Symposium on Sustainable U.S. Health Spending: *The Quest for Value*

Washington, DC, July 15, 2014

![Real Per Capita Health Spending Graph](image)

**Symposium Monograph**

Paul Hughes-Cromwick and Ani Turner, editors

*February 12, 2015*

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Acknowledgements

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We thank David Adler, our Robert Wood Johnson Foundation program officer, for his guidance and encouragement. In particular, it was his excellent suggestion to broaden the topics we addressed by adding sessions on healthcare delivery and preventive health.

The content is solely the responsibility of the authors and does not necessarily represent the views of the Robert Wood Johnson Foundation.

Superb logistics, communications, media, and audiovisual assistance was provided by David Arbor, Alison Gary, Brigitte Jones, Marijka Lischak, Alan Merritt, Lonnie Moore, Kristen Perosino, Roy Quini, Ken Schwartz, Chris Weaver, and Jim Wetherill. Extensive editorial input to this monograph was provided by Mary Joscelyn and Amy Schneider.

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Contributors

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Dr. Altman is an economist whose research interests are primarily in the area of federal and state health policy. Among his many professional achievements, he served 12 years as Chairman of the congressionally legislated Prospective Payment Assessment Commission, formed to advise Congress and the Administration on the functioning of the Medicare Diagnostic Related Group Hospital Payment System and other system reforms. He is also Chair of The Health Industry Forum which brings together diverse group leaders from across the health care field to develop solutions for critical problems facing the health care system.

**Dave A. Chokshi,** MD, MSc, is an Assistant Vice President in the Office of Healthcare Improvement at the New York City Health and Hospitals Corporation—the largest public health care system in the U.S. He practices primary care (internal medicine) at Bellevue Hospital and is an Assistant Professor of Population Health and Medicine at NYU Langone Medical Center.

Previously, Dr. Chokshi was Director of Population Health Improvement at NYU Langone. In 2012-13, he served as a White House Fellow at the U.S. Dept. of Veterans Affairs, where he was the principal health advisor in the Office of the Secretary. His prior work experience spans the public, private, and nonprofit sectors, including positions with the New York City and State Departments of Health, the Louisiana Department of Health, and a startup clinical software company. Dr. Chokshi helped grow the nonprofit Universities Allied for Essential Medicines (UAEM), dedicated to improving access to medicines in developing countries; he was a founding member of UAEM’s Board of Directors.

Dr. Chokshi has written on medicine and public health in The New England Journal of Medicine, JAMA, The Lancet, Health Affairs, and Science. He has also contributed to The Atlantic and Scientific American. He trained in internal medicine at Brigham & Women's Hospital, where he practiced primary care at the Southern Jamaica Plain Health Center, and was a clinical fellow at Harvard Medical School. During his training, he did clinical work in Guatemala, Peru, Botswana, Ghana, and India. He received his M.D. with Alpha Omega Alpha distinction from Penn, an M.Sc in global public health as a Rhodes Scholar at Oxford, and graduated summa cum laude from Duke.

**Ceci Connolly** is the Managing Director of the Health Research Institute at PwC, a research organization dedicated to objective analysis on the issues, policies and trends important to health organizations and policymakers.

Ms. Connolly is a veteran journalist, author and commentator who spent 25 years in the news business, reporting on national politics, health care, Latin America, and natural disasters such as Hurricane Katrina. As the national health correspondent for the *Washington Post*, she chronicled enactment of the Affordable Care Act and was co-author of *Landmark: The Inside Story of America's New Health Care Law and...*
What It Means for Us All.

During her years in journalism, she reported on six U.S. presidential campaigns and was a major contributor to the book *Deadlock: The Inside Story of America’s Closest Election*. She spent more than two years based in Mexico City, traveling extensively throughout Latin America. She produced a daily blog on Mexico’s 2006 presidential race, as well as a multimedia project on HIV-AIDS along the U.S.-Mexico border.

Ms. Connolly is a board member for the non-profit Whitman Walker Health, and is the first non-physician to receive the Mayo Clinic’s prestigious Plummer Society Award for promoting deeper understanding of science and medicine. She also serves on the National Advisory Board of the Center for Sustainable Health Spending and was the recipient of a fellowship at Harvard’s Kennedy School of Government.

