

ADELINA (YANYUE) WANG

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EDUCATION

2020-21 Post-Doctoral Fellow, National Bureau of Economic Research

2015-20 Ph.D. in Economics, Stanford University

2011-14 B.A. in Applied Mathematics, B.A. in Economics, University of California, Berkeley
Highest Honors in Economics, Haas Scholar, Honor's Thesis advisor Prof. Emmanuel Saez
Highest Distinction in General Scholarship

RESEARCH AND TEACHING FIELDS

Public Economics, Health Economics, Applied Econometrics, Machine Learning

WORKING PAPERS

[1] **The Impact of Alternative Types of Elder Care Providers: Stratified IV Analysis with Machine Learning Using Nursing Home Exits** (Job Market Paper)

This paper develops the stratified instrumental variables (IV) with machine learning method to analyze elder care provider types. Despite an increasingly aging population, finding the appropriate elder care provider among various agencies and facilities is still difficult. For example, home health agencies, nursing homes, and inpatient rehabilitation facilities are all common providers, each with different care intensities, service categories, and cost burdens. With few medical guidelines, quality and cost comparisons of providers based on observational data are important, but the validity of results can be threatened by selection bias. In this paper, I focus on the analysis of post-acute care (care after hospital discharge) for the elderly, and overcome the empirical challenge by instrumenting provider type with hospital-nursing home vertical disintegration. Yet first stage results show that the exit of hospital-affiliated nursing homes increases the likelihood of both home health care and inpatient rehabilitation. To address the violation of monotonicity, I thus propose stratified IV with machine learning. I estimate the individual-specific first stage effects of instrument on treatment values with generalized random forest, use these estimates to stratify compliers along different response margins, and identify stratum-specific local average treatment effects. The analysis shows that the marginal elderly costs the government twice as much in inpatient rehabilitation facilities than nursing homes, without experiencing improvement in health outcomes. Meanwhile, for the elderly on another response margin, home health can provide care with quality and cost similar to nursing homes. These results can inform government policy on elder care financing and management, and the method is widely applicable to IV analysis in settings of multiple treatments.

[2] **The Economic Impact of Healthcare Quality** (with Anne-Line Koch Helsø and Nicola Pierri)

IMF Working Paper No. 19/173

We study the costs of hospitalizations on patients' earnings and labor supply, using the universe of hospital admissions in Denmark and full-population tax data. We evaluate the quality of treatment based on its ability to mitigate the labor market consequences of a given diagnosis and propose a new measure of hospital quality, the "Adjusted Earning Losses" (AEL). We document a sizeable heterogeneity in quality across Danish hospitals: AEL standard deviation is equal to approximately 10% of the average decline in labor earnings following a hospital admission. We show that AEL contains significant additional information relative to traditional measures and does not suffer from worse selection issues. We also document a large decline in the labor cost of hospitalizations over time, with large variations across diseases. We find that the average post-hospitalization reduction in labor earnings declined by 25% (50%) on the intensive (extensive) margin between 1998 and 2012.

[3] **Heterogeneity in The Impact of Privatizing Social Health Insurance** (with Mark Duggan and Craig Garthwaite)

State governments face the classic “make or buy” decision for the provision of Medicaid services. Over the past two decades, the majority of states have outsourced the provision of social insurance through Medicaid Managed Care (MMC) programs. These programs have been extensively studied in the literature – with little evidence of large positive or negative effects. However, most states allowed older and sicker enrollees to remain enrolled in the government run fee for service (FFS) programs. It is possible that these more fragile enrollees could have a different experience in managed care. In this paper we study California’s mandatory enrollment of the senior and persons with disabilities (SPD) population in MMC. We find this mandatory enrollment caused an increased use of the emergency department and transfers between hospitals. This was not simply a hassle cost for enrollees – we also estimate an increase in mortality for the affected population. These effects were strongest for enrollees who had the greatest use of medical services prior to enrollment in MMC – the types of enrollees that might be expected to have a different experience with managed care. Our results suggest the adverse impact of MMC varies by the health of enrollees, which should inform the optimal outsourcing decision for governments.

