

CURRICULUM VITAE

MARK B. McCLELLAN, M.D., PH.D.

THE BROOKINGS INSTITUTION
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EDUCATION:

1993	Ph.D., Economics, Massachusetts Institute of Technology
1992	M.D., Harvard-MIT Division of Health Science and Technology, <i>cum laude</i>
1991	M.A., M.P.A., Regulatory Policy, Kennedy School of Government, Harvard
1985	B.A., English/Biology, University of Texas, Austin, <i>summa cum laude</i>

CLINICAL TRAINING:

1996	Diplomate, American Board of Internal Medicine
1993 – 1995	Resident in Internal Medicine, Department of Medicine, Brigham and Women's Hospital

EMPLOYMENT:

CURRENT POSTION

2007 – Present	Senior Fellow in Economic Studies, Brookings Institution
2013 – Present	Director, Initiatives on Value and Innovation in Health Care, Brookings Institution

PREVIOUS POSITIONS

2007 – 2013	Director, Engelberg Center for Health Care Reform, Brookings Institution
2006 – 2007	Visiting Senior Fellow, AEI-Brookings Joint Center for Regulatory Studies, American Enterprise Institute and the Brookings Institution
2004 – 2006	Administrator, Centers for Medicare and Medicaid Services, U.S. Department of Health and Human Services
2002 – 2004	Commissioner, U. S. Food and Drug Administration
2001 – 2002	Member, Council of Economic Advisers, and Senior Director for Health Care Policy, White House
2000 – 2007	Associate Professor with tenure, Department of Economics and Department of Medicine, Stanford University (on leave 2001-2007)
1998 – 1999	Deputy Assistant Secretary for Economic Policy, U.S. Department of the Treasury
1998 – 2001	Director, Program on Health Outcomes Research, Stanford Medical School
1995 – 1999	Assistant Professor, Department of Economics and Department of Medicine, Stanford University
1995 – 2001	Attending Physician in Internal Medicine, Stanford Health Services
1991 – 1995	Research Associate, Department of Health Care Policy, Harvard Medical School
1989 – 1991	Consultant, RAND Corporation

ADVISORY POSITIONS AND AFFILIATIONS:

Board Member, National Alliance for Hispanic Health
Board Member, National Council of Organizations on Aging
Board Member, Long-Term Quality Alliance
Board Member, Reagan-Udall Foundation
Board Member, Research! America
Board Member, Aviv Real Estate Investment Trust
Board Member, Johnson & Johnson
Advisor, General Atlantic Partners
Advisor, Third Rock Ventures
Advisor, Castlight Health
Advisor, Capital Royalty
Research Associate, National Bureau of Economic Research (Aging and Health Care Programs)
Represented Speaker, Washington Speakers Bureau
Member, Institute of Medicine, National Academy of Sciences
Chair, Institute of Medicine Roundtable on Science and Value-Driven Health Care
Chair, National Quality Forum, Clinician Measure Application Partnership
Chair, National Advisory Committee, Aligning Forces for Quality

SELECTED HONORS AND AWARDS:

1985	Phi Beta Kappa
1988	John F. Kennedy Fellowship in Public Policy (Harvard University)
1992	Aesculapian Society (Harvard Medical School)
1994	<i>Review of Economic Studies</i> Award, Outstanding Dissertation in Economics
1994	Finalist, National Academy of Social Insurance Dissertation Prize
1995	Finalist, Best Research Paper, Association for Health Services Research
1996	John M. Olin Faculty Research Fellowship
1997	Kenneth Arrow Award, Best Research Paper in Health Economics
1999	Career Development Award, National Institute on Aging
1999	Griliches Award, Best Empirical Research Paper, <i>Quarterly Journal of Economics</i> / <i>Journal of Political Economy</i>
2000	National Fellow, Hoover Institution
2001	Kenneth Arrow Award, Best Research Paper in Health Economics
2003	Elected to Institute of Medicine, National Academy of Sciences
2003	VIDA (Vision, Innovation, Dedication, and Advocacy) Award, National Alliance for Hispanic Health
2003	Indispensable Person in Health Research Award, Alliance for Aging Research
2004	Cancer Leadership Award, Friends of Cancer Research
2004	King David Award for Public Leadership, Jerusalem Fund
2005	AMA Joseph F. Boyle Award for Distinguished Public Service
2005	Public Service Leadership Award, National Coalition for Cancer Survivorship
2006	Booker T. Washington Award, National Minority Health Month Foundation
2006	The Surgeon General's Medallion for Outstanding Commitment and Dedication to the Health and Welfare of All People, and Exemplary Service in the Public Trust