She has appeared on PBS’ Washington Week, The Early Show on CBS, NPR’s Diane Rehm Show, and several news programs on MSNBC and the Fox News Channel. She has spoken at the prestigious National Press Club, the Chautauqua Institution, the Cleveland Clinic, numerous universities and health care conferences. Prior to joining PwC, Ms. Connolly was a senior adviser at the McKinsey Center for Health Reform.

In her role at the Health Research Institute, Ms. Connolly oversees a team of independent analysts and writers who track major developments across the health care spectrum.

![Image of Paul Ginsburg]

**Paul Ginsburg** is Norman Topping Chair in Medicine and Public Policy at the University of Southern California. Continuing to be based in the Washington, DC, area, he teaches graduate health administration courses and conducts health policy research.

From 1995 through the end of 2013, he was President of the Center for Studying Health System Change (HSC). Founded with core support from the Robert Wood Johnson Foundation, HSC conducted research to inform policymakers and other audiences about changes in organization, financing and delivery of care and their effects on people. HSC was widely known for the objectivity and technical quality of its research and its success in communicating this research to policymakers, industry leaders, the media, and the research community. HSC enjoys particular respect for its knowledge of developments in communities and health care markets.

Before founding HSC, Dr. Ginsburg served as the founding Executive Director of the Physician Payment Review Commission (now the Medicare Payment Advisory Commission). Widely regarded as highly influential, the Commission developed the Medicare physician payment reform proposal that was enacted by the Congress in 1989. Dr. Ginsburg was a Senior Economist at RAND and served as Deputy Assistant Director at the Congressional Budget Office (CBO). Before that, he served on the faculties of Duke and Michigan State Universities. He earned his doctorate in economics from Harvard University.

Dr. Ginsburg is a noted speaker and consultant on the changes in the financing and delivery of health care, particularly on the evolution of health care markets. In addition to presentations on the overall direction of change, recent topics have included cost trends and drivers, consumer-driven health care, provider payment reform, future of employer-based health insurance, and competition in health care. As a consultant to the Bipartisan Policy Center, he has contributed to reports on reducing federal spending on health care (2010) and on a strategy to contain health care costs (2013). He has been named to Modern Healthcare’s "100 Most Influential Persons in Health Care" eight times. He received the first annual HSR Impact Award from AcademyHealth. He is a founding member of the National Academy of Social Insurance and a Public Trustee of the American Academy of Ophthalmology, served two elected terms on the Board of AcademyHealth, served on CBO’s Panel of Health Advisors, and serves on the Health Affairs editorial board.
Kate Goodrich joined the Centers for Medicare & Medicaid Services (CMS) in September 2011, serving as a Senior Technical Advisor to the Director of the Office of Clinical Standards and Quality and the Chief Medical Officer of CMS. In this role, she provides leadership on quality measurement programs and co-leads a CMS-wide task force to align measures across programs and with the private sector as well as a companion U.S. Department of Health and Human Services (HHS)-wide committee. Before coming to CMS, Dr. Goodrich served as a Medical Officer in the Office of the Assistant Secretary for Planning and Evaluation (ASPE). She managed the portfolio of ASPE Comparative Effectiveness Research (CER) projects, including the creation of a multipayer claims database for CER. She was also the Project Manager for the HHS contract with the National Quality Forum. She continues to practice clinical medicine as a Hospitalist and an Associate Professor of Medicine at The George Washington University.

