### The Faculty of Medicine of Harvard University Curriculum Vitae

Date Prepared:	October 9, 2020
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### Education:

9/2002–5/2006	B.A. with General and Departmental Honors	Major: Public Health Studies Minor: Economics	Johns Hopkins University
8/2006–5/2014	M.D., Magna Cum Laude	Medicine	Harvard Medical School
8/2008–5/2012	Ph.D.	Health Policy Economics concentration	Harvard University

### **Postdoctoral Training:**

6/2014–6/2015	Internship	Internal Medicine, Primary Care	Massachusetts General Hospital
6/2015–6/2017	Residency	Internal Medicine, Primary Care	Massachusetts General Hospital

### **Clinical and Research Fellowships:**

6/2010–5/2012	Pre-Doctoral Fellow	Fellowship in Aging and Health Economics	National Bureau of Economic Research
6/2012–5/2013	Post-Doctoral Fellow	Fellowship in Aging and Health Economics	National Bureau of Economic Research
6/2014–6/2017	Clinical Fellow	Medicine	Harvard Medical School

### **Faculty Academic Appointments:**

7/2017–	Assistant Professor	Health Care Policy	Harvard Medical School
7/2018–	Assistant Professor	Medicine	Harvard Medical School

### Appointments at Hospitals/Affiliated Institutions:

8/2017–5/2020	Assistant in Medicine	Department of Medicine	Massachusetts General Hospital
5/2020-	Assistant Physician	Department of Medicine	Massachusetts General Hospital

### **Other Professional Positions:**

2004–2006	Intern (2004-05), Special Guest (2005-06)	The Brookings Institution,
	Center on Social and Economic Dynamics	Washington, DC

2005–2006	Clinical Research Fellow, Department of Medicine	Union Memorial Hospital, Baltimore, MD
2015	Analyst/Advisor, Medicare Advantage payment policy Office of Health Policy, Office of the Assistant Secretary for Planning and Evaluation (Jul-Aug)	U.S. Department of Health and Human Services
2015–2016	Visiting Fellow, Accountable Care, Health Policy Commission	Commonwealth of Massachusetts
2016	Visiting Scholar, Dartmouth Institute for Health Policy and Clinical Practice (Aug-Sep)	Geisel School of Medicine, Dartmouth College
2016	Visiting Scholar, Leonard Davis Institute of Health Economics and Department of Medical Ethics and Health Policy (Oct-Nov)	Perelman School of Medicine, University of Pennsylvania
2017–	Faculty, Center for Primary Care	Harvard Medical School
Administrati	ve Leadership Positions:	
Local		
2003–2005	Founder and Editor-in-Chief, Epidemic Proportions: Johns Hopkins Undergraduate Public Health Journal	Johns Hopkins University
2005–2006	President, Alpha Epsilon Delta: Johns Hopkins Pre- Medical Honor Society	Johns Hopkins University

Resident Tutor, Pre-Medicine Committee

Co-Chair, Student Leadership Committee

Co-President, Harvard University Student Chapter

Cabot House,	Harvard	College
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AcademyHealth

Center for Primary Care, Harvard Medical School

### **Committee Service:**

# Local

2008–2012

2010–2011

2013–2014

2011–2014	Student Steering Committee, MD-PhD Program	Harvard Medical School
2014–2015	Community Advisory Board, Center for Primary Care	Harvard Medical School
2015–2016	Leadership Council, The Family Van	Harvard Medical School
2015–2017	Representative of the Department of Medicine, Trainee Quality and Safety Committee (2-year term)	Massachusetts General Hospital
2016–2017	Resident Co-Leader, Department of Medicine Resident Quality and Safety Committee	Massachusetts General Hospital
2016–2017	Resident Co-Leader, Department of Medicine Resident Leadership Curriculum	Massachusetts General Hospital
2017–	Committee on Higher Degrees in Health Policy	Harvard University
2018–	Finance Committee, Internal Medicine Associates	Massachusetts General Hospital
2018–	Standing Committee on Health Policy	Ph.D. Program in Health Policy Harvard University

### Regional

2009–2012	Committee on Publications	Massachusetts Medical Society
2010–2012	Task Force on Health Care Reform	Massachusetts Medical Society
2010–	Boston Advisory Board	Albert Schweitzer Fellowship
National		
2015	Technical Expert Panel: "Improving Medicare Advantage Benchmarks," Office of the Assistant Secretary for Planning and Evaluation	U.S. Department of Health and Human Services
2016	Payment Transformation Blue Ribbon Panel	Hawaii Medical Service Association
2020	Technical Expert Panel	Health Care Cost Institute
2020	Co-chair, Scientific Abstract Committee	Society of General Internal Medicine
Professional	Societies:	
2008–	Massachusetts Medical Society 2008–2010 Medical Student Section	
2009–	American Society of Health Economists	
2011–	AcademyHealth	
2014–2015	American College of Physicians	

# Other Review Activities:

Grant Review Activities:

2014-

2018-

2016

2018

2014	Abstract Reviewer, Annual Research Meeting	AcademyHealth
2015–2016	Student Poster Abstract Committee	AcademyHealth
	Abstract Reviewer, 25th Annual National Research Service Award (NRSA) Trainees Research Conference	Agency for Healthcare Research and Quality

National Institute on Aging,

National Institute on Aging, National Institutes of Health

National Institutes of Health

### **Editorial Activities:**

#### Ad hoc Reviewer

Academic Medicine American Economic Review American Journal of Epidemiology American Journal of Managed Care Annals of Internal Medicine British Medical Journal Circulation Circulation: Cardiovascular Quality and Outcomes Forum for Health Economics & Policy

Society of General Internal Medicine

NIA-S: Standing Committee on Behavioral and Social

Science of Aging (Ad hoc Grant Reviewer)

Scientific review panel (Ad hoc Grant Reviewer)

American Economic Association

Health Affairs Health Economics Health Services and Outcomes Research Methodology Health Services Research Healthcare Inquiry International Journal of Health Care Finance and Economics JAMA Internal Medicine Journal of Clinical Oncology Journal of General Internal Medicine Journal of Health Economics Journal of Human Resources Journal of Public Economics Journal of the American Medical Association Medical Care Research and Review Milbank Quarterly New England Journal of Medicine PLOS Medicine Psychiatric Services

#### **Other Editorial Roles**

2013–2017	Editor, Payment Reform	Healthcare
2013–2018	Associate Editor	Healthcare
2017–2018	Guest Editor	Inquiry (Special Collection on Medicare Advantage)
2017–	Editorial Board	PLOS Medicine

### Honors and Awards:

2002–2006	Woodrow Wilson Research Fellowship	Johns Hopkins University
2005	Finalist, Rhodes Scholarship	District XV, United States
2005–2006	Suzy Bacon Fellowship (Honorary)	Johns Hopkins University
2006	Outstanding Achievement in Public Health	Johns Hopkins University
2007	Edward Hickling Bradford Research Fellowship	Harvard Medical School
2007	PASTEUR Research Fellowship	Harvard Medical School
2009	Top Doctors: Boston Medical Students	Boston Magazine
2009–2011	Certificate of Distinction in Teaching 2009: Advanced Topics in Health Policy (GOV 1597) 2010: Advanced Topics in Health Policy (GOV 1597) 2011: Advanced Topics in Global Health and Health Policy (GHHP 99)	Harvard University
2010	Top 10 Papers Published in 2010	Health Affairs
2010–2011	Excellence in Tutorial Facilitation Award 2010: Introduction to Health Care Policy (HC.750) 2011: Introduction to Health Care Policy (HC.750)	Harvard Medical School
2011	Best Abstract, Most Outstanding Abstract, "Health Reform Implementation" category	AcademyHealth Annual Research Meeting, Seattle

