## ANGIE ACQUATELLA

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#### HARVARD UNIVERSITY

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#### **Office Contact Information**

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#### **Personal Information:**

Date of Birth: August 21, 1994 Citizenship: USA, Venezuela, British Gender: Female

#### Graduate Studies:

Harvard University, 2016 to 2021 Ph.D. in Economics <u>Thesis Title</u>: "Essays on Financial Incentives in Health Care" <u>Completion Date</u>: May 2021

<u>References</u>: Professor David Cutler Harvard University dcutler@fas.harvard.edu 617-496-5216

Professor Stefanie Stantcheva Harvard University sstantcheva@fas.harvard.edu 617-496-2606 Professor Oliver Hart Harvard University ohart@harvard.edu 617-496-7730

Professor Keith Marzilli Ericson Boston University Questrom kericson@bu.edu 617-861-7673

### **Undergraduate Studies**:

B.S. Mathematics, University of Texas at Austin, *Magna Cum Laude*, 2016 B.A. Economics, University of Texas at Austin, *Magna Cum Laude*, 2016

#### **Teaching and Research Fields**:

Primary field: Health Economics Secondary fields: Public Finance, Contract Theory

#### **Teaching Experience:**

| Fall 2020      | Contract Theory (PhD level), Harvard, Teaching Fellow for Prof Oliver Hart      |
|----------------|---|
| Spring 2019,20 | Microeconomic Theory (PhD level), Harvard, Teaching Fellow for Prof Oliver Hart |
| Spring 2018    | Microeconomic Theory (PhD level), Harvard, Teaching Fellow for Prof Mike        |
|                | Powell  |

## **Professional Activities:**

| 2021-Present | Technology & Policy Research Initiative Fellow, Boston University Law       |
|--------------|---|
| 2016-2020    | Harvard Graduate Student Economics Association                              |
| Grants:      |   |
| 2022         | NBER Center for Aging and Health  |
|              | "The Impact of Payment Policy for Physician-Administered Drugs" (with Keith |
|              | Ericson and Amanda Starc, National Institute on Aging grant P30AG012810)    |
| 2021         | National Institute for Health Care Management                               |
|              | "Redesigning Payment Policy for Physician-Administered Drugs" (with Keith   |
|              | Ericson and Amanda Starc)   |

### Honors, Scholarships, and Fellowships:

| 2021-23    | Boston University Questrom, Post-doctoral Research Fellow     |
|------------|---|
| 2022-23    | National Bureau of Economic Research, Visiting Researcher     |
| 2019, 2020 | National Bureau of Economic Research, Aging and Health Fellow |
| 2016       | National Science Foundation Fellow                            |
| 2016       | University of Texas at Austin, Dean's Distinguished Graduate  |
| 2016       | Daniel Hamermesh Senior Thesis Prize                          |
|            |   |

### **Research Experience and Other Employment:**

| Summer 2017 | Stanford University, Research Assistant for Professor Matthew Gentzkow       |
|-------------|--|
| Summer 2015 | White House Council of Economic Advisers, Research Intern                    |
| Spring 2015 | University of Texas at Austin, Research Assistant for Professor Sandra Black |
| 2013 - 2015 | Innovations for Peace and Development Lab, Experiments Team Leader           |

## **Research Papers:**

# "Health Insurance for Redistribution" (JOB MARKET PAPER; joint with Myles Wagner and Anthony Yu)

How can governments use health insurance policy and taxes to increase health equity and reduce income inequality? We derive sufficient statistics formulas for optimal health care subsidies and taxes for a social planner who cares about health inequality, in addition to income inequality. These depend on the planner's social preferences, income-specific demand elasticities of medical spending, the joint distribution of health, income, and medical spending. We revisit the RAND Health Insurance experiment to estimate the elasticities and we find that low-income individuals have less elastic demand for medical spending than high-income individuals, suggesting that the fiscal costs of moral hazard depend on the socioeconomic status of individuals who receive the health care subsidy. We simulate the optimal health insurance policy and tax schedule under egalitarian and Rawlsian welfare objectives over health and income. A planner who places a high weight on the sick, relative to the healthy, chooses a health insurance policy that looks like Medicaid: the optimal health care safety net eligibility threshold is 130% of the Federal Poverty Line, subsidizing 100% of medical spending for low income individuals and 70% for the rest.