Paul Hughes-Cromwick is Senior Health Economist, Center for Sustainable Health Spending, Altarum Institute, Ann Arbor, Michigan, where he has worked for 12 years. He has 30 years of professional work experience, involving multi-disciplinary teams spanning academic, private, and government sectors. This includes the University of Michigan-School of Nursing, Henry Ford Health System, University of Pittsburgh Graduate School of Public Health, State of Connecticut Office of Policy and Management, and the U.S. Department of Health and Human Services Office of the Assistant Secretary for Planning and Evaluation. He also has 14 years of experience on health plan and hospital Boards of Directors, including Board Chair and executive member of a health insurance plan, and six years as Chair of the National Association for Business Economics health economics roundtable. He has significant experience in health services research including cost-effectiveness analysis. Paul has proven successes in strategic planning, business development, organizing scientific meetings, large grant awards, project management, major computer acquisitions and implementation, and overall establishment of research programs. His prime research interests are tracking and investigating national health expenditures leading to U.S. cost control and fiscal sustainability, economic analysis of health reform, conducting health insurance studies, and understanding health system incentives. He has multiple publications in a diverse range of journals, and presentations in varied contexts. Mr. Hughes-Cromwick has a BS in mathematics and philosophy from the University of Notre Dame and an MA in applied economics from Clark University. Married with three adult children, enjoys travel, and has a life-long interest in fitness, music, and public service/charity.

Joanne Kenen is the Politico health care editor. Ms. Kenen has covered everything from Haitian voodoo festivals to U.S. presidential campaigns. (Sometimes it is hard to tell the difference, she says.) Since arriving in Washington in 1994, she has focused on health policy and health politics. She joined POLITICO in Sept. 2011. Ms. Kenen got the newspaper bug in second grade (the Teeny Town News), spent way too much time at the Harvard Crimson, and then found herself in Central America, where she had an Inter-American Press Association fellowship. She worked for Reuters in New York, Florida, the Caribbean, and Washington. As a Kaiser Family Foundation media fellow in 2006–07,
she wrote about aging and palliative care. She spent three years writing and blogging about health policy at the nonpartisan New America Foundation.

Her work has appeared in numerous publications including The Atlantic, Kaiser Health News, The Washingtonian, CQ, The Washington Post, the Center for Public Integrity, Health Affairs, AARP’s The Magazine and Bulletin, National Journal, Slate, and Miller-McCune. She co-authored two books that have absolutely nothing to do with health: The Costa Rica Reader and a parenting book, The Sleep Lady’s Good Night, Sleep Tight. One was adopted in college courses; the other one made money.

When she isn’t busy trying to figure out what Congress is up to (not that Congress always knows what Congress is up to), she can be found in Bethesda, Md., with her husband, Ken Cohen, and their two sons. When she needs a break from health policy, she writes about her kids, chocolate cake, or cross-dressing female pirates.

Michael Kleinrock, Director of Research Development at IMS Institute, sets the research agenda for the institute, leading the development of reports and projects focused on the current and future role of biopharmaceuticals in health care in the U.S. and globally.

Each year, Mr. Kleinrock leads the development of IMS’s perspectives included in its annual “Year in Review” presentation, as well as its review of the future outlook for the global pharmaceutical market. He writes and speaks regularly on these and other topics and is sought for his unique and pragmatic perspectives, backed by rigorous analysis and research, on issues of interest to pharmaceutical companies, financial analysts, trade groups, policy advocates, and regulatory agencies.

Mr. Kleinrock joined IMS in 1999 and held roles in customer service, marketing, and product management. In 2006, he joined the Market Insights team, which in 2011 became the IMS Institute for Healthcare Informatics. Mr. Kleinrock holds a BA in history and political science from the University of Essex and an MA in journalism and radio production from Goldsmiths College.

Larry Levitt is Senior Vice President for Special Initiatives at the Kaiser Family Foundation and Senior Advisor to the President of the Foundation. Among other duties, he is Co-Executive Director of the Program for the Study of Health Reform and Private Insurance. He previously was Editor-in-Chief of kaisernetwork.org, the Foundation’s online health policy news and information service, and directed the Foundation’s communications and online activities and its Changing Health Care Marketplace Project.

Before joining the Foundation, Mr. Levitt served as a Senior Health Policy Advisor to the White House and the U.S. Department of Health and Human Services, working on the development of President Clinton's Health Security Act and other health policy initiatives. Earlier, he was the Special Assistant for Health Policy with California Insurance Commissioner John Garamendi, was a Medical Economist with Kaiser Permanente, and served in a number of positions in the Massachusetts state government. Mr. Levitt holds a bachelor's degree in economics from the University of California, Berkeley and a master's degree in public policy from Harvard University's Kennedy School of Government.

