### HARVARD MEDICAL SCHOOL CURRICULUM VITAE

| Date Prepare                     | ed:         | Noven            | nber 11, 2023   |  |
|----------------------------------|-------------|------------------|---|--|
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| <b>Education:</b> 2000 2006 2009 | B.A., Ph.D. | B.S.             | Massachusetts Institute of Technology (Economics, Biology)<br>University of Chicago (Economics)<br>Doctoral committee: David Meltzer, Steven Levitt, Tomas Philipson<br>Preliminary examinations: Industrial organization, labor economics<br>University of Chicago |  |

### Postdoctoral Training: Internships and Residencies

| 2009-2010 | Intern in Internal Medicine, Massachusetts General Hospital   |
|-----------|---|
| 2010-2012 | Resident in Internal Medicine, Massachusetts General Hospital |

### **Research Fellowships**

2006-2007Fellow, Bing Center for Health Economics, RAND Corporation2008-2009AHRQ Postdoctoral Fellow, RAND Corporation and UCLA

### **Faculty Academic Appointments**

| v         | 11  |
|-----------|---|
| 2012-2015 | Assistant Professor of Health Care Policy, Department of Health Care Policy |
|           | Harvard Medical School  |
| 2012-2013 | Clinical Fellow in Medicine, Harvard Medical School                         |
|           | Massachusetts General Hospital  |
| 2013-2016 | Assistant Professor of Medicine, Harvard Medical School                     |
|           | Massachusetts General Hospital  |
| 2015-2016 | Associate Professor of Health Care Policy, Department of Health Care Policy |
|           | Harvard Medical School  |
|           |   |

| 2016- | Ruth L. Newhouse Associate Professor of Health Care Policy, Department of Health Care |
|-------|---|
|       | Policy  |
|       | Harvard Medical School  |
| 2016- | Associate Professor of Medicine, Harvard Medical School                               |
|       | Massachusetts General Hospital  |
| 2022- | Joseph P. Newhouse Professor of Health Care Policy, Department of Health Care Policy  |
|       | Harvard Medical School  |
| 2023- | Professor of Medicine, Harvard Medical School   |
|       | Massachusetts General Hospital  |
|       |   |

# Appointments at Hospitals/Affiliated Institutions

| 2012- | Assistant in Medicine, Hospital Medicine Unit, Department of Medicine |
|-------|---|
|       | Massachusetts General Hospital  |

# **Other Professional Positions:**

| 2002      | Lecturer, Dept. of Economics, University of Chicago                                     |
|-----------|---|
| 2011-2012 | Senior Fellow, Schaeffer Center for Health Policy and Economics, University of Southern |
|           | California  |
| 2012-     | Faculty Research Fellow, National Bureau of Economic Research                           |
| 2023-     | Research Associate, National Bureau of Economic Research                                |
|           |   |

# **Committee Service:**

| Local     |   |                                       |
|-----------|---|---------------------------------------|
| 2010-     | Winthrop House Pre-medical advisor        | Harvard University                    |
|           |   | Pre-medical advisor                   |
| 2013-     | Standing Committee on Health Policy       | Harvard Medical School                |
|           |   | Member                                |
| 2013-2014 | Graduate School of Arts and Sciences      | Harvard University                    |
|           | Dissertation Fellowship Award Committee   | Member                                |
| 2014      | Scholars in Medicine Project Review       | Harvard Medical School                |
|           |   | Reviewer                              |
| 2014      | Health Acceleration Challenge             | Harvard Business School               |
|           |   | Judge                                 |
| 2014-     | Harvard University Data Science Institute | Harvard University                    |
|           | Planning Committee                        | Member                                |
| 2014      | Task Force on Diversity and Inclusion     | Harvard Medical School                |
|           | Metrics Sub-Committee                     | Co-Chair                              |
| 2020-     | Committee on Promotions, Reappointments,  | Harvard Medical School                |
|           | and Appointments                          | Member                                |
|           |   |                                       |
| National  |   |                                       |
| 2013-2015 | Advisory Group for Health Economics       | Academy Health                        |
|           |   | Member                                |
|           |   |                                       |
| 2014-2016 | Board of Directors                        | National Perinatal Information Center |
|           |   | Member                                |

| 2014-2015 | Committee for study on Diagnostic Errors in Health Care   | Institute of Medicine<br>Member   |
|-----------|---|---|
| 2016-2019 | Technical expert panel for Episode-based resource use measures  | Centers for Medicare and Medicaid<br>Services                           |
| 2017-2019 | Bernie J. O'Brien New Investigator Award<br>Selection Committee   | International Society for<br>Pharmacoeconomics and Outcomes<br>Research |
| 2018      | Technical expert panel for MACRA<br>Episode-Based Cost Measures-Medicare<br>Spending Per Beneficiary (MSPB) Service<br>Refinement | Centers for Medicare and Medicaid<br>Services                           |
| 2018-2019 | National Academies Graduate Medical<br>Outcomes and Metrics Workshop  | National Academies of Medicine<br>Participant                           |
| 2018-     | National Academies Advisory Committee<br>on Emerging, Science, Technology, and<br>Innovation                                      | National Academies of Medicine<br>Member                                |
| 2020      | National Academies Committee on<br>Implications of Discarded Weight-Based<br>Drugs  | National Academies of Medicine<br>Member                                |
| 2021      | National Academies Workshop on<br>"Towards a Post-Pandemic World –<br>Lessons from COVID-19 for Now and the<br>Future"            | National Academies of Medicine<br>Participant                           |

# **Professional Societies:**

| 2011-2013 | American Medical Association                               | Member |
|-----------|--|--------|
| 2013-     | Academy Health   | Member |
| 2013-     | International Society for Pharmaceutical Outcomes Research | Member |

### **Grant Review Activities:**

| 2017         | Ad hoc reviewer, R21/R33 Review Panel | National Institutes of Health |
|--------------|---------------------------------------|-------------------------------|
| Editorial Ac | tivities:                             |                               |

Ad hoc Reviewer

American Economic Review

American Economic Association Journal: Policy Annals of Emergency Medicine Annals of Internal Medicine American Journal of Managed Care BMJ Demography Health Affairs Health Services Research Journal of the American Medical Association Journal of Health Economics Journal of Human Capital Journal of Political Economy Journal of Policy Analysis and Management Journal of Law and Economics Medical Care New England Journal of Medicine Quarterly Journal of Economics **Review of Economics and Statistics** Social Science and Medicine

#### **Other Editorial Roles**

2013-

Associate Editor

Forums for Health Economics and Policy

#### **Honors and Prizes:**

| 2000      | Phi Beta Kappa, MIT   |  |  |
|-----------|---|--|--|
| 2000-2009 | National Institutes of Health Medical Scientist Training Program Fellowship   |  |  |
| 2005-2006 | National Institute of Aging Training Fellowship   |  |  |
| 2007      | Eugene Garfield Award from Research! America for best paper in economics on the   |  |  |
|           | economic impact of medical research. Awarded jointly with Tomas J. Philipson for "Who   |  |  |
|           | Benefits from New Medical Technologies? Estimates of Consumer and Producers   |  |  |
|           | Surpluses for the New HIV/AIDS Drugs," published in <i>BE Forum for Health Economics and Policy</i> .   |  |  |
| 2008-2009 | AHRQ Postdoctoral Fellowship  |  |  |
| 2011      | Finalist, National Institute for Health Care Management Foundation Annual Research  |  |  |
|           | Award, for "An Economic Evaluation of the War on Cancer," published in Journal of   |  |  |
|           | Health Economics.   |  |  |
| 2011      | Finalist, Annals of Internal Medicine Young Investigator Award, for "Sexually transmitted diseases among users of erectile dysfunction drugs," published in <i>Annals of Internal</i> |  |  |
|           | Medicine.   |  |  |
| 2012      | Recognized as being in the top grade of reviewers for Annals of Internal Medicine.  |  |  |
| 2013-2014 | Certificate for excellence in tutorial facilitation by Academy at Harvard Medical School  |  |  |
|           | (for HMS Course HC750)  |  |  |
| 2013      | National Institutes of Health Director's Early Independence Award (\$2.5M, 5 year grant awarded by Office of the NIH Director to 14 scientists nationwide)                            |  |  |
| 2014      | Appointed to Institute of Medicine Committee on Diagnostic Errors in Health Care  |  |  |

