Using data on insurance coverage from the Panel Study of Income Dynamics, we estimate the effect of the extension of Medicare to the disabled on the

private insurance coverage of non-disabled individuals. We find that the insurance coverage of individuals who had a health condition that limited their ability to work increased significantly in states with high versus low rates of disability.

A limited-sample benchmark approach to assess and improve the performance of risk equalization models

- Journal of Health Economics---2010---Pieter J.A. Stam,René C.J.A. van Vliet,Wynand P.M.M. van de Ven

A new method is proposed to assess and improve the performance of risk equalization models in competitive markets for individual health insurance, where compensation is intended for variation in observed expenditures due to so-called S(ubsidy)-type risk factors but not for variation due to other, so-called N(on-subsidy)-type risk factors. Given the availability of a rich subsample of individuals for which normative expenditures, YNORM, can be accurately determined, we make two contributions: (a) any risk equalization scheme applied to the entire population, YREF, should be evaluated through its performance in the subsample, by comparing YREF with YNORM (not by comparing YREF with observed expenditures, Y, in the entire population, as commonly done); (b) conventional risk equalization schemes can be improved by the subsample regression of YNORM, rather than Y, on the risk adjusters that are observable in the entire population. This new method is illustrated by an application to the 2004 Dutch risk equalization model.

Stockpiling anti-viral drugs for a pandemic: The role of Manufacturer Reserve Programs

- Journal of Health Economics---2010---Joseph E. Harrington,Edbert B. Hsu

To promote stockpiling of anti-viral drugs by non-government organizations such as hospitals, drug manufacturers have introduced Manufacturer Reserve Programs which, for an annual fee, provide the right to buy in the event of a severe outbreak of influenza. We show that these programs enhance drug manufacturer profits but could either increase or decrease the amount of pre-pandemic stockpiling of anti-viral drugs.

Should new antimalarial drugs be subsidized?

- Journal of Health Economics---2010---Ramanan Laxminarayan,Ian Parry,David L. Smith,Eili Y. Klein

Malaria kills over a million people each year. The loss of chloroquine due to the spread of parasite resistance is largely responsible for the resurgence of malaria. A new class of antimalarial drugs called artemisinins are available, but are unaffordable to most people in malaria-endemic countries and may quickly face the same fate as chloroquine unless they are combined with a partner drug. Subsidies for artemisinin combination treatments may be warranted on second-best grounds as they deter use of single-ingredient drugs, for which externalities from the risk of resistance evolution are larger. Furthermore, by expanding total effective drug use, subsidies reduce infection transmission externalities among individuals. However, use of combination treatments could still lead to drug resistance and the subsidies themselves entail welfare consequences. This paper develops a conceptual and numerical framework for understanding the conditions under which subsidies for artemisinin combinations can be justified on economic efficiency grounds.

Monitoring technology and firm boundaries: Physician-hospital integration and technology utilization

- Journal of Health Economics---2010---Jeffrey S. McCullough,Eli M. Snir

We study the relationship between physician-hospital integration and its relation to monitoring IT utilization. We develop a theoretical model in which monitoring IT may complement or substitute for integration and test these relationships using a novel data source. Physician labor market heterogeneity identifies the empirical model. We find that monitoring IT utilization is increasing in integration, implying that expanded firm

boundaries complement monitoring IT adoption. We argue that the relationship between monitoring IT and firm boundaries depends upon the contractibility of the monitored information.

Simulation sample sizes for Monte Carlo partial EVPI calculations

- Journal of Health Economics---2010---Jeremy E. Oakley,Alan Brennan,Paul Tappenden,Jim Chilcott

Partial expected value of perfect information (EVPI) quantifies the value of removing uncertainty about unknown parameters in a decision model. EVPIs can be computed via Monte Carlo methods. An outer loop samples values of the parameters of interest, and an inner loop samples the remaining parameters from their conditional distribution. This nested Monte Carlo approach can result in biased estimates if small numbers of inner samples are used and can require a large number of model runs for accurate partial EVPI estimates. We present a simple algorithm to estimate the EVPI bias and confidence interval width for a specified number of inner and outer samples. The algorithm uses a relatively small number of model runs (we suggest approximately 600), is quick to compute, and can help determine how many outer and inner iterations are needed for a desired level of accuracy. We test our algorithm using three case studies.

