

Application for the NBER Digitization Tutorial

Contact Information

Name: Jennifer Kwok
Program: PhD, Department of Economics
Institution: University of California, Berkeley
Email: jenkwook@econ.berkeley.edu
Phone: 201-315-2586

Graduate Studies

I am a fourth-year PhD student in the Department of Economics at the University of California, Berkeley. My coursework offered me rigorous training in applied microeconomics. During my second year, I completed nine semester-long field courses: two courses each in Industrial Organization, Labor Economics, Development Economics, and Psychology and Economics as well as a course in Applied Econometrics. I passed the field exams in Industrial Organization and Labor Economics during Summer 2014 and my oral Qualifying Exam during Spring 2015.

My understanding of theoretical models, empirical methods, and experimental research design enables me to conduct high-quality research in health economics, industrial organization, and labor economics. I continue to learn from and enjoy participating in reading groups and seminars, including the Health Economics Reading Group, Industrial Organization Reading Group, Seminar in Industrial Organization, Seminar in Labor Economics, Industrial Organization Work in Progress Forum, and Labor Lunch Seminar. I also attend conferences, such as the NBER Summer Institute 2015 Workshops in Aging, Health Care, and Labor Studies.

Learning more about the Economics of Digitization will help improve my research on healthcare industries. I am particularly interested in how technology adoption in healthcare, including new medical technologies and electronic health records (EHRs), affects healthcare productivity and patient health-related outcomes. I am also interested in how researchers and medical professionals could potentially use patient chart data from EHRs to help measure and improve provider quality, since EHRs are a larger and richer source of information on patient health, patient behavior, and provider behavior than medical claims. Furthermore, I am interested in innovation in the pharmaceutical and biotechnology industries, including its relationships with drug marketing and drug use.

Proposed Dissertation

My dissertation focuses on the influence of the provider-patient relationship on patient health-related behavior and outcomes. The provider-patient relationship impacts healthcare access and production. In healthcare access, the relationship affects whether a patient has a usual source of care, successfully seeks care, and receives timely care. In healthcare production, the relationship determines the quality, effectiveness, and efficiency of care.

One paper in my dissertation will investigate effects of continuity in the provider-patient relationship on patient behavior and outcomes. Provider continuity occurs when the same provider treats a patient over time. Provider discontinuities, defined as breaks in continuity, may affect the quantity and quality of healthcare. The project will determine the causal effects of provider discontinuities that occur with (a) individual physicians in multi-physician groups, (b) individual physicians in single-physician practices, and (c) entire multi-physician groups. The

primary analysis will use event study methods to study discontinuity events due to physician exits from the profession and physician relocations outside provider markets. The secondary analysis will add instrumental variable methods to study potential discontinuity events due to physician relocations within provider markets.

Another paper in my dissertation will investigate how factors in the provider-patient relationship contribute to healthcare variation. Provider-specific factors generate effects a provider would have on all patients, whereas patient-specific factors generate effects a patient would have at all physicians. The approach will first decompose healthcare variation into provider-specific factors, patient-specific factors, and idiosyncratic provider-patient match effects using methods from the firm-worker match literature. Second, it will identify (a) organization and physician characteristics that explain provider-specific effects and (b) provider-patient relationship characteristics that explain idiosyncratic provider-patient match effects. Third, it will characterize provider-patient sorting based on patient-specific and provider-specific factors. Finally, it will determine effects of healthcare provider organizations on referrals and associated provider choice using event study methods.

My analyses will use claims data from Original Medicare and Massachusetts insured, non-Medicare patients. I will use Centers for Medicare and Medicaid Services (CMS) Research Identifiable Files that include 20% of Original Medicare beneficiaries, available for years 1999-2012, as my primary sample. I have received CMS approval under Data Use Agreement (DUA) 28157, which includes reuse of DUAs 16702 and 22559 with NBER. I will use the Massachusetts All Payer Claims Database (APCD), available for years 2010-2014, as my supplemental sample. I am currently applying for access to the Massachusetts APCD. The provider sample will consist of physicians in outpatient specialties, including primary care. The outcomes will be efficiency (Prevention Quality Indicators), major events (hospitalizations, mortality), spending, new diagnoses, medical care use (preventive, primary, specialty, and emergency care), and drug use.

My results will provide evidence on what changes to provider-patient relationships could improve healthcare access, quality, and efficiency. Potential policy and practice changes could increase provider continuity (e.g., regulate narrow network plans), strengthen provider-patient relationships in accountable care organizations (ACOs) or managed care plans, and promote efficient provider choice (e.g., offer more provider information, improve online searches, assign patient-specific default providers, restructure referral incentives).

My dissertation committee consists of Benjamin Handel (Co-Chair) and David Card (Co-Chair) in the Department of Economics, Jonathan Kolstad in the Haas School of Business, and William Dow in the School of Public Health. I expect to complete my dissertation in May 2017 or May 2018. My career goals are to become an economics professor, specializing in healthcare, at a major research university and to improve healthcare through economics research.