

CURRICULUM VITAE

Jeffrey S. McCullough

Health Management and Policy
University of Michigan
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EMPLOYMENT

University of Michigan, Ann Arbor, MI. Associate Professor of Health Management and Policy (2016 – present).

Member, Michigan Center for Health Analytics and Medical Prediction (2016-Present)

Faculty Affiliate, Michigan Institute for Data Science (2016-Present)

Faculty Affiliate, Institute for Health Policy and Innovation (2016-Present)

Co-director, Executive Master's Program (2016-2017)

University of Minnesota, Minneapolis, MN. Associate Professor of Health Policy and Management (2014 – 2015).

University of Minnesota, Minneapolis, MN. Assistant Professor of Health Policy and Management (2007 – 2014).

Medical University of South Carolina, Charleston, SC. Assistant Professor of Health Administration and Policy (2004 – 2007).

University of Pennsylvania, Wharton School, Philadelphia, PA. Health Care Systems Department, Research Assistant (1999 – 2004).

Abt Associates, Cambridge, MA. Health Care Services Research Department, Research Assistant (1996 – 1998).

The Advisory Board Company, Washington, DC. Research Assistant (1995 – 1996).

Harvard School of Public Health, Molecular Genetics and Immunology, Boston, MA. Independent researcher (1991 – 1994).

EDUCATION

Ph.D. in Health Economics, University of Pennsylvania, Wharton School (December 2005)

Dissertation: The Adoption and Diffusion of Hospital Information Systems

Committee: Mark V. Pauly (Chair), L. Robert Burns, Patricia Danzon, Lorin Hitt, and Joel Waldfogel.

A.B. in Biochemistry, Cum Laude, Harvard University, Cambridge, MA (1990 – 1994).

FIELDS OF SPECIALIZATION

Economics of information technology and health care

Health technology markets

Industrial organization

ACADEMIC PUBLICATIONS

Michael Thompson, Michael Thompson, Hechuan Hou, Alexander Brescia, Francis Pagani, Devraj Sukul, Jeffrey S McCullough, and Donald Likosky “Center Variability in Medicare-Claims Based Publicly Reported Transcatheter Aortic Valve Replacement Outcome Measures.” *Journal of the American Heart Association*. Vol. 10, no 21. (November, 2021).

Chung, Ellimoottil, and McCullough. “The Role of Social Support in Telehealth Utilization Among Older Adults in the United States During the COVID-19 Pandemic.” *Telemedicine Reports*. (November 9, 2021).

Brescia et al., “Generalizability of Trial Data to Real-World Practice: An Analysis of The Society of Thoracic Surgeons INTERMACS Database.” *The Annals of Thoracic Surgery*. (October 10, 2021).

Fleigner et al., “Evaluating Treatment-Specific Post-Discharge Quality-of-Life and Cost-Effectiveness of TAVR and SAVR: Current Practice & Future Directions.” *IJC Heart & Vasculature*. vol. 36 (October 1, 2021).

Cascino et al., “A Challenge to Equity in Transplantation: Increased Center-Level Variation in Short-term Mechanical Circulatory Support Use in the Context of the Updated US Heart Transplant Allocation Policy.” (September 16, 2021).

Li et al., “Changes in Primary Care Telehealth Use and Impact on Acute Care Visits for Ambulatory Care-Sensitive Conditions during COVID-19.” *Health Services Research*. vol. 56 (September 15, 2021).

Wong et al., “External Validation of a Widely Implemented Proprietary Sepsis Model in Hospitalized Patients.” *JAMA Internal Medicine*. vol. 181, no. 8 (August 1, 2021): 1065-1070.

- Grace F. Chao, et al. "Use of Telehealth by Surgical Specialties During the COVID-19 Pandemic." *JAMA Surgery*. (March 26, 2021).
- Gordon Burtch, Bradley Greenwood, and Jeffrey S. McCullough. "Ride-Hailing Services and Alcohol Consumption: Longitudinal Analysis." *JMIR*. Vol 23, no 1 (2021): e15402.
- David W. Hutton, Jeffrey S. McCullough Lisa Prosser, Wen Ye, William H Herman, Ping Zhang, Tamara Pilishvili, and Jamison Pike. "Cost Implications of Pneumococcal Vaccination of Adults Aged 30-60 with a Recent Diagnosis of Diabetes." *Vaccine*. Vol. 39, no 8 (2021): 1178-1179.
- Alexander A. Brescia, et al., "Assessment of Mortality Among Durable Left Ventricular Assist Device Recipients Ineligible for Clinical Trials." *JAMA Network Open*. Vol 4, no 1 (2021): e2032865-e2032865.
- Kartik Ganju, Hillal Atasoy, Jeffrey S. McCullough, and Bradley Greenwood. "The Role of Decision Support Systems in Attenuating Racial Biases in Healthcare Delivery." *Management Science*. Vol. 66, no. 11 (2020): 4921-5484.
- Finalist for the National Institute of Health Care Management's Annual Research Award.
- Alexander A. Brescia, et al., "Generalizability of Left Ventricular Assist Device Clinical Trial Findings: An Analysis of the INTERMACS Database." *Journal of Heart and Lung Transplantation*. Vol 39, no 4 (2020): S38-S39.
- Thomas Cascino, et al., "Mechanical Circulatory Support Use in the Context of Updated Heart Transplant Allocation Policy in the US-Analysis of POTN Data." *Journal of Heart and Lung Transplantation*. Vol 39, no 4 (2020): S73.
- Mike Thompson et al., "Center Variation in Medicare Spending for Durable Left Ventricular Assist Device Implant Hospitalizations." *JAMA Cardiology*. Vol 4, no 2 (2019): 153-160.
- Dori Cross, Jeffrey S. McCullough, Jane Banaszak-Holl, and Julia Adler-Milstein, "Health Information Exchange between Hospitals and Skilled Nursing Facilities Not Associated with Lower Readmissions." *Health Services Research*. Vol 54, no 6 (2019): 1335-1345.
- Dori Cross, Jeffrey S. McCullough, and Julia Adler-Milstein, "Drivers of health information exchange use during post-acute care transitions." *American Journal of Managed Care*. Vol. 25, no. 1 (2019): e7-e13.
- Mike Thompson et al., "Center Variation in Medicare Spending for Durable Left Ventricular Assist Device Implant Hospitalizations." *JAMA Cardiology*. Vol 4, no 2 (2019): 153-160.