2011	First place, Health Policy/Medical Education Sixth Annual Research Poster Symposium	Massachusetts Medical Society
2011	Honorable Mention Award, Innovations Conference	Center for Primary Care Harvard Medical School
2012	Best Abstract, Most Outstanding Abstract, "Delivery System Innovations" category	AcademyHealth Annual Research Meeting, Orlando
2012	Finalist, 18th Annual Health Care Research Award	National Institute for Health Care Management Foundation
2012	Joan P. Curhan Citizenship Award	Harvard University
2013	Article-of-the-Year Award	AcademyHealth
2014	30 Under 30 in Science and Healthcare	Forbes Magazine
2014	Honors in a Special Field (Magna): Health Economics and Health Policy	Committee on Awards & Honors Harvard Medical School
2014	Rose Seegal Prize ("Best research paper on the relation of the medical profession to the community")	Faculty of Medicine Harvard Medical School
2014	Best Abstract Award (Residents) 12th Annual Celebration of Clinical Research	Department of Medicine Massachusetts General Hospital
2014	Daniel Ford Award ("Achievement in health services and outcomes research"), General Internal Medicine Housestaff Research Awards	Division of General Internal Medicine, Johns Hopkins Medicine
2014	First Place, Oral Presentation Resident Research Category	Massachusetts Chapter, American College of Physicians
2015	National Winner, "High Value Care" category Resident/Fellow Research Poster Competition	Internal Medicine 2015, American College of Physicians
2015	Morton N. Swartz, M.D. Humanism in Medicine Award Selected by peers for "Joy in the practice of medicine and kindness to others"	Department of Medicine, Massachusetts General Hospital
2015	Hospital-Wide Individual Research Award	Massachusetts General Hospital
2016	Mack Lipkin Sr. Associate Member Scientific Presentation Award	Society of General Internal Medicine
2016	Seema S. Sonnad Emerging Leader in Managed Care Research Award	The American Journal of Managed Care
2017	Award for Excellence in Clinician Investigation	Society of General Internal Medicine, New England Region
2018	Most-Shared Health Affairs Articles of 2017	Health Affairs
2018	HCUP Outstanding Article of the Year – Honorable Mention	AHRQ and AcademyHealth
2018	Ten Influential Studies in Health Services Research	National Academy of Medicine
2019	Milton W. Hamolsky Jr. Faculty Scientific Presentation Award	Society of General Internal Medicine
2019	Bernie J. O'Brien New Investigator Award	International Society for Pharmacoeconomics and Outcomes Research

2019	Best Abstract, "Payment and Delivery System Innovations" category	AcademyHealth Annual Research Meeting, Washington
2020	Outstanding Reviewer in 2019	Health Services Research
2020	Outstanding Junior Investigator of the Year	Society of General Internal Medicine
2020	NIHCM Foundation Health Care Research Award	National Institute for Health Care Management Foundation
2020	Best Abstracts, "Addressing Consumer and Patients' Preferences and Needs" category and "Payment and Delivery Systems Innovations" category	AcademyHealth Annual Research Meeting

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

# Past

2011–2014	Provider Payment Reform and Implications for Health Care Costs National Institute on Aging (F30 AG039175) Principal Investigator Individual Pre-doctoral MD-PhD National Research Service Award
2014–2016	Impact of Payment Reform on Physician Referrals, Patient Flows and Health Care Costs National Institute for Health Care Management Foundation Co-investigator (PI: Bruce Landon) Evaluations of the All-Payer Claims Database of the Commonwealth of Massachusetts
2014–2017	"The Impact of Employee Wellness Programs: A Randomized Controlled Trial" Jameel Poverty Action Lab – North America Co-investigator (PI: Katherine Baicker) Randomized controlled trial of the impact of a workplace wellness intervention
2015–2018	"The Impact of Employee Wellness Programs: A Randomized Controlled Trial" Robert Wood Johnson Foundation (72611) Co-Project Director with Katherine Baicker Randomized controlled trial of the impact of a workplace wellness intervention
Current	
2016–2020	"The Impact of Employee Wellness Programs" National Institute on Aging (R01 AG050329) Principal Investigator 2018–2020 (PI: Katherine Baicker 2016–2018) Randomized controlled trial of the impact of a workplace wellness intervention
2017–2021	Laura and John Arnold Foundation Co-investigator (PI: Michael Chernew) HealthCare Markets and Regulation Lab, Harvard Medical School Research on payment and delivery system reform
2017–2022	"Inequities in Health Outcomes in the Twenty-First Century: Understanding New Causes and the Impact of Delivery System Reforms on Health Care Disparities" Office of the Director, National Institutes of Health (DP5 OD 024564) Principal Investigator NIH Director's Early Independence Award

### Training Grants and Mentored Trainee Grants

2008–2009 Harvard University Ph.D. Program in Health Policy Training Grant Agency for Healthcare Research and Quality (T32 HS000055) Trainee (PI: Joseph Newhouse) Institutional Training Grant

- 2009–2010 Harvard Medical School/Harvard University Walker Grant Harvard University PhD Program in Health Policy Trainee (PI: Joseph Newhouse) Institutional Training Grant
- 2010–2011 Pre-doctoral Fellowship in Aging and Health Economics National Institute on Aging (T32 AG000186) Pre-doctoral Fellow (PI: David Wise) National Bureau of Economic Research (NBER) pre-doctoral fellowship

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

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

2009–2010	Advanced Topics in Health Policy Co-Instructor, undergraduates	Harvard College 1-2 2-hour classes/week, 13 weeks
2011 Spring	Advanced Topics in Global Health and Health Policy, Co-Instructor, undergraduates	Harvard College 1 2-hour class/week, 13 weeks
2009–2015	Introduction to Health Care Policy, medical and dental medicine students 2009–2011: Head Teaching Fellow 2009–2010, 2014: Tutorial leader 2011–2015: Guest lecturer	Harvard Medical School and Harvard School of Dental Medicine 3 1-hour classes/week, 4 weeks 1 2-hour lecture/year
2015 Aug	Economics for Health Policy, Guest lecturer, Master's degree students	Harvard T.H. Chan School of Public Health, 2-hour lecture
2016 Nov	Health Care Management & Strategy, Guest lecturer, undergraduate students	Wharton School, Univ of Pennsylvania 1.5-hour lecture
2016 Fall	Health Care Systems, Guest lecturer, undergraduate students	Wharton School, Univ of Pennsylvania 2 1.5-hour lectures
2017–	Research in Health Economics, Guest lecturer, doctoral students	Harvard Kennedy School 1.5-hour lecture per year
2018–	Evidence, Insight and Strategy for Optimizing Health Benefits, Course Co-Director	Harvard Medical School Office for External Education, 3 days per year
2018 Aug	Economics for Health Policy, Guest lecturer, Master's degree students	Harvard T.H. Chan School of Public Health, 2-hour lecture
2018–	Core Course in Health Policy, Guest lecturer and Quality section leader (2020), doctoral students	Harvard University 1 to 2 2-hour lectures per year
2019–	Essentials of the Profession 1—Health Policy, Tutorial leader, medical and dental medicine students	Harvard Medical School and Harvard School of Dental Medicine 2 hours per week, 4 weeks per year
2019 Nov	U.S. Healthcare Industry and Regulatory Policy, Guest lecturer, graduate students	Harvard Kennedy School 1-hour lecture
2020	Health Care Quality in America, Guest lecturer, Undergraduate students	Harvard College 1-hour lecture
2020	Essentials of the Profession 2—Health Policy,	Harvard Medical School

	Guest lecturer, medical and dental students	2 1-hour lectures
2020 May	Economics of Health Care—Public vs. Market Solutions, Guest lecturer	Harvard T.H. Chan School of Public Health, 1-hour lecture
2020 July	MD-PhD Summer Course for entering students, Guest lecturer	Harvard Medical School 2 1-hour classes
Formal Teach	ning of Residents, Clinical Fellows and Researc	h Fellows (post-docs):
2015 Apr	"Improving Quality while Slowing Spending," Department of Medicine Noon Conference, residents (PGY 1-3) and faculty	Massachusetts General Hospital 1-hour lecture
2015–2016	"High-Yield Health Policy," Department of Medicine Ambulatory Care Curriculum, junior and senior residents (PGY 2-3)	Massachusetts General Hospital 4 1-hour lecturers
2017–	"Health Care Policy" Department of Medicine Noon Conference, residents (PGY 1-3) & faculty	Massachusetts General Hospital 1-2 1-hour lectures per year
2017 Feb	Partners Centers of Expertise in Health Policy and Management: Health Policy Course, residents and fellows (PGY 1-9)	Partners Healthcare, Boston, MA 1-hour lecture
2017 Mar	"Current Issues in Health Policy," Department of Psychiatry, residents (PGY 3-4)	McLean Hospital 1-hour lecture
2017–	"U.S. Health/Mental Health Policy," Department of Psychiatry Community Psychiatry Curriculum, residents (PGY 1-4)	Massachusetts General Hospital 3-5 hours per year
2017–	"US Health Policy" Department of Medicine Global Medicine Curriculum, interns (PGY 1)	Massachusetts General Hospital 1-hour lecture per year
2018–	Co-Director, Partners Centers of Expertise in Health Policy and Management: Health Policy Course, residents and fellows (PGY 1-9)	Partners Healthcare 1 week per year, 3-5 hours of lecture and discussion per year
2018–	Invited discussant, Department of Psychiatry Child Psychiatry Fellowship Journal Club	Massachusetts General Hospital 1-hour seminar per year
2019–	"Health Care Policy and Economics," Management Leadership Track (PGY 1-3)	Brigham and Women's Hospital 1-hour lecture per year
2020	"Health Care Policy" MGH/McLean Adult Psychiatry Residency noon conferences	Massachusetts General Hospital 2.5 hours
Clinical Supe	ervisory and Training Responsibilities:	
2018–	Inpatient attending physician on the Bigelow house staff teaching service	Massachusetts General Hospital 4 weeks per year
Laboratory a	nd Other Research Supervisory and Training Re	esponsibilities:

2017–	Supervision of doctoral student research and training, Harvard Medical School	2 hour meetings per month and 1:1 supervision 2 hours per month
2017–	Supervision of research assistants training and	1 hour meeting per week and 1:1

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	protocol, Harvard Medical School	supervision 1 hour per week
2018–	Supervision of summer students research and training, Harvard Medical School	1 hour meeting per week and 1:1 supervision 1 hour per week
Formally Mer	ntored Harvard Medical, Dental, and Graduate St	udents:
2017–	<ul> <li>Suhas Gondi, M.D./M.B.A. candidate, Harvard M. School; Foster Scholar in Health Policy, Advocad Primary Care Innovation, Massachusetts Generation</li> <li>Mentoring role: research advisor and collabo</li> <li>5 papers published: <u>Health Affairs Blog</u> (2019) JAMA IM (2020)</li> </ul>	cy, and Media, Stoeckle Center for al Hospital rator
2018–	<ul> <li>Yunan Ji, Ph.D. candidate in Health Policy, Harv</li> <li>Mentoring role: research advisor and collabo</li> <li>1 paper published: <u>NEJM</u> (2019)</li> </ul>	
2018–	<ul> <li>Mubeen Shakir, M.Sc., M.D. (2019), Harvard Me</li> <li>Mentoring role: research advisor for HMS sch Health and Health Care between Rural and U the HMS Leon Eisenberg Prize for Medicine</li> </ul>	holarly project (thesis) "Differences in Jrban America," which was awarded
2018–	<ul> <li>Joseph Bruch, Ph.D. candidate, Harvard School</li> <li>Mentoring role: chair, dissertation committee</li> <li>3 papers published: <u>JAMA Internal Medicine</u> <u>Medicine</u> (2020)</li> </ul>	
2018–	<ul><li>Jason Buxbaum, Ph.D. candidate in Health Polic</li><li>Mentoring role: research advisor</li></ul>	cy, Harvard University
2019–	<ul> <li>Shivani Shah, M.D. candidate, Harvard Medical</li> <li>Mentoring role: research advisor</li> <li>1 paper published: <u>JAMA Health Forum</u> (202</li> </ul>	
2020–	<ul><li>Garret Johnson, M.D. candidate, Harvard Medica</li><li>Mentoring role: scholarly project mentor</li></ul>	al School
Other Mentored Trainees and Faculty:		

2013–2017 Andrew P. Loehrer, M.D., M.P.H. Assistant Professor of Surgery, Geisel School of Medicine, Dartmouth; formerly Clinical Fellow in Complex General Surgical Oncology, MD Anderson Cancer Center; David Torchiana Fellow in Health Policy & Management, MGH

- Mentoring role: research advisor and collaborator
- 7 original research manuscripts published in: <u>JAMA Surgery</u> (2013, 2017), <u>Annals of Surgery</u> (2015, 2016), <u>Journal of the American College of Surgeons</u> (2015), <u>Journal of Clinical Oncology</u> (2016), and <u>Journal of Oncology Practice</u> (2017)
- 2014–2015 John W. Scott, M.D., M.P.H. Assistant Professor, University of Michigan; formerly Fellow, Harborview Medical Center; Henry Ellis Warren Research Fellow, Center for Surgery and Public Health, BWH; Brigham and Women's Hospital and Harvard Medical School

	<ul> <li>Mentoring role: research advisor and collaborator</li> <li>2 original research manuscripts published in: <u>Health Affairs</u> (2015), <u>Journal of the American College of Surgeons</u> (2015)</li> </ul>
2018 Summer	<ul><li>Carol Tao, B.A. candidate, New York University</li><li>Mentoring role: research advisor</li></ul>
2018 Summer	<ul><li>William Tian, M.D. candidate, University of Illinois College of Medicine</li><li>Mentoring role: research advisor</li></ul>
2018–2019	<ul> <li>Cian P. McCarthy, M.B., B.Ch., B.A.O.</li> <li>Internal Medicine resident, Massachusetts General Hospital</li> <li>Mentoring role: research advisor and collaborator</li> <li>2 papers published in: Journal of the American College of Cardiology (2018), Circulation (2018)</li> </ul>
2018–2019	<ul> <li>Arielle Elmaleh-Sachs, M.D.</li> <li>Internal Medicine resident, Massachusetts General Hospital</li> <li>Mentoring role: research advisor</li> </ul>
2018–	<ul> <li>Sneha Kannan, M.D.</li> <li>Internal Medicine resident, Massachusetts General Hospital</li> <li>Mentoring role: research advisor and collaborator</li> <li>1 manuscript under peer review</li> </ul>
2018–	<ul> <li>Samuel J. Enumah, M.D.</li> <li>General Surgery resident, Brigham and Women's Hospital; Association for Academic Surgery/Association for Academic Surgery Foundation Trainee Research Fellow in Clinical Outcomes, Education &amp; Health Services; Harvard T-32 Trainee</li> <li>Mentoring role: research advisor and collaborator</li> <li>1 manuscript under peer review</li> </ul>
2018–	<ul> <li>Nicole Benson, M.D.</li> <li>Fellow in Child and Adolescent Psychiatry, Massachusetts General Hospital</li> <li>Mentoring role: research advisor and collaborator</li> <li>2 manuscripts published: <u>JGIM</u> (2020), <u>Health Affairs</u> (2020)</li> </ul>
2018–	<ul> <li>Thomas Roberts, M.D., M.B.A.</li> <li>Internal Medicine resident, Massachusetts General Hospital</li> <li>Mentoring role: research advisor and collaborator</li> <li>1 manuscript under peer review</li> </ul>
2019 Summer	<ul> <li>Neeti Kulkarni, B.A. candidate, Brandeis University</li> <li>Mentoring role: research advisor and collaborator</li> <li>1 manuscript under peer review</li> </ul>
2019–	<ul> <li>Lindsey J. Patterson, Ph.D.</li> <li>Marshall J. Seidman Fellow, Harvard Medical School</li> <li>Mentoring role: research advisor and collaborator</li> <li>1 manuscript under peer review</li> </ul>