The puzzle of Muslim advantage in child survival in India

- Journal of Health Economics---2010---Sonia Bhalotra,Christine Valente,Arthur van Soest

The socioeconomic status of Indian Muslims is, on average, considerably lower than that of upper-caste Hindus. Muslims nevertheless exhibit substantially higher child survival rates, and have done for decades. This paper analyses this seeming puzzle. A decomposition of the survival differential confirms that some compositional effects favour Muslims but that, overall, differences in characteristics and especially the Muslim deficit in parental education predict a Muslim disadvantage. The results of this study contribute to a recent literature that debates the importance of socioeconomic status (SES) in determining health and survival. They augment a growing literature on the role of religion or culture as encapsulating important unobservable behaviours or endowments that influence health, indeed, enough to reverse the SES gradient that is commonly observed.

Do red herrings swim in circles? Controlling for the endogeneity of time to death

- Journal of Health Economics---2010---Stefan Felder,Andreas Werblow,Peter Zweifel

Studies on the effect of ageing on health care expenditure (HCE) have revealed the importance of controlling for time-to-death (TTD). These studies, however, are subject to possible endogeneity if HCE influences the remaining life expectancy. This paper introduces a 10-year observation period on monthly HCE, socioeconomic characteristics and survivor status to first predict TTD and then use the predicted values as an instrument in the regression for HCE. While exogeneity of TTD has to be rejected, core results concerning the role of TTD rather than age as a determinant of HCE (the 'red herring' hypothesis) are confirmed.

Progress and compliance in alcohol abuse treatment

- Journal of Health Economics---2010---Hsienming Lien,Mingshan Lu,Ching-to Ma,Thomas G. McGuire

Improving patient compliance with physicians' treatment or prescription recommendations is an important goal in medical practice. We examine the relationship between treatment progress and patient compliance. We hypothesize that patients balance expected benefits and costs during a treatment episode when deciding on compliance; a patient is more likely to comply if doing so results in an expected gain in health benefit. We use a unique data set of outpatient alcohol abuse treatment to identify a relationship between treatment

progress and compliance. Treatment progress is measured by the clinician's comments after each attended visit. Compliance is measured by a client attending a scheduled appointment, and continuing with treatment. We find that a patient who is making progress is less likely to drop out of treatment. We find no evidence that treatment progress raises the likelihood of a patient attending the next scheduled visit. Our results are robust to unobserved patient heterogeneity.

Consequences of eliminating federal disability benefits for substance abusers

- Journal of Health Economics---2010---Pinka Chatterji,Ellen Meara

Using annual, repeated cross-sections from national household surveys, we estimate how the January 1997 termination of federal disability insurance, Supplemental Security Income (SSI), for those with Drug Addiction and Alcoholism affected labor market outcomes among individuals targeted by the legislation. We also examine whether the policy change affected health insurance, health care utilization, and arrests. We employ propensity-score methods to address differences in observed characteristics between likely substance users and others, and we used a difference-in-difference-in-difference approach to mitigate potential omitted variables bias. In the short-run (1997-1998), declines in SSI receipt accompanied appreciable increases in labor force participation and current employment. There was little measurable effect of the policy change on insurance and utilization, but we have limited power to detect effects on these outcomes. In the later period after the policy change (1999-2002), the rate of SSI receipt rose, and short-run gains in labor market outcomes diminished.

Social host liability for minors and underage drunk-driving accidents

- Journal of Health Economics---2010---Angela Dills

Social host laws for minors aim to reduce teenage alcohol consumption by imposing liability on adults who host parties. Parents cite safety reasons as part of their motivation for hosting parties, preferring their teens and their teens' friends to drink in a supervised and safe locale. Both sides predict an effect of social host liability for minors on alcohol-related traffic accident rates for under-aged drinkers; the effects, however, work in opposite directions. This paper finds that, among 18-20 year olds, social host liability for minors reduced the drunk-driving fatality rate by 9%. I find no effect on sober traffic fatalities. Survey data on drinking and drunk driving suggest the declines resulted mostly from reductions in drunk driving and not reductions in drinking.