- Daniel J. Crespín, Jon B. Christianson, Jeffrey S. McCullough, and Michael D. Finch, “Do health systems respond to the quality of their competitors?” *American Journal of Managed Care*. Vol. 25, no. 4 (2019): e104-e110.
- Hilal Atasoy, Brad N. Greenwood, and Jeffrey S. McCullough, “The Digitization of Patient Care: A Review of the Effects of Electronic Health Records on Health Care Quality and Utilization.” *Annual Review of Public Health*. Vol. 40 (2019): 487-500.
- AJay Holmgren, Julia Adler Milstein, and Jeffrey S. McCullough, “Are all certified EHRs created equal? Assessing the relationship between EHR vendor and hospital meaningful use performance.” *Journal of the American Medical Informatics Association*. Vol. 25, no. 6 (2018): 654-660.
- Jean Abraham, Coleman Drake, Jeffrey S. McCullough, Kosali Simon, “What Drives Insurer Participation and Premiums in the Federally-Facilitated Marketplace?” *International Journal of Health Economics and Management*. Vol. 17, no. 4 (2017): 395-412.
- Daniel Crespín, Jon B. Christianson, Jeffrey S. McCullough, and Michael Finch, “Do Health Systems Have Consistent Performance Across Locations and Is Consistency Associated with Higher Performance?” *American Journal of Medical Quality*. Vol. 32, no. 4 (2017): 414-422.
- Daniel Crespín, Jon B. Christianson, Michael Finch, and Jeffrey S. McCullough, “Health System Consolidation and Diabetes Care Performance at Ambulatory Clinics” *Health Services Research*, Vol. 51, no. 5 (2016): 1772-1795.
- Coleman Drake, Jean M. Abraham, and Jeffrey S. McCullough. “Rural Enrollment in the Federally-Facilitated Marketplace.” *Journal of Rural Health*. Vol. 31, no. 3 (2016): 332-339.
- Jeffrey S. McCullough, Stephen T. Parente, and Robert J. Town. “Health Information Technology and Patient Outcomes: The Role of Information and Labor Coordination.” *The RAND Journal of Economics*. Vol. 27, no. 1 (2016): 207-236.
- Guodong Gao, Brad Greenwood, Ritu Agarwal, and Jeffrey S. McCullough “Vocal Minority and Silent Majority: How Do Online Ratings Reflect Population Perceptions of Quality?” *Management Information Systems Quarterly*. Vol 39, no. 3 (2015): 565-589.
- MIS Quarterly Best Paper Award
- L. Robert Burns, Jeffrey S. McCullough, and Douglas R. Wholey. “Is the System Really the Solution? Operating Costs in Hospital Systems.” *Medical Care Research and Review*. Vol. 72, no. 3 (2015): 247-272.
- Jeffrey S. McCullough, Jean M. Abraham, Jon B. Christianson, Daniel Crespín, and Michael Finch. “Public Reporting and the Evolution of Clinical Quality.” *International Journal of Health Care Economics and Management*. Vol. 15, no. 1 (2015): 127-138.
- Bradly M. Gray, Jonathan L. Vandergrift, Gordon Gao, Jeffrey S. McCullough, and Rebecca S. Lipner, “Website Ratings of Physicians and The Quality of Physician Care.” *JAMA*