# **Report of Local Invited Presentations:**

# No presentations below were sponsored by outside entities

4/2006	"Smoking and Obesity: The Public Health Crises of Our Generation" Woodrow Wilson Fellowship Ceremony, Johns Hopkins University, Baltimore, MD
10/2009	"Health Care Reform and the Social Sciences," 27th Annual Student Faculty Retreat, MD-PhD Program, Harvard Medical School, Waterville Valley, NH
3/2011	"Health Care Reform," Boston University School of Medicine, Boston, MA
8/2011	"Effect of the AQC on Health Care Spending and Quality" Massachusetts Health Care Quality and Cost Council, Boston, MA
1/2012	"A Primer on Health Care Reform," Albert Schweitzer Fellowship, Boston Fellows Meeting, Boston, MA
7/2012	"Next Steps in Health Care Reform: Transitioning to Accountable Care" Principal Clinical Experience Intersession, Harvard Medical School, Boston, MA
7/2012	"Early Experience with Accountable Care in Massachusetts" Meet the Expert Seminar Series, Harvard School of Public Health, Boston, MA
9/2013	"Clinical Decision-Making and Health Care Spending" MD-PhD/LHB Grand Rounds, Harvard Medical School, Boston, MA
10/2013	"Improving the Value of American Health Care: Policy Options" 31th Annual Retreat, MD-PhD Program, Harvard Medical School, Boston, MA
12/2013	"Slowing the Growth of Health Care Spending" Health Policy Seminar, Tufts Medical Center, Boston, MA
10/2015	"Health Care Spending and Quality Under Global Payment," Netherlands Delegation, Harvard T.H. Chan School of Public Health, Boston, MA
12/2013	"Slowing the Growth of Health Care Spending" Health Policy Seminar, Tufts Medical Center, Boston, MA
2/2016	"Strategies for Slowing Health Care Spending," Harvard T.H. Chan School of Public Health, Boston, MA
10/2016	"Strategies to Slow the Growth of Health Care Spending" Department of Health Care Policy, Harvard Medical School, Boston, MA
10/2016	"Strategies to Slow Health Care Spending," Division of General Internal Medicine, Massachusetts General Hospital, Boston, MA
2/2017	"Health Care and the Affordable Care Act after the Election," Department of Psychiatry, Massachusetts General Hospital, Boston, MA
5/2017	"The Changing Mortality and Composition of Opioid-Related Hospitalizations Versus Other Hospitalizations in the United States," Division of General Internal Medicine Medical Rounds Conference, Massachusetts General Hospital, Boston, MA
9/2017	"The Impact of Workplace Wellness Programs on Health and Economic Outcomes," Harvard School of Public Health, Boston, MA
10/2017	"Health Care Policy in 2020," Primary Care in 2020 Conference, Center for Primary Care, Harvard Medical School, Boston, MA
2/2018	"Policies to Address Health Care Spending and Value," Health Policy and Insurance Research Seminar, Department of Population Medicine, Harvard Medical School and Harvard Pilgrim Health Care Institute, Boston, MA
3/2018	"Policies to Address Health Care Spending," Health Policy Seminar, Institute for Clinical Research and Health Policy Studies, Tufts Medical Center, Boston, MA 11

3/2018	"Fixing Prices or Price Fixing? Physician Responses to New Payments for Heart Disease Treatments," HCP Health Economics Seminar, Harvard Medical School, Boston, MA
5/2018	"A Guide to Research in Health Policy," Medical Directors' Meeting, Population Health Management, Partners Healthcare, Boston, MA
6/2018	"The Impact of Changes in Medicare Physician and Hospital Outpatient Fees," Division of General Internal Medicine, Massachusetts General Hospital, Boston, MA
7/2018	"The Impact of Medicare PCI Fee Changes on Provider Behavior," Smith Center for Outcomes Research in Cardiology, Beth Israel Deaconess Medical Center, Boston, MA
9/2018	"Meet the Investigator" Seminar, MD-PhD Program, Harvard Medical School, Boston, MA
10/2018	"Impact of Workplace Wellness on Health and Economic Outcomes: A Randomized Controlled Trial," HCP Health Economics Seminar, Harvard Medical School, Boston, MA
8/2018	"Health Care Policy and Payment Reform," MIT HMS Healthcare Innovation Bootcamp (88 participants from 35 countries), MIT Sloan School of Management, Cambridge, MA
2/2019	"ACOs in Massachusetts: the AQC Experience," MassHealth, Executive Office of Health and Human Services, Commonwealth of Massachusetts
3/2019	"Physician Scientists and the Health Care Economy," (Clinical and Population Health Keynote), University of Massachusetts Medical School, MD/PhD Program   Medical Scientist Training Program, 14th Annual Physician-Scientist Retreat, Worcester, MA
4/2019	"The Impact of Changes in Medicare Prices for PCI," Cath Conference, Massachusetts General Hospital, Boston, MA
4/2019	"Changes in Economic and Clinical Outcomes Under CMS Mandatory Bundled Payments for Joint Replacements," Division of General Internal Medicine, Massachusetts General Hospital, Boston, MA
5/2019	"Impact of Workplace Wellness on Health and Economic Outcomes: A Randomized Controlled Trial," Division of General Internal Medicine Medical Rounds Conference, Massachusetts General Hospital, Boston, MA
6/2019	"Health Care: An Endangered Species?" Alumni Day Symposium, Harvard Medical School
6/2019	"Policy Options to Address Health Care Spending," Center for Primary Care, Harvard Medical School, Boston, MA
6/2019	"Innovation in the Context of Health Policy," MIT HMS Healthcare Innovation Bootcamp (67 participants from around 30 countries), Harvard Medical School, Boston, MA
9/2019	"Health Care Spending and Quality 8 Years into Global Payment," Healthcare Markets & Regulations Lab Industry Working Group Summit, Harvard Medical School, Boston, MA
11/2019	"Improving the Value of Health Care," 45th Anniversary Reunion and Celebration Harvard/MIT Medical Scientist Training Program, Harvard Medical School, Boston, MA

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

### No presentations below were sponsored by outside entities

# Regional

	"Changing Paradigms in Healthcare: What Does the Future Hold?" Massachusetts Medical Society Physician Leadership Institute, Boston, MA
4/2012	"Year-2 Evaluation of the Alternative Quality Contract" The Dartmouth Institute for Health Policy and Clinical Practice, Lebanon, NH

6/2013	"The Return-on-Investment of Wellness: Evidence and Policy" New England Employee Benefits Council, Waltham, MA	
7/2014	"Program Evaluation and ROI: Evidence and Policy" Best Practices in Worksite Wellness Conference, Braintree, MA	
11/2014	"Health Care Spending and Quality 4 Years into Global Payment for ACOs" (selected abstract), American College of Physicians Annual Scientific Meeting, Waltham, MA	
3/2015	"Medicare Fee Cuts and Physician-Hospital Integration" (selected abstract), New England Society of General Internal Medicine (SGIM) Regional Meeting, Boston, MA	
4/2015	"The Emergence of Worksite Wellness in Health Policy" The Business of Worksite Wellness and Nutrition Conference, Rockland, MA	
3/2016	"Changes in Quality and Spending for High versus Low Socioeconomic Status Populations Under Global Payment" (selected abstract), New England Society of General Internal Medicine (SGIM) Meeting, New Haven, CT (Plenary speaker)	
4/2016	"Improving the Evidence Base on Worksite Wellness" Third Annual Emerging Trends in Wellness Conference, Randolph, MA	
3/2017	"Mortality and Composition of Opioid Hospitalizations in the United States" (selected abstract), New England Society of General Internal Medicine (SGIM) Meeting, Boston, MA	
4/2017	"An Update on the Evidence Base for Workplace Wellness," Fourth Annual Emerging Trends in Wellness Conference, Randolph, MA	
4/2018	"Impact of Workplace Wellness on Health and Economic Outcomes," Fifth Annual Emerging Trends in Wellness Conference, Randolph, MA	
2/2019	"Current State of Health Care Policy in the United States," Whitney Center, Hamden, CT	
National		
12/2005	"Undergraduate public health education: Role of the student-run publication" (selected abstract), American Public Health Association Meeting, Philadelphia, PA	
11/2009	"The Albert Schweitzer Fellowship," PRI-MED Conference, Boston, MA	
6/2010	"Using the Dartmouth Atlas" (selected abstract), AcademyHealth Annual Research Meeting, Boston, MA	
8/2010	"Health Care Reform 2010: Policies and Objectives," Carolinas Medical Center, Concord, NC	
10/2010	"Health Care Reform 2010: Policies and Objectives," 4th Annual Albert Schweitzer Fellowship Conference, Baltimore, MD	
6/2011	"Effect of the AQC on Health Care Spending and Quality" (selected abstract), 17th Annual National Research Service Award (NRSA) Trainees Research Conference, Seattle WA	
6/2011	"The Effect of Global Payment in Accountable Care Organizations on Health Care Costs" (selected abstract), AcademyHealth Annual Research Meeting, Seattle, WA	
10/2011	"Health Care Reform and its Implications," 5th Annual Albert Schweitzer Fellowship Conference, Boston, MA	
11/2011	"Effect of the AQC on Health Care Spending and Quality" (selected abstract), Gerontological Society of America, 64th Annual Meeting, Boston, MA	
1/2012	"Effect of the AQC on Health Care Spending and Quality" (selected abstract), American Economic Association/Allied Social Science Associations, Chicago, IL	