George Miller has served on the technical staff of Altarum Institute and one of Altarum's predecessor organizations, Vector Research, Inc., since
1972. He is currently affiliated with Altarum’s Center for Sustainable Health Spending, where he participates in the center’s efforts to track national health spending, understand the drivers of spending growth, and quantify a sustainable spending growth rate. In other efforts, he has supported Altarum in applications of operations research to modeling and analysis of health care issues that have included topics in the value of prevention, disease management, medical responses to demand surges, cost-effectiveness of clinical interventions, beneficiary population forecasting, telemedicine, graduate medical education, medical logistics, medical staffing, medical facilities planning, and collections forecasting.

Dr. Miller’s work has been published in the New England Journal of Medicine; the Journal of the American College of Cardiology; Health Affairs; Medical Decision Making; Advances in Health Economics and Health Services Research; Health Care Management Science; Infection Control and Hospital Epidemiology; the International Journal of Disaster Medicine; the Joint Commission Journal on Quality and Patient Safety; Interfaces; Management Science; IEEE Transactions on Systems, Man, and Cybernetics; and IIE Transactions. He frequently serves as a reviewer for several of these journals.

Dr. Miller has chaired numerous sessions at national meetings of the Institute for Operations Research and the Management Sciences (INFORMS), served on INFORMS’s Long-Range Planning Committee, and served for 7 years (3 years as Chair) of its committee to select the recipient of the Bonder Scholarship for Applied Operations Research in Health Services. Dr. Miller received his BSE, MSE, and PhD degrees in industrial and operations engineering from the University of Michigan, where he subsequently served as an Adjunct Assistant Professor.

Harold D. Miller is the President and CEO of the Center for Healthcare Quality and Payment Reform. Miller has been working at the local, state, and national levels on initiatives to improve the quality of healthcare services and to change the fundamental structure of healthcare payment systems in order to support improved value. Miller also serves as Adjunct Professor of Public Policy and Management at Carnegie Mellon University.

Miller is a nationally recognized expert on healthcare payment and delivery reform, and has given invited testimony to Congress on how to reform healthcare payment. He has authored a number of papers and reports on health care payment and delivery reform, including “From Volume to Value: Better Ways to Pay for Healthcare,” which appeared in the September 2009 issue of Health Affairs, “Win-Win-Win Approaches to Healthcare Cost Control Through Physician-Led Payment Reform, which appeared in the March 2014 issue of Clinical Gastroenterology and Hepatology, the Center for Healthcare Quality and Payment Reform’s reports How to Create Accountable Care Organizations, Transitioning to Accountable Care, and Ten Barriers to Healthcare Payment Reform and How to Overcome Them, the Network for Regional Healthcare Improvement’s report Making the Business Case for Payment and Delivery Reform, the Massachusetts Hospital Association’s report Creating Accountable Care Organizations in Massachusetts, the American Medical Association’s report Pathways for Physician Success Under Healthcare Payment and Delivery Reforms, the Medical Society of Virginia’s report How Virginia Physicians Can Improve the Quality and Reduce the Costs of Health Care Through Payment and Delivery Reforms, and the Association of Departments of Family Medicine’s report Leading the Way in Accountable Care: How Departments of Family
Medicine Can Help Create a Higher Quality, More Affordable Healthcare System.

From 2008 to 2013, Miller served as the President and CEO of the Network for Regional Healthcare Improvement (NRHI), the national association of Regional Health Improvement Collaboratives, and he organized NRHI’s national Summits on Healthcare Payment Reform in 2007 and 2008 and its Summit on Regional Healthcare Transformation in 2013. His report *Creating Payment Systems to Accelerate Value-Driven Health Care: Issues and Options for Policy Reform* which was prepared for the 2007 Summit was published by the Commonwealth Fund in September, 2007, and his summary of the recommendations from the 2008 Payment Reform Summit, *From Volume to Value: Transforming Healthcare Payment and Delivery Systems to Improve Quality and Reduce Costs*, was published in November 2008 by NRHI and the Robert Wood Johnson Foundation.

