### **KELSEY MORAN**

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DOCTORAL	Massachusetts Institute of Technology (MIT)
STUDIES	PhD, Economics, Expected Completion June 2025
	DISSERTATION: "Essays in Health Economics"

DISSERTATION COMMITTEE AND REFERENCES

Professor Amy Finkelstein MIT Department of Economics 77 Massachusetts Avenue, E52-442 Cambridge, MA 02139 617-253-4149 afink@mit.edu Professor Jonathan Gruber MIT Department of Economics 77 Massachusetts Avenue, E52-318 Cambridge, MA 02139 617-253-8892 gruberj@mit.edu

Professor Joseph Doyle MIT Sloan School of Management 100 Main Street, E62-518 Cambridge, MA 02139 617-452-3761 jjdoyle@mit.edu

**PRIOR**Wellesley College**EDUCATION**B.A. in Economics with Honors<br/>summa cum laude, Phi Beta Kappa

2017

- CITIZENSHIP United States GENDER Female
- LANGUAGES English (native), Spanish (intermediate)
- FIELDS Primary Fields: Health Economics, Public Finance

Secondary Fields: Industrial Organization, Labor Economics

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TEACHING Experience	Economics Research & Communication (undergraduate, MIT 14.33) Teaching Assistant to Professors Dave Donaldson, Jim Poterba	2021
	Econometrics (undergraduate, Wellesley ECON 203) Teaching Assistant to Professor Kristin Butcher	2017
	Econometrics (undergraduate, Wellesley ECON 203) Teaching Assistant to Professor Kartini Shastry	2016
<b>RELEVANT</b> <b>POSITIONS</b>	Research Assistant to Professor Joseph Doyle Research Assistant to Professor Amy Finkelstein Research Assistant at Federal Reserve Board of Governors (Fiscal Analysis Section) Research Assistant to Professors Kristin Butcher, Kartini Shastry Research Intern at U.S. Department of the Treasury (Office of Economic Policy) Research Assistant to Professor Robert Schoeni	2022, 2023 2020, 2021 2017-2019 2016-2017 2016 2015
Fellowships, Honors, and Awards	NBER Pre-Doctoral Fellowship in Aging and Health Research (x2) MIT Undergraduate Economics Association Best TA Award George and Obie Schultz Fund Grant National Science Foundation Graduate Research Fellowship Peggy Howard Graduate Fellowship in Economics Natalie Bolton Faculty Prize in Applied Economics (Wellesley) Schiff Fellowship (Wellesley) Case Fellowship (Wellesley) Wellesley in Washington Fellowship Phi Beta Kappa (elected Junior Year)	2023-2025 2022 2022 2019-2024 2019 2017 2016-2017 2016-2017 2016 2016
<b>PROFESSIONAL</b> <b>ACTIVITIES</b>	Referee: American Economic Journal: Applied Economics, American Journal: Economic Policy, American Economic Review: Insights, Amer of Health Economics Presentations: Wellesley College American Society of Health Economists (ASHEcon) Google American Society of Health Economists (ASHEcon) Federal Reserve Board Applied Microeconomics Seminar Service: Organizer for NBER Aging and Health Fellows Lunch Organizer for MIT Public Finance Field Lunch Organizer for MIT Public Finance Field Lunch Mentor for Economics Mentoring Program Treasurer for MIT Graduate Women in Economics Instructor for Federal Reserve Board's Howard University R Course	

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**PUBLICATIONS** "Immigrant Labor and the Institutionalization of the U.S.-Born Elderly" (with Kristin Butcher and Tara Watson). *Review of International Economics*, 30(5), 2022.

**"The Evolution of Infant Mortality Inequality in the United States, 1960–2016"** (with Nick Turner and Kaveh Danesh). *Science Advances*, 6(29), 2020.

# RESEARCH"Costs of Technological Frictions: Evidence from EHR (Non-)Interoperability"PAPERS(Job Market Paper)<br/>(with Rebekah Dix and Thi Mai Anh Nguyen)

Interoperability—the ability of different systems to work together—is an increasingly vital component of product markets. We study the impact of interoperability frictions in the context of US hospital Electronic Health Record (EHR) systems. While use of EHR systems is widespread, interoperability of these systems remains low, particularly across those produced by different EHR vendors. We examine how interoperability affects patients by considering both a direct, technological effect of influencing health information exchange and an allocative effect of shifting the flow of patients across providers. Using an event study design in which interoperability between hospital pairs changes when one changes EHR vendors, we find evidence for both channels. When two hospitals switch to having the same EHR vendor, charges and readmissions rates for patients who are transferred and referred between them decrease by 4% and 11%, respectively. In addition, these hospitals now share 8% more inpatient transfers and 9-10% more referrals. This change in patient flows further affects patient outcomes: patient health improves when their sending hospitals switch to EHR vendors used by higher-quality hospitals in the market and worsens when the opposite occurs. To quantify the welfare gain from reducing interoperability frictions, we estimate a demand model of how patients and providers trade-off interoperability with other receiving hospital characteristics when choosing where to send patients. The model is identified by changes in patient flows following changes in hospital EHR vendors and interoperability levels. We show that eliminating all interoperability frictions would redirect 7.5% of patients to different hospitals and increase joint hospital-patient welfare by 21%, the equivalent of a 57-kilometer reduction in travel distance.