- Internal Medicine*. Published online December 01, 2014.
doi:10.1001/jamainternmed.2014.6291.
- Bradley M. Gray, Jonathan L. Vandergrift, Mary M. Johnston, James Reschovsky, Lorna Lynn, Eric Holmbo, Jeffrey S. McCullough, and Rebecca S. Lipner. "The Association Between Imposition of a Maintenance of Certification Requirement and Changes in Health Care Costs and Avoidable Hospital Admissions." *JAMA*. Vol. 312, no. 22 (2014): 2348-2357.
- Jean M. Abraham, Daniel Crespín, Jeffrey S. McCullough, and Jon B. Christianson. "What is the Cost of Quality for Diabetes Care?" *Medical Care Research and Review*. Vol. 71, no. 6 (2014): 580-598.
- Chia-Wei Lin, Pinar Karaca-Mandic, Jeffrey S. McCullough, and Lesley Weaver. "Access to Oral Osteoporosis Drugs Among Medicare Part D Beneficiaries." *Women's Health Issues*, Vol. 24, no. 4 (2014): e435-e445.
- Corey Angst, Ritu Agarwal, Gordon Gao, Jiban Khuntia, and Jeffrey S. McCullough, "Information Technology and Voluntary Quality Disclosure by Hospitals." *Decision Support Systems*, Vol. 57 (2014): 367-375.
- Michelle M. Casey, Ira Moscovice, and Jeffrey S. McCullough, "Rural Primary Care Practices and Meaningful Use of Electronic Health Records: The Role of Regional Extension Centers." *Journal of Rural Health*, Vol. 30, no. 3 (Summer 2014): 244-251.
- Jinhyung Lee, Jeffrey S. McCullough, and Robert J. Town. "The Impact of Health Information Technology on Hospital Productivity." *The RAND Journal of Economics*. Vol. 44, no. 3 (Fall 2013): 545-568.
- Jeffrey S. McCullough, B. Ack Leerpan, and Jon B. Christianson, "Do Electronic Medical Records Improve Diabetes Quality in Physician Practices?" *American Journal of Managed Care* Vol. 19, no. 2 (2013): 144-149.
- Paula H. Song, Jeffrey S. McCullough, and Kristin L. Reiter. "The Role of Non-Operating Income in Community Benefit Provision by Not-for-Profit Hospitals." *Journal of Health Care Finance*. Vol. 39, no. 3 (2013): 59-70.
- L. Robert Burns, Douglas R. Whole, Jeffrey S. McCullough, Peter Kralovec, and Ralph Muller, "The Changing Configuration of Hospital Systems: Centralization, Federalization, or Fragmentation?" *Advances in Health Care Management*. Vol 1, no. 13 (2012): 189-232.
- Guodong Goa, Jeffrey S. McCullough, Ritu Agarwal, and Ashish Jha, "Online Physician Ratings by Patients: A Changing Landscape of Physician Quality Reporting." *Journal of Medical Internet Research*, Vol. 14 (2012):e38.
- Jing Du, Stuart M Speedie, Nawan Theera-Ampornpant, Jeffrey S McCullough, and Young-Taek Park, "The Use of Count Data Models in Biomedical Informatics Research." *Journal of the American Medical Informatics Association*, Vol. 19, no. 1 (2012): 39-44.

- Pinar Karaca-Mandic, Jeffrey S. McCullough, Mustaqeem A. Siddiqui, Axel Grothey, and Nilay D. Shah, "Impact of New Drugs and Biologicals on the Treatment and Costs for Colorectal Cancer." *American Journal of Managed Care*, Vol. 17 (2011): 160-168.
- Jean Abraham, Jeffrey S. McCullough, Stephen T. Parente, and Martin M. Gaynor, "Use of Electronic Health Records Among US Hospitals." *Journal of Healthcare Engineering*, Vol. 2 (2011): 121-142.
- Jeffrey S. McCullough, Michelle Casey, Michele Burlew, and Ira Moscovice, "Meaningful Use of Health Information Technology by Rural Hospitals." *Journal of Rural Health*, Vol. 27, (2011): 329-337.
- Paula Song, Ann McAlarney, Julie Robbins, and Jeffrey S. McCullough, "Exploring the Business Case for Ambulatory Electronic Health Record System Adoption." *Journal of Healthcare Management*. Vol. 56 (2011): 169-180.
- Jeffrey S. McCullough and Eli M. Snir, "Monitoring Technology and Firm Boundaries: Physician-Hospital Integration and Technology Utilization." *Journal of Health Economics*, Vol. 29 (2010): 457-467.
- Jeffrey S. McCullough, Michelle Casey, Ira Moscovice, and Shailendra Prasad, "The Effect of Health Information Technology on Quality." *Health Affairs*, Vol. 29 (2010): 647-654.
- Stephen T. Parente and Jeffrey S. McCullough, "Health Information Technology and Patient Safety: Evidence from Panel Data." *Health Affairs*, Vol. 28, No. 2 (March 2009): 357-360.
- Jeffrey S. McCullough, "The Adoption of Hospital Information Systems," *Health Economics*, Vol. 17, no 5 (May 2008): 649-664.
- Richard C. Lindrooth and Jeffrey S. McCullough, "The Effect of Medicaid Family Planning Expansions on Unplanned Births," *Women's Health Issues*, Vol. 17 (2007): 66-74.
- Awarded the Charles E. Gibbs Leadership Prize in recognition for excellence in women's health policy research.
- Sean Nicholson, Patricia M. Danzon, and Jeffrey S. McCullough, "Biotech-Pharmaceutical Alliances as a Signal of Asset and Firm Quality," *Journal of Business*, Vol. 78, no. 4 (2005): 1433-1464.
- Mark V. Pauly, Alan L. Hillman, Michael F. Furukawa, and Jeffrey S. McCullough, "HMO Behavior and Stock Market Valuation: What Does Wall Street Reward and Punish?" *Journal of Health Care Finance*. 28, No. 1, (Fall 2001): 7-15.