Tolerance and HIV

- Journal of Health Economics---2010---Andrew M. Francis,Hugo Mialon

We empirically investigate the effect of tolerance for gays on the spread of HIV in the United States. Using a state-level panel dataset spanning the mid-1970s to the mid-1990s, we find that tolerance is negatively associated with the HIV rate. We then investigate the causal mechanisms potentially underlying this relationship. We find evidence consistent with the theory that tolerance for homosexuals causes low-risk men to enter the pool of homosexual partners, as well as causes sexually active men to substitute away from underground, anonymous, and risky behaviors, both of which lower the HIV rate.

Hyperbolic discounting, the sign effect, and the body mass index

- Journal of Health Economics---2010---Shinsuke Ikeda,Myong-Il Kang,Fumio Ohtake

Analysis of a broad survey of Japanese adults confirms that time discounting relates to body weight, not only via impatience, but also via hyperbolic discounting, proxied by inclination toward procrastination, and the sign effect, where future negative payoffs are discounted at a lower rate than future positive payoffs. Body mass index is positively associated with survey responses indicative of impatience and hyperbolic discounting, and negatively associated with those indicative of the sign

effect. A one-unit increase in the degree of procrastination is associated with a 2.81 percentage-point increase in the probability of being obese. Subjects exhibiting the sign effect show a 3.69 percentage-point lower probability of being obese and a 4.02 percentage-point higher probability of being underweight than those without the sign effect. These effects are substantial compared with the prevalence rates of the corresponding body mass status. Obesity and underweight thus result in part from the temporal decision biases.

The effects of a sick pay reform on absence and on health-related outcomes

- Journal of Health Economics---2010---Patrick Puhani,Katja Sonderhof

We evaluate the effects of a reduction in sick pay from 100 to 80% of the wage. Unlike previous literature, apart from absence from work, we also consider effects on doctor/hospital visits and subjective health indicators. We also add to the literature by estimating both switch-on and switch-off effects, because the reform was repealed 2 years later. We find a 2-day reduction in the number of days of absence. Quantile regression reveals higher point estimates (both in absolute and relative terms) at higher quantiles, meaning that the reform predominantly reduced long durations of absence. In terms of health, the reform reduced the average number of days spent in hospital by almost half a day, but we cannot find robust evidence for negative effects on health outcomes or perceived liquidity constraints.

Retail price regulation and innovation: Reference pricing in the pharmaceutical industry

- Journal of Health Economics---2010---David Bardey,Antoine Bommier,Bruno Jullien

Our paper is a first attempt to evaluate the long run impact of reference pricing on pharmaceutical innovation, health and expenditures. The model is based on a dynamic game involving three types of agents: pharmaceutical firms, consumers and a regulatory entity. Pharmaceutical firms choose the level of research investment and its innovative content, then negotiate introductory prices for new drugs with the regulator. Reference pricing affects negatively the intensity of research and it also modifies the types of innovations that are brought to the market, deterring small innovations. The model is calibrated with a small data on statins in France. Our results suggest that reference pricing typically generates a decline in health, whereas discounted expenditures may decrease or increase, depending on the degree of deterrence of cost reducing innovations.

Why are junior doctors reluctant to consult attending physicians?

- Journal of Health Economics---2010---Otto Swank

A physician performs two tasks: making diagnoses and determining treatments. To reduce medical error, junior doctors are supposed to consult their supervisors when they face uncommon circumstances. However, recent research shows that junior doctors are reluctant to do so. This paper presents a model that explains (i) which junior doctors shy away from consulting; (ii) when junior doctors are reluctant; (iii) the importance of protocols in the medical sector; and (iv) when consulting is a sign of strength or a sign of weakness. Furthermore, I show that encouraging junior doctors to consult by investigating mishaps leads to another distortion: they will give too much weight to own assessments.

The additive utility assumption of the QALY model revisited

- Journal of Health Economics---2010---Afschin Gandjour,Amiram Gafni

Quality-adjusted life years are valid representations of the preferences of individuals for health outcomes only under a set of restrictive assumptions. One of the key assumptions is additive utility independence (AUI). Recently, Bleichrodt and Filko [Bleichrodt and Filko, 2008. Journal of Health Economics 27 (5), 1237-1249] presented a new test for AUI, the test for generalized marginality (GM). Based on a student survey showing that violations observed at an individual level cancel

out at the group level they concluded that use of the QALY model for economic evaluations in health care is supported. In this comment we argue that this conclusion is not warranted for 2 independent reasons: (i) the GM test is not sufficient to claim AUI both at an individual and group (i.e., aggregated) level and (ii) the student survey is not appropriate to make generalized statements about preferences at the population level.