| 2015 | International Society for Pharmacoeconomics and Outcomes Research Bernie O'Brien<br>New Investigator Award  |
|------|---|
| 2015 | Altmetric Top 100 articles of 2015 for "Mortality and treatment patterns among patients hospitalized with acute cardiovascular conditions during dates of national cardiology meetings," published in <i>JAMA Internal Medicine</i> . |
| 2016 | Becker's Hospital Review 60 Most Powerful People in Health Care in 2016, for work documenting gender disparities in physician income published in <i>JAMA Internal Medicine</i>   |
| 2016 | Altmetric Top 100 articles of 2016 for "Comparison of hospital mortality and readmission rates for Medicare patients treated by male vs female physicians," published in <i>JAMA Internal Medicine</i> .                              |
| 2017 | John F. Burke Keynote Lecture, Harvard Trauma and Critical Care Symposium, Boston, MA   |
| 2018 | Senior Day Speaker, Department of Medicine, University of Chicago, Chicago, IL  |
| 2018 | American College of Radiology Moreton Lecture, Washington, D.C.   |
| 2018 | Becker's Hospital Review 100 great leaders in health care   |
| 2018 | Altmetric Top 100 articles of 2017 for "Reduction in firearm injuries during NRA annual conventions," published in <i>New England Journal of Medicine</i> .   |
| 2020 | TEDMED 2020 Speaker, "The profound difference between seeing and looking"   |
| 2020 | Elected to American Society for Clinical Investigation (ASCI)   |

# **Report of Funded and Unfunded Projects:**

# Past Funding

| 2005 | Me-too innovation in pharmaceutical markets<br>Seed grant/University of Chicago Center for Health and the Social Sciences<br>Co- investigator                    |
|------|--|
| 2006 | Surplus appropriation from R&D and technology assessment<br>Seed grant/University of Chicago Center for Health and the Social Sciences<br>Co- investigator       |
| 2006 | Intellectual property and external consumption effects<br>Seed grant/University of Chicago Center for Health and the Social Sciences<br>Co- investigator         |
| 2007 | Impact of Personalized Medicine on the Pharmaceutical Industry<br>Seed grant/University of Chicago Center for Health and the Social Sciences<br>Co- investigator |
| 2009 | Economic efficiency and disparities in global health<br>Seed grant/ University of Chicago Center for Health and the Social Sciences<br>Co-investigator           |
| 2013 | Screening for Free: A Value-Based Insurance Design Natural Experiment (R01)  |

|           | National Institutes of Health<br>Co-investigator, PI John Hsu  |
|-----------|--|
| 2013      | The role of private plans in Medicare (R01)<br>National Institute on Aging<br>Co-investigator, PI Joseph Newhouse  |
| 2013      | Income effects and current law forecasts on health care spending growth (R01)<br>National Institute on Aging<br>Co-investigator, PI Michael Chernew                          |
| 2013-2019 | Physician determinants of health care spending, quality, and patient outcomes<br>Office of the Director, National Institutes of Health, Early Independence Award (DP5)<br>PI |
| 2014      | Health Care Markets and Regulation Lab, Project: An Intervention to Manage Acute<br>Changes in Home Care Patients<br>Laura and John Arnold Foundation<br>Co-Investigator     |
| 2015      | Evaluation of the Oncology Care Model<br>CMS via Abt Associates<br>Co-Investigator   |
| 2016      | Diffusion of Clinical Evidence into Practice: Physician Networks, Delivery Organizations,<br>and Markets (R56)<br>NIH<br>Co-Investigator                                     |
| 2017      | Evaluating the Blue Shield of California Narcotic Safety Initiative<br>Blue Shield of California Foundation<br>Co-Investigator   |
| 2017      | Impact of Telemedicine on Medicare Beneficiaries with Mental Illness (R01)<br>NIH<br>Co-Investigator   |
| 2017      | The Impact of Direct-to-Consumer, Video Telehealth (R01)<br>AHRQ<br>Co-Investigator  |
| 2017-2021 | Medical reversals: De-implementing ineffective and unsafe treatments (R01)<br>AHRQ<br>Co-Investigator  |
| 2016-2021 | Effects of Ambulance, Transport Distance, and Hospital Destination on Health Outcomes  |

of Out-of-Hospital Medical Emergencies (R01) AHRQ Co-Investigator

# **Current Funding**

| 2019-2022  | Use of Prescription Opioids Following Surgery and Associated Adverse Patient Outcomes<br>in Older Adults (R56)<br>NIH/NIA<br>PI  |
|------------|--|
| 2019-2024  | Prescribing of opioids at hospital discharge and associated adverse patient outcomes (R01)<br>AHRQ<br>PI   |
| 2020-2025  | The Impact of physician and health system factors on the quality of care for persons with<br>Alzheimer's disease and related dementias at the end of life (R01)<br>NIH<br>Co-Investigator            |
| 2021-2025  | The Impact of Surgeon Factors and Education/Training on Disparities in Surgical Care<br>(R01)<br>NIH<br>Co-Investigator  |
| Pending Fu | nding  |
| 2022-2027  | Effect of the COVID-19 pandemic on care for pregnant persons (R01)<br>AHRQ<br>Co-Investigator  |
| 2022-2027  | Effect of physician/health system factors and physician-patient racial/ethnic concordance<br>on disparities in the care of Alzheimer's disease and related dementias (R01)<br>NIH<br>Co-Investigator |
| 2022-2027  | Novel Data Linkages to Address Persistent Opioid Use After Surgery (R01)<br>NIH<br>Co-Investigator   |

# **Report of Local Teaching and Training:**

### **Teaching of Students in Courses**

| 2000 | Introductory | microeco | nomics/Teaching | assistant | Univ. of Chicago |
|------|--------------|----------|-----------------|-----------|------------------|
|------|--------------|----------|-----------------|-----------|------------------|

|           | Undergraduate students                            | 2, 1 hr sessions per wk for 10 wks   |
|-----------|---|--------------------------------------|
| 2001      | Graduate econometrics/Teaching assistant          | Univ. of Chicago                     |
|           | Graduate students                                 | 1 hr session per wk for 10 wks       |
| 2002      | Introductory microeconomics/Lecturer              | Univ. of Chicago                     |
|           | Undergraduate students                            | 3, 1 hr sessions per wk for 10 wks   |
| 2012-2015 | HC 750: Health Care Policy                        | Harvard Medical School               |
|           | Medical students                                  | 3, 1 hr tutorials per wk for 4 wks   |
| 2012-2014 | Health policy journal workshop                    | Harvard Kennedy School of Govt       |
|           | MD/MPP students                                   | 4, 1.5 hr lectures per yr            |
| 2014-     | Health Policy 2000 (Core course in health policy) | Harvard University                   |
|           | PhD students                                      | 1, 2 hr lecture per yr               |
| 2015-     | GHHP 50: The quality of health care in America    | Harvard University                   |
|           | Harvard college (co-taught w/ Ashish Jha)         | 2, 1.5 hr lectures per wk, Spring    |
| 2015-     | PhD in Health Policy Research Seminar             | Harvard University                   |
|           | Lead, joint with Laura Hatfield                   | 1, 1 hr seminar per wk, Fall/Spring  |
| 2016      | Essentials of the Profession (Innovation Lecture) | Harvard Medical School               |
|           | Medical students                                  | 2 hr lecture                         |
| 2016-2108 | Essentials of the Profession                      | Harvard Medical School               |
|           | Medical students                                  | 5, 1 hr tutorials per wk for 2.5 wks |
| 2018-     | Essentials of the Profession II, Director         | Harvard Medical School               |
|           | Medical students                                  | 3, 1 hr lectures per wk for 8 wks    |
| 2020-     | CSO 705, Economics of Medical Innovation          | 1, 1 hr lecture per year             |
|           | Masters students                                  | Harvard Medical School               |
| 2020-     | New concepts of value and evidence generation     | 8, 2 hr lectures per year            |
|           | Executive education program                       | Harvard Medical School               |
| 2022      | Generating Research Ideas, Econ 3017              | Harvard University                   |
|           | PhD students                                      | 1, 1 hr lecture per year             |