WORKING PAPERS

- Jeffrey S. McCullough, Kartik Ganju, and Chandy Ellimoottil. “Does Telemedicine Transcend Disparities or Create a Digital Divide? Evidence from the COVID-19 Pandemic.”
- Kartik Ganju, Jeffrey S. McCullough, Kathleen Li, and Chandy Ellimoottil. “Women do IT better: Gender Differences in Telehealth Adoption During the COVID-19 Pandemic.”
- Jinhyung Lee, Jeffrey S. McCullough, and Paula Song, “Liquidity constraints in health IT capital investments.” Under revision.
- Jeffrey S. McCullough et al., “Racial and gender inequities in utilization of and outcomes after left ventricular assist devices.” Under review.
- Weiguang Wang, Min Chen, Guodong Gao, and Jeffrey S. McCullough, “Every Bit Counts: Using Deep Learning and Vectorization to Analyze Healthcare Big Data.” Under revision.
- Jeffrey S. McCullough, Jason Gibbons, Neil Mehta, and Jeremy Sussman. “Treatment effect Heterogeneity in First-Line Oral Antidiabetic Treatments.”
- Jeffrey S. McCullough and Sriram Somanchi, “Measuring the value of personalized medicine: evidence from advanced heart failure.”
- Jeffrey S. McCullough and Serena Ng, “The Health Consequences of Direct-to-Consumer Pharmaceutical Advertising.”
- John Richardson, David W. Hutton, Lisa A Prosser, Cheryl A. King, Daniel Eisenberg, and Jeffrey S. McCullough, “Medical Costs Associated with Grief and Bereavement.”
- Neha Bairoliya, Pinar Karaca-Mandic, Jeffrey S. McCullough, and Amil Petrin, “Consumer Learning and the Entry of Generic Pharmaceuticals.”

WORKS IN PROGRESS

- Jeffrey S. McCullough and Susan Somanchi, “Using machine learning methods to measure competition in physician markets.”
- Jeffrey S. McCullough, Susan Parker, and Susan Somanchi, “Market Structure and Algorithmic Performance in Healthcare.”
- Jeffrey S. McCullough, Jordan Rhodes, and David Ridley. “Pharmaceutical marketing and the demand for prescription opioids.”
- Jeffrey S. McCullough, “Quantifying the benefits of me-too drugs.”

Bradley Gray, Jeffrey S. McCullough and Jonathan Vandegrift “Is the National Committee for Quality Assurance (NCQA’s) Patient Centered Medical Home Practice Infrastructure Score Associated with Cost and Quality of Primary Care?”

Jeffrey S. McCullough and Roger Feldman. “The effect of Vertical Restrictions on Medicare Advantage Market Shares.”

OTHER PUBLICATIONS

Joshua Bourque, et al., “Effect of Race and Geography on Rates of Durable Ventricular Assist Device (VAD) Use in the US. A Combined Medicare and Interagency Registry of Mechanically Assisted Circulatory Support (INTERMACS) Analysis.” *Circulation*, Vol. 138, Supplement 1 (2018). Published Abstract.

Francis Pagani, et al., “Hospital-Level Variation in Durable VAD Mortality and Medicare Payments. An Analysis of a Linked Interagency Registry of Mechanically Assisted Circulatory Support (INTERMACS) and Medicare Dataset.” *Circulation*. Vol. 138, Supplement 1 (2018). Published Abstract.

Neha Bairoliya, Pinar Karaca-Mandic, Jeffrey S. McCullough, and Amil Petrin. “Consumer Learning and the Entry of Generic Pharmaceuticals.” NBER Working Paper, w23552. (2017).

Jean Abraham, Coleman Drake, Jeffrey S. McCullough, and Kosali Simon. “Rural-Urban Differences in Insurer Participation for Marketplace-Based Coverage.” University of Minnesota Rural Health Research Center Policy Brief (August, 2016).

Jeffrey S. McCullough, Stephen T. Parente, and Robert J. Town. “Health Information Technology and Patient Outcomes: The Role of Organizational and Informational Complementarities.” NBER Working Paper, w18684. (2013).

Roger Feldman, Jeffrey S. McCullough, Steven D. Pizer, and Austin Frakt. “Report to the Pennsylvania Attorney General on the Impact of Vertical Integration with Health Systems on Medicare Advantage Plan Premiums, Quality, and Market Shares.” Submitted January 26, 2013.

Jinhyung Lee, Jeffrey S. McCullough, and Robert J. Town, “The impact of health information technology on hospital productivity.” NBER working paper, w18025 (2012).

Jeffrey S. McCullough, Michelle Casey, Ira Moscovice, “Critical Access Hospitals and Meaningful Use of Health Information Technology.” Flex Monitoring Team Policy Brief #14 (February 2010).

Daniel Zismer, Jeffrey S. McCullough, Peter E. Person, Colleen Renier, and David Knutson, “Integrated Health Care Economics, Part II: Understanding the Revenue Drivers in

- Fully Integrated Community Health Systems.” *Physician Executive*, 35, No. 4 (Jul-Aug 2009): 26-8.
- Jeffrey S. McCullough, Michele Casey, and Ira Moscovice, “Health Information Technology Policy and Rural Hospitals.” Upper Midwest Rural Health Research Center Policy Brief (June, 2009).
- Jeffrey S. McCullough, Michelle Casey, and Ira Moscovice, “Prevalence of Preconditions for Meaningful Use: Preliminary Statistics.” Health Care Policy Memo Written at the Request of the Federal Office of Rural Health Policy Research, (June 17, 2009).
- Daniel Zismer, Jeffrey S. McCullough, Peter E. Person, Colleen Renier, and David Knutson, “Integrated Health Care Economics, Part I: Are Specialty Physician Services Revenues Reliable Predictors of Community Health System Financial Performance.” *Physician Executive*, (May-June, 2009): 26-31.
- Jeffrey S. McCullough, Michele Casey, and Ira Moscovice, “Health Information Technology Policy and Rural Hospitals.” Healthcare Reform Policy Brief Written at the Request of the Federal Office of Rural Health Policy Research, (May, 2009).
- W. David Bradford, Jeffrey S. McCullough, J. Chang, AC Costales, and JA Gricar, “Contraceptive failure rates among Medicaid and non-Medicaid enrollees.” *Value in Health*, Vol. 11, no 3 (May-June, 2008): A245-A246.
- Jeffrey S. McCullough (2008), Health care markets, In *The Encyclopedia of Health Services Research*. Sage Publications: Thousand Oaks, CA: Ross M. Mullner.
- Sean Nicholson, Patricia M. Danzon, and Jeffrey S. McCullough, “Biotech-Pharmaceutical Alliances as a Signal of Asset and Firm Quality,” NBER Working Paper, w9007, June 2002. <http://papers.nber.org/papers/W9007>
- With Douglas C. MacDonald, Andrea Hassol, Kenneth Carlson, Elizabeth Fournier, and Jennifer Yap, “Telemedicine Can Reduce Correctional Health Care Costs; An Evaluation of a Prison Telemedicine Network.” US Department of Justice, National Institute of Justice, Publication Number: NCJ175040, March 1999.

