Benjamin Chartock
The Wharton School
3641 Locust Walk
Philadelphia, PA
19104

Dear Boot Camp Application Committee,

Thank you for the opportunity to apply for the Health Economics Research Boot Camp at the NBER in Cambridge in December 2019. Please find enclosed my CV and application essay.

My contact information is as follows:

Benjamin Chartock
3641 Locust Walk
Colonial Penn Center – Office 413
Philadelphia, PA 19104

Email: chartock@wharton.upenn.edu
Mobile: (617) 417-2649

My letter of recommendation is coming from Professor Claudio Lucarelli. His contact information is as follows:

Professor Claudio Lucarelli
3641 Locust Walk
Colonial Penn Center – Office 202
Philadelphia, PA 19104

Email: clucarel@wharton.upenn.edu

Thanks so much,

-Benjamin Chartock

Updated: October 2019

CURRICULUM VITAE

Benjamin L. Chartock

Department of Health Care Management & Economics
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Education

Ph.D.,	Health Economics, University of Pennsylvania, The Wharton School	2017-
B.A.,	Economics, Cornell University, *magna cum laude*	2010-2014

Previous Positions

Federal Trade Commission's Bureau of Economics, Office of Applied Research	2015-2017
Bates White Economic Consulting,	2014-2015

Publications

Chartock, Benjamin, Christopher Garmon, and Sarah Schutz. "Consumers' Responses To Surprise Medical Bills In Elective Situations." *Health Affairs* 38.3 (2019): 425-430.

Garmon, Christopher, and Benjamin Chartock. "One in Five Inpatient Emergency Department Cases May Lead to Surprise Bills." *Health Affairs* 36.1 (2016): 177-181.

Ph.D. Courses Completed

Fall Yr. 1:	Microeconomic Theory (681), Econometrics I (705), Health Services Systems (841)
Spring Yr. 1:	Game Theory & Applications (682), Applied Econometrics II (521), Proseminar in Health Service Research-Models and Methods (900), Economic Health Care and Policy (903)
Fall Yr. 2:	Empirical Industrial Organization (712), Industrial Organization of Health Care (902), Economic Foundations of Management (900), Seminar in Organizational Theory in Health Care (904)
Spring Yr. 2:	Nonparametric & Machine Learning Methods for Structural Estimation Problems (712), Health Econometrics (900), Empirical Models in Marketing (956/7)

Fall Yr. 3: Topics in Applied Microeconomics (712)

Op-Eds & Other Writing

How Do Consumers Respond to Surprise Medical Bills?, *Health PolicySense Blog, Leonard Davis Institute of Health Economics* (3/4/2019)

Analyzing Senator Hassan's Binding Arbitration Approach to Preventing Surprise Medical Bills, *Brookings Institution Blog & Health Affairs Blog, (*10/19/2018)

In Through the Out Door: A Comprehensive Look at Surprise Medical Bills, *Real Clear Politics* (1/9/2017)

Patent Assertion Entity Activity Study: An FTC Report
Bureau of Economics and Office of Policy Planning, FTC (10/6/2016)

Presentations

2019 Patients as Consumers, Health Affairs (Washington, DC), APPAM (Denver)
2016 AcademyHealth Economics Meeting (Boston, MA)
2015 International School and Conference on Network Science (Rio de Janiero), 6th Workshop on Complex Networks (New York, NY), US Military Academy Network Science Center
2014 Cornell Behavioral Economics Seminar (Ithaca, NY)

Awards and Fellowships

2019 George James Travel Award
2017- Associate Fellow, Leonard Davis Institute of Health Economics
2014 Industrial Organization Prize, Cornell
2014 Service to Economics Department Award, Cornell
2014 Karpel Language Prize, Cornell

Media Mentions

Surprise Billing: New York Times, Philadelphia Inquirer, Vox.com, Kaiser Health News, Dallas Morning News, Becker's Hospital Review, Washington Post
Patent Assertion Entities: Los Angeles Times

Teaching Assistant

2019 Economics of Pharma and Biotech Industries (MBA and undergraduate), Wharton
2018 Health Care Systems (undergraduate), Wharton
2013-2014 Introductory Statistics (undergraduate), Cornell

Research Assistant

Wharton: Abby Alpert
FTC: Ginger Jin, Daniel Hosken
Cornell: Robert H. Frank, Ori Heffetz, Daniel Benjamin

Professional Memberships

American Economic Association, American Society of Health Economics, AcademyHealth, Penn LDI and United States of Care (US of Care) Research Network

NBER Health Economics Research Boot Camp for Graduate Students
Application Essay
Benjamin Chartock

I chose to focus my PhD on health care economics because of the chasm between health care in America and the textbook models of well-functioning markets. In my 1st year core microeconomics class, we studied the fundamental theorems of welfare economics. The first fundamental welfare theorem guarantees that a competitive market will exhaust all the gains from trade; that the market equilibrium is Pareto efficient. But this finding relies on each participant having full information, requires that there is free entry and exit and no monopoly power, and requires that preferences are well-behaved. There are so many outstanding research questions surrounding health care precisely because these conditions are violated, and as an applied economist, I think of my role is to be an advocate for fixing market failures.

