HARVARD UNIVERSITY

PhD PROGRAM IN HEALTH POLICY



October 8, 2019

Dear Ben Handel, Katherine Ho, and Jonathan Kolstad,

I am applying to the NBER Health Economics Research Bootcamp for Graduate Students. I am currently a second-year PhD student at the Harvard PhD Program in Health Policy, in the Management track with a disciplinary focus in economics. I am also an MD-PhD student and have completed the first two years of medical school.

I am interested in participating in the Health Economics Research Bootcamp to learn more about frontier research questions and methods, engage in discussion with notable faculty members and fellow students, and gain inspiration and ideas for my own research and dissertation work. I think this event is a terrific opportunity for my professional development as an aspiring physician-researcher in health economics. I would be available locally to take full advantage of the program.

My current research interests are in health economics, especially as it relates to the intersection of the fields of organizational economics and industrial organization. I am particularly interested in physician behavior and productivity, persistent performance differences among provider organizations, vertical integration in the healthcare industry, and access to health care for vulnerable populations. Enclosed is an essay describing my current and future research agendas in greater detail.

I have requested a letter of recommendation from my PhD advisor Rob Huckman, which has been sent separately. Thank you all very much for your time and the opportunity to apply, and I look forward to hearing from you.

Sincerely,

Lucy Chen
Wyss House
Soldiers Field Road
Boston, MA 02163
(301) 825-6578
luchen@hbs.edu

Lucy Chen

Essay: Rationale for Bootcamp

My primary objective in attending the bootcamp is to hone my ability to think like a health economist about research questions, with the goal of becoming better equipped to conduct health economics research myself. I would like to attend the bootcamp to learn about frontier topics and methods in health economics research, especially from prominent researchers in the field. I think this intensive experience would help me further consolidate my knowledge about the existing and frontier literatures and methods, spark ideas for new research questions, and gain a stronger grasp of how to approach my own future research in health economics. My current fields of interest within health economics are organizational economics, industrial organization, and public economics.

My current research activities are focused on two main topics: provider productivity and organization, as well as access to care for women, low-income, and vulnerable populations. Regarding the first topic, I am passionate about studying physician behavior and how it is influenced by formal and informal organizational structures, incentives, or contracts. One project (with Rob Huckman and Max Pany) will analyze the association between team-based primary care and chronic disease outcomes, such as BMI, blood pressure, hemoglobin A1c, and LDL cholesterol, using a large electronic health record dataset. Through this project, we hope to leverage novel data to better characterize provider teams and coordination, and understand the implications for productivity and health outcomes.

Another research area I am interested in is access to quality care for vulnerable populations. I am motivated to study this topic because I think equity and distributional considerations are important in health economics and policy. I am a research assistant for Ben Sommers on a project studying the impacts of Medicaid work requirements, which were implemented in Arkansas in

2018, on healthcare access, utilization, and outcomes, as well as employment. This project aims to evaluate the work requirement policy and is also related to the economic literature on the take-up and targeting of social programs. I am also a research assistant for Richard Frank and Haiden Huskamp on a project studying the impacts of Medicaid expansion and the individual market on low-income reproductive-age women's healthcare spending, utilization, and outcomes. This project aims to better understand the policies' impacts on mental health, as well as care during preconception and postpartum.

For my own future research agenda, I hope to study physician behavior and firms of providers, especially focusing on their productivity, organizational structure (including integration), and competition on quality and non-price dimensions. I think this topic is the key to informing impactful health policy and to better understanding how providers might respond to incentives created by policy efforts to improve the U.S. healthcare delivery system. I am especially interested in studying these concepts in settings primarily serving vulnerable populations, such as low-income individuals, Medicaid beneficiaries, pregnant women, and medically complex patients, where the stakes may be higher and the costs of inefficient providers may be greater. I believe my dual training as an MD-PhD student will serve as a comparative advantage in studying these topics in physician behavior, especially in asking detailed research questions informed by actual practice and in accessing novel and detailed data sources. Ultimately, my career goal is to become a practicing physician-researcher in health economics and policy.