A reply to Gandjour and Gafni

- Journal of Health Economics---2010---Han Bleichrodt,Martin Filko

Gandjour and Gafni (2010) criticize our paper on two counts. Their first point of criticism is ill-founded and results from many mathematical mistakes that they make. The second is due to a lack of understanding of the general principles of empirical research.

Understanding differences in health behaviors by education

- Journal of Health Economics---2010---David M. Cutler,Adriana Lleras-Muney

Using a variety of data sets from two countries, we examine possible explanations for the relationship between education and health behaviors, known as the education gradient. We show that income, health insurance, and family background can account for about 30 percent of the gradient. Knowledge and measures of cognitive ability explain an additional 30 percent. Social networks account for another 10 percent. Our proxies for discounting, risk aversion, or the value of future do not account for any of the education gradient, and neither do personality factors such as a sense of control of oneself or over one's life.

Does education reduce the probability of being overweight?

- Journal of Health Economics---2010---Dinand Webbink,Nicholas G. Martin,Peter M. Visscher

The prevalence of overweight and obesity is growing rapidly in many countries. Education policies might be important for reducing this increase. This paper analyses the causal effect of education on the probability of being overweight by using longitudinal data of Australian identical twins. The data include self-reported and clinical measures of body size. Our cross-sectional estimates confirm the well-known negative association between education and the probability of being overweight. For men we find that education also reduces the probability of being overweight within pairs of identical twins. The estimated effect of education on overweight status increases with age. Remarkably, for women we find no negative effect of education on body size when fixed family effects are taken into account. Identical twin sisters who differ in educational attainment do not systematically differ in body size. Peer effects within pairs of identical twin sisters might play a role.

Childhood economic conditions and length of life: Evidence from the UK Boyd Orr cohort, 1937-2005

- Journal of Health Economics---2010---Paul Frijters,Timothy Hatton,Richard M. Martin,Michael Shields

We study the importance of childhood socioeconomic conditions in predicting differences in life expectancy using data from a large sample of children collected in 16 locations in England and Scotland in 1937-39, who have been traced through official death records up to 2005. We estimate a number of duration of life models that control for unobserved family heterogeneity. Our results confirm that childhood conditions such as household income and the quality of the home environment are significant predictors of longevity. Importantly, however, the role of socioeconomic status appears to differ across cause of death, with household income being a significant predictor of death from smoking-related cancer. Moreover, we find that (1) poor housing conditions in childhood is associated with reduced longevity, that (2) early doctor-assessed childhood health conditions significantly predict a reduced length of life, that (3) children born in a location with relatively high infant mortality rates live significantly

fewer years, and that (4) there is a high correlation in longevity across children from the same family across all causes of death. We estimate that the difference in life expectancy between those with the 'best' and 'worst' observable characteristics is about 9 years, which increases to 20 years when we take into account the 'best' and 'worst' observable and unobservable household characteristics.

Behavioral impact of graduated driver licensing on teenage driving risk and exposure

- Journal of Health Economics---2010---Pinar Karaca-Mandic,Greg Ridgeway

Graduated driver licensing (GDL) is a critical policy tool for potentially improving teenage driving while reducing teen accident exposure. While previous studies demonstrated that GDL reduces teenage involvement in fatal crashes, much remains unanswered. We explore the mechanisms through which GDL influences accident rates as well as its long term effectiveness on teen driving. In particular, we investigate: (1) whether GDL policies improve teenage driving behavior, or simply reduce teenage prevalence on the roads; (2) whether GDL exposed teens become better drivers in later years. We employ a unique data source, the State Data System, which contains all police reported accidents (fatal and non-fatal) during 1990-2005 for 12 states. We estimate a structural model that separately identifies GDL's effect on relative teenage prevalence and relative teenage riskiness. Identification of the model is driven by the relative numbers of crashes between two teenagers, two adults, or a teenager and an adult. We find that the GDL policies reduce the number of 15-17-year-old accidents by limiting the amount of teenage driving rather than by improving teenage driving. This prevalence reduction primarily occurs at night and stricter GDL policies, especially those with night-time driving restrictions, are the most effective. Finally, we find that teen driving quality does not improve ex post GDL exposure.