# Formal Teaching of Residents, Clinical Fellows and Research Fellows (post-docs)

| 2012      | Medical malpractice and healthcare delivery<br>Emergency Medicine residents | Harvard Emergency Medicine.<br>1, 1 hr lecture |
|-----------|---|--|
| 2012-2018 | Tools of Human Investigation  | Massachusetts General Hospital                 |
| 2012 2010 | Medical residents   | 5, 1.5 hr lectures per yr                      |
| 2014-     | Global medicine   | Massachusetts General Hospital                 |
|           | Medical residents   | 2, 1 hr meetings per yr                        |
| 2015      | National cardiology meetings and mortality                                  | BWH Dept. of Medicine                          |
|           | Medicine residents  | 1, 1 hr lecture                                |
| 2016      | Medical malpractice   | Harvard Emergency Medicine                     |
|           | Emergency Medicine residents  | 1, 1 hr lecture                                |
| 2016      | Race and gender bias in physician salary                                    | Harvard Neurology                              |
|           | Neurology residents   | 1, 1 hr lecture                                |
| 2016-     | Management and Leadership Seminar   | BWH Dept. of Medicine                          |
|           | Medical residents   | 1, 1 hr lecture                                |
|           |   |  |

# **Clinical Supervisory and Training Responsibilities**

2012- Attending physician for house staff general medicine service (Bigelow), Massachusetts General Hospital

# Formally Supervised Trainees

| 2013      | Jacqueline DePasse, MD / Medical Resident, Massachusetts General Hospital<br>Research mentor; Project: Declining demand for duty hours as a rationale for duty hour<br>reform. Manuscript published, <i>Journal of General Internal Medicine</i>  |
|-----------|---|
| 2013      | Matthew Abola, BA / Candidate, Harvard Post-baccalaureate Program<br>Research mentor; Project: Association between treatment toxicity and outcomes in<br>oncology clinical trials. Manuscript published, <i>Annals of Oncology</i>  |
| 2013      | Gaurie Tilak, BA / MD Candidate, Harvard Medical School<br>Research mentor; Project: Authorship inflation in high-impact medical journals.<br>Manuscript published, <i>Inquiry</i> .  |
| 2013-2014 | Elias Dayoub, BA / MD Candidate, University of Michigan, MPP Candidate, Harvard<br>Kennedy School<br>Research mentor; Projects: Rethinking how we measure drug innovation (Published,<br>Health Affairs Blog), Association between pain and tachycardia (Manuscript published,<br>Mayo Clinic Proceedings), Health outcomes and behaviors of health care professionals<br>(Manuscript published, Mayo Clinic Proceedings) |
| 2013-     | Dan Ly, MD / Medical Resident, Massachusetts General Hospital<br>Research mentor; Project: Rates of divorce among U.S. physicians. Manuscript published,<br><i>BMJ</i> .  |
| 2013-2015 | Prachi Sanghavi, BA / PhD Candidate, Harvard PhD Program in Health Policy<br>Dissertation committee member; Project: Comparative effectiveness of pre-hospital care<br>strategies in the United States. Manuscripts published, <i>JAMA Internal Medicine</i> and<br><i>Annals of Internal Medicine</i> .  |
| 2014      | Vishal Arora, BA Candidate, Harvard College<br>Undergraduate Senior Thesis Advisor; Project: Defensive medicine among physicians in<br>Texas  |
| 2014-2016 | Yusuke Tsugawa, BA / PhD Candidate, Harvard PhD Program in Health Policy<br>Dissertation committee member; Project: Association of physician-level spending and<br>outcomes in hospitalized Medicare patients   |
| 2014-     | Dhruv Khullar, MD, MPH / Medical Resident, Massachusetts General Hospital<br>Research mentor; Projects: Differences in rates of academic promotion between male and<br>female physicians in U.S. medical schools ( <i>JAMA</i> ), Prognostic errors in health care ( <i>BMJ</i> ),<br>Reducing diagnostic errors: why now? ( <i>NEJM</i> )  |

| 2014      | Rebecca Haffajee, JD / PhD Candidate, Harvard PhD Program in Health Policy; Project:<br>Mandatory Use of Prescription Drug Monitoring Programs. Manuscript published, <i>JAMA</i> |
|-----------|---|
| 2015-     | Annetta Zhou, BA / PhD Candidate, Harvard PhD Program in Health Policy Dissertation committee member  |
| 2015-2016 | Caroline Holte / BA Candidate, Harvard College<br>Undergraduate Senior thesis advisor; Racial disparities in health care access   |
| 2015-2016 | Anumita Das / BA Candidate, Harvard College<br>Undergraduate Senior thesis advisor; Economics of orphan drug policy   |
| 2016      | Leia Wedlund / BA Candidate, Harvard College<br>Research advisor; Marathons and Mortality ( <i>NEJM</i> )   |
| 2017      | Aakash Jain / BA Candidate, Duke University<br>Research advisor; Natural experiments in health care   |
| 2017      | Andrew Vogel / BA Candidate, Brown University<br>Research advisor; Designing experiments in health care   |
| 2017      | Spencer Luster/ MD-PhD Candidate, Harvard Medical School<br>Research advisor  |
| 2017-2019 | Caitlin Carroll, BA / PhD Candidate, Harvard PhD Program in Health Policy Dissertation committee member   |
| 2018      | Willie Jin / BA Candidate, Harvard College<br>Undergraduate Senior thesis advisor   |
| 2018      | Antonio Chan / BA Candidate, Harvard College<br>Undergraduate Senior thesis advisor   |
| 2018      | Max Franzblau / BA Candidate, Harvard College<br>Undergraduate Senior thesis advisor  |
| 2018      | Gal Kaplowitz / BA Candidate, Harvard College<br>Undergraduate advisor  |
| 2018-     | Nathan Varady / Orthopedic Surgery Resident, Hospital for Special Surgery Research advisor  |
| 2018-2020 | Monica Farid, BA / PhD Candidate, Harvard PhD Program in Health Policy Dissertation committee member  |

| 2018-2020 | Dan Ly, MD, MPH / PhD Candidate, Harvard PhD Program in Health Policy Dissertation committee member              |
|-----------|--|
| 2018-     | Christopher Worsham / Critical care fellow, Massachusetts General Hospital Research advisor                      |
| 2018-     | Andre Zimerman / Internal Medicine Resident, Hospital de Clinicas de Porto Alegre,<br>Brazil<br>Research advisor |
| 2019      | Sean Chanicka / BA Candidate, Harvard College<br>Undergraduate Senior thesis advisor                             |
| 2019      | Mohammad Ayman / BA Candidate, Harvard College<br>Undergraduate Senior thesis advisor                            |
| 2019      | Andres De Loera-Burst / BA Candidate, Harvard College<br>Undergraduate Senior thesis advisor                     |
| 2021      | David Cron / General Surgery Resident, Massachusetts General Hospital<br>Research advisor                        |