Miller also served for several years as the Strategic Initiatives Consultant to the Pittsburgh Regional Health Initiative (PRHI). His work demonstrating the significant financial penalties that hospitals can face if they reduce hospital-acquired infections was featured in *Modern Healthcare* magazine in December, 2007. He designed and led a multi-year PRHI initiative that significantly reduced preventable hospital admissions and readmissions through improved care for chronic disease patients.

Miller has worked in more than 30 states and metropolitan regions to help physicians, hospitals, employers, health plans, and government agencies design and implement payment and delivery system reforms, and he assisted the Centers for Medicare and Medicaid Services with the implementation of its Comprehensive Primary Care Initiative in 2012.

Miller serves on the Board of Directors of the National Quality Forum, and he has represented the Network for Regional Healthcare Improvement on the National Priorities Partnership.
interdisciplinary arts and sciences with a specialization in public health science from Union Institutes and University.

Peter Richard Orszag is a Vice Chairman of Corporate and Investment Banking, Chairman of the Public Sector Group, and Chairman of the Financial Strategy and Solutions Group at Citigroup. He is also a columnist at Bloomberg View, a Distinguished Scholar at New York University School of Law, and an Adjunct Senior Fellow at the Council on Foreign Relations. Before joining Citigroup, he was a Distinguished Visiting Fellow at the Council on Foreign Relations and a contributing columnist for the New York Times op-ed page. Prior to that, he was the 37th Director of the Office of Management and Budget under President Barack Obama and had also served as the Director of the Congressional Budget Office.

Dr. Orszag is a member of the Institute of Medicine of the National Academies of Science. He serves on the Boards of Directors of the Peterson Institute for International Economics, the Robert Wood Johnson Foundation, the Mt. Sinai Hospital, New Visions for Public Schools in New York, the Russell Sage Foundation, and ideas42.

Kavita Patel, MD, MS is the Managing Director for Clinical Transformation and Delivery at the Engelberg Center for Health Care Reform and a Fellow in Economic Studies. Dr. Patel is a practicing Primary Care Internist at Johns Hopkins Medicine. She also served in the Obama Administration as Director of Policy for the Office of Intergovernmental Affairs and Public Engagement in the White House. As a Senior Aide to Valerie Jarrett, President Obama's senior advisor, Dr. Patel played a critical role in policy development and evaluation of policy initiatives connected to health reform, financial regulatory reform, and economic recovery issues.

Dr. Patel has a deep understanding of Capitol Hill from her time spent on the late Sen. Edward Kennedy's staff. As Deputy Staff Director on Health, she served as a policy analyst and trusted aide to the Senator, and was part of the senior staff of the Health, Education, Labor and Pensions Committee under Sen. Kennedy's leadership. She also has an extensive research and clinical background, having worked as a researcher at the RAND Corporation and as a practicing physician in both California and Oregon. Dr. Patel is a previous Robert Wood Johnson Clinical Scholar. While at Brookings, she will return to providing clinical care as an internal medicine practitioner. She earned her medical degree from the University of Texas Health Science Center and her master's in public health from the University of California, Los Angeles.

Uwe E. Reinhardt, PhD, is recognized as one of the nation's leading authorities on health care economics. He is the James Madison Professor of Political Economy and Professor of Economics and Public Affairs at Woodrow Wilson School of Public and International Affairs at Princeton University. He has been a member of the Institute of Medicine of the National Academy of Sciences since 1978. He is a past President of the Association of Health Services Research.

From 1986 to 1995, Dr. Reinhardt served as a Commissioner on the Physician Payment Review Committee, established in 1986 by Congress to advise it on issues related to the payment of physicians. He is a senior associate of the Judge Institute for Management of
Cambridge University and a trustee of Duke University and its health system.

Dr. Reinhardt is or was a member of numerous editorial boards, among them the Journal of Health Economics, the Milbank Memorial Quarterly, Health Affairs, the New England Journal of Medicine, and Journal of the American Medical Association. He received a PhD from Yale University.