2008	The Presidential Citation in Recognition of Contributions to Promoting High Quality Innovative and Affordable Health Care, The American College of Cardiology
2008	The American College of Cardiology Foundation 39 th Annual Louis F. Bishop Lecturer, 57 th Annual Scientific Session
2008	Star of Texas Healthcare Award
2009	Marshall Seidman Distinguished Lecturer in Health Policy, Harvard Medical School
2011	Cutter Lecture on Preventive Medicine, Harvard School of Public Health
2013	Thomas Ferguson Distinguished Lecturer, American Society of Thoracic Surgeons

PUBLICATIONS:

Articles:

1. "Appropriateness of Care: A Comparison of Global and Outcome Methods to Set Standards," Mark B. McClellan, Robert H. Brook. *Medical Care*. Philadelphia: July, 1992. Vol. 30, Iss. 7; p. 565-586.
2. "Does More Intensive Treatment of Acute Myocardial Infarction in the Elderly Reduce Mortality? Analysis Using Instrumental Variables," Mark B. McClellan, Barbara J. McNeil, Joseph P. Newhouse. *Journal of the American Medical Association*. Chicago: September, 1994. Vol. 272, Iss. 11; p. 859-866.
3. "Uncertainty, Health Care Technologies, and Health Care Choices," Mark B. McClellan. *American Economic Review Papers and Proceedings*. Nashville: May, 1995. Vol. 85, Iss. 2; p. 38-44.
4. "The Uncertain Demand for Medical Care: A Comment on Emmett Keeler," Mark B. McClellan. *Journal of Health Economics*. Amsterdam: June, 1995. Vol. 14, Iss. 2; p. 239-242.
5. "Do Doctors Practice Defensive Medicine?" Daniel P. Kessler, Mark B. McClellan. *Quarterly Journal of Economics*. Cambridge: May, 1996. Vol. 111, Iss. 2; p. 353-390.
6. "Are the Returns to Technological Change in Health Care Declining?" Mark B. McClellan. *Proceedings of the National Academy of Sciences of the United States of America*. Washington: November, 1996. Vol. 93, Iss. 23; p. 12701-12708.
7. "The Marginal Cost-Effectiveness of Medical Technology: A Panel Instrumental-variables Approach," Mark B. McClellan, Joseph P. Newhouse. *Journal of Econometrics*. Amsterdam: March, 1997. Vol. 77, Iss. 1; p. 39-64.
8. "Hospital Reimbursement Incentives: An Empirical Analysis," Mark B. McClellan. *Journal of Economics and Management Strategy*. Oxford: Spring, 1997. Vol. 6, Iss. 1; p. 91-128.
9. "The Effects of Malpractice Pressure and Liability Reforms on Physicians' Perceptions of Medical Care," Daniel P. Kessler, Mark B. McClellan. *Journal of Law and Contemporary Problems*. Durham: Winter, 1997. Vol. 60, Iss. 1-2; p. 81-106.
10. "Econometrics in Outcomes Research: The Use of Instrumental Variables," Joseph P. Newhouse, Mark B. McClellan. *Annual Review of Public Health*. Palo Alto: May, 1998. Vol. 19; p. 17-34.
11. "Technological Change in Heart-Disease Treatment: Does High-Tech Mean Low Value?" Mark B. McClellan, Haruko Noguchi. *American Economic Review*. Nashville: May, 1998. Vol. 88, Iss. 2; p. 90-96.
12. "What Has Increased Medical-Care Spending Bought?" David M. Cutler, Mark B. McClellan, Joseph P. Newhouse. *American Economic Review*. Nashville: May, 1998. Vol. 88, Iss. 2; p. 132-136.