### "Hospital Charity Care & The Hill-Burton Act"

Hospital provision of charity care plays a crucial role in ensuring healthcare access for uninsured and low-income patients, yet the factors influencing this provision remain poorly understood. This paper examines how hospital charity care responds to regulatory changes by analyzing the long-term effects of the Hill-Burton Act of 1946, which allocated \$6 billion to over 3,500 hospitals in exchange for those facilities providing free and reduced-cost care to uninsured patients for 20 years. Using detailed hospital financial data from four large states, patient discharge data from the Healthcare Cost and Utilization Project, and event studies around the expiration of Hill-Burton charity care obligations, I analyze the impact of these regulatory expirations on hospital conduct and patient access to care. I find that Hill-Burton hospitals decrease charity care provision by 30% and reduce admissions of likely charity-eligible patients by 14% after their obligations expire. These patients are

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subsequently shifted to neighboring public and non-profit hospitals, where they are required to pay for care. While county-level access to hospital care remains stable, county-level charity care spending drops by 20% after the first expiration of Hill-Burton obligations in the county. These results reveal strategic behavior in hospital charity care provision and highlight the importance of considering hospital objectives and responses when designing polices to improve healthcare access for underinsured populations.

### "Safety Net Crowd-Out: How Public Programs Affect Non-Profit Hospital Charity Care"

Medical organizations in the US provide billions of dollars of free and discounted healthcare to uninsured and low-income patients each year. This paper examines the interplay between the two largest providers of this safety net healthcare: private hospitals and the public sector. Using federal tax returns from non-profit hospitals and difference-in-differences strategies, I analyze how increases in the public healthcare safety net affect the private provision of charity care. I find that a one standard deviation increase in publicly funded health centers per capita is associated with a 9% decrease in non-profit hospital charity care spending from hospitals in the same county as these centers. Further, state-level Medicaid expansions coincide with a 35% decrease in non-profit hospital charity care. Finally, I show that non-profit hospitals do not change their financial assistance policies following either of these local increases in the public safety net, but rather allow their charity spending to fall with demand. These findings provide substantial evidence of public spending crowding out private charity in the healthcare sector.

### "Heterogeneity in Effectiveness of Flu-Shot Incentives: Evidence from a Large-Scale Field Experiment"

(co-first author with Gail Rosenbaum as well as Amir Goren, Michelle Meyer, Christopher Chabris, and Joseph Doyle)

Despite the proven effectiveness of flu vaccinations in reducing morbidity and mortality, uptake rates remain suboptimal. This paper tests whether offering a state scratch-off lottery ticket before an upcoming primary or specialty appointment can increase vaccination rates in a large-scale field experiment involving nearly 58,000 participants. We compare the lottery incentive with two other nudges: a small cash incentive and a text message reminder, alongside a passive control group. Our findings demonstrate that receiving any intervention significantly increased vaccination rates by 2 percentage points at scheduled appointments (an 8% increase from the control mean) and by 1.45 percentage points over the flu season (a 3% increase from the control mean). Notably, we found no additional benefits from cash or lottery incentives beyond the reminder. Given the large sample size and rich set of covariates from electronic health records, the setting is well-suited for a causal forest machine learning algorithm to identify heterogeneous effects across patient and county characteristics. Patients with characteristics in the top quartile of effectiveness were 3 to 4 times more likely to be influenced by the nudges. These results highlight the importance of targeting behavioral strategies in public health.

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## **RESEARCH IN**"Sharing is Caring: The Role of Health Information Exchange on Patient Care"**PROGRESS**(with Ari Bronsoler, Joseph Doyle, and John Van Reenen)

Healthcare has been transformed by health information technology over the past two decades, but the impact of such digital technologies on health outcomes remains a long-standing and controversial question. In this project, we focus on the role of Health Information Exchange (HIE), an innovation designed to improve communication between healthcare systems and one that has been heavily subsidized and promoted as a way to improve quality of care. Using a newly compiled database of annual, state-level health information exchange laws, we show these laws strongly influence the adoption of HIE. Instrumental variable estimates that exploit state law changes show that HIE adoption reduces county-level mortality rates from flu and pneumonia by 18%. Hospital-level readmission rates for common conditions also fall by 4-5%. Given that the proportion of hospitals with HIE capability rose by 50 percentage points over the period in which we find these effects, we estimate that this diffusion saved 27,000 lives per year. We attribute the health improvements to enhanced public health response to infectious disease and improved care coordination.

### "Interoperability and Competition in Electronic Health Records"

(with Rebekah Dix and Thi Mai Anh Nguyen)

While electronic health record (EHR) systems are widely used by US hospitals, interoperability-the ability to easily share patient data between different EHR systems-is limited. Advocates argue that increasing interoperability benefits patient health while reducing healthcare costs. However, the trend towards greater concentration in the EHR market introduces a potential trade-off between interoperability and EHR system costs. In this project, we examine the role of interoperability in EHR vendor competition. At the core of our analysis is a model of hospital demand for EHR systems that incorporates the effects of interoperability on patient flows and outcomes (Dix, Moran, and Nguyen, 2024), EHR system costs, and EHR system functionalities. We will estimate this model using data on hospital finances, EHR system choices, interoperability, and patient flows and outcomes. This demand model allows us to infer vendor incentives for setting interoperability levels, functionalities, and prices. Specifically, the model enables us to quantify the incentives for EHR vendors to improve within-system interoperability, which strengthens their market power, versus across-system interoperability, which has positive spillovers on the rest of the market. Our results are informative on the design of technology adoption subsidies and interoperability regulations in industries with large adjustment costs and interoperability concerns.