6/2012	"Year-2 Evaluation of the Alternative Quality Contract" (selected abstract), 18th Annual National Research Service Award (NRSA) Trainees Research Conference, Orlando, FL
6/2012	"Year-2 Evaluation of the Alternative Quality Contract" (selected abstract), Health Economics Interest Group, AcademyHealth Annual Research Meeting, Orlando, FL
6/2012	"Unintended Consequences of Redistributing Income from Specialists to Primary Care Physicians in Medicare" (selected abstract), AcademyHealth Annual Research Meeting, Orlando, FL
6/2012	"Effect of the Alternative Quality Contract on Health Care Spending and Quality: Year-2 Results" (selected abstract), AcademyHealth Annual Research Meeting, Orlando, FL
6/2013	"Year-2 Evaluation of the Alternative Quality Contract" (Article-of-the-Year session), AcademyHealth Annual Research Meeting, Baltimore, MD
2/2014	"Slowing the Growth of Health Care Spending: Evaluations of Current Policy Approaches," Institute for Healthcare Policy and Innovation (IHPI), Department of Medicine, University of Michigan, Ann Arbor, MI
4/2014	"Payment Reform in Massachusetts: Early Evidence on Spending and Quality," Dartmouth Symposium in Health Care Delivery Science, Hanover, NH
4/2014	"Conducting ROI Analysis," Health Care Innovations Exchange: Virtual Roundtable on Return on Investment, Agency for Healthcare Research and Quality (AHRQ)
4/2014	"Payment Reform in Massachusetts: Effect of Global Payment on Health Care Spending and Quality 4 Years into the Alternative Quality Contract" (selected abstract), Society of General Internal Medicine (SGIM) 37th Annual Meeting, San Diego, CA
11/2014	"Health Care Spending and Quality 4 Years into Global Payment for ACOs," Grand Rounds, Division of General Internal Medicine, Johns Hopkins Medicine, Baltimore, MD
6/2015	"Medicare Fee Cuts and Physician-Hospital Integration" (selected abstract), AcademyHealth Annual Research Meeting, Minneapolis, MN
12/2015	"Evaluating Strategies for Improving the Value of Health Care Spending" Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA
5/2016	"Changes in Quality of Care and Medical Spending for High versus Low Socioeconomic Status Populations under Global Payment" (selected abstract), Society of General Internal Medicine (SGIM) 2016 Annual Meeting, Hollywood, FL (Plenary)
6/2016	"Policy Rationale and Implications of Payment Reform," Risk-based Contracting—Preparing for the Inevitable session American Diabetes Association 76th Scientific Sessions, New Orleans, LA
7/2016	"Leadership in the Field of Medicine" (keynote), National Youth Leadership Forum on Medicine, Wellesley, MA
9/2016	"Competitive Bidding in Medicare Advantage," Congressional Budget Office, Panel of Health Advisors, Washington, DC
11/2016	"Frameworks in Health Policy and Health Economics," The MedX Program University of Pennsylvania, Philadelphia, PA
11/2016	"Strategies for Slowing Health Care Spending: Implications for Health Systems," Innovation Speaker Series, Center for Health Care Innovation, UPenn Health System
11/2016	"Implications of the Election for Health Care Reform," Penn HealthX, Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA
11/2016	"Medicare Financing Reform after the Election," Division of General Internal Medicine, Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA

2/2017	"Mobile Health and Wellness: Return-on-Investment," Expert Series: Mobile Health Clinics—Meeting Your Employees Where They Are. Health Resources in Action Webinar.
4/2017	"The Changing Mortality and Composition of Opioid-Related Hospitalizations Versus Other Hospitalizations in the United States" (selected abstract), Society of General Internal Medicine (SGIM) 2017 Annual Meeting, Washington, DC
4/2017	"Medicare Advantage Benchmarks, Bids, and Rebates Before and After the Affordable Care Act" (selected abstract), Society of General Internal Medicine (SGIM) 2017 Annual Meeting, Washington, DC
6/2017	"Mortality and Composition of Opioid Hospitalizations in the United States" (selected abstract), AcademyHealth Annual Research Meeting, New Orleans, LA
7/2017	"Making Positive Change Through Medicine and Health Care" (Keynote), National Youth Leadership Forum on Medicine, Wellesley, MA
4/2018	"Health Care Spending and Quality 8 Years into Global Payment" (selected abstract), Society of General Internal Medicine (SGIM) 2018 Annual Meeting, Denver, CO
6/2018	"Payments to Medicare Advantage Plans and Plan Generosity Before and After the Affordable Care Act" (selected abstract), 7 <sup>th</sup> Conference of the American Society of Health Economists (ASHEcon), Atlanta, GA
6/2018	Discussant for "Vertical Integration and a Changing Physician Workforce" (by Neprash H, Chernew ME, McWilliams JM), 7 <sup>th</sup> Conference of the American Society of Health Economists (ASHEcon), Atlanta, GA
6/2018	"The Impact of Workplace Wellness on Health, Health Care, and Employment Outcomes: A Randomized Controlled Trial" (selected abstract), 7 <sup>th</sup> Conference of the American Society of Health Economists (ASHEcon), Atlanta, GA
6/2018	Discussant for "Did Medicare Advantage Payment Cuts Affect Beneficiary Access to Care?" (by Skopec L, Zuckerman S, Aarons J), 7 <sup>th</sup> Conference of the American Society of Health Economists (ASHEcon), Atlanta, GA
6/2018	"Changes in Health Care Spending and Quality 8 Years into Global Payment" (selected abstract), AcademyHealth Annual Research Meeting, Seattle, WA
7/2018	"Making Positive Change Through Medicine and Health Care" (Keynote), National Youth Leadership Forum on Medicine, Wellesley, MA
5/2019	"Putting Patients First" (Panelist), The State of Care: Future of Medicare, The Atlantic, Washington, DC
5/2019	"Impact of Workplace Wellness on Health and Economic Outcomes: A Randomized Controlled Trial" (selected abstract), Society of General Internal Medicine (SGIM) 2019 Annual Meeting, Washington, DC (Plenary)
5/2019	"Changes in Economic and Clinical Outcomes Under CMS Mandatory Bundled Payments for Joint Replacements" (selected abstract), Society of General Internal Medicine (SGIM) 2019 Annual Meeting, Washington, DC (Hamolsky Award Finalists)
6/2019	"Changes in Economic and Clinical Outcomes Associated with CMS Mandatory Bundled Payments for Joint Replacements" (selected abstract), AcademyHealth Annual Research Meeting, Washington, DC
6/2019	"Spending on out-of-Network Care in the United States, 2008-2016" (selected abstract), AcademyHealth Annual Research Meeting, Washington, DC
6/2019	"Health Care Spending and Quality 8 Years into Global Payment" (selected abstract), 8 <sup>th</sup> Conference of the American Society of Health Economists (ASHEcon), Washington, DC

6/2019	"The Impact of Fee Changes on Provider Behavior: Evidence from Asymmetric Changes in Professional and Facility Fees for Heart Disease Treatments" (selected abstract), 8 <sup>th</sup> Conference of the American Society of Health Economists (ASHEcon), Washington, DC
7/2019	"Making Positive Change Through Medicine and Health Care" (Keynote), National Youth Leadership Forum on Medicine, Boston, MA
9/2019	"Improving the Evidence Base to Inform Health Policy," NCCIH at 20: A Catalyst for Integrative Health Research, National Institutes of Health, Bethesda, MD
10/2019	"Navigating Mixed Payments: What is the Argument to Increase Primary Care Spend?" 2019 Primary Care Conference, Boston, MA
7/2020	"Social Learning and Health Care Utilization: Evidence from Spousal Health Shocks" (selected abstract), AcademyHealth Annual Research Meeting (virtual live plenary and virtual pre-recorded session due to Covid-19)
7/2020	"Changes in Prescription Drug Spending and Utilization 8 Years into Global Payment" (selected abstract), AcademyHealth Annual Research Meeting (virtual due to Covid-19)

#### International

- 7/2011 "The Effect of Global Payment in ACOs on Health Care Costs" (selected abstract) International Health Economics Association (iHEA), Toronto, Canada
- 5/2018 "Paying for Value: From Theory to Practice," in Funding for Value session (chair), Shifting to Value-Based Health Care conference, International Consortium for Health Outcomes Measurement and University of Paris, Palais d'Iéna, Siège du Conseil économique, social et environnemental, Paris, France
- 12/2019 "Transparency in Incentives: Outcome-Based Payments," EIT Health Summit 2019, European Institute of Innovation & Technology, European Union, Paris, France (Plenary)

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

#### **Current Licensure and Certification:**

2014–2017	Commonwealth of Massachusetts, Board of Registration in Medicine, Limited License
2017–	Commonwealth of Massachusetts, Board of Registration in Medicine, Active License
2019–	Board Certification, American Board of Internal Medicine

#### **Practice Activities:**

2017–	, ,	Massachusetts General Hospital, Internal Medicine Associates	2 sessions per week
2017–	Inpatient attending (Bigelow teaching service)	Massachusetts General Hospital, Department of Medicine	2-4 weeks per year

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

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

2006–2008 Mentor, Harvard Manville Mentoring Program The Manville School, Judge Baker Children's Center, Boston, MA (Served as a big brother mentor at the school, 2 hours per week.)