13. "Are Medical Prices Declining? Evidence from Heart Attack Treatments," David M. Cutler, Mark B. McClellan, Joseph P. Newhouse, Dahlia Remler. *Quarterly Journal of Economics*. Cambridge: November, 1998. Vol. 113, Iss. 4; p. 991-1024.
14. "Risks and Costs of End-Stage Renal Disease After Heart Transplantation," John Hornberger, Jennie Best, Jeffrey Geppert, Mark B. McClellan. *Transplantation*. Baltimore: December, 1998. Vol. 66, Iss. 12; p. 1763-1770.
15. "Medicare Reform: Who Pays, and Who Benefits?" Mark B. McClellan, Jonathan S. Skinner. *Health Affairs*. Bethesda: Jan/Feb, 1999. Vol. 18, Iss. 1; p. 48-62.
16. "A Global Analysis of Technological Change in Health Care: The Case of Heart Attacks: Preliminary report from the TECH research network," Mark B. McClellan, Daniel P. Kessler on behalf of the TECH Investigators. *Health Affairs*. Bethesda: May, 1999. Vol. 18, Iss. 3: p. 250-255
17. "How does managed care do it? Prices and productivity in managed care," David M. Cutler, Mark B. McClellan, Joseph P. Newhouse. *RAND Journal of Economics*. Santa Monica: Autumn, 2000. Vol. 31, Iss. 3; p. 526-548.
18. "Designing a Medicare Prescription Drug Benefit: Issues, Obstacles and Opportunities," Mark B. McClellan, Ian D. Spatz, Stacie Carney. *Health Affairs*. Bethesda: Mar/Apr, 2000. Vol. 19, Iss. 2; p. 26-41.
19. "The Marginal Benefits of Invasive Treatments for Acute Myocardial Infarction: Does Insurance Coverage Matter?" John M. Brooks, Mark B. McClellan, Herbert S. Wong. *Inquiry*. Rochester: Spring, 2000. Vol. 37, Iss. 1; p. 75-90.
20. "Medicare Reform: Fundamental Problems, Incremental Steps," Mark B. McClellan. *Journal of Economic Perspectives*. Nashville: Spring, 2000. Vol. 14, Iss. 2; p. 21-44.
21. "Is Hospital Competition Socially Wasteful?" Daniel P. Kessler, Mark B. McClellan. *Quarterly Journal of Economics*. Cambridge: May, 2000. Vol. 115, Iss. 2; p. 577-615.
22. "Are We Inhibited? Renal Insufficiency Should Not Preclude the Use of ACE Inhibitors for Patients with Myocardial Infarction and Depressed Left Ventricular Function," Craig D. Frances, Haruko Noguchi, Barry M. Massie, Warren S. Browner, Mark B. McClellan. *Archives of Internal Medicine*. Chicago: September, 2000. Vol. 160, Iss. 17; p. 2645-2650.
23. "Overview of the Special Supplement Issue," Mark B. McClellan, Joseph P. Newhouse. *Health Services Research*. Chicago: December, 2000. Vol. 35, Iss. 5; p. 1061-1069.
24. "Does Physician Specialty Affect Survival of Elderly Patients with Myocardial Infarction?" Craig D. Frances, Michael G. Shlipak, Haruko Noguchi, Paul A. Heidenreich, Mark B. McClellan. *Health Services Research*. Chicago: December, 2000. Vol. 35, Iss. 5; p. 1093-1116.
25. "Trends in Treatment and Outcomes for Acute Myocardial Infarction: 1975-1995," Paul A. Heidenreich, Mark B. McClellan. *The American Journal of Medicine*. New York: February, 2001. Vol. 110, Iss. 3; p. 165-174.
26. "Differences in Technological Change Around the World: Evidence from Heart Attack Care," with the Technological Change in Healthcare (TECH) Investigators. *Health Affairs*. Bethesda: May-June, 2001. Vol. 20, Iss. 3; p. 25-42.
27. "Productivity Change in Health Care," David M. Cutler, Mark B. McClellan. *American Economic Review*. Nashville: May, 2001. Vol. 91, Iss. 2; p. 281-286.
28. "Is Technological Change in Medicine Worth It?" David M. Cutler, Mark B. McClellan. *Health Affairs*. Bethesda: Sep/Oct, 2001. Vol. 20, Iss. 5; p. 11-29.
29. "The Relation Between Managed Care Market Share and the Treatment of Elderly Fee-For-Service Patients with Myocardial Infarction," Paul A. Heidenreich, Mark B. McClellan, Craig D. Frances, Laurence C. Baker. *The American Journal of Medicine*. New York: February, 2002. Vol. 112, Iss. 3; p. 176-182.
30. "Reducing Uninsurance Through the Nongroup Market: Health Insurance Credits and Purchasing Groups," with Katherine Baicker. *Health Affairs*. April 2002. W163-W166.

