

Claire Boone

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RESEARCH AREAS Health economics, health policy, behavioral economics, behavioral science, impact evaluation, clinical decision-making

EDUCATION **Ph.D. Health Policy, Health Economics**, University of California, Berkeley 2022

MPH Epidemiology & Biostatistics, University of California, Berkeley 2017

BA&Sc Biology & Economics, McGill University 2013

REFERENCES Paul Gertler, Professor, Haas School of Business, University of California, Berkeley. E-mail: gertler@berkeley.edu

Ziad Obermeyer, Associate Professor, School of Public Health, University of California, Berkeley. E-mail: zobermeyer@berkeley.edu

Jonathan Kolstad, Associate Professor, Haas School of Business and Department of Economics, University of California, Berkeley. E-mail: jkolstad@berkeley.edu

Ulrike Malmendier, Professor, Haas School of Business and Department of Economics, University of California, Berkeley. E-mail: ulrike@berkeley.edu

JOB MARKET PAPER *Title: The Role of Discretion in Clinical Decision Making: Evidence from Thresholds*

Summary: When a decision maker has discretion, such as a worker reporting their taxable income, threshold-based rules or policies are known to distort behavior. This has not been studied in the context of medicine, where thresholds guide many important diagnosis and treatment decisions. Using bunching estimation & data from over 600,000 primary care visits in Chile I study how providers make diagnostic and treatment decisions for hypertension, defined as blood pressure $\geq 140/90$ mmHg. Importantly, blood pressure is a noisy measure of risk and often over-stated when measured in clinic. I find a large behavioral response to the diagnostic threshold, suggesting providers use their discretion to re-categorize some positive tests as negatives. Here, the behavioral response leads to a more accurate classification of patients according to cardiovascular risk. Last, I find evidence suggesting providers use the representative heuristic to distinguish between true and false positives.

WORKING PAPERS **How Spillovers from Appointment Reminders Improve Health Clinic Efficiency** *NBER Working Paper 28166 & Revision requested at Journal of Health Economics.* (with P Celhay, T Gracner, P Gertler, & J Rodriguez)

Summary: Missed appointments burden health care systems through inefficient use of staff time and resources. We study an at-scale text message appointment reminder program in Chile that sent reminders only to patients diagnosed with a chronic condition. Using clinic-level data, we find that the program did not change the number of visits by patients eligible to receive the reminder, but visits from ineligible patients increased by up to 7.4% at treated clinics. We conclude that scheduling systems

combined with automatic appointment reminders can improve clinic-level efficiency by promoting timely cancellations and re-scheduling instead of no-shows.

Can a private health sector engagement program with social health insurance encourage pro-poor outcomes? Evidence from an impact evaluation in Kenya. (with P Gertler, J Gruber, & A Kwan).

Summary: We study the simultaneous supply- and demand-side effects of African Health Markets for Equity, a randomized management intervention that aimed to improve the quality and accessibility of private-sector clinics in Kenya. The program increased the share of clinics accepting, and households enrolled in, national insurance. This in turn increased the share of clinics' clients from lower wealth quintiles. We also conducted standardized patient (SP) experiments to measure the effects of not being able to afford full services on quality of care. SPs presented as poor by telling the provider they could only afford KSH 300 in fees. We find that when faced with a client's budget constraint, providers reduced the quantity of both necessary and unnecessary care, resulting in lower quality of care for 'poor' clients.

Do private providers give patients what they demand, even if it is inappropriate? A randomized study using standardized patients in Kenya.

Revision requested at BMJ Open (with P Gertler, A Kwan, & G Sulis)

Summary: We use standardized patients to study the effects of a patient demanding one of two possible inappropriate medicines, as examples of trade-offs providers might make between risks, profits, and patient satisfaction. At private clinics in Kenya, demanding a deworming medicine significantly increased its rate of dispensing to 35% (95% CI: 25-44) compared to 3% (95% CI: 0-7) without demanding. Demanding an antibiotic did not change its probability of dispensing. These results show private providers appear to account for both business-driven benefits and individual health impacts when making prescribing decisions.

SELECT WORK IN PROGRESS The Role of Appointment Reminders in the Management of Chronic Disease. (with P Celhay, P Gertler, & T Gracner).

Summary: Using event studies and a difference-in-differences design we evaluate the effects of an national, at-scale appointment reminder program on the health behaviors of over 300,000 patients living with chronic conditions in Chile. Reminders increased patients' use of preventative primary care, resulting in patients receiving more frequent health monitoring, more prescription updates, and better medication adherence. These patients were also more likely to be hospitalized for cardiovascular-related reasons but less likely to die in hospital, which may be driven by referrals or better health seeking behaviors. We conclude that a simple and low-cost nudge can lead to a meaningful improvement in health-seeking behaviors when implemented at scale.

Who gets diagnosed with type 2 diabetes? (with P Geldseltzer)

Summary: Regression discontinuity design has been used to evaluate the effect of diagnosis and treatment in several clinical contexts. A common feature of these papers is the relatively small change in the probability of diagnosis or treatment at the clinical threshold, which is expected to be near 1. Using claims data from a large insurer in the United States we examine whether the change in diagnosis at the threshold for type 2 diabetes varies by patient race/ethnicity, sex, age, or provider characteristics.