AWARDS, GRANTS, AND CONTRACTS

Investigator Status: Principal Investigator (local)
Name of PI: Jeffrey S. McCullough (Alison Cuellar)
External Agency: Robert Wood Johnson Foundation
Project Title and Dates: Physician consolidation and its effect on specialist choice: A causal analysis with machine learning
12/14/2018-12/14/2019
Direct Costs: \$53,171

Investigator Status: Co-Principal Investigator

Name of PI: Niel Mehta and Jeffrey S. McCullough
Funding Agency: Michigan Institute for Clinical & Health Research
Project Title and Dates: Joint Initiative in Vaccine Economics 5
7/01/2018-6/31/2019
Total Costs: \$46,030

Investigator Status: Co-Investigator
Name of PI: David Hutton
External Agency: Centers for Disease Control
Project Title and Dates: Joint Initiative in Vaccine Economics 5,
09/01/2015-08/31/2018

Investigator Status: Co-Investigator (PI on integration project)
Name of PI: Ira Moscovice
External Agency: Health Resources and Services Administration
Project Title and Dates: University of Minnesota Rural Health Research Center,
09/01/2012-08/31/2016
Direct Costs: \$2,259,708

Investigator Status: Co-Investigator (co-PI on projects within this grant)
Name of PI: Ira Moscovice
External Agency: Health Resources and Services Administration
Project Title and Dates: Medicare Rural Hospital Flexibility Program Evaluation,
09/01/08-08/31/13
Direct Costs: \$6,691,781

Investigator Status: Co-Investigator
Name of PI: Dennis Scanlon (Jon Christianson as local sub-PI)
External Agency: The Robert Wood Johnson Foundation
Project Title and Dates: Aligning Forces for Quality Evaluation Project
Computerized Physician Order Entry, 06/01/2013-11/30/2016
Direct Costs: \$209,453

Investigator Status: Co-Investigator
Name of PI: Roger Feldman
External Agency: Commonwealth of Pennsylvania
Project Title and Dates: The Effects of Vertical Integration on the Medicare Advantage
Market, 10/1/2011-9/30/2012
Direct Costs: \$177,583

Investigator Status: Co-Investigator
Name of PI: Dennis Scanlon (Jon Christianson as local sub-PI)
External Agency: The Robert Wood Johnson Foundation
Project Title and Dates: Aligning Forces for Quality II (extension), 05/01/2011-
10/31/2012
Direct Costs: \$199,315

Investigator Status: Co-Investigator
Name of PI: Dennis Scanlon (Jon Christianson as local sub-PI)
External Agency: The Robert Wood Johnson Foundation
Project Title and Dates: Aligning Forces for Quality II, 05/01/2008-10/31/2011
Direct Costs: \$500,402

Investigator Status: Principal Investigator
Name of PI: NA
External Agency: RWJF Changes in Health Care Financing and Organization
Project Title and Dates: The Costs and Benefits of Health Information Technology: The Impact of Computerized Physician Order Entry, 09/01/08-12/31/10
Direct Costs: \$258,233

Investigator Status: Co-Investigator
Name of PI: David Knutson
External Agency: CMS
Project Title and Dates: Alternative Approaches to Measuring Physician Resource Use, 09/29/08-05/28/11
Direct Costs: \$1,499,979

Investigator Status: Co-Investigator (co-PI on health IT portion)
Name of PI: Ira Moscovice
External Agency: Health Resources and Services Administration
Project Title and Dates: Upper Midwest Rural Health Research Center, 09/01/08-08/31/12
Direct Costs: \$2,275,224

Investigator Status: Co-Investigator (co-PI on health IT portion)
Name of PI: Ira Moscovice
External Agency: Health Resources and Services Administration
Project Title and Dates: Medicare Rural Hospital Flexibility Program Evaluation, 09/01/08-08/31/13
Direct Costs: \$4,601,165

Investigator Status: Co-Investigator
Name of PI: Stephen Parente
External Agency: Agency for Health Research and Quality
Project Title and Dates: National Impact of IT Investments on Hospital Quality, 07/01/08-8/30/10
Direct Costs: \$198,652

Investigator Status: Co-Investigator
Name of PI: Bradford
External Agency: Bayer Healthcare Pharmaceuticals, Inc. (Corporate Contract)

Project Title and Dates: The Financial and Clinical Efficacy of Mirena in State Medicaid Programs: An Investigation of Cost-Offsets Derived from the Effect of Mirena on Pregnancy Prevention and the Treatment of Menorrhagia, 06/01/07-05/31/08
Direct Costs: \$10,368 (Subcontract only)