31. "Effectiveness and Cost-Effectiveness of Implantable Cardioverter Defibrillators in the Treatment of Ventricular Arrhythmias Among Medicare Beneficiaries," J. Peter Weiss, Olga Saynina, Kathryn M. McDonald, Mark B. McClellan, Mark A. Hlatky. *The American Journal of Medicine*. New York: May, 2002. Vol. 112, Iss. 7; p. 519-527.
32. "Optimal Liability Policy in an Era of Managed Care," Daniel P. Kessler, Mark B. McClellan. *Journal of Public Economics*. Amsterdam: May, 2002. Vol. 84, Iss. 2; p. 175-197.
33. "Racial and Sex Differences in Refusal of Coronary Angiography," Paul A. Heidenreich, Michael G. Shlipak, Jeffrey Geppert, Mark B. McClellan. *The American Journal of Medicine*. New York: August, 2002. Vol. 113, Iss. 3; p. 200-207.
34. "The effects of hospital ownership on medical productivity," Daniel P. Kessler, Mark B. McClellan. *RAND Journal of Economics*. Santa Monica: Autumn, 2003. Vol. 33, Iss. 3; p. 488-506.
35. "Reducing Uninsurance Through the Nongroup Market: Health Insurance Credits and Purchasing Groups," Mark B. McClellan, Katherine Baicker. *Health Affairs*. Bethesda: October, 2002. Vol. 22; p. w363.
36. "How Liability Law Affects Medical Productivity," Daniel P. Kessler, Mark B. McClellan. *Journal of Health Economics*. Amsterdam: November, 2002. Vol. 21, Iss. 6; p. 931-955.
37. "Ensuring Safe and Effective Medical Devices," David W. Feigal, Susan N. Gardner, Mark B. McClellan. *New England Journal of Medicine*. Boston: January, 2003. Vol. 348, Iss. 3; p. 191-192.
38. "Is More Information Better? The effects of 'report cards' on Health Care Providers," David Dranove, Daniel Kessler, Mark B. McClellan, Mark Satterthwaite. *Journal of Political Economy*. Chicago: June, 2003. Vol. 111, Iss. 3; p. 555-588.
39. "Cardiac procedure use and outcomes in elderly patients with acute myocardial infarction in the United States and Canada, 1988-1994," Louise Pilote, Frederic Lavoie, Olga Saynina, Mark B. McClellan. *Medical Care*. Philadelphia: July, 2003. Vol. 41, Iss. 7; p. 813-822.
40. "Advance Directives and Medical Treatment at the End of Life," Daniel P. Kessler, Mark B. McClellan. *Journal of Health Economics*. Amsterdam: January, 2004. Vol. 23, Iss. 1; p.111-127.
41. "The Cost of Decedents in the Medicare Program: Implications for Payments to Medicare+Choice Plans" Melinda Beeuwkes Buntin, Alan M. Garber, Mark B. McClellan, Joseph P. Newhouse. *Health Services Research*. Chicago: February 2004. Vol. 39, Iss. 1; p. 111-130.
42. "Trends in Inpatient Treatment Intensity Among Medicare Beneficiaries at the End of Life," Amber E. Barnato, Mark B. McClellan, Christopher R. Kagay, Alan M. Garber. *Health Services Research*. Chicago: April, 2004. Vol. 39, Iss. 2; p. 363-376.
43. "Detecting Medicare Abuse," David Becker, Daniel P. Kessler, Mark B. McClellan. *Journal of Health Economics*. Amsterdam: January, 2005. Vol. 24, Iss. 1; p. 189-210.
44. "Medicare Coverage of ICDs," Mark B. McClellan, Sean R. Tunis. *New England Journal of Medicine*. Boston: January, 2005. Vol. 352, Iss. 3; p. 222-224.
45. "REPLY: Angiotensin-Converting Enzyme Inhibitors and Angiotensin-Receptor Blockers in Chronic Heart Failure," Mark B. McClellan, Jerod M. Loeb, Carolyn M. Clancy, Gary S. Francis, Alice K. Jacobs, Kenneth W. Kizer, Margaret E. O'Kane, Michael J. Wolk. *Annals of Internal Medicine*. Philadelphia: March, 2005. Vol. 142, Iss. 5; p. 386-389.
46. "Medicare Part D Prescription Coverage: What It Means for Primary Care Physicians," Mark B. McClellan. *Geriatrics*. Duluth: October, 2005. Vol. 60, Iss. 10; p. 7-9.
47. "A Prescription for a Modern Medicare Program," Peter B. Bach, Mark B. McClellan. *New England Journal of Medicine*. Boston: December, 2005. Vol. 353, Iss. 26, p. 2733-2735.
48. "The Incidence of Medicare," Jonathan S. Skinner, Mark B. McClellan. *Journal of Public Economics*. Amsterdam: January, 2006. Vol. 90, Iss. 1-2; p. 257-276.
49. "International Differences in Patient and Physician Perceptions of 'High Quality' Healthcare: A Model from Pediatric Cardiology," Arthur Garson, Jr., Celina M. Yong, Cynthia A. Yock, Mark