The Long-term Health Impact of In-Utero Exposure to Excessive Intake of Sugar. (with P Gertler & T Gracner)

Summary: Using sugar rationing in the United Kingdom in World War II, we provide some of the first causal estimates of the effect of exposure to excess sugar in-utero on health in adulthood. Using a regression discontinuity design we compare individuals exposed to sugar rationing during different developmental periods: in-utero and for the first two years of life, in-utero and for the first year of life, in-utero only, and not exposed to rationing. Using 54,758 UK Biobank participants, we find that cohorts exposed to sugar rationing in utero develop type 2 diabetes 2.1 years later than cohorts not exposed to sugar rationing. Effects are larger the longer an individual was exposed to rationing: a delay of 2.4 years if exposed in-utero and for the first year of life, and 3.5 years if exposed in utero and for the first 2 years of life.

Measuring behavioral biases in physicians: a standardized patient experiment in Rwanda (with P Gertler & A Stiney-Wellsjo)

Summary: Using randomized standardized patient experiments we test for whether common behavioral biases influence the clinical decisions of physicians in Rwanda.

Increasing the intensity of physical education reduces student enrollment: evidence from synthetic difference-in-differences (with N Perales & J Wang)

Summary: We use a synthetic difference-in-differences approach and data from the the Youth Risk Behavior Surveillance System survey to evaluate the effects of state school exercise policies on the behavior and health of students.

PUBLICATIONS **StayWell at Home: A Text Messaging Intervention to Counteract Depression and Anxiety during COVID-19 Social Distancing.** *JMIR Mental Health* 2021. (with A Aguilera, C Figueroa, R Hernandez-Ramos et al.)

Proximate determinants of tuberculosis in Indigenous peoples worldwide: a systematic review. *Lancet Global Health* 2019. (with M Cormier, K Schwartzman, N'Diaye D et al.)

Zika: A scourge in urban slums. *PLOS Neglected Tropical Diseases* 2017. (with R Snyder, C Cardoso, L Riley et al.)

Exploring genetic suppression interactions on a global scale. *Science* 2016. (with J van Leeuwen, C Pons, J Mellor et al.)

**POLICY
REPORTS**

African Health Markets for Equity Impact Evaluation (with D Contreras, R Cuckovich, P Gertler, J Gruber, A Kwan, & N Perales)

The Impact of SMS Appointment Reminders on Patient Health (with P Celhay, P Gertler, & T Gracner)

Educate! Evaluation: Four-year Follow-up Report (with D Carney, L Chioda, P Gertler, D Contreras, A Jager, & A Kwan)

**PRESENTA-
TIONS**

2021: American Society of Health Economists (ASHEcon), International Health Economics Association (iHEA), The People Lab at UC Berkeley

2020: Conference on Health IT and Analytics (CHITA)

RESEARCH EXPERIENCE	The Sweet Life: the Long-Term Effects of a Sugar-Rich Diet , Research assistant for Dr. Paul Gertler, & Dr. Tadeja Gracner (2020-present)
	African Health Markets for Equity , Research assistant for Dr. Paul Gertler (2019-2020)
	Educate! Soft Skills and Entrepreneurship for Youth in Uganda , Research assistant for Dr. Laura Chioda & Dr. Paul Gertler (2017-2019)
TEACHING EXPERIENCE	Behavioral Science UC Berkeley Goldman School of Public Policy, graduate level. Teaching assistant for Professor Elizabeth Linos [In progress, Spring 2022].
	Epidemiological Methods I , UC Berkeley School of Public Health, graduate level. Teaching assistant for Professor Sandra McCoy, Fall 2017. Average rating 5.98/7
	Introduction to Economics , UC Berkeley Economics Department, undergraduate level. Teaching assistant for Professor Martha Olney Fall 2016. Av. rating 5.95/7
	Introduction to Economics , UC Berkeley Economics Department, undergraduate level. Teaching assistant for Professor Brad DeLong Spring 2016. Av. rating 6.51/7
AWARDS	The Berkeley Center on the Economics and Demography of Aging Pilot grant 2021
	UC Berkeley Institute for International Studies, Summer research fellowship 2019
	UC Berkeley Center for Latin American Studies travel grant 2019
	USAID Global Development Fellow 2018
	Tinker Foundation Latin America Travel Grant 2018
	Center for Global Public Health Summer Research Fellow 2016, 2018
	Block Grant for highest GPA in Master's program 2017
	UC Berkeley School of Public Health Alumni Association Award 2017
SERVICE	Foreign Language and Area Studies Summer Fellow 2016
	McGill University Dean's Honor List for GPA in top 10% of students 2013
	Mentor, Getting into Grad School, UCB Office for Graduate Diversity 2020-2021
	Mentor, Undergraduate Research Apprentice Program at UC Berkeley 2019-2022
OTHER	Health Policy Graduate Admissions Committee 2019
	Member, Economists for Equity at UC Berkeley 2017-present
OTHER	Languages: R, Stata, French, Spanish
	Citizenship: United States and Canada

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