Lucy Chen

Wyss House, Soldiers Field Road, Boston, MA 02163 • (301) 825-6578 • luchen@hbs.edu

EDUCATION

Harvard University Cambridge, MA
Ph.D. in Health Policy (Management track, based at Harvard Business School) 2018 – 2022 (expected)
Current coursework: Econ3017 (Health Economics Reading Seminar, Newhouse), MIT 14.271 (Industrial Organization I, Ellison), MIT 14.472 (Public Finance II, Finkelstein), auditing MIT 14.282 (Organizational Economics I, Gibbons).
Completed coursework: Econ2020A&B (Microeconomic Theory I & II, Kotowski & Avery/Kohlberg), Econ2110 & 2115 (Econometrics I & II, Avery & Goodman), US Healthcare Strategy and Regulatory Policy (Dafny), Core Course in Health Policy A&B (Newhouse/Frank/Zaslavsky), Mental Health Policy (Frank/Huskamp/McGuire)

Harvard Medical School Boston, MA
M.D., Harvard/MIT MD-PhD Program 2016 – 2024 (expected)

The Wharton School Philadelphia, PA
B.S. in Economics, concentrations in Health Care Management & Policy and Operations, Information & Decisions (Decision Processes track) 2012 – 2016

University of Pennsylvania Philadelphia, PA
B.A. in Biology with Honors, *summa cum laude*, Phi Beta Kappa 2012 – 2016
Vagelos Program in Life Sciences & Management

RESEARCH INTERESTS

Physician behavior and productivity, healthcare delivery reform and quality, vertical integration and provider market structure, Medicaid, women's health

RESEARCH GRANTS

- Contract #76780, Robert Wood Johnson Foundation, Health Data for Action, 09/15/19 – 09/14/20
  Project Title: Association of team-based primary care with chronic disease outcomes
  Role: Co-Investigator (with Rob Huckman, Max Pany)

RESEARCH EXPERIENCE

Harvard Medical School, Department of Health Care Policy Boston, MA
Research Assistant for Richard Frank, PhD, and Haiden Huskamp, PhD June 2019 – present

- Impact of Medicaid expansion and Exchanges on low-income women's healthcare spending, utilization

Harvard T.H. Chan School of Public Health, Department of Health Policy and Management Boston, MA
Research Assistant for Ben Sommers, MD, PhD May 2019 – present

- Survey of low-income individuals in four Southern states to evaluate work requirements

Harvard Medical School, Center for Primary Care Boston, MA
Research Assistant for Barbara Ogur, MD and Russ Phillips, MD 2016 – 2018

- Factors influencing primary care career choices of Harvard Medical School graduates

University of Pennsylvania, Leonard Davis Institute of Health Economics Philadelphia, PA
Research Assistant for Scott Halpern, MD, PhD 2014 – 2016

- RCT of defaults in advance directives, public opinion of financial incentives for advance care planning

PEER-REVIEWED PUBLICATIONS

Auriemma CL, **Chen L**, Olorunnisola M, Delman A, Nguyen CA, Cooney E, Gabler NB, Halpern SD. "Public opinion regarding financial incentives to engage in advance care planning and complete advance directives." American Journal of Hospice and Palliative Medicine. 2017 Sep;34(8):721-8.