- B. McClellan. *The American Journal of Cardiology*. New York: April, 2006. Vol. 97, Iss. 7; p. 1073-1075.
50. "The First Months of the Prescription Drug Benefit - A CMS Update," Peter B. Bach, Mark B. McClellan. *New England Journal of Medicine*. Boston: June, 2006, Vol. 354, Iss. 22; p. 2312-2314.
 51. "Drug Safety Reform at the FDA — Pendulum Swing or Systematic Improvement?" *New England Journal of Medicine*. Boston: April, 2007, Vol. 356, p. 17001-1702.
 52. "Satisfaction Guaranteed — "Payment by Results" for Biologic Agents," Alan M. Garber, Mark B. McClellan. *New England Journal of Medicine*. Boston: October, 2007, Vol. 357, p. 1575-1577.
 53. "Fostering accountable health care: moving forward in Medicare," Elliott S. Fisher, Mark B. McClellan, John Bertko, Steven M. Lieberman, Julie J. Lee, Julie L. Lewis, Jonathan S. Skinner. *Health Affairs*. Bethesda: March/April, 2009. Vol. 28, Iss. 2; p. w219-w231.
 54. "Four Important Steps Toward 21st Century Care for Patients with Cancer," with Joshua S. Benner. *The Oncologist*. April 2009. Vol. 14, No. 4; p. 313-316.
 55. "The New Sentinel Network—Improving the Evidence of Medical-Product Safety," with Richard Platt, Marcus Wilson, K. Arnold Chan, Joshua S. Benner and Janet Marchibroda. *The New England Journal of Medicine*. Boston: August, 2009. Vol. 361, p. 645-647.
 56. "A National Strategy to Put Accountable Care into Practice," with Aaron McKethan, Julie L. Lewis, Joachim Roski and Elliott S. Fisher. May 2010. *Health Affairs*. Vol. 29, Iss. 5; p. 982-990.
 57. "Beyond the Affordable Care Act: Achieving Real Improvements in Americans' Health," with David R. Williams and Alice Rivlin. *Health Affairs*. August 2010. Vol. 29, Iss. 8; p. 1481-1488.
 58. "An Evaluation of Recent Federal Spending on Comparative Effectiveness Research," with Joshua S. Benner, Marisa Morrison, Erin Karnes and S. Lawrence Kocot. *Health Affairs*. October 2010. Vol. 29, Iss. 10; p. 1768-1776.
 59. "An Accelerated Pathway for Targeted Cancer Therapies," with Joshua Benner, Richard Schilsky, David Epstein and Ray Woosley. *Nature Reviews Drug Discovery*. February 2011. Vol. 10.
 60. "Reforming Payments to Healthcare Providers: The Key to Slowing Healthcare Cost Growth While Improving Quality?" *Journal of Economic Perspectives*, Spring 2011. Vol. 25(2), p. 69-92.
 61. "Measuring Health Care Performance Now, Not Tomorrow: Essential Steps to Support Effective Health Reform," with Joachim Roski, *Health Affairs*. April 2011. Vol 30, p. 682-689.
 62. "Building the Path to Accountable Care," with Elliott Fisher and Dana Safran. *The New England Journal of Medicine*. Boston: December 2011. Vol. 365, p. 2445-244.
 63. "The Care Span: Unintended Consequences of Steps to Cut Readmissions and Reform Payments May Threaten Care of Vulnerable Older Adults," with Mary Naylor, Ellen Kurzman, David Grabowski, Charlene Harrington, and Susan Reinhard. *Health Affairs*. June 2012. Vol. 31, p. 1623-1632.