### "Contracting Solutions with Ethical Professional Norms"

I study optimal health care contracting in a principal-agent framework with altruistic providers. I find that financial incentives alone cannot correct for the inefficiencies in the health care system, but financial incentives *combined* with ethical professional norms can. Despite asymmetric information and imperfect agency, systems that pay using global budgets, such as in the U.K., can achieve first best outcomes, but this requires that providers internalize patient health gains from costlier treatments. Failing to account for ethical considerations and using cost-reimbursement contracts creates incentives for inefficient, low-value care provision, and high volumes of these services accrue to significant economic magnitudes.

## "Evaluating the Optimality of Provider Reimbursement Contracts" (under review)

This paper proposes a method for evaluating the optimality of provider reimbursement contracts that are partially retrospective, meaning that they condition payment on ex-post reported costs. In a setting where patients heterogeneously benefit from medical care, I derive the optimal linear reimbursement contract for an insurer maximizing the aggregate health of his patients. Then, I propose two ways to empirically calibrate the optimality condition of the insurer with respect to the component of the contract that reimburses retrospectively. I apply one method to the Medicare Outpatient Prospective Payment System, and estimate that 14% of Medicare payments are suboptimally prospective. The study of the linear contract also provides new theoretical reasons for why insurers may want a partially retrospective reimbursement contract, such as prospective payment with outlier payment adjustments, when provider moral hazard is small.

#### **Research in Progress:**

# "Redesigning Payment Policy for Physician Administered Drugs" (joint with Keith Ericson and Amanda Starc)

In this paper, we estimate the effects of Medicare Part B payment policy on the price path of physicianadministered drugs by comparing drugs where Medicare Part B is a larger versus smaller share of demand. We find that drugs with high Medicare market shares have *slower* price growth than less exposed drugs, but higher launch prices. We then estimate a dynamic demand model for physicianadministered drugs using Medicare Part B pricing and utilization data. Current payment policy (lagged cost plus a percentage market up) for Medicare Part B drugs creates financial incentives for physicians to choose more expensive drugs. We use our demand estimates to quantify the effects of counter-factual payment policies on prescriptions, prices, and the Medicare budget.

# "Optimal Design of Pharmaceutical Contracts for Static and Dynamic Efficiency" (joint with Keith Ericson and Amanda Starc)

In pharmaceutical markets, the presence of insurance affects the standard innovation policy trade-off between dynamic efficiency (setting higher prices to provide incentives for innovation) and static efficiency (driving price towards near marginal cost of production). This paper characterizes the effects of patient cost-sharing on investment and pricing incentives. Cost-sharing always augments static inefficiency due to moral hazard, but we can implement first-best dynamic efficiency. Cost-sharing can induce innovation for drugs whose benefits are uncertain at the development stage by aligning market returns with social value, such as anti-psychotics. For drugs whose benefits clearly target a patient population or disease category (e.g. anti-inflammatory) cost-sharing accelerates investment, but distorts the static price far above the monopoly price.

## "A Prescription for Manipulation" (with Sayeh Nikpay and Rena Conti)

The 340B program entitles certain public, non-profit hospitals to discounted outpatient drugs, and substantial profit margins when discounts are not passed onto payers. Previous work suggests 340B increases ex post strategic behavior. Using hospital administrative data from 1996-2016, we show that 340B also results in ex ante strategic behavior through manipulation of eligibility criteria. Non-parametric density tests show marked discontinuities in the eligibility criterion around the eligibility cutoff. The non-parametric hazard of manipulating eligibility for 340B is higher among hospitals with larger returns to participation. Finally, within-hospital trends in the 340B eligibility criterion break after hospitals meet the minimum eligibility criteria.

# "Better and Cheaper Health Care: Inculcating Ethical Virtues in Physicians" (joint with John Rhee M.D., Amish Acharya)

We propose a large-scale randomized controlled trial to test a novel and holistic health care financing model that combines behavioral interventions with financial incentives to achieve cheaper and better health care. The financing model is derived from economic theory, and it combines standard cost-reduction incentives with a behavioral intervention designed to increase physicians' ethical considerations. Theory predicts that ethically motivated physicians will have a higher likelihood of making care decisions that maximize the long run health of patients, and consequently minimize long run health care costs. We propose testing the theory in the U.K. General Practitioners (GPs) setting. We will randomly assign 200 practices of GPs in the northwest London area to an 'ethical virtues' intervention or control. We expect providers in the ethics treatment arm to have a higher propensity to undertake non-reimbursed testing and preventative care procedures that translate to lower lifetime patient health care costs within on three of the most expensive chronic disease areas: peripheral artery disease, chronic kidney disease, and coronary heart disease. Using the data customarily collected by the Primary Care Clinical Research Network, we will quantify the long-run savings of the ethics treatment by tracking patients and comparing their respective costs in the primary and secondary care settings.