The fatal toll of driving to drink: The effect of minimum legal drinking age evasion on traffic fatalities

- Journal of Health Economics---2010---Michael Lovenheim,Joel Slemrod

There is a sizeable literature on the effect of minimum legal drinking age (MLDA) restrictions on teenage drunk driving. This paper adds to the literature by examining the effect of MLDA evasion across states with different alcohol restrictions. Using state-of-the-art GIS software and micro-data on fatal vehicle accidents from 1977 to 2002, we find that in counties within 25 miles of a lower-MLDA jurisdiction, a legal restriction on drinking does not reduce youth involvement in fatal accidents and, for 18 and 19-year-old drivers, fatal accident involvement actually increases. Farther from such a border, we find results consistent with the previous literature that MLDA restrictions are effective in reducing accident fatalities. The estimates imply that, of the total reduction in teenager-involved fatalities due to the equalization of state MLDAs at 21 in the 1970s and 1980s, for 18-year olds between a quarter and a third and for 19-year olds over 15 percent was due to equalization. Furthermore, the effect of changes in the MLDA is quite heterogeneous with respect to the fraction of a state's population that need not travel far to cross a border to evade its MLDA. Our results imply the effect of lowering the MLDA in select states, such as has been proposed in Vermont, could lead to sizeable increases in teenage involvement in fatal accidents due to evasion of local alcohol restrictions.

Longitudinal analysis of income-related health inequality

- Journal of Health Economics---2010---Paul Allanson,Ulf-G. Gerdtham,Dennis Petrie

This paper considers the characterisation and measurement of income-related health inequality using longitudinal data. The paper elucidates the nature of the Jones and López Nicolás (2004) index of "health-related income mobility" and explains the negative values of the index that have been reported in all the empirical

applications to date. The paper further presents an alternative approach to the analysis of longitudinal data that brings out complementary aspects of the evolution of income-related health inequalities over time. In particular, we propose a new index of "income-related health mobility" that measures whether the pattern of health changes is biased in favour of those with initially high or low incomes. We illustrate our work by investigating mobility in the General Health Questionnaire measure of psychological well-being over the first nine waves of the British Household Panel Survey from 1991 to 1999.

Hospital closure and economic efficiency

- Journal of Health Economics---2010---Cory Capps,David Dranove,Richard Lindrooth

We present a new framework for assessing the effects of hospital closures on social welfare and the local economy. While patient welfare necessarily declines when patients lose access to a hospital, closures also tend to reduce costs. We study five hospital closures in two states and find that urban hospital bailouts reduce aggregate social welfare: on balance, the cost savings from closures more than offset the reduction in patient welfare. However, because some of the cost savings are shared nationally, total surplus in the local community may decline following a hospital closure.

A flexible two-part random effects model for correlated medical costs

- Journal of Health Economics---2010---Lei Liu,Robert L. Strawderman,Mark E. Cowen,Ya-Chen Shih

In this paper, we propose a flexible "two-part" random effects model ([Olsen and Schafer, 2001] and [Tooze et al., 2002]) for correlated medical cost data. Typically, medical cost data are right-skewed, involve a substantial proportion of zero values, and may exhibit heteroscedasticity. In many cases, such data are also obtained in hierarchical form, e.g., on patients served by the same physician. The proposed model specification therefore consists of two generalized linear mixed models (GLMM), linked together by correlated random effects. Respectively, and conditionally on the random effects and covariates, we model the odds of cost being positive (Part I) using a GLMM with a logistic link and the mean cost (Part II) given that costs were actually incurred using a generalized gamma regression model with random effects and a scale parameter that is allowed to depend on covariates (cf., Manning et al., 2005). The class of generalized gamma distributions is very flexible and includes the lognormal, gamma, inverse gamma and Weibull distributions as special cases. We demonstrate how to carry out estimation using the Gaussian quadrature techniques conveniently implemented in SAS Proc NLMIXED. The proposed model is used to analyze pharmacy cost data on 56,245 adult patients clustered within 239 physicians in a mid-western U.S. managed care organization.