BOOKS AND REPORTS:

A Global Analysis of Technological Change in Health Care: Heart Attacks, edited with Daniel P. Kessler, University of Michigan Press, 2002.

Implementing Comparative Effectiveness Research: Priorities, Methods, and Impact, edited with Joshua S. Benner. The Brookings Institution, 2009.

Bending the Curve: Effective Steps to Address Long-Term Health Care Spending Growth, with Joseph Antos, John Bertko, Michael Chernew, David Cutler, Dana Goldman, Elizabeth McGlynn, Mark Pauly, Leonard Schaeffer, and Stephen Shortell. The Brookings Institution, 2009.

Bending the Curve Through Health Reform Implementation, with Joseph Antos, John Bertko, Michael Chernew, David Cutler, Francois de Brantes, Dana Goldman, Bob Kocher, Elizabeth McGlynn, Mark Pauly, Leonard Schaeffer, and Stephen Shortell. The Brookings Institution, 2010.

Bending the Curve – Person-Centered Health Care Reform: A Framework for Improving Care and Slowing Health Care Cost Growth, with Joseph Antos, Katherine Baicker, Michael Chernew, Dan Crippen, David Cutler, Tom Daschle, Francois de Brantes, Glenn Hubbard, Bob Kocher, Michael Leavitt, Peter Orszag, Mark Pauly, Alice Rivlin, Leonard Schaeffer, Donna Shalala, and Stephen Shortell. The Brookings Institution, 2013.