2007–2008	Boston Fellow, Albert Schweitzer Fellowship (Helped establish an after-school physical activity and nutrition program for at-risk youth with colleagues at the Brookside Community Health Center, Jamaica Plain, MA. 200 service hours.)
2008–2012	Resident Tutor, Cabot House, Harvard College Primary service: Pre-Medicine Committee (advising pre-medical students, writing committee letters for medical schools, and holding mock interviews). Secondary service: tutoring in economics, organic chemistry, and careers.
2013–2014	Copy editor (pro bono), Goroll AH, Mulley AG, eds. "Primary Care Medicine: Office Evaluation and Management of the Adult Patient, 7th Edition." Lippincott Williams & Wilkins and Wolters Kluwer, 2014.
2015 Oct	Guest speaker, "Evaluations of Public and Private Strategies for Improving the Value of Health Care Spending," Health Policy Commission, Boston, MA
2016 May	Guest speaker, "Mortality Among Opioid-Related vs. Other Hospitalizations in the U.S.," Health Policy Commission, Boston, MA.
2017 Feb	Expert, New England Journal of Medicine Resident 360, in public group discussion "From Volume to Value: Understanding the Impact of ACOs and New Care Models in Healthcare" (2 weeks).
2017 Apr	Guest speaker, "Changes in Quality of Care and Medical Spending for High versus Low Socioeconomic Status Populations under Global Payment," Health Policy Commission, Boston, MA
2017 Sep	Opening talk and moderator, "Alternative Models at the State and Federal Levels," It Depends What State You're In: Policies and Politics of the US Health Care System, Radcliffe Institute for Advanced Study, Harvard University
2017 Nov	Participant, Data Science Rountable, "Key Factors for Scientific Impact on Policy," Harvard Data Science Initiative and Elsevier
2019 Mar	Health Policy career paths program, Office of Career Services, Faculty of Arts and Sciences, Harvard University
2019 Mar	"Care at the End of Life: Toward a Roadmap for Plans" (Lecture), International Foundation of Employee Benefit Plans, St. Petersburg, FL
2019 Apr	" <u>Wellness Wednesday: Workplace Wellness</u> " (Podcast), All Sides with Ann Fisher, 89.7 National Public Radio News, WOSU, Ohio
2019 Apr	"Do workplace wellness programmes work?" (Guest), Early Edition, Newstalk ZB, New Zealand
2019 Apr	" <u>Do workplace wellness programs work?</u> " (Guest), Health Report, ABC Radio National, Sydney, Australia
2019 May	"Impact of Workplace Wellness on Health and Economic Outcomes" (Webinar), Health Enhancement Research Organization
2019 May	"Impact of Workplace Wellness on Health and Economic Outcomes" (Webinar), WELCOA and National Wellness Institute
2019 Dec	Participant, "Implementation and De-implementation Methodologies for Complementary and Integrative Health Approaches" meeting, National Center for Complementary and Integrative Health, National Institutes of Health
2020 Jan	Testimony, H4134 - An Act to improve health care by investing in VALUE, Joint Committee on Health Care Financing, Commonwealth of Massachusetts

2020 Jun <u>Economic and Clinical Impact of COVID-19 on Provider Practices in</u> <u>Massachusetts: Interim Results: May 20 – June 17, 2020</u>. Health Policy Commission, Commonwealth of Massachusetts

### **Research Citations and Coverage:**

#### **Research Cited in Government Testimony or Policy**

Testimony of David M. Cutler, PhD, Committee on the Budget, U.S. Senate (2/29/2012)
Testimony of Dana Gelb Safran, ScD, Committee on Finance, U.S. Senate (6/14/2012)
Department of Health and Human Services, *Federal Register* Vol 77, No 179 (9/14/2012)
Testimony of David Blumenthal, MD, MPP, Special Committee on Aging, U.S. Senate (2/27/2013)
Testimony of Leemore S. Dafny, PhD, Committee on the Judiciary, U.S. Senate (9/22/2015)
Testimony of Andrew Kolodny, MD, Committee on Homeland Security and Governmental Affairs, U.S. Senate (1/17/2018)

Testimony of Matthew Fiedler, PhD, Committee on Finance, U.S. Senate (5/8/2019)

#### **Research Covered by Newspaper or News Articles**

New York Times (9/30/2012; 1/4/2013; 1/5/2015; 1/20/2015; 4/16/2019; 9/9/2019; 10/7/2019) Washington Post (4/15/2011; 1/24/2012; 4/30/2012; 7/12/2012) Wall Street Journal (10/1/2019) Los Angeles Times (12/12/2012; 4/19/2019; 5/13/2019) US News & World Report (10/30/2014; 5/6/2016; 4/16/2019) PBS Newshour (12/4/2017) NPR (4/16/2019) CNBC (12/4/2017; 4/16/2019) Boston Globe (10/29/2014; 11/11/2014; 1/9/2017; 12/5/2017; 7/18/2019) WBUR CommonHealth (7/11/2012; 1/10/2017; 4/16/2019; 7/18/2019) Other U.S. outlets: CNN Business, Kaiser Health News, MinnPost, Reuters, San Diego Union-Tribune, Seattle Times International outlets: CBC News (Canada), Deutsches Ärzteblatt (Germany), The Irish Times, Medical Tribune (Germany), Sciences et Avenir (France)

### **Research Covered in Other Outlets**

American Journal of Managed Care Newsroom, American Prospect, Axios, Becker's Hospital Review, The British Medical Journal, The Business Journals, Business Wire, CFO Magazine, Connecticut Public Radio, Enterprise Echo, FactCheck.org, FierceHealthcare, Forbes, Fortune Magazine, Harvard Business Review, Harvard Gazette, Healthcare Finance News, Healthcare IT News, HealthDay, HealthExec, HealthLeaders Media, The Heritage Foundation, The Hill, The Incidental Economist, Medical Economics, Modern Healthcare, News Wise, People Management, Psychology Today, Retail Wire, ScienceDaily, Tech Times, The Verge, Vice Media, Yahoo News

### Report of Scholarship

#### Peer-Reviewed Scholarship in Print or Other Media:

- Song Z, Reinhardt K, Buzdon M, Liao P. "Association between support group attendance and weight loss after Roux-en-Y gastric bypass." <u>Surgery for Obesity and Related Diseases</u>. 2008 Mar-Apr;4(2):100-103.
- Baicker K, Cutler D, Song Z. "Workplace wellness programs can generate savings." <u>Health Affairs</u>. 2010 Feb;29(2):304-311.