Physician incentives: Cure versus prevention

- Journal of Health Economics---2010---Kris De Jaegher

This paper distinguishes between two scenarios for the physician-patient encounter. In the cure scenario, the patient does not know whether a loss can be recovered. In the prevention scenario, the patient faces a threat but does not know whether this threat is real enough to justify preventive action. The patient wants to induce the physician both to give an accurate diagnosis and to put appropriate effort into cure or prevention. It is shown that in the cure scenario, a contingent fee solves both these incentive problems. In the prevention scenario, however, putting up with low effort makes it easier to get an accurate diagnosis, and the use of contingent fees should be limited. These results are interpreted as providing a rationale for observed exceptions to legal and ethical restrictions on the use of contingent fees. Indeed, such exceptions are often granted for cases that fit the cure scenario.

Monopoly pricing of an antibiotic subject to bacterial resistance

- Journal of Health Economics---2010---Markus Herrmann

We develop a dynamic bio-economic model of bacterial resistance and disease transmission in which we characterize the pricing policy of a monopolist who is protected by a patent. After expiration, the monopolist behaves competitively in a generic industry having open access to the common pool of antibiotic efficacy and infection. The monopolist manages endogenously the levels of antibiotic efficacy as well as the infected population, which represent quality and market size respectively and achieves, at least temporarily, higher such levels than a hypothetically myopic monopolist who does not take into account the dynamic externalities. The pricing policy and the biological system is characterized by the turnpike property. Before the patent vanishes, the monopolist behaves more and more myopically, leading to a continuous decrease in the price of the antibiotic. Once the generic industry takes over, a discontinuous fall in price occurs. Whether a prolongation of the patent is socially desirable depends on the relative levels of antibiotic efficacy and infection.

Calculating the concentration index when income is grouped

- Journal of Health Economics---2010---Philip Clarke,Tom Van Ourti

The problem introduced by grouping income data when measuring socioeconomic inequalities in health (and health care) has been highlighted in a recent study in this journal. We re-examine this issue and show there is a tendency to underestimate the concentration index at an increasing rate when lowering the number of income categories. This tendency arises due to a form of measurement error and we propose two correction methods. Firstly, the use of instrumental variables (IV) can reduce the error within income categories. Secondly, through a simple formula for correction that is based only on the number of groups. We find that the simple correction formula reduces the impact of grouping and always outperforms the IV approach. Use of this correction can substantially improve comparisons of the concentration index both across countries and across time.

Does graded return-to-work improve sick-listed workers' chance of returning to regular working hours?

- Journal of Health Economics---2010---Jan Høgelund,Anders Holm,James McIntosh

Using Danish register and survey data, we examine the effect of a national graded return-to-work program on the probability of sick-listed workers returning to regular working hours. During program participation, the sick-listed worker works fewer hours and receives the normal hourly wage for the hours worked and sickness benefit for the hours off work. When the worker's health improves, working hours are increased until the sick-listed worker is able to work regular hours. Taking account of unobserved differences between program participants and non-participants, we find that participation in the program significantly increases the probability of returning to regular working hours.

Budgetary policies and available actions: A generalisation of decision rules for allocation and research decisions

- Journal of Health Economics---2010---Claire McKenna,Zaid Chalabi,David Epstein,Karl Claxton

The allocation problem in health care can be characterised as a mathematical programming problem but attempts to incorporate uncertainty in costs and effect have suffered from important limitations. A two-stage stochastic mathematical programming formulation is developed and applied to a numerical example to explore and demonstrate the implications of this more general and comprehensive approach. The solution to the allocation problem for different budgets, budgetary policies, and available actions are then demonstrated. This analysis is used to evaluate different budgetary policies and examine the adequacy of standard decision rules in cost-effectiveness analysis. The research decision is then considered alongside the allocation problem. This more general formulation demonstrates that the value of further research depends on: (i) the budgetary policy in place; (ii) the realisations revealed

during the budget period; (iii) remedial actions that may be available; and (iv) variability in parameters values.

Who will care? Employment participation and willingness to supply informal care

- Journal of Health Economics---2010---F. Carmichael,S. Charles,C. Hulme

The impact of informal care responsibilities on the willingness and ability of caregivers to undertake paid employment has been the subject of a number of studies. In contrast, the effect of employment status on willingness to undertake informal care has been less well explored. This paper concentrates on this less-studied direction of causality using the data provided by 15 waves of the British Household Panel Survey. We find that employment participation and earnings both impact negatively on willingness to supply informal care. This evidence has implications for health and social care policy since informal care has been shown to be a significant substitute for formal long-term care.