BOOK CHAPTERS:

1. “Where does the money go? Medical expenditures in a large corporation,” with David A. Wise, in Alan M. Garber, ed., *Issues in Health and Aging in the United States and Japan*, University of Chicago Press, October, 1995.
2. “Medicare reimbursement and hospital cost growth,” in David A. Wise, ed., *Advances in the Economics of Aging*, University of Chicago Press, 1996.
3. “The feasibility of medical savings accounts,” with Matthew J. Eichner and David A. Wise, in James M. Poterba, ed., *Tax Policy and the Economy*, Vol. 11, MIT Press, 1997.
4. “What is technological change?” with David Cutler, in D. Wise, ed., *Inquiries in the Economics of Aging*, University of Chicago Press, 1998.
5. “Insurance or self-insurance? Variation, persistence, and individual health accounts,” with Matthew J. Eichner and David A. Wise, in David A. Wise, ed., *Inquiries in the Economics of Aging*, University of Chicago Press, 1998.
6. “Incitations et financement des hôpitaux: le partage prospectif et retrospectif des coûts,” in Stephane Jacobzone, ed., *Economie de la Sante*, Paris: INSEE, 1998.
7. “Diagnosis and medical expenditures at the end of life,” with Alan M. Garber and Thomas E. MaCurdy, in David Wise, ed., *Frontiers in the Economics of Aging*, University of Chicago Press, 1998.
8. “Health events, health insurance, and labor supply: evidence from the Health & Retirement Study,” in David Wise, ed., *Frontiers in the Economics of Aging*, University of Chicago Press, 1998.
9. “Persistence of medical expenditures among elderly beneficiaries,” with Alan M. Garber and Thomas E. MaCurdy, in Alan M. Garber, ed., *Frontiers in Health Policy Research*, Vol. 1, MIT Press, 1998.
10. “The distributional effects of Medicare,” with Julie J. Lee and Jonathan S. Skinner, in James M. Poterba, ed., *Tax Policy and the Economy*, Vol. 13, MIT Press, 1999.
11. “The quality of for-profit and not-for-profit hospitals,” with Douglas Staiger, in David M. Cutler, ed., *Ownership in the Health Care Industry*, University of Chicago Press, 2000.
12. “Prices and productivity for heart disease,” with David M. Cutler, Joseph P. Newhouse, and Dahlia K. Remler, in Ernst R. Berndt, ed., *Productivity Studies in Health Care*, University of Chicago Press, 2000.
13. “Productivity change in heart attack care, 1975-1995: a literature review and synthesis,” with Paul A. Heidenreich, in Ernst R. Berndt, ed., *Productivity Studies in Health Care*, University of Chicago Press, 2000.

14. "Evaluating health care providers," with Douglas Staiger, in Alan M. Garber, ed., *Frontiers in Health Policy Research, Vol. 3*, MIT Press, 2000.
15. "Medical spending near the end of life: an update," with Jeffrey Geppert, in David A. Wise, ed., *Frontiers in the Economics of Aging*, University of Chicago Press, 2000.
16. "Biomedical research and then some: the causes of technological change in heart disease care," in Kevin M. Murphy and Robert H. Topel, eds., *The Value of Biomedical Research*, University of Chicago Press, 2002.
17. "Trends in the use of intensive procedures at the end of life," with Amber E. Barnato and Alan M. Garber, in Alan M. Garber, ed., *Frontiers in Health Policy Research, Vol. 4*, MIT Press, 2002.
18. "Area differences in utilization of medical care and mortality among U.S. elderly," with Victor R. Fuchs and Jonathan S. Skinner, in David A. Wise, ed., *Frontiers in the Economics of Aging*, University of Chicago Press, 2002.
19. "Comparative Effectiveness Research: Will It Bend the Health Care Cost Curve and Improve Quality?" in *Implementing Comparative Effectiveness Research: Priorities, Methods, and Impact*. The Brookings Institution, 2009.