# Local invited presentations

| 2005 | Who Benefits from New Medical Technologies? Evidence from AIDS/Applied                    |
|------|---|
|      | Microeconomics Series   |
|      | University of Chicago, Chicago, IL  |
| 2010 | Cost-effectiveness Analysis, Economic Efficiency, and Innovation/Department of Health     |
|      | Care Policy Special Lecture Series  |
|      | Harvard Medical School, Boston, MA  |
| 2013 | Value of Life in General Equilibrium/Harvard, MIT, Boston University Combined Health      |
|      | Economics Workshop  |
|      | Boston University Department of Economics, Boston, MA                                     |
| 2013 | Medical malpractice/Department of Medicine Health Policy Seminar                          |
|      | Massachusetts General Hospital, Boston, MA  |
| 2013 | Medical malpractice/Department of Medicine Ambulatory Clerkship seminar                   |
|      | Brigham and Women's Hospital, Boston, MA  |
| 2013 | Medical malpractice/Department of Medicine Management Leadership Training seminar         |
|      | Brigham and Women's Hospital, Boston, MA  |
| 2014 | Medical malpractice and health care delivery/Pediatric Grand Rounds                       |
|      | Cambridge Hospital, Cambridge, MA   |
| 2014 | Trends in earnings of male and female health care professionals in the U.S./Harvard Joint |
|      | Committee on the Status of Women, Income Gender Equity event, Panelist                    |
|      | Harvard Medical School, Boston, MA  |

| 2014 | Multiple provider prescribing of opioids in Medicare/Department of Rheumatology Clinical Sciences Lecture Series |
|------|--|
|      | Brigham and Women's Hospital, Boston, MA   |
| 2015 | Medical malpractice/HVMA Health Policy Seminar   |
|      | Brigham and Women's Hospital, Boston, MA   |
| 2016 | Sex differences in academic promotion/MGH Diversity Council  |
|      | Massachusetts General Hospital, Boston, MA   |
| 2016 | Navigating Life as a Scholar at Harvard/Harvard New Faculty Institute  |
|      | Harvard University, Cambridge, MA  |
| 2016 | Medical malpractice/Department of Medicine Grand Rounds  |
|      | Exeter Hospital, Exeter, NH  |
| 2016 | Natural experiments in health care/Division of General Internal Medicine Grand Rounds                            |
|      | Beth Israel Deaconess Hospital, Boston, MA   |
| 2017 | Natural experiments in health care/Smith Center for Outcomes Research in Cardiology                              |
|      | Beth Israel Deaconess Hospital, Boston, MA   |
| 2017 | US Malpractice Policy and Trends/Harvard Series on Leadership in Healthcare: Policy and                          |
|      | Practice   |
|      | Harvard Medical School, Boston, MA   |
| 2017 | Observational studies in health care/Management and Leadership Series Lecture                                    |
|      | Brigham and Women's Hospital, Boston, MA   |
| 2018 | Thinking differently/Management and Leadership Series Lecture  |
|      | Brigham and Women's Hospital, Boston, MA   |
| 2018 | Natural experiments/Center for Evidence Based Imaging Lecture  |
|      | Brigham and Women's Hospital, Boston, MA   |
| 2019 | Natural experiments in health care / Division of Rheumatology Grand Rounds                                       |
|      | Massachusetts General Hospital, Boston, MA   |
| 2021 | Natural experiments in health care / Department of Urology Grand Rounds  |
|      | Brigham and Women's Hospital, Boston, MA   |
| 2021 | Natural Experiments in Health Care / Beth Israel Deaconess Hospital Pathology Grand                              |
|      | Rounds   |
|      | Boston, MA   |
| 2023 | Natural Experiments in Health Care / Massachusetts General Hospital Medical Practice                             |
|      | Evaluation Center  |
|      | Boston, MA   |

# **Report of Regional, National, and International Invited Teaching and Presentations:**

**Regional Presentations** Those activities below sponsored by outside entities are so noted and the sponsors are identified.

| 2007 | Value of Life in General Equilibrium/Health Economics Speaker Series         |
|------|--|
|      | RAND Corporation, Santa Monica, CA   |
| 2013 | Medical malpractice and health care delivery/Medical Grand Rounds            |
|      | Exeter Hospital, Exeter  |
| 2017 | Natural experiments in health care/Boston University School of Public Health |
|      | Boston, MA   |

2018 Thinking differently /Harvard University Niemann Foundation 80<sup>th</sup> Anniversary Conference Boston, MA

### **National Presentations**

Those activities below sponsored by outside entities are so noted and the sponsors are identified.

| 2005 | 05 Who Benefits from New Medical Technologies? Evidence from AIDS/National Inst<br>of Health Director Conference   |  |
|------|--|--|
|      | Arlington, VA  |  |
| 2006 | Cost-effectiveness Analysis and Innovation/National Bureau of Economic Research Health Care Meetings   |  |
|      | Boston, MA   |  |
| 2006 | Economics of Exercise/American Society of Health Economists Annual Meeting Madison, WI   |  |
| 2006 | Cost-effectiveness Analysis and Innovation/Federal Trade Commission Roundtable Washington, D.C.  |  |
| 2006 | Value of Life in General Equilibrium/Journal of Human Capital Inaugural Conference<br>State University of New York, Buffalo, NY  |  |
| 2007 | Who Benefits from New Medical Technologies? Evidence from AIDS/Research America!<br>Award Lecture  |  |
| 2008 | Washington, D.C.<br>Me-too Innovation in Pharmaceutical Markets/National Bureau of Economic Research<br>Frontiers in Health Policy Meeting<br>Washington, D.C.   |  |
| 2009 | Endogenous Cost-Effectiveness Analysis in Health Care Technology Adoption/National Bureau of Economic Research Health Care Meetings  |  |
| 2013 | Boston, MA<br>Cost-Effectiveness Based Policies and Economic Efficiency/University of Chicago<br>Meeting on Future of Health Care Reform in the U.S.   |  |
| 2014 | Chicago, IL<br>Mortality and treatment patterns among patients hospitalized with acute cardiovascular<br>conditions during dates of national cardiology meetings/University of Washington<br>Health Economics Seminar                            |  |
| 2014 | Seattle, WA<br>Mortality and treatment patterns among patients hospitalized with acute cardiovascular<br>conditions during dates of national cardiology meetings/Cornell University Law School<br>Health Law and Economics Seminar<br>Ithaca, NY |  |
| 2014 | What does it mean to do translational research in the social sciences?/American Physician Scientist Association National Meeting, Panelist   |  |
| 2014 | Chicago, IL<br>Mortality and treatment patterns among patients hospitalized with acute cardiovascular<br>conditions during dates of national cardiology meetings/American Society for Health<br>Economics Biennial Meeting<br>Los Angeles, CA    |  |