Investigator Status: Advisor
Name of PI: Eric Barrette
External Agency: Agency for Health Research and Quality
Project Title and Dates: The Impact of Health Information Technology on Demand for Inpatient Services, 09/01/2009 – 08/31/2010
Direct Costs: \$24,863

Investigator Status: Co-Investigator
Name of PI: Bradford
External Agency: NIH/NHLBI
Project Title and Dates: DTC Advertising Effect on Adherence to Statin Therapy, 07/01/04-05/31/07
Direct Costs: \$175,000 (annual)

Investigator Status: Co-Investigator
Name of PI: Lindrooth
External Agency: Berlex Laboratories (Corporate Contract)
Project Title and Dates: Medicaid Coverage of Family Planning Services: Unplanned Pregnancies and Adoption of New Products, 08/01/05 – 06/30/06
Direct Costs: \$105,665

INVITED PRESENTATIONS

The Economics of Data Science in Health Care: Research Opportunities and Challenges.
Keynote presentation for CESifo Area Conference on the Economics of Digitization.
Munich, Germany.

Telemedicine during the COVID-19 Pandemic. Federal Communications Commission.
Washington, DC (Remote), October, 2021.

Using Real World Data for Personalized Treatment Effects: Heterogeneity in the Benefits of Oral Antidiabetic Medications. National Big Data in Health Science Conference.
Columbia, SC (Remote), February, 2021.

The Value of Precision Medicine: Evidence From One Year Beyond LVAD Implantation.
Pennsylvania State University, College Station, PA, April, 2018.

Panel Discussion on the Economics of Pharmaceutical Pricing. Caribbean Health Economics Symposium. St. Croix, US Virgin Islands. December, 2017.

The Health Consequences of Direct-to-Consumer Pharmaceutical Advertising. University of Texas, Austin, Tx. November, 2017.

Machine Learning Techniques for Health Services Research. George Mason University, Fairfax, VA, May, 2017.

- Productivity, Liquidity, and Investment in Health Information Technology. University of Michigan, Ann Arbor, MI, April, 2015.
- Health Information Technology and Patient Outcomes: The Roles of Information and Labor Coordination. University of Chicago, Chicago, IL, January 2015.
- Competing Under New Rules: Insurer Entry and Premiums in Exchange-Based Coverage. Allied Social Sciences Association Annual Meeting. Boston, MA, January 2015.
- Competing Under New Rules: Insurer Entry and Premiums in Exchange-Based Coverage. NBER Conference on the Economics of Health Insurance Exchanges. Cambridge, MA, December 2014.
- Health Information Technology and Patient Outcomes: The Roles of Information and Labor Coordination. University of Maryland, College Park, MD, October 2014.
- The Impact of Direct-to-Consumer Pharmaceutical Advertising. University of Chicago Health Economics Workshop, Chicago, IL, November, 2013.
- Health Information Technology and Patient Outcomes. Third ICT Conference Munich, Institute for Strategy, Technology and Organization, Munich, Germany, October 2013.
- Health Information Technology and Patient Outcomes. Georgia Institute of Technology, Atlanta, Georgia, October 2013.
- Health Information Technology and Patient Outcomes: The Role of Organizational and Informational Complementarities. Integrated Healthcare Delivery Workshop, Lehigh University, May 2012.
- The Impact of Health Information Technology on Patient Outcomes. Georgia State University, Atlanta, GA, November 2011.
- The Impact of Health Information Technology on Patient Outcomes. AcademyHealth Research Briefing, Washington, DC, March 2011.
- The Impact of Health Information Technology on Hospital Productivity. University of Maryland. College Park, MD, May 2010.
- The Effect of Computerized Physician Order Entry (CPOE) on Quality in US Hospitals. Mayo Clinic Health Services Research Grand Rounds, Rochester, MN, November 2009.
- The Welfare Consequences of DTC Advertising: A Dynamic Model of Statin Advertising. Pennsylvania State University, State College, PA, September 28, 2009.
- The Effect of Medicaid Family Planning Expansions on Unplanned Births. The 2006 National Medicaid Summit, Park City, Utah September 28, 2006.
- Consequences of the Medicaid Policy to Reimburse the Use of Contraceptives. Meeting of the Mirena Health Outcomes Advisory Board. New York, NY, February 9, 2006.

CONFERENCE PRESENTATIONS

- Physician Consolidation and its Effect on Specialist Care: An Application with Machine Learning. American Society of Health Economics. Washington, DC, June, 2019.