- Song Z, Safran DG, Landon BE, He Y, Ellis RP, Mechanic RE, Day MP, Chernew ME. "Health care spending and quality in year 1 of the Alternative Quality Contract." <u>New England Journal of</u> <u>Medicine</u>. 2011 Sep 8;365(10):909-918.
- 4. Barnett ML, **Song Z**, Landon BE. "Trends in physician referrals in the United States, 1999-2009." <u>Archives of Internal Medicine</u>. 2012 Jan 23;172(2):163-170.
- 5. **Song Z**, Landon BE. "Controlling health care spending—the Massachusetts experiment." <u>New</u> <u>England Journal of Medicine</u>. 2012 Apr 26;366(17):1560-1561.
- 6. McWilliams JM, **Song Z**. "Implications for ACOs of variations in spending growth." <u>New England</u> <u>Journal of Medicine</u>. 2012 May 10;366(19):e29(1-3).
- 7. **Song Z**, Safran DG, Landon BE, Landrum MB, He Y, Mechanic RE, Day MP, Chernew ME. "The 'Alternative Quality Contract,' based on a global budget, lowered medical spending and improved quality." <u>Health Affairs</u>. 2012 Aug;31(8):1885-1894.
- Song Z, Cutler DM, Chernew ME. "Potential consequences of reforming Medicare into a competitive bidding system." <u>Journal of the American Medical Association</u>. 2012 Aug 1;308(5):459-460.
- 9. **Song Z**, Landrum MB, Chernew ME. "Competitive bidding in Medicare: who benefits from competition?" <u>American Journal of Managed Care</u>. 2012 Sep;18(9):546-552.
- 10. **Song Z**, Lee TH. "The era of delivery system reform begins." <u>Journal of the American Medical</u> <u>Association</u>. 2013 Jan 2;309(1):35-36.
- Song Z, Hill C, Bennet J, Vavasis A, Oriol NE. "Mobile clinic in Massachusetts associated with cost savings from lowering blood pressure and emergency department use." <u>Health Affairs.</u> 2013 Jan;32(1):36-44.
- Song Z, Ayanian JZ, Wallace J, He Y, Gibson TB, Chernew ME. "Unintended consequences of eliminating Medicare payments for consultations." <u>JAMA Internal Medicine</u>. 2013 Jan 14;173(1):15-21.
- 13. Blumenthal DM, **Song Z**, Jena AB, Ferris TG. "Guidance for structuring team-based incentives in healthcare." <u>American Journal of Managed Care</u>. 2013 Feb 1;19(2):e64-70.
- 14. **Song Z**, Fendrick AM, Safran DG, Landon B, Chernew ME. "Global budgets and technologyintensive medical services." <u>Healthcare</u>. 2013 Jun;1(1-2):15-21.
- Sharp AL, Song Z, Safran DG, Chernew ME, Fendrick AM. "The effect of bundled payment on emergency department use: Alternative Quality Contract effects after year one." <u>Academic</u> <u>Emergency Medicine</u>. 2013 Sep;20(9):961-964.
- 16. Loehrer AP<sup>^</sup>, **Song Z**, Auchincloss HG, Hutter MM. "Massachusetts health care reform and reduced racial disparities in minimally invasive surgery." <u>JAMA Surgery</u>. 2013 Dec;148(12):1116-1122.
- 17. **Song Z**, Landrum MB, Chernew ME. "Competitive bidding in Medicare Advantage: effect of benchmark changes on plan bids." <u>Journal of Health Economics</u>. 2013 Dec;32(6):1301-1312.
- Chien AT, Song Z, Chernew ME, Landon BE, McNeil BJ, Safran DG, Schuster MA. "Two-year impact of the Alternative Quality Contract on pediatric health care quality and spending." <u>Pediatrics</u>. 2014 Jan;133(1):96-104.

- 19. Afendulis CC, Fendrick AM, **Song Z**, Landon BE, Safran DG, Mechanic RE, Chernew ME. "The impact of global budgets on pharmaceutical spending and utilization: early experience from the Alternative Quality Contract." <u>Inquiry</u>. 2014 Jan 1;51:1-7.
- 20. **Song Z**. "Accountable care organizations in the U.S. health care system." <u>Journal of Clinical</u> <u>Outcomes Management</u>. 2014 Aug 1;21(8):364-371.
- 21. **Song Z**, Sequist TD, Barnett ML. "Patient referrals: a linchpin for increasing the value of care." Journal of the American Medical Association. 2014 Aug 13;312(6):597-598.
- 22. Song Z. "Becoming a physician in the age of payment reform." <u>Healthcare</u>. 2014 Sep;2(3):168-169.
- 23. **Song Z**, Rose S, Safran DG, Landon BE, Day MP, Chernew ME. "Changes in health care spending and quality 4 years into global payment." <u>New England Journal of Medicine</u>. 2014 Oct 30;371(18):1704-1714.
- 24. Stuart EA, Huskamp HA, Duckworth K, Simmons J, **Song Z**, Chernew M, Barry CL. "Using propensity scores in difference-in-differences models to estimate the effects of a policy change." <u>Health Services and Outcomes Research Methodology</u>. 2014 Dec 1;14(4):166-182.
- 25. Scott JW<sup>^</sup>, Sommers BD, Tsai TC, Scott KW, Schwartz AL, **Song Z**. "Dependent coverage provision led to uneven insurance gains and unchanged mortality rates in young adult trauma patients." <u>Health Affairs</u>. 2015 Jan;34(1):125-133.
- 26. **Song Z**, Chokshi DA. "The role of private payers in payment reform." <u>Journal of the American</u> <u>Medical Association</u>. 2015 Jan 6;313(1):25-26.
- Basu S, Landon BE, Song Z, Bitton A, Phillips RS. "Implications of workforce and financing changes for primary care practice utilization, revenue, and cost: a generalizable mathematical model for practice management." <u>Medical Care</u>. 2015 Feb;53(2):125-132.
- 28. **Song Z**, McMahon LF Jr. "Rethinking physician payment." <u>Journal of General Internal Medicine</u>. 2015 Feb;30(2):152-154.
- 29. Loehrer AP<sup>^</sup>, **Song Z**, Auchincloss HG, Hutter MM. "Influence of health insurance expansion on disparities in the treatment of acute cholecystitis." <u>Annals of Surgery</u>. 2015 Jul;262(1):139-145.
- 30. **Song Z**, Wallace J, Neprash HT, McKellar MR, Chernew ME, McWilliams JM. "Medicare fee cuts and cardiologist-hospital integration." JAMA Internal Medicine. 2015 Jul 1;175(7):1229-1231.
- Scott JW^, Salim A, Sommers BD, Tsai TC, Scott KW, Song Z. "Racial and regional disparities in the effect of the Affordable Care Act's dependent coverage provision on young adult trauma patients." Journal of the American College of Surgeons. 2015 Aug;221(2):495-501.
- Perez KM<sup>^</sup>, Flier L, D'Couto H, Rudder M, Thakker A, Weems J, Wibecan L, Song Z, Bitton A, Erb J, Pollack S, Silbersweig D, Sullivan L, Frolkis J. "Behavioral health integration in primary care at Brigham and Women's Advanced Primary Care Associates, South Huntington." <u>Healthcare</u>. 2015 Sep;3(3):169-174.
- Basu S, Phillips RS, Bitton A, Song Z, Landon BE. "Medicare chronic care management payments and financial returns to primary care practices: A modeling study." <u>Annals of Internal Medicine</u>. 2015 Oct 20;163(8):580-588.

- 34. **Song Z**, Chopra V, McMahon LF. "Addressing the primary care workforce crisis." <u>American Journal</u> <u>of Managed Care</u>. 2015;21(8):e452-454.
- 35. Loehrer AP<sup>^</sup>, Hawkins AT, Auchincloss HG, **Song Z**, Hutter MM, Patel VI. "Impact of expanded insurance coverage on racial disparities in vascular disease: insights from Massachusetts." <u>Annals of Surgery</u>. 2016 Apr;263(4):705-711.
- 36. Loehrer AP<sup>^</sup>, Chang DC, Hutter MM, **Song Z**, Lillemoe KD, Warshaw AL, Ferrone CR. "Health insurance expansion and treatment of pancreatic cancer: Does increased access lead to improved care?" <u>Journal of the American College of Surgeons</u>. 2015 Dec;221(6):1015-1022.
- 37. Aung KK<sup>^</sup>, Hill C, Bennet J, **Song Z**, Oriol N. "The emerging business models and value proposition of mobile health clinics." <u>American Journal of Accountable Care</u>. 2015 Dec: 36-40.
- Barry CL, Stuart EA, Donohue JM, Greenfield SF, Kouri E, Duckworth K, Simmons J, Song Z, Mechanic R, Chernew ME, Huskamp HA. "The early impact of the 'Alternative Quality Contract' on mental health service use and spending In Massachusetts." <u>Health Affairs</u>. 2015 Dec;34(12):2077-2085.
- 39. **Song Z**, Colla CH. "Specialty-based global payment: A new phase in payment reform." <u>Journal of the American Medical Association</u>. 2016 Jun 7;315(21):2271-2272.
- 40. Wallace J, **Song Z**. "Traditional Medicare versus private insurance: How spending, volume, and price change at age sixty-five." <u>Health Affairs</u>. 2016 May 1;35(5):864-872.
- 41. Huskamp HA, Greenfield SF, Stuart EA, Donohue JM, Duckworth K, Kouri EM, **Song Z**, Chernew ME, Barry CL. "Effects of global payment and accountable care on tobacco cessation service use: an observational study." <u>Journal of General Internal Medicine</u>. 2016 Oct;31(10):1134-1140.
- 42. Haas DA, Bozic KJ, DiGioia AM, **Song Z**, Kaplan RS. "Drivers of the variation in prosthetic implant purchase prices for total knee and total hip arthroplasties." <u>Journal of Arthroplasty</u>. 2017 Feb;32(2):347-350.e3.
- 43. Lauffenburger JC, Gagne JJ, **Song Z**, Brill G, Choudhry NK. "New and unexpected potentiallydisruptive life events: what are the immediate impacts on medication-taking behavior? A casecrossover analysis." <u>BMJ Open</u>. 2016 Aug 4;6(8):e010958.
- 44. **Song Z.** "MACRAeconomics: Physician incentives and behavioral economics in the Medicare Access and CHIP Reauthorization Act." <u>Healthcare</u>. 2016 Sep 27. pii: S2213-0764(16)30099-9.
- 45. Stuart EA, Barry CL, Donohue JM, Greenfield SF, Duckworth K, **Song Z**, Kouri EM, Ebnesajjad C, Mechanic R, Chernew ME, Huskamp HA. "Effects of accountable care and payment reform on substance use disorder treatment: evidence from the initial 3 years of the Alternative Quality Contract." <u>Addiction</u>. 2017 Jan;112(1):124-133.
- 46. **Song Z**, Fisher ES. "The ACO experiment in infancy—Looking back and looking forward." <u>Journal</u> <u>of the American Medical Association</u>. 2016 Aug 16;316(7):705-706.
- 47. Basu S, Phillips RS, **Song Z**, Landon BE, Bitton A. "Effects of new funding models for patientcentered medical homes on primary care practice finances and services: results of a microsimulation model." <u>Annals of Family Medicine</u>. 2016 Sep;14(5):404-414.