Take, for example, my research agenda about surprise, out-of-network medical bills. If you're not familiar, a surprise bill is when a patient goes to an in-network hospital, sees an in-network primary physician, but is nonetheless treated by an out-of-network radiologist, anesthesiologist, or other provider. It's like going to a restaurant and getting a separate bill from the pastry chef. I first became acquainted with the issue of surprise, out-of-network bills when I was a pre-doctoral research assistant at the Bureau of Economics at the FTC. There, I used the MarketScan data to write a descriptive paper about the prevalence of surprise, out-of-network bills.[1] We didn't know it at the time, but Zack Cooper and Fiona Scott-Morton were working on the same topic, and our results replicated theirs.

Since then, I have been working on a model related to government policies to address surprise billing. One such policy to alleviate the market failure of surprise bills is to free the patient from any financial responsibility and use final-offer arbitration to settle the payment dispute between the doctor and the insurer, *ex post*. My current research tries to estimate the preferences that arbitrators have about fair settlements for surprise medical bills. Because final-offer arbitration requires that the arbitrator pick only among the two offers, the econometrician never observes the arbitrator's ideal settlement amount. Nonetheless, this expected amount matters to doctors and insurers as it represents the outside option to agreeing to participate in a provider network. Ashenfelter and Bloom (1984), in a study of final-offer arbitration, shows that the arbitrator preferences can be estimated with a series of final offer bids and who was selected, as well as case details. Accordingly, my research began by submitting a FOIA request to

[1] Garmon, Christopher, and Benjamin Chartock. "One in five inpatient emergency department cases may lead to surprise bills." *Health Affairs* 36, no. 1 (2016): 177-181.

New York State for the data from final offer arbitrations, and I am using that data to estimate the parameters that govern the distribution of arbitrator preferences in New York State. Understanding the structural determinants of arbitrator preferences can allow for counterfactual exercises, such as "what if society chose a different benchmark to resolve these disputes? What if we used a different mechanism to reach settlements?"

A second line of my research relates to information asymmetry in the market for physician care. I am working on a project that studies how disclosure of physicians' patient satisfaction scores from randomly-assigned surveys changes doctor volume and clinical quality. Motivated by Jin & Leslie (QJE, 2003), who find that disclosure of food inspection scorecards alleviates Akerlof-style adverse selection, I am seeking to understand what happens when a 44-hospital health system in the Upper Midwest released Yelp-style ratings of doctors. To identify the effects of the information disclosure, I am using two methods to establish causality. I exploit rounding thresholds in the rating system to estimate a regression discontinuity model of the impact of a doctor's score on their volume, and I leverage variation around when the disclosure happens across doctors to establish the effect of information disclosure on quality. I became interested in the topic of information economics all the way when I was an undergraduate at Cornell, and I wrote my senior thesis on the subject.

I hope to be selected for the NBER boot camp because of the opportunity to learn from amazing speakers, to network with PhD students from other schools (who will be my future colleagues!) and to get a flavor of cutting-edge work being done in my field. I really think that I would benefit from this opportunity; I have heard from others that the program is amazing. If I am selected, I will contribute to the discussions in workshops and in conversations with my peers I would otherwise not have the chance meet.

Thanks so much for considering my application.

CLAUDIO LUCARELLI
ASSOCIATE PROFESSOR, HEALTH CARE MANAGEMENT
THE WHARTON SCHOOL, UNIVERSITY OF PENNSYLVANIA
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Letter of Recommendation – Health Economics Ph.D. Student Boot Camp: Benjamin Chartock

Benjamin Chartock is an outstanding 3rd year Ph.D. student in our Health Care Management & Economics Ph.D. program. I recommend him strongly for the Boot Camp in Health Economics. At Wharton, we choose a small group of students each year with a deep interest in producing economic research on health care, and Ben brings energy and excitement to all the work he does. I teach the Ph.D. course "Industrial Organization in Health Care." His final project (a demand estimation exercise) showed promising technical ability. I expect that he will continue to demonstrate strong skills as he begins his dissertation work.

Ben is an asset to our Ph.D. program and the larger economics community. He is eager to discuss ideas with colleagues, both faculty and students, and started and currently manages a weekly lunch workshop for in-progress doctoral work. Ben would be a great addition to the NBER boot camp. He treats scholarship very seriously, understands the importance of collaboration, and recognizes the need for productive discussion.

Ben developed much of his aptitude at the Federal Trade Commission. Before starting his Ph.D., Ben did a pre-doctoral research assistantship there in the Bureau of Economics. When he came to Penn, he seemed to already understand what makes a good research question and had some clarity about methods because of his RA experience. Working at the Bureau of Economics at the FTC allowed him to spend time with many applied micro-economists in an issue-driven setting.

Ben's interests will likely result in a fruitful research portfolio. Two interesting projects that he is working on are an empirical analysis of arbitration between doctors and insurers after surprise out-of-network bills, and a study measuring the effects of information asymmetry in the market for physician services. In his empirical analysis of arbitration, he is estimating a model of the probability that an insurer wins an arbitration dispute using data that he acquired from a Freedom of Information Act request. The project extends an older model of equilibrium behavior in final-offer arbitration and has important policy implications for laws protecting patients from surprise bills. His project on information asymmetry looks at how a disclosure policy that released survey data about physicians' patient satisfaction reduced welfare loss due to alleviating adverse selection. The setting for this project is a large hospital system in the Midwest which shares a data collaboration with our department.

I think Ben would be a wonderful addition to the NBER Health Economics Boot Camp, and I give him my strongest recommendation.

Sincerely,
Claudio Lucarelli