| 2014 | The effect of the FDA chlorofluorocarbon ban on out-of-pocket costs and utilization of albuterol inhalers among individuals with asthma/American Society for Health Economics Biennial Meeting  |
|------|---|
| 2014 | Los Angeles, CA<br>Discussant presentation: Low value health care services/American Society for Health<br>Economics Biennial Meeting<br>Los Angeles, CA   |
| 2014 | Discussant presentation: Economics of hospitalists/American Society for Health<br>Economics Biennial Meeting<br>Los Angeles, CA   |
| 2014 | Does medical malpractice law improve health care quality/NBER Summer Health Care<br>Institute<br>Cambridge, MA  |
| 2015 | Is doing more, doing better? Basic versus advanced life support ambulances for medical<br>emergencies/American College of Emergency Physicians, panel presentation with<br>Professors Prachi Sanghavi and Joseph Newhouse<br>Boston, MA |
| 2015 | What happens to patients when doctors leave town?/Future of Health Care Lecture Series,<br>Kansas University<br>Kansas City, KS   |
| 2016 | Medical malpractice and the physician/Brown University Lecture Series on Health Care<br>Providence, RI  |
| 2016 | Why should we care about diagnostic errors?/National Health Policy Forum Washington, D.C.   |
| 2016 | What happens to patients when doctors leave town?/Economics workshop, Clark<br>University<br>Worcester, MA  |
| 2016 | What happens to patients when doctors leave town?/Dartmouth University<br>Hanover, NH   |
| 2016 | Updates on medical malpractice/Grand rounds, Exeter Hospital Exeter, NH   |
| 2016 | The wider public health value of HCV treatments/National Viral Hepatitis Roundtable<br>Congressional Briefing<br>Washington, D.C.   |
| 2016 | Next-generation comparative effectiveness research/Panelist, International Society for<br>Pharmacoeconomics and Outcomes Research annual meeting<br>Washington, D.C.  |
| 2016 | Novel methods for valuing specialty drugs/ Panelist, International Society for<br>Pharmacoeconomics and Outcomes Research annual meeting<br>Washington, D.C.  |
| 2016 | Predicting readmissions with electronic health record data/ Discussant, American Society of Health Economics Meetings Philadelphia, PA  |
| 2016 | Physician overbilling in Medicare/ Discussant, American Society of Health Economics<br>Meetings<br>Philadelphia, PA   |

| 2016         | Keynote speech on health policy research/Maxwell Health Champion's Summit Maxwell Health, Boston, MA  |
|--------------|---|
| 2016         | Marathons and mortality/University of Washington<br>Seattle, WA   |
| 2016         | Marathons and mortality/Yale University<br>New Haven, CT  |
| 2017         | Natural experiments in health care/Doximity Annual Leadership Summit<br>San Francisco, CA   |
| 2017         | Physician spending and patient mortality, Grand Rounds / Cambridge Health Alliance,<br>Boston MA  |
| 2017         | Prescribing of opioids in Medicare, Grand Rounds / Case Western Reserve University Cleveland, OH  |
| 2017         | Gender differences in promotion and salary among academic physicians / American<br>Thoracic Society Gender Equity Summit  |
| 2017         | Washington, D.C.<br>Using big data to study the impact of graduate medical education / National Academies of<br>Medicine Workshop on GME Outcomes and Metrics<br>Washington, D.C.           |
| 2017         | Thinking differently in health care/Medical Scientist Training Program 50 <sup>th</sup> Anniversary University of Chicago, Chicago, IL  |
| 2017         | Using big data to study the impact of graduate medical education, National Academies of Medicine Workshop on GME Outcomes and Metrics, Washington, D.C.                                     |
| 2017         | Marathons and mortality, Boston Medflight Annual Conference, Hanscom Airforce Base, MA.   |
| 2017         | Medical malpractice and the physician, Harvard Trauma and Critical Care Symposium,<br>John F. Burke Keynote Lecture, Boston, MA   |
| 2018         | Thinking differently in health care/University of Chicago Medical Grand Rounds and Senior Day invited speaker, Chicago, IL  |
| 2017         | Gender differences in promotion, salary, and quality of care / University of Colorado<br>Hospitals Department of Medicine Grand Rounds, Aurora, CO  |
| 2018<br>2018 | Thinking differently / American College of Radiology Moreton Lecture, Washington, D.C.<br>Natural experiments in health care / SUNY Stony Brook Anesthesia Grand Rounds, Long<br>Island, NY |
| 2018         | Natural experiments in health care / UT Southwestern Medicine Grand Rounds, Dallas, TX  |
| 2019         | Valuing new medical technologies / International Society for Pharmacoeconomics and<br>Outcomes Research Annual Meeting, New Orleans, LA   |
| 2019         | Setting drug prices in Medicare: Toward a competitive market? / American Society for Health Economics Annual Meeting, Washington, D.C.  |
| 2019         | New answers to old questions in opioids/ American College of Rheumatology, Atlanta, GA  |
| 2020         | The profound difference between seeing and looking / TEDMED Conference, Boston, MA  |
| 2020         | Alternative payments models and innovation / International Society for<br>Pharmacoeconomics and Outcomes Research Annual Meeting, Orlando, FL   |
| 2020         | COVID-19 and Elections / Duke University Initiative for Science and Policy, Durham, NC  |
| 2021         | Natural experiments in health care / Electronic Health Economics Colloqium (EHEC)   |

| 2021 | Natural Experiments in health care / VCU Hospitals Department of Medicine Grand         |
|------|---|
|      | Rounds  |
| 2022 | Richmond, VA  |
| 2022 | Natural experiments in health care/University of Miami MSTP Symposium Keynote Miami, FL |
| 2022 | Natural experiments in health care/UT Southwestern                                      |
|      | Dallas, TX  |
| 2022 | Natural experiments in health care/University of Florida Medicine Grand Rounds          |
|      | Gainesville, FL   |
| 2022 | Natural experiments in health care/Academy Health Health Economics Interest Group       |
| 2022 | Boston, MA  |
| 2022 | Natural experiments in health care/University of Pennsylvania                           |
| 2022 | Philadelphia, PA<br>Natural experiments in health care/Cleveland Clinic                 |
| 2022 | Cleveland, OH   |
| 2022 | Accidental Medicine/Sentara Healthcare  |
| 2022 | Norfolk, VA   |
| 2023 | Random Acts of Medicine/St. Louis Public Library Literary Series                        |
|      | St. Louis, MO   |
| 2023 | Random Acts of Medicine/Corewell Health   |
|      | Grand Rapids, MI  |
| 2023 | Random Acts of Medicine/Society for Cardiovascular Computed Tomography National         |
|      | Meeting, Keynote  |
|      | Boston, MA  |
| 2023 | Random Acts of Medicine/University of Colorado Anschutz                                 |
|      | Aurora, CO  |
| 2023 | Random Acts of Medicine/Stanford University   |
|      | Stanford, CA  |
| 2023 | Random Acts of Medicine/ASTRO Annual Meeting Keynote                                    |
|      | San Diego, CA   |
| 2023 | Random Acts of Medicine/Family Action Network   |
|      | Chicago, IL   |
|      |   |

# **International Presentations**

Those activities below sponsored by outside entities are so noted and the sponsors are identified.

| 2005 | Who Benefits from New Medical Technologies? Evidence from AIDS                       |
|------|--|
|      | Kiel Institute for the World Economy, Kiel, Germany                                  |
| 2006 | Cost-effectiveness Analysis and Innovation/ European Science Foundation New          |
|      | Technology and Decision Making Conference  |
|      | Salzau, Germany  |
| 2015 | Productivity of physician care/Invited lecture, Royal Free Hospital, National Health |
|      | Service  |
|      | London, United Kingdom   |
| 2015 | Health care quality and the economics of innovation/Invited lecture, St. Luke's      |
|      | International University   |
|      |  |

|      | Tokyo, Japan  |
|------|---|
| 2015 | Health care quality and the economics of innovation/Invited lecture, Kyoto University |
|      | Kyoto, Japan  |
| 2016 | Measuring value in health care/Invited lecture, CPB Netherlands Bureau for Economic   |
|      | Policy Analysis   |
|      | The Hague, Netherlands  |
| 2016 | What happens to patients when doctors leave town?/Vall d'Hebron Hospital              |
|      | Barcelona, Spain  |
| 2016 | What happens to patients when doctors leave town?/University of British Columbia      |
|      | Vancouver, Canada   |
| 2017 | What happens to patients when doctors leave town?/CEMFI                               |
|      | Madrid, Spain   |
| 2018 | Natural experiments in health care / Berlin Institute of Technology                   |
|      | Berlin, Germany   |
| 2019 | Thinking differently / University College Dublin                                      |
|      | Dublin, Ireland   |
| 2019 | Natural experiments in health care / University of Paris - Descartes                  |
|      | Paris, France   |

# **Report of Clinical Activities and Innovations:**

### **Current Licensure and Certification**

| 2011- | Massachusetts Medical License                  |
|-------|--|
| 2012- | Diplomate, American Board of Internal Medicine |

### **Practice Activities**

| 2012- | Hospitalist                          | Massachusetts General Hospital |
|-------|--------------------------------------|--------------------------------|
| 2012- | Inpatient teaching service (Bigelow) | Massachusetts General Hospital |

# **Report of Education of Patients and Service to the Community:**

### **Educational Material for Patients and the Lay Community**

Those activities below sponsored by outside entities are so noted and the sponsor(s) is(are) identified.