Alice M. Rivlin is a Senior Fellow in the Economic Studies Program at Brookings, a Visiting Professor at the Public Policy Institute of Georgetown University, and the Director of the Engelberg Center for Health Care Reform. She recently served as a member of the President's Debt Commission, was founding director of CBO, served as OMB director and was Federal Reserve Vice Chair. She is an expert on fiscal and monetary policy and was the recipient of the 2013 Robert M. Ball Award for Outstanding Achievements in Social Insurance, awarded by the National Academy of Social Insurance.

Before returning to Brookings, Ms. Rivlin served as Vice Chair of the Federal Reserve Board (1996–1999). She was Director of the White House Office of Management and Budget in the first term of the Clinton administration. She also chaired the District of Columbia Financial Management Assistance Authority (1998–2001). Ms. Rivlin was the founding director of the Congressional Budget Office (1975–1983) and Director of the Economic Studies Program at Brookings (1983–1987). She also served at the Department of Health, Education and Welfare as Assistant Secretary for Planning and Evaluation.

In February 2010, Ms. Rivlin was named by President Obama to the Commission on Fiscal Responsibility and Reform. She also co-chaired, with former Sen. Pete Domenici, the Bipartisan Policy Center's Task Force on Debt Reduction. Ms. Rivlin received a MacArthur Foundation Prize Fellowship in 1983 and the Moynihan Prize in 2008. She was named one of the greatest public servants of the last 25 years by the Council for Excellence in Government in 2008. She has taught at Harvard University, George Mason University, and the New School for Social Research. She has served on the Boards of Directors of several corporations and as President of the American Economic Association.

Ms. Rivlin is a frequent contributor to newspapers, television, and radio and is currently a regular commentator on Nightly Business Report. Her books include Systematic Thinking for Social Action (1971), Reviving the American Dream (1992), and Beyond the Dot.coms (with Robert Litan, 2001). She is co-editor of Restoring Fiscal Sanity: How to Balance the Budget (with Isabel Sawhill, 2004), Restoring Fiscal Sanity 2005: Meeting the Long-Run Challenges (with Isabel Sawhill), Restoring Fiscal Sanity 2007: The Health Spending Challenge (with Joseph Antos), and The Economic Payoff from the Internet Revolution (with Robert Litan, 2001).

Charles Roehrig, PhD, is a Vice President and Institute Fellow who directs Altarum’s Center for Sustainable Health Spending. His research interests include timelier tracking of health spending, determining its sustainable growth rate, and modeling its future growth. He has overseen development of the Altarum Health Sector Economic Indicators, which provide monthly tracking of health spending, prices, utilization, and employment. He developed the Triangle of Painful Choices to illustrate the link between the federal budget and the sustainable rate of health spending. He also led the development of estimates of national health spending by medical condition (including spending on prevention) and has extended this research to include the impact of disease prevalence on expenditure growth. He is currently studying the impact of primary prevention on health spending and is modeling the impact of business cycles on health spending growth. He also has many years of experience in
modeling health workforce supply and requirements. His work has been published in *Health Affairs* and the *New England Journal of Medicine*, and he blogs regularly for Altarum’s Health Policy Forum and Health Affairs. In addition to his applied research, he has published in the field of theoretical econometrics in academic journals such as *Econometrica* and the *Journal of Econometrics*.

Dr. Roehrig holds a PhD in economics from The University of Michigan, an MS in statistics from The University of Michigan, and a BA in economics from Amherst College.

**Ani Turner** is Deputy Director of Altarum’s Center for Sustainable Health Spending and leads the Center’s health workforce analysis and modeling, and monthly tracking of national health sector employment. Working with government and commercial clients for over two decades, she has developed forecasting models and conducted analyses of health care resources, costs, and quality for the Department of Health and Human Services, the Department of Defense (DoD), individual States, and private health plans. Ms. Turner led development of a system of models for the Health Resources and Services Administration, National Center for Health Workforce Analysis, to project supply and demand for the nation’s clinicians, including physicians, physician assistants, and advanced practice nurses, by specialty. In internally funded research, she developed a method to link the health workforce by occupation with national health expenditures, for which she received the National Association for Business Economics NABE Award for outstanding paper.

