PRIYA V. SHANMUGAM
scholar.harvard.edu/priya
priya.v.shanmugam@gmail.com

HARVARD UNIVERSITY

Placement Director: Amanda Pallais	APALLAIS@FAS.HARVARD.EDU	617-495-2151
Placement Director: Nathan Hendren	NHENDREN@FAS.HARVARD.EDU	617-496-3588
Assistant Director: Brenda Piquet	BPIQUET@FAS.HARVARD.EDU	617-495-8927

Office Contact Information
1805 Cambridge St
Cambridge, MA 02138
630-697-9481

Personal Information: Born July 30, 1991. Female. US Citizen.

Undergraduate Studies:
B.S., Economics and Mathematics, Dartmouth College, High Honors, *cum laude*, 2013

Graduate Studies:
Harvard University, 2013 to present
Ph.D. Candidate in Economics
Thesis Title: *"Essays on Clinical Decision-Making"*
Expected Completion Date: May 2020

References:

Professor Larry Katz
Harvard University
617-495-5148
lkatz@harvard.edu

Professor David Cutler
Harvard University
617-496-5216
dcutler@harvard.edu

Professor Isaiah Andrews
Harvard University
617-496-2720
iandrews@harvard.edu

Teaching and Research Fields:
Primary fields: Health Economics, Labor Economics
Secondary field: Behavioral Economics

Teaching Experience:

Spring 2016 & 2017	Econ 980b: Economics of Education, Harvard University, teaching fellow for Professors Claudia Goldin and Larry Katz
Spring 2016 & 2017	Econ 2330: History of Human Capital, Harvard University, teaching fellow for Professors Claudia Goldin and Larry Katz
Fall 2015	Econ 1010a: Introductory Microeconomics, Harvard University, teaching fellow for Professor Maxim Boycko

Honors, Scholarships, and Fellowships:

2018-2019	Earl A. Chiles Fellowship
2017-2018	Becker-Friedman Institute Predoctoral Fellowship in Health Economics
2017-2018	NBER Predoctoral Fellowship in Health and Aging
2013-2014	Rita Ricardo-Campbell Fellowship
2013	Jacob J. Rintels Prize, Best Thesis in the Social Sciences, Dartmouth College

Research Papers:

"*Decision-Making Under Cognitive Constraints: Evidence from the Emergency Department.*"
(Job Market Paper)
Complex, high-stakes decisions are often made solely by human experts. However, many of these decisions are made under significant cognitive constraints. I estimate the causal impact of an increase in cognitive constraints on the quality of Emergency Department care using the universe of ED visits across the state of New York from 2005-2015. I define cognitive constraints as a function of variation in the number and complexity of other patients a doctor sees at the same time. Patients who arrive when the ED is busy versus empty are of similar ex-ante health, but differ in how cognitively constrained their physician is. My empirical analysis focuses on two common complaints: chest pains, where decision-making aids in the form of simple risk-scoring tools are plentiful, and abdominal pains, where no such aids are available. I show that constraints improve survival for high-risk patients, even in the absence of aids. However, cognitive constraints increase mortality for low-risk patients, even when aids are present. Constraints cause doctors to admit high-risk patients into the hospital, and conduct more diagnostic testing instead of hospital admission for low-risk patients. When aids are present, constraints reduce variation in treatment across hospitals, cause patients to receive more uncommon diagnoses, and create significantly larger increases in patient survival relative to the amount of additional care provided to patients, which suggests that aids assist doctors in identifying patients who will benefit the most from additional care. Overall, a combination of decision aids and discretion is preferred to either one alone, and the optimal combination hinges critically on patient type.

Research Paper(s) in Progress

"*Gender Differences in Learning: Evidence from the Emergency Department*"
Gender differences in how workers perceive their own abilities may be an important channel through which gender gaps in performance appear and persist in the labor market. I use administrative data on every Emergency Department (ED) visit in New York from 2005-2015 to understand how doctors update their perceptions of their own abilities after a patient they treated dies. Using an event study design, I study how doctors change their treatment behavior in response to two types of patient deaths: when the patient had an ex-ante high(low) likelihood of death and the doctor was unlikely(likely) to be at fault. I explore how the effects of these shocks on a doctor's treatment style, and the subsequent effects on the cost and quality of care they provide, differ by doctor gender. Preliminary results suggest that, even in situations where a patient's death was unavoidable, male and female doctors respond by adjusting their treatment styles differently in ways that exacerbate existing gender gaps in performance.

"Habit Formation and Technological Deadoption"
Many clinical practices are ineffective or even harmful, yet they continue to be provided to patients. We still do not understand what causes healthcare practitioners to be slow to stop providing care that has been deemed low-value. I use administrative data on every hospital visit across the State of New York from 2005-2015 to understand how doctors de-adopt once-accepted practices that have been deemed harmful. I

focus on two clinical practices: early elective deliveries for pregnant women and drug-eluting stents for blocked arteries, both of which were once common, then deemed harmful in the early 2000s and early 2010s respectively. Both practices were de-adopted with significant variation across hospitals in speed and extent of de-adoption. I develop a model of physician habit formation as a within-physician productivity spillover, and test it as an explanation for slow technological de-adoption against other theories of information diffusion, risk aversion or institutional barriers.

"*Decision Fatigue and Not-So-Grumpy Judges?*"
How does decision fatigue affect high-stakes choices? Previous evidence from Israel shows that the likelihood of granting parole decreases dramatically as judges get fatigued and "grumpy". I find evidence to the contrary. Using administrative data on every parole hearing held at the New Hampshire Parole Board between 2008 and 2011, I exploiting the alphabetical ordering of parole hearings at the New Hampshire Parole Board to estimate the causal impact of judge fatigue on hearing outcomes. I show that having a parole hearing 10 minutes later in the day increases the likelihood of receiving parole by 2.5-3.1pp. The results support the idea that decision fatigue is distinct from changes in the emotion of the decision-maker. I hypothesize that the "default heuristic" - when fatigued, judges take the decision taken most often - may reconcile these and prior findings, as 82% of New Hampshire hearings result in parole.