- Risk Adjustment or Risky Business: Measuring Provider Judgment and Skill in Personalized Medicine. American Society of Health Economics. Washington, DC, June, 2019.
- Personalized Predictions for the Value of Medical Device Utilization. American Society of Health Economics. Atlanta, GA, June, 2018
- The Value of Personalized Medicine: Treatment Effect Heterogeneity One Year Beyond Left Ventricular Assist Device Implantation. Conference on Health IT and Analytics. Washington, DC, October, 2018.
- Consumer Learning and the Entry of Generic Pharmaceuticals. Midwest Health Economics Conference, Minneapolis, MN, May, 2017.
- Inference and Identification in Machine Learning. Workshop on Health IT and Economics, Washington, DC, October 2016.
- Consumer Learning and the Entry of Generic Pharmaceuticals. American Society of Health Economics, Philadelphia, PA, June 2016.
- Product Differentiation, Consumer Learning and the Value of Me-Too Drugs. Caribbean Health Economics Society Symposium, British Virgin Islands, December 2015.
- Insurer Competition and Premiums in the Federally-Facilitated Health Insurance Exchange, NBER, Cambridge, MA, December, 2014.
- The Impact of Direct-to-Consumer Pharmaceutical Advertising. American Society of Health Economics, Los Angeles, CA, June, 2014.
- The Effect of Restrictive Contracts on the Medicare Advantage Market, Allied Social Science Association, Philadelphia, PA, January 2014.
- Product Differentiation and Severity Adjustment in US Hospitals, Allied Social Science Association, Philadelphia, PA, January 2014.
- Identifying High-Quality Rural Hospitals and the Role of Service Line Specialization. International Health Economics Association, Sydney, Australia, July 2013.
- Public Reporting and the Evolution of Clinical Quality. International Health Economics Association. Sydney, Australia, July 2013.
- Health Information Technology and Patient Outcomes: The Role of Organizational and Informational Complementarities. Annual Health Economic Conference. Stanford, CA, October 2013.
- The Welfare Consequences of Pharmaceutical Advertising: A Dynamic Model of Pharmaceutical Demand. Annual Health Econometrics Workshop, New York, NY, October 2012.
- The Impact of Health IT on Quality. American Society of Health Economics, Minneapolis, MN, June 2012.
- Liquidity Constraints in Health IT capital Investments. American Society of Health Economics, Minneapolis, MN, June 2012.
- Do Electronic Medical Records Improve Diabetes Quality in Physician Practices? Organization Behavior in Health Care. Dublin, Ireland, April 2012.

- The Impact of Health Information Technology on Quality: Understanding the Role of Technological and Organizational Complementarities. Organization Behavior in Health Care. Dublin, Ireland, April 2012.
- The Impact of Health Information Technology on Patient Outcomes. Workshop on Health IT and Economics. Washington, DC, October 2011.
- The Impact of Health Information Technology on Patient Outcomes. National Bureau of Economic Research Summer Institute. Boston, MA, July 2011.
- A Dynamic Model of Pharmaceutical Demand and the Welfare Consequences of Direct-to-Consumer Advertising. International Health Economics Association. Toronto, Canada, July 2011.
- The Impact of Health Information Technology on Hospital Productivity. International Health Economics Association. Toronto, Canada, July 2011.
- The Impact of Health Information Technology on Patient Outcomes. International Health Economics Association. Toronto, Canada, July 2011.
- The Impact of Health Information Technology on Patient Outcomes. AcademyHealth Research Briefing. Washington, DC, March 2011.
- The impact of health information technology on hospital productivity. Workshop on Health IT and Economics. Washington, DC, October 2010.
- The Impact of Information Technology Adoption on the Cost and Quality of Inpatient Care. American Society of Health Economics. Ithaca, NY, June 2010.
- The welfare consequences of DTC advertising: A dynamic model of statin advertising. American Society of Health Economics. Ithaca, NY, June 2010.
- The Effect of Computerized Physician Order Entry on Quality in US Hospitals. Mayo Clinic Health Services Research Grand Rounds, Rochester, MN, November 2009.
- The welfare consequences of DTC advertising: A dynamic model of statin advertising. Pennsylvania State University, State College, PA, September 28, 2009.
- The Value of Computerized Physician Order Entry in the Production of Quality. International Health Economics Association. Beijing, China, July 2009.
- The Impact of Direct-to-Consumer Advertisements on Watchful Waiting: Stain ads and Cholesterol Testing. Minnesota Health Services Research Conference, St, Paul, MN, March 2008.
- Monitoring Technology and Firm Boundaries: Physician-Hospital Integration and Technology Utilization, Workshop on Information Systems Economics, Montreal, Canada, December 2007.
- Vertical Integration and Monitoring Technology Demand, International Health Economics Association, Copenhagen, Denmark, July 2007.
- Consolidation and Lock-in Within the Hospital Information System Industry. Southern Economic Association, November 18, 2006.

Physician-Hospital Integration and Information Technology Adoption. International Health Economics Association, Barcelona, Spain, July 2005.

Consolidation and Switching Costs in the Hospital Information System Industry. International Health Economics Association, San Francisco, CA, 2003.

The Adoption and Diffusion of Hospital Information Technology: Preliminary Results from a Dynamic Model, Academy Health Conference, NRSA Session, Washington, DC, 2002.

HONORS AND AWARDS

JAMIA Editors Choice, “Are all certified EHRs created equal? Assessing the relationship between EHR vendor and hospital meaningful use performance.” June, 2018.

MIS Quarterly Best Paper, “Vocal Minority and Silent Majority: How Do Online Ratings Reflect Population Perceptions of Quality?” 2015

Outstanding Author Contribution Award from Emerald Literati Network for the 2013 Publication in *Advances in Health Care Management*.

MHA Class of 1981 Faculty Award for Excellence in Teaching, awarded in 2012.

Charles E. Gibbs Leadership Prize in recognition for excellence in women’s health policy research (2007).

National Research Services Award (1998-2001), granted by the Wharton Health Care Systems Department, funded by the National Institutes of Health to further health policy research.

Parker Francis Brown Scholar (1991-1994), awarded by Harvard University to outstanding science students.

PROFESSIONAL SERVICE

Conference on Health IT and Analytics (formerly Workshop on Health IT and Economics), co-founder and program co-chair (2010 – present).

Interoperable Health Information Exchange, Technical Expert Panel Participant (2017).

Special Issue Editor for Health IT, *American Journal of Managed Care* (2015-2016).

Section Editor for Health IT, *Health Care: The Journal of Delivery Science and Innovation* (2013-2015).