OTHER PUBLICATIONS

Joy Madubuonwu, **Lucy Chen**, and Benjamin D. Sommers, *Work Requirements in Kentucky Medicaid: A Policy in Limbo* (Commonwealth Fund, Sept. 2019). https://doi.org/10.26099/wm0z-p823

Lucy Chen et al., *Medicaid Expansion in Texas: Potential Economic and Employment Implications* (Commonwealth Fund, Sept. 2019). https://doi.org/10.26099/65zd-bm48

WORKING PAPERS

Lucy Chen and Benjamin D. Sommers, "Risk Factors for Losing Medicaid in the Era of Work Requirements: Evidence from Four Southern States." *In preparation.*

HARVARD | BUSINESS | SCHOOL

ROBERT S. HUCKMAN |
ALBERT J. WEATHERHEAD III PROFESSOR OF BUSINESS ADMINISTRATION
FACULTY CHAIR, HEALTH CARE INITIATIVE
CHAIR, MBA REQUIRED CURRICULUM

October 6, 2019

Professors Ben Handel, Katherine Ho, and Jonathan Kolstad
Selection Committee
NBER Health Economics Research Boot Camp

Dear Ben, Kate, and Jon:

I hope that this letter finds you all doing well. It is my pleasure to write in enthusiastic support of Lucy Chen's application for the NBER Health Economics Research Boot Camp. I first met Lucy in 2016, when she began her graduate studies as a joint MD-PhD candidate at Harvard Medical School and in the management track of the Harvard PhD Program in Health Policy. I serve as the co-chair of the latter program. Lucy has now completed the first two years of her MD program and is currently in the second year of her PhD studies. Given this timing and Lucy's potential, I feel that she is at a perfect point to take a deeper dive into health economics by participating in your program. I am certain both that she would gain a lot from participating and that you would find her to be an excellent contributor to the group.

Lucy entered her graduate studies after receiving two bachelor's degrees from the University of Pennsylvania—one in biology (*summa cum laude*) and the other in economics from the Wharton School—where she was also selected for the Vagelos Program in Life Sciences and Management. During her time at Harvard, Lucy has jumped into graduate coursework in economics and, in fact, is currently taking or has taken a set of courses—including industrial organization, public finance, and econometrics—that looks more like that of a typical economics student than a health policy candidate. She has also served as a research assistant for several health economists, including Richard Frank, Haiden Huskamp, and Ben Sommers. Finally, it is important to acknowledge that Lucy has completed half of her medical school training and thus brings a fair degree of clinical background to her work. My sincere hope is that the bootcamp would provide Lucy with the opportunity to synthesize her substantial experience in a manner that deepens her skills and perspective as a health economist.

The streams of Lucy's research agenda further suggest that she would be an excellent fit for the bootcamp. With respect to her interests in provider productivity and organization, Lucy and I, along with MD-PhD candidate Max Pany, were recently awarded a grant under the Robert Wood

SOLDIERS FIELD | BOSTON, MA 02163 | Ph 617.495.6649 | Fx 617.496.4066 | rhuckman@hbs.edu | GEORGE F. BAKER FOUNDATION

Johnson Foundation's Health Data for Action Program to examine the impact of team-based primary care on outcomes for patients with chronic disease. Though the grant does not carry funding, it was awarded after a competitive review process and provides us with access to several years of patient-level data from a leading EMR provider. I share the role of project director with Lucy and Max but want to emphasize that they took the lead on developing our grant application and in designing the studies that we will ultimately conduct. In reviewing the drafts of our application, I was impressed by the quality of Lucy's thinking and writing, both of which are clear and concise. It was also clear to me that she has a good sense of what is required for empirical identification—an instinct that will serve her well throughout her career and surely in the context of the bootcamp.

Though I am not directly involved in Lucy's work on access to care for vulnerable populations, it clearly is an important domain in which the combination of her clinical and research background will position her as an important contributor in the future. She is already building a great deal of experience through her RA positions and writing in this area. My expectation is that the bootcamp would help Lucy think about how the interesting insights that she is developing in this stream can be developed into well-formed contributions to the health economics literature.

As a final note, I will mention that Lucy is simply a wonderful colleague. She is dedicated to working through challenging questions and is very willing to push on ideas in a clear and collegial manner. I am certain that she will be a terrific contributor to the bootcamp, just as I have no doubt that she will gain a lot from the experience and will ultimately make terrific contributions to the health economics community.

If I can provide any further information to help with your decision, please let me know.

Best regards,



Robert S. Huckman