1. Host of Freakonomics, M.D. podcast

### Books, monographs, articles and presentations in other media

- 2. Jena AB, Philipson TJ. "Dividing the Benefits from Medical Breakthroughs," *Milken Institute Review*, 8(1), pp. 46-55, 2006.
- 3. Jena AB, Philipson TJ. "Striking a Balance on New Technology," *America's Health Insurance Plans Coverage*, 2006.

- 4. Goldman D, Jena AB, Lakdawalla D, Philipson TJ, Reyes C, Sun E. "An economic evaluation of the war on cancer," *Vox*, 2010.
- 5. Chandra A, Jena AB, Skinner J. "The promise and challenge of comparative effectiveness research," *Vox,* 2011.
- 6. Lakdawalla D, Goldman D, Jena AB, Agus D. "Medicare End-of-Life Counseling: A Matter of Choice," *American Enterprise Institute Health Policy Outlook* (No. 7), pp. 1-7, 2011.
- 7. Goldman D, Schwartz S, Lakdawalla D, Philipson T, **Jena AB**. "Harnessing the promise of comparative effectiveness research," *Health Affairs* Blog, September 12, 2012.
- 8. Goldman D, Chernew, Jena AB. "Health insurance exchanges may be too small to succeed," *New York Times*, November 23, 2012.
- 9. Chandra A, Jena AB, Seabury S. "Defensive medicine may be costlier than it seems," *Wall Street Journal*, Feb 8 print edition, p. A13, 2013.
- Bhattacharya J, Chandra A, Chernew M, Goldman D, Jena AB, Lakdawalla D, Malani A, Philipson T. "Best of Both Worlds: Uniting Universal Coverage and Personal Choice in Health Care," *American Enterprise Institute*, pp. 1-41, 2013.
- 11. Dayoub E, **Jena AB**, Lakdawalla D. "The End of the Blockbuster? Implications for Pricing of New Drugs," *Health Affairs* Blog, June 16, 2014.
- 12. Philipson T, Jena AB. "Value to Whom? How much are new treatments worth?" *Scientific American World View*, 2014.
- 13. Seabury S, Helland E, **Jena AB**. "California's Proposition 46 and the uncertain future of medical malpractice liability reform." *Health Affairs* Blog, December 10, 2014
- 14. Jena AB, Philipson T. "Global health: Who should pay for your altruism?" Forbes, 6/4/2015.
- 15. Khullar D, Jena AB. "Why some drugs price should be high?" STAT, March 17, 2016.
- 16. Khullar D, **Jena AB**. "Homicide's role in the racial life-expectancy gap," *Wall Street Journal*, April 28, 2016.
- 17. Khullar D, Jena AB. "Do incentives nudge physicians to prescribe opioids for pain?," *STAT*, August 18, 2016.
- 18. Jena AB. "Proposed new guidelines for the PBS put cost-cutting before patients," *The Guardian*, August 18, 2016.
- 19. Jena AB, Kamal-Bahl S. "Family spillover effects for health care treatments should be valued," *Health Affairs Blog*, February 10, 2017.
- 20. Tsugawa Y, Jena AB, Jha AK. "Immigrant doctors provide better care, according to a study of 1.2 million hospitalizations," *Harvard Business Review*, February 2, 2017.
- 21. Jena AB, Olenski A, Blumenthal DM, Khullar D. "Trump's immigration order could make it harder to find a psychiatrist or a physician." *FiveThirtyEight*, February 3, 2017.
- 22. Jena AB, Khullar D. "To increase vaccination rates, share information on disease outbreaks," *Harvard Business Review*, February 22, 2017.
- 23. Barnett ML, Jena AB. "Long term opioid addiction can start in the ER," *Los Angeles Times*, February 27, 2017.
- 24. **Jena AB**, Khullar D. "Health care has "never events." Law enforcement should, too." *Slate*, March 7, 2017.
- 25. Tsugawa Y, Jena AB. "Higher U.S. physician spending doesn't lead to better patient outcomes." *Harvard Business Review*, March 13, 2017.
- 26. Jena AB, Gray J, Richardson S, Khullar D. "Did the election stress Americans out? If it did, we didn't see doctors about it." *FiveThirtyEight*, March 17, 2017.

- 27. Olenski AR, Barnett ML, **Jena AB**. "When clinicians know they're being watched, patients fare better." *Harvard Business Review*, March 24, 2017.
- 28. Tsugawa Y, Blumenthal DM, Newhouse JP, Zaslavsky A, Jena AB. "Do doctors get worse as they get older?" *Harvard Business Review*, May 24, 2017.
- 29. Goldman DP, Jena AB. "Value-based pricing makes sense, but it is difficult to pull off." *STAT*, June 8, 2017.
- 30. Blumenthal DM, Yu-Isenberg K, Yee J, **Jena AB**. "Real-world evidence complements randomized controlled trials in clinical decision making," *Health Affairs Blog*, September 27, 2017.
- 31. Jena AB, Barnett ML, Goldman DP. "How health care providers can help end the over-prescription of opioids," *Harvard Business Review*, October 24, 2017.
- 32. Blumenthal DM, Olenski AR, Tsugawa, **Jena AB.** "Substitute Doctors Are Becoming More Common. What Do We Know About Their Quality of Care? New research on "locum tenens" physicians," *Harvard Business Review*, December 11, 2017.
- 33. **Jena AB**, Jain A, Hicks TR. "Do 'Fast and Furious' Movies Cause a Rise in Speeding?," *New York Times*, January 26, 2018.
- 34. Venkataramani A, Gandhavadi M, **Jena AB**. "Far from being forgotten, the NFL's 'replacement players' may help make football safer," *STAT*, February 2, 2018.
- 35. **Jena AB**. "U.S. drug prices higher than in the rest of the world, here's why," *The Hill*, January 19, 2018.
- 36. Jena AB, Goldman DP. "Here's how we can increase the supply or organs and keep people off the waiting list," *The Hill*, February 13, 2018.
- 37. Geruso M, Jena AB, Layton T. "Will personalized medicine mean higher costs for consumers?" *Harvard Business Review*, March 1, 2018.
- 38. Jena AB, Blumenthal DM, Kamal-Bahl S. "Health Care Is an Investment, and the U.S. Should Start Treating It Like One." *Harvard Business Review*, April 2, 2018.
- 39. Khullar D, Jena AB. "Our surprising finding: Whatever a doctors political views, end-of-life care is the same." *USA Today*, April 12, 2018.
- 40. **Jena AB**, Gray J, Sunstein C. "Doctor visits about suicidal thoughts rose with '13 Reasons Why.' Handle Season 2 with care." *USA Today*, May 17, 2018.
- 41. Rotenstein L, Jena AB. "It's time to rethink the anatomy of physician behavior," *Health Affairs Blog*, June 20, 2018.
- 42. Jena AB, Sunstein C Hicks TR. "The benefit of having the same name as a police officer" *New York Times*, August 5, 2018.
- 43. Jena AB. "Making medical school free is no cure-all" *Bloomberg*, August 28, 2018.
- 44. Goldman DP, Jena AB. "Surprise! Trump might actually lower drug prices" *Washington Post*, August 29, 2018.
- 45. Khullar D, Jena AB. "How modern medicine has changed the Supreme Court" *New York Times*, August 31, 2018.
- 46. Rotenstein L, Sadun R, Jena AB. "Why doctors need leadership training." *Harvard Business Review*, October 17, 2018.
- 47. Jena AB, Barnett ML, Layton. "The link between August birthdays and A.D.H.D." *New York Times*, November 28, 2018.
- 48. Worsham C, **Jena AB**. "The art of evidence based medicine" *Harvard Business Review*, January 30, 2019.
- 49. Rotenstein L, Jena AB. "Pursuing salary equity in medical leadership where is the data?" *Health Affairs Blog*, April 26, 2019.