Special Issue Editor for Health IT, *Health Systems* (2013-2014).

Global Assessment of the HITECH Program (ONC/Mathematica Policy Research), Technical Expert Panel Member (2010 – 2013).

AcademyHealth, Health Economics Interest Group Advisory Board Member, (2008 – 2014).

National Science Foundation *Learning Health System* working group (2013).

The Office of the National Coordinator for Health IT, EHR Adoption Panel Member

(2010).

Agency for Health Research and Quality, Working Group on Building Capacity for Provider Policy Simulation Capacity (2010).

The Office of the National Coordinator for Health IT, EHR Adoption Panel member (2010).

AcademyHealth, Health Economics Interest Group Meeting Chair, (2010 – 2011).

American Society of Health Economics, Small Conference Coordination Committee Member (2010 – 2011).

AcademyHealth, Health IT Theme Leader (2009 – 2010).

Program committee, American Health Economics Conference (2006)

TEACHING EXPERIENCE

Instructor, Corporate Finance for Health Care Administrators (Winter 2016 – present)

Instructor, Corporate Finance for Health Care Administrators, executive (Winter 2016 – present)

Instructor, Current Issues in Pharmaceutical and Medical Device Industries (2019-2020)

Instructor, Data Analytics for Health Management and Policy (Winter 2018 and 2019)

Instructor, Doctoral Health Economics (Fall 2017 and Winter 2019)

Instructor, Executive Masters Introductory Seminar (Fall 2016-Fall 2018)

Lecturer, Digital Health, Cheung Kong Graduate School of Business (Summer 2016)

Instructor, Health Care Finance II, Master's (Fall 2009 – Fall 2015).

Instructor, Health Care Finance II, Executive MHA, online (Fall 2012 – Fall 2015).

Instructor, Health Care Finance, Master's (Fall 2007).

Instructor, Health System Accounting, Master's (Fall 2004, 2005, & 2006).

Instructor, Health Economics, Master's (Spring 2005, 2006, & 2007).

Lecturer, Mini-course in microeconomics (Fall 2002).

Wharton teacher training (Spring 2002).

ADVISING

Doctoral Dissertations Directed

Jason Gibbons, Three Essays on Opioid Epidemic, dissertation co-advisor, Expected 2021. University of Michigan, HSOP

Sung Choi, Three Essays on the Causes and Consequences of Hospital Financial Performance, dissertation co-advisor, completed 2015. University of Minnesota, HSRPA

Jinhyung Lee, Essays on Health Information Technology, dissertation advisor/co-chair, completed 2010. University of Minnesota, HSRPA

Doctoral Committees Served On

Dori Cross, Electronic Information Sharing to Improve Post-Acute Transitions of Care, completed 2018. University of Michigan

Daniel Crespin. Clinic Switching by Patients with Diabetes and its Relationship with Costs and Health Outcomes, in progress. University of Minnesota., Completed 2018. University of Minnesota, HSRPA

Neha Bairoliya. Essays in Labor and Health Economics, 2015. University of Minnesota, Economics.

Barrette, Eric. The Impact of Health Information Technology on Demand for Inpatient Services, dissertation committee member, 2012. University of Minnesota, HSRPA

Golyaev, Konstantin. The Impact of the Community Reinvestment Act on the Home Mortgage Lending Industry in California, dissertation committee member, 2012. University of Minnesota, Economics

Leerapan, B. Ack. Influence of Organizational Reputation on Disclosure of Quality Data and Subsequent Quality of Primary Care Services, dissertation committee member, 2011. University of Minnesota, HSRPA

Park, Young-Taek. Impact of Task, Structure, and Environment on Electronic Health Record Adoption, Use, and Interoperability in Hospitals, dissertation committee member, completed 2010. University of Minnesota, Institute for Health Informatics.

James W. Coon Jr. Electronic Medical Records in Correctional Healthcare Settings, dissertation committee member, completed 2007. Medical University of South Carolina, Doctorate of Health Administration.

Masters Theses Directed

Malone, Stephanie. Philanthropy and Community Benefits: Consequences of Charity in Nonprofit Hospitals, PHAP, thesis advisor and committee chair, in progress. University of Minnesota, HPM.

Zborowsky, Ashley. The Public Health Consequences of Evergreening Pharmaceutical Patents. PHAP thesis advisor and committee chair, Completed 2013. University of Minnesota, HPM.

Lin, Chia-Wei. Utilization of Oral Osteoporosis Drugs Among Female Medicare Part D Beneficiaries. MS HSRPA, committee member, Completed 2012. University of Minnesota, HPM.

Solberg, David. The Legal Implications of Pay-for-Delay Contracts in Prescription Pharmaceuticals, PHAP thesis advisor and committee chair, in progress. University of Minnesota, HPM.

Wahlam, Jason A. Do Medicaid Preferred Drug Lists Reduce Expenditures? PHAP, thesis advisor and committee chair, 2010. Received HPM best thesis award and Minnesota Health Services Research Conference best student paper award. University of Minnesota, 2010.

CONSULTING ACTIVITIES

I have assisted government agencies in the investigation and analysis of health care antitrust. These projects have addressed consolidation in hospital, physician, and insurance markets. Work for the Commonwealth of Pennsylvania has focused on insurance network inclusion for delivery systems with integrated insurance products. Finally, I provided analytic and consulting services for opioid litigation.

PROFESSIONAL MEMBERSHIPS

Academy for Information Systems

American Economic Association

American Society of Health Economists

International Health Economics Association