- 48. Loehrer AP<sup>A</sup>, **Song Z**, Haynes AB, Chang DC, Hutter MW, Mullen JT. "The impact of health insurance expansion on the treatment of colorectal cancer." <u>Journal of Clinical Oncology</u>. 2016 Dec;34(34):4110-4115.
- 49. **Song Z**, Blumenthal DM. "Expanding payment reform in Medicare: The cardiology episode-based payment model." Journal of the American Medical Association. 2016 Nov 15;316(19):1973-1974.
- 50. **Song Z**, Rose S, Chernew ME, Safran DG. "Lower- versus higher-income populations in the Alternative Quality Contract: Improved quality and similar spending." <u>Health Affairs</u>. 2017 Jan 1;36(1):74-82.
- 51. Loehrer AP<sup>^</sup>, Murthy SS, **Song Z**, Lubitz CC, James BC. "Association of insurance expansion with surgical management of thyroid cancer." <u>JAMA Surgery</u>. 2017 Aug 1;152(8):734-740.
- 52. Barnett ML, **Song Z**, Rose S, Bitton A, Chernew ME, Landon BE. "Insurance transitions and changes in physician and emergency department utilization: An observational study." <u>Journal of General Internal Medicine</u>. 2017 Oct;32(10):1146-1155.
- 53. Navathe AS, **Song Z**, Emanuel EJ. "The next generation of episode-based payments." <u>Journal of the American Medical Association</u>. 2017 Jun 20;317(23):2371-2372.
- Basu S, Phillips RS, Song Z, Bitton A, Landon BE. "High levels of capitation payments needed to shift primary care toward proactive team and nonvisit care." <u>Health Affairs</u>. 2017 Sep 1;36(9):1599-1605.
- 55. Basu S, Landon BE, Williams JW Jr, Bitton A, **Song Z**, Phillips RS. "Behavioral health integration into primary care: a microsimulation of financial implications for practices." <u>Journal of General Internal Medicine</u>. 2017 Dec;32(12):1330-1341.
- 56. **Song Z**. "Using Medicare prices—Toward equity and affordability in the ACA marketplace." <u>New</u> <u>England Journal of Medicine</u>. 2017 Dec 14;377(24):2309-2311.
- 57. **Song Z**. "Mortality quadrupled among opioid-driven hospitalizations, notably within lower-income and disabled white populations." <u>Health Affairs</u>. 2017 Dec;36(12):2054-2061.
- 58. Loehrer AP<sup>^</sup>, Chang DC, **Song Z**, Chang GJ. "Health reform and utilization of high-volume hospitals for complex cancer operations." <u>Journal of Oncology Practice</u>. 2018 Jan;14(1):e42-e50.
- 59. Donohue JM, Barry CL, Stuart EA, Greenfield SF, **Song Z**, Chernew ME, Huskamp HA. "Effects of global payment and accountable care on medication treatment for alcohol and opioid use disorders." Journal of Addiction Medicine. 2018 Jan/Feb;12(1):11-18.
- 60. **Song Z**, Ferris TG. "Baby boomers and beds: a demographic challenge for the ages." <u>Journal of General Internal Medicine</u>. 2018 Mar;33(3):367-369.
- 61. **Song Z**, Navathe AS, Emanuel EJ, Volpp KG. "Incorporating value into physician payment and patient cost-sharing." <u>American Journal of Managed Care</u>. 2018 Mar;24(3):126-128.
- Basu S, Phillips RS, Bitton A, Song Z, Landon BE. "Finance and Time Use Implications of Team Documentation for Primary Care: A Microsimulation." <u>Annals of Family Medicine</u>. 2018 Jul;16(4):308-313.

- 63. **Song Z**, Goodson JD. "The CMS Proposal to Reform Office-Visit Payments." <u>New England Journal</u> of Medicine. 2018 Sep 20;379(12):1102-1104.
- McCarthy CP<sup>A</sup>, Vaduganathan M, Singh A, Song Z, Blankstein R, Gaggin HK, Wasfy JH, Januzzi JL Jr. "Type 2 Myocardial Infarction and the Hospital Readmission Reduction Program." <u>Journal of the American College of Cardiology</u>. 2018 Sep 4;72(10):1166-1170.
- 65. Barnett ML, **Song Z**, Bitton A, Rose S, Landon BE. "Gatekeeping and Patterns of Outpatient Care Post Healthcare Reform." <u>American Journal of Managed Care</u>. 2018 Oct;24(10):e312-e318.
- 66. McCarthy CP<sup>^</sup>, Vaduganathan M, **Song Z**. "Moving Beyond the Hospital: Outpatient Cardiovascular Bundled Payments in Medicare." <u>Circulation</u>. 2018;138:2169–2171.
- Baum A, Song Z, Landon BE, Phillips RS, Bitton A, Basu S. "Health Care Spending Slowed After Rhode Island Applied Affordability Standards to Commercial Insurers." <u>Health Affairs</u>. 2019 Feb;38(2):237-245.
- 68. Gondi S^, **Song Z**. "Potential Implications of Private Equity Investments in Health Care Delivery." Journal of the American Medical Association. 2019;321(11):1047-1048.
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### Thesis:

Song Z. "Financial Incentives in Health Care Reform: Evaluating Payment Reform in Accountable Care Organizations and Competitive Bidding in Medicare." Doctoral Thesis. Ph.D. Program in Health Policy, Harvard University, April 2012.

Doctoral Thesis Committee: Michael E. Chernew, Ph.D. (Chair) John Z. Ayanian, M.D., M.P.P. Thomas G. McGuire, Ph.D. Joseph P. Newhouse, Ph.D.

### Working Papers in Economics:

"Pricing and Pass-through in Response to Subsidies and Competition: Evidence from Medicare Advantage Before and After the Affordable Care Act" (with Daria Pelech)

<u>Abstract</u>: After years of growth, federal payments to Medicare Advantage plans began to decline after the Affordable Care Act (ACA). We exploit variation in those payments caused by the ACA to assess whether insurers respond symmetrically to payment increases and decreases preand post-ACA. We find that plans changed their pricing and pass-through to beneficiaries symmetrically, with plans passing through roughly 60 cents for each dollar of payment increases or decreases. However, plans reduced less salient benefits post-ACA by more than they had increased them pre-ACA, even though they left premiums virtually unchanged. Partial pass-through suggests that plans likely operate above cost; plans in more competitive markets responded less to payment changes than plans in less competitive markets. Partial pass-through of payment cuts, combined with quality bonuses and growth in risk scores, may explain the continued growth in Medicare Advantage enrollment post-ACA.

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