- 50. Jena AB. "Is an 80-hour work week enough to train a doctor?" *Harvard Business Review*, July 11, 2019.
- 51. Frakes MD, Gruber J, Jena AB. "Do as the doctor says, not as he or she does" STAT, July 22, 2019.
- 52. Jena AB, Kee R, Baumgardner J, Ma Q, Zhang J. "Making life saving medical treatments more affordable." *Harvard Business Review*, October 25, 2019.
- 53. Lerchenmueller M, Sorensen O, Jena AB. "Women present their research less positively than men." *Harvard Business Review*, December 18, 2019.
- 54. Jena AB, Lerchenmueller M, Sorensen O. "Men call their own research 'excellent'." *New York Times*, December 17, 2019.
- 55. Jena AB, Olenski AR. "How common mental shortcuts can cause major physician errors." *New York Times*, February 20, 2020.
- 56. Jena AB, Woo J, Worsham C. "How much does voting spread viruses?" *New York Times*, March 17, 2020.
- 57. Worsham C, **Jena AB**, Goldman DP. "Where is Big Data when we need it most?" *The Hill*, April 23, 2020.
- 58. Jena AB, Worsham C. "What coronavirus researchers can learn from economists." *New York Times*, June 30, 2020.
- 59. Jena AB, Worsham C. "If we want to beat Covid-19, we need to get a lot better at vaccinating people." *Washington Post*, July 9, 2020.
- 60. Fink, S, Jena AB, "Calif. Pay-For-Delay Law Lacks Nuance." Law360, July 17, 2020.
- 61. Worsham C, Jena AB. "The curious link between kids' birthdays and getting their flu vaccine." *STAT*, August 1, 2020.
- 62. Worsham C, Jena AB. "Make flu shots mandatory for school openings." *Bloomberg Opinion*, August 5, 2020.
- 63. Whaley C, **Jena AB**. "Women make less when men dominate their workplaces. Gender diversity could close the gap." *USA Today*, August 14, 2020.
- 64. Jena AB. "To really lower health care costs, look beyond prescription drugs." *Washington Post*, February 16, 2021.
- 65. Jena AB, Yabroff KR, Watanabe JH, Amankwah FH. "Discarded drugs in single dose vials: Can payers recoup payment?" *Health Affairs Blog*, March 12, 2021.
- 66. Whaley C, **Jena AB.** "We studied COVID-19 cases after birthdays. Family gatherings can still be dangerous." *USA Today*, June 21, 2021.
- 67. Jena AB. "The Covid 'Birthday Effect' Crossed Political Boundaries." *New York Times*, July 16, 2021.
- 68. Jena AB, Worsham C. "Facts Alone Aren't Going to Win Over the Unvaccinated. This Might." *New York Times*, December 21, 2021.
- 69. Worsham C, Jena AB. "The 'successful failures' of Apollo 13 and Covid-19 vaccination." *STAT*, April 11, 2022.
- 70. Essien UR, Ly DP, Jena AB. "Why Affirmative Action Bans Hurt Health Equity." Los Angeles Times, May 3, 2022.
- 71. Jena AB, Worsham C. "The Science of What We Eat is Failing Us." New York Times, June 19, 2023.
- 72. Jena AB, Worsham C. "Do Younger or Older Doctors Get Better Results?" *Wall Street Journal*, July 8, 2023.
- 73. Jena AB, Worsham C. "Why Kids with Summer Birthdays Face Surprising Health Risks." *Los Angeles Times*, July 11, 2023.

- 74. Jena AB, Worsham C. "How Did E-ZPass Help Expectant Mothers Who Live Near Toll Booths?" *Harvard Gazette*, July 11, 2023.
- 75. Jena AB. "What to Watch Out for When Students Have Summer Birthdays." *Education Week*, July 12, 2023.
- 76. Jena AB, Worsham C. "The Surprising Link Between Thunderstorms and Asthma." *Wall Street Journal*, November 11, 2023.

# **Report of Scholarship:**

### Peer Reviewed Publications in Print or Other Media

#### **Research Investigations**

- 1. Franco P, Wilson T, **Jena AB**. "Physiological evidence for an interaction between helices II and XI in the Melibiose carrier of *E.Coli*," *Biochimica Et Biophysica Acta*, 1510 (1-2), pp. 231-242, 2001.
- Philipson TJ, Jena AB. "Who benefits from new medical technologies? Estimates of consumer and producer surpluses from the new HIV/AIDS drugs," *Forum for Health Economics and Policy*, Forum: Biomedical Research and the Economy, Article 3, 2005. (Also NBER Working Paper 11810).
- 3. Jena AB, Philipson TJ. "Cost-effectiveness as a price control," *Health Affairs* 26(3), pp. 696-703, 2007.
- 4. Garber A, Goldman D, Jena AB. "The promise of health care cost-containment," *Health Affairs* 26(6), pp. 1545-1547, 2007.
- 5. Jena AB, Philipson TJ. "Cost-effectiveness analysis and innovation," *Journal of Health Economics* 27, pp. 1224-1236, 2008. Originally circulated as "Surplus Appropriation from R&D and Technology Assessment Procedures," NBER Working Paper 12016.
- 6. Goldman D, **Jena AB**, Philipson TJ, Sun EC. "Drug licenses: A promising model of pharmaceutical pricing," *Health Affairs* 27(1), pp. 122-129, 2008.
- 7. Joyce G, Goldman D, Vogt W, Sun EC, Jena AB. "An assessment of Medicare Part D after two years," *American Journal of Managed Care* 15(8), pp. 536-544, 2009.
- 8. Goldman D, Jena AB, Lakdawalla D, Malin J, Malkin J, Sun EC. "The value of specialty oncology drugs," *Health Services Research* 45(1), pp. 115-132, 2009.
- 9. Jena AB, Calfee J, Mansley E, Philipson TJ. "Me-too innovation in pharmaceutical markets," *Forum for Health Economics & Policy* 12(1) (Frontiers in Health Policy Research), Article 5, 2009.
- 10. Lakdawalla D, Sun EC, **Jena AB**, Goldman D, Philipson TJ. "An economic evaluation of the war on cancer," *Journal of Health Economics* 29(3), pp. 333-346, 2010.
- 11. Sun EC, **Jena AB**, Lakdawalla D, Reyes C, Philipson TJ, Goldman D. "The contributions of improved therapy and earlier detection to cancer survival gains, 1988-2000" *Forum for Health Economics & Policy* 13(2), Article 1, 2010.
- 12. Meltzer DO, **Jena AB**. "The economics of intense exercise," *Journal of Health Economics* 29 (3), pp. 347-352, 2010.
- 13. Jena AB, Goldman D, Lakdawalla D, Kamdar A, Lu Y. "Sexually transmitted diseases among users of erectile dysfunction drugs," *Annals of Internal Medicine* 153(1), pp. 1-7, 2010.
- 14. Jena AB, Mechoulan S, Philipson TJ. "Altruism and innovation in health care," *Journal of Law and Economics* 53(3), pp. 497-518, 2010.
- 15. Jena AB, Baldwin D, Daughtery S, Meltzer D, Arora V. "Presenteeism among resident physicians," *Journal of the American Medical Association* 304(11), pp. 1166-1168, 2010.