[4] **The Behavioral Foundations of Default Effects: Theory and Evidence from Medicare Part D** (with Zarek Brot-Goldberg, Timothy Layton, and Boris Vabson)

Defaults have been shown to be powerful in a variety of settings, from retirement savings to organ donation. We use novel data and a unique natural experiment in the Medicare Part D prescription drug insurance program to show that defaults (rather than switching costs or persistent preference heterogeneity) drive plan enrollment in health insurance. First, we document that only 16% of low-income (“dual-eligible”) beneficiaries make an active plan choice when they initially qualify, with the rest instead enrolling in a randomly-selected default plan. Enrollment in default plans is persistent, with only one-third of randomly-assigned beneficiaries actively choosing to switch to a different plan after five years of enrollment. Next, we show that this long persistence is also driven by default rules: When continuing beneficiaries’ default exogenously changes from remaining in their incumbent plan to being automatically switched to a randomly-chosen alternative, 92% of beneficiaries switch plans. We also document that the consequences of this passivity are significant, with default-driven reassignment resulting in a 6% decrease in beneficiary drug spending. We then ask: If defaults are so powerful, how should we design them? We develop a general model of active choice under costly decision-making that allows for the possibility that either paternalistic defaults that steer consumers to plans that are good for them (Thaler and Sunstein 2003) or harmful defaults that “shock” consumers into making active choices (Carroll et al. 2009) could be optimal. We show that optimal default design depends on a critical, previously-overlooked parameter: The elasticity of active choice propensity with respect to the value of the default. We then leverage variation in the value of the randomly-assigned default plans in our setting to show that, in Medicare Part D, this elasticity is approximately zero, implying that harsher defaults do not trigger active choice. Indeed, using a different natural experiment and a structural model of attention, we find that default-following behavior is largely random, with two-thirds of its variation coming from transitory shocks to attention. Our results show that default rules are an integral part of insurance market design and that beneficiaries are likely to benefit from paternalistic defaults rather than be hurt by them.

TEACHING EXPERIENCE

- 2020 Teaching Assistant to Prof. Chris Makler, Economic Analysis I, Stanford University
- 2019 Teaching Assistant to Prof. Mark Duggan, Principles of Economics, Stanford University
- 2017 Teaching Assistant to Prof. Susan Athey and Prof. Mohammad Akbarpour, Marketplaces for Goods and Services (MBA), Stanford Graduate School of Business
- Teaching Assistant to Prof. Susan Athey and Prof. Magid Abraham, Advertising and Monetization (MBA), Stanford Graduate School of Business

RELEVANT POSITIONS

- 2016-20 Research Assistant to Prof. Mark Duggan, Department of Economics, Stanford University
2013-15 Research Assistant to Prof. Ulrike Malmendier, Department of Economics, UC Berkeley
2013 Research Assistant to Prof. Robert H. Edelstein, Haas School of Business, UC Berkeley

SCHOLARSHIPS, HONORS, AND AWARDS

- 2020 American Society of Health Economists (ASHEcon) Diversity Scholarship
2018 National Bureau of Economic Research (NBER) Health Economics Bootcamp Scholarship
2018 Thomas Parry Research Fellowship, Integrated Benefits Institute
2017-18 Arnold Foundation Graduate Fellowship, Stanford Institute for Economic Policy Research (SIEPR)
2014 Phi Beta Kappa
2013-14 Haas Scholar
2012 Edward Frank Kraft Award
2011-14 Dean's Honors List
2011-12 Cal Alumni Association Leadership Award Scholarship

PRESENTATIONS

- 2020 University of Rochester School of Medicine (scheduled), Electronic Health Economics Colloquium (EHEC), European Union National Productivity Boards Teleconference (by coauthor)
2019 American Society of Health Economists (ASHEcon) Conference (by coauthor)

LEADERSHIP EXPERIENCE

- 2019 Interview Committee Member, Cal Alumni Association Leadership Award Scholarship
2016-17 Graduate Student Social Chair, Department of Economics, Stanford University
2013-14 Vice President, Economic Honor Society Omicron Delta Epsilon UC Berkeley Chapter
2012 Director of Student Development, International Student Association at Berkeley
2012 Director of Professional Development, Berkeley Business Society
2012 Coordinator of Alumni Relations, Leadership Award Scholars Association

DISSERTATION COMMITTEE

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OTHER

Programming: Stata, R, Python, SAS, SQL