- 16. Romley J, **Jena AB**, Goldman D. "Hospital spending and inpatient mortality: Evidence from California," *Annals of Internal Medicine* 154(3), pp. 160-167, 2011.
- 17. Jena AB, Goldman D, Joyce G. "Association between the birth of twins and parental divorce," *Obstetrics and Gynecology* 117(4), pp. 892-897, 2011.
- 18. Chandra A, Jena AB, Skinner J. "The pragmatists's guide to comparative effectiveness research," *Journal of Economic Perspectives* 25(2), pp. 27-46, 2011.
- 19. Jena AB, Goldman D. "Growing internet use may help explain the rise in prescription drug abuse in the United States," *Health Affairs* 30(6), pp. 1-8, 2011.
- 20. Basu, A, **Jena AB**, Philipson TJ. "The impact of comparative effectiveness research on health and health care spending," *Journal of Health Economics* 30(4), pp. 695-706, 2011.
- 21. Jena AB, Seabury S, Lakdawalla D, Chandra A. "Malpractice risk according to physician specialty," *New England Journal of Medicine* 365(7), pp. 629-636, 2011.
- 22. Jena AB, Goldman D, Foster S, Califano J. "Prescription medication abuse and internet-based pharmacies," *Annals of Internal Medicine* 155(12), pp. 848-850, 2011.
- 23. Karaca-Mandic P, **Jena AB**, Joyce G, Goldman D. "Out-of-pocket medication costs and use of medications and health care services among children with asthma," *Journal of the American Medical Association* 307(12), pp. 1284-1291, 2012.
- 24. Seabury S, Chandra A, Lakdawalla D, Jena AB. "Defense costs of medical malpractice claims," *New England Journal of Medicine* 366(14), pp. 1354-1356, 2012.
- 25. Jena AB, Chandra A, Lakdawalla D, Seabury S. "Outcomes of medical malpractice litigation against US physicians," *Archives of Internal Medicine* 172(11), pp. 892-94, 2012.
- 26. Jena AB, Meltzer DO, Press V, Arora V. "Why physicians work when sick," *Archives of Internal Medicine* 172(14), pp. 1107-08, 2012.
- 27. Jena AB, Arora V, Hauer K, Durning S, Borges N, Oriol N, Elnicki M, Fagan M, Harrell H, Torre Dario, Prochaska M, Meltzer DO, Reddy S. "The prevalence and nature of postinterview communications between residency programs and applicants during the match," *Academic Medicine* 87(10), pp. 1434-42, 2012.
- 28. Jena AB, Romley J, Newton-Cheh C, Noseworthy P. "Therapeutic hypothermia for out-of-hospital cardiac arrest: Utilization trends and hospital mortality," *Journal of Hospital Medicine* 7(9), pp. 684-689, 2012.
- 29. Ratcliffe T, Durning S, **Jena AB**, Grau T, Artino A, Arora V, Hauer K, Borges N, Oriol N, Elnicki M, Fagan M, Harrell H, Torre D, Prochaska M, Meltzer D, Reddy, S. "Postinterview communication between military residency applicants and training programs," *Military Medicine* 177(9), pp. 54-60, 2012.
- 30. Philipson TJ, Sun EC, Goldman D, Jena AB. "A Re-examination of the Costs of Medical R&D," *Forum for Health Economics & Policy* 15(3), pp. 132-159, 2012.
- 31. Seabury S, **Jena AB**, Chandra A. "Trends in earnings of health care professionals in the United States, 1987-2010," *Journal of the American Medical Association* 38(20), pp. 2083-285, 2012.
- 32. Jena AB, Philipson TJ. "Endogenous cost-effectiveness analysis and health care technology adoption," *Journal of Health Economics* 32(1), pp. 172-180, 2013.
- 33. Seabury S, Chandra A, Lakdawalla D, **Jena AB**. "On average, physicians spend nearly 11 percent of their 40-year careers with an open, unresolved malpractice claim" *Health Affairs* 32(1), pp. 111-119, 2013.
- 34. Jena AB, Karaca-Mandic P, Weaver L, Seabury S. "Predicting new diagnoses of human immunodeficiency virus infection using internet search engine data," *Clinical Infectious Diseases*, doi:10.1093/cid/cit022, February 7, 2013.

- 35. Prasad V, **Jena AB**. "Pre-specified falsification endpoints: can they validate true observational associations?," *Journal of the American Medical Association* 309(3), pp. 241-242, 2013.
- 36. **Jena AB**, Sun EC, Goldman D. "Confounding in the association of proton pump inhibitor use with risk of community acquired pneumonia," *Journal of General Internal Medicine* 28(2), pp. 223-30, 2013.
- 37. Blumenthal D, Song Z, Jena AB, Ferris T. "Guidance for structuring team-based incentives in healthcare," *American Journal of Managed Care* 19(2), e64-370, 2013.
- 38. Romley J, Jena AB, O'Leary J, Goldman D. "Spending and mortality in U.S. Acute Care Hospitals," *American Journal of Managed Care* 19(2), e46-54, 2013.
- 39. Jena AB, Mechoulan S, Philipson TJ. "Should global health be tailored toward the rich? Altruism and efficient R&D for neglected diseases," *Forum for Health Economics & Policy* 16(1), pp. 1-17, 2013.
- 40. Jena AB, Prasad V. "Duty hour reform in a shifting medical landscape," *Journal of General Internal Medicine* 28(9), pp. 1238-40, 2013.
- 41. Blumenthal D, Jena AB. "Hospital value based purchasing," *Journal of Hospital Medicine* 8(5), pp. 271-277, 2013.
- 42. Axelrod L, Shah D, **Jena AB**. "The European Working Time Directive: An uncontrolled experiment in medical care and education," *Journal of the American Medical Association* 309(5), pp. 447-48, 2013.
- 43. Jena AB, Chandra A, Seabury S. "Malpractice risk among U.S. pediatricians," *Pediatrics* 131(6), pp. 1148-1154, 2013.
- 44. Seabury S, Chandra A, **Jena AB**. "Trends in the Earnings of Male and Female Health Care Professionals in the United States, 1987-2010," *JAMA Internal Medicine* 173(18), pp. 1748-50, 2013.
- 45. Goldman D, Gupta C, Vasudeva E, Trakas K, Riley R, Lakdawalla D, Agus D, Sood N, Jena AB, Philipson TJ. "The value of diagnostic testing in personalized medicine," *Forum for Health Economics & Policy* 16(2), pp. 121-33, 2013.
- 46. Basu A, **Jena AB**, Goldman D, Philipson T, Dubois R. "Heterogeneity in action: The role of passive personalization in comparative effectiveness research," *Health Economics* 23(3), pp. 359-373, 2013.
- 47. Jena AB, Sun E, Romley J. "Mortality among high risk patients with acute myocardial infarction admitted to U.S. teaching-intensive hospitals in July: A retrospective observational study," *Circulation* 128(25), pp. 2754-63, 2013.
- Lakdawalla D, Jena AB, Doctor J. "Careful Use of Science to Advance the Debate on United Kingdom's Cancer Drugs Fund," *Journal of the American Medical Association* 311(1), pp. 25-26, 2014.
- 49. Jena AB, Sun E, Prasad V. "Does the declining lethality of gunshot injuries mask a rising epidemic of gun violence in the United States?" *Journal of General Internal Medicine* 29(7), pp. 1065-1069, 2014.
- 50. Jena AB, Goldman D, Weaver L, Karaca-Mandic P. "Opioid prescribing by multiple providers in Medicare: retrospective observational study of insurance claims," *BMJ* 348:g1393, 2014.
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