For a decade, Ms. Turner led work for the DoD conducting economic analyses of hospital requirements and life-cycle costs in support of over a dozen multi-million dollar military medical construction decisions. Ms. Turner's recent work has explored the business case for racial equity for the W.K. Kellogg Foundation, and assessing the value of investments in primary prevention, with an emphasis on community-based interventions and the social determinants of health, for the Robert Wood Johnson Foundation. Ms. Turner holds a Bachelor’s degree in mathematics, summa cum laude, Phi Beta Kappa, and a Master of Arts in Applied Economics, both from the University of Michigan.
Preface

This monograph is the result of a meeting held in Washington, DC, on July 15, 2014. It is the fourth such annual meeting for the Altarum Institute Center for Sustainable Health Spending (CSHS), whose mission is to guide the transition of the United States to sustainable health spending growth by analyzing and tracking spending, developing solutions, and advocating for meaningful change.

What are our core strategies for this work?

The CSHS builds upon decades of multidisciplinary policy research experience and advanced economic modeling for public, private, and philanthropic clients. With the Center, Altarum is focusing this research and policy expertise on the macroeconomic trends and key drivers of healthcare spending to formulate strategies for sustainable growth.

Core strategies follow:

▲ Timely tracking and forecasting of health spending and cost factors,
▲ Systems-level evaluations of options for bending the cost curve,
▲ Research to fill data gaps and develop new promising strategies,
▲ Pilot projects and demonstrations of strategies in particular geographic areas, and
▲ Development of and advocacy for policy recommendations to advance proven approaches.

The center is one of four critical systems issues funded by Altarum and launched in May 2011 (see triangle figure).

Please note: We have edited the July 15, 2014 presentations for clarity.

A complete (4-hour) video of the event and an 18-minute highlights video are available at: www.altarum.org/cshs/meetings. This site also contains the materials for our previous meetings.
Symposium Agenda

With Funding from the Robert Wood Johnson Foundation, The Altarum Institute for Sustainable Health Spending Presents:

Symposium on Sustainable U.S. Health Spending: The Quest for Value

Tuesday, July 15, 2014 • 8:30 a.m. – 2:00 p.m.
The Pew Charitable Trusts Conference Center • 901 E Street NW, Washington, D.C.

Agenda

8:30 – 9:00 a.m.  Continental Breakfast and Welcome
Lincoln Smith, President and Chief Executive Officer, Altarum Institute
Ceci Connolly, Managing Director, PwC Health Research Institute – Moderator, Sessions I - II

9:00 – 9:55 a.m.  I. Health Spending in 2014: What’s Happening?
Peter Orszag, Vice Chairman, Corporate and Investment Banking, Citibank
Larry Levitt, Senior Vice President for Special Initiatives, Kaiser Family Foundation
Stuart Altman, Professor of National Health Policy, Heller School Brandeis University

10:00 – 10:55 a.m.  II. Health Care Delivery: How to Best Increase Value & Quality?
Harold D. Miller, Director, Center for Healthcare Quality & Payment Reform
Kate Goodrich, Director, Quality Measurement and Health Assessment Group, CMS
Kavita Patel, Managing Director for Clinical Transformation and Delivery, Brookings Institution

11:00 – 12:00 p.m.  III. Disease Prevention Interventions: What’s the Value?
George Miller, Fellow, Altarum Center for Sustainable Health Spending – Moderator
Alice Rivlin, Director, Engelberg Center for Health Care Reform, Brookings Institution
Dave Chokshi, Department of Population Health, NYU Langone Medical Center
Bobby Milstein, Director, ReThink Health, Visiting Scientist, MIT Sloan School of Management

12:05 – 1:15 p.m.  IV. Health Spending and Value Roundtable: What Lies Ahead in 2015 & Beyond?
Joanne Kenen, Health Editor, POLITICO – Moderator
Charles Roehrig, Director, Altarum Center for Sustainable Health Spending
Paul Ginsburg, University of Southern California
Michael Kleinrock, Director, Research Development, IMS Institute
Uwe Reinhardt, James Madison Professor of Political Economy, Princeton University

1:15 – 2:00 p.m.  Lunch and Informal Discussions

Follow us at twitter.com/Altarum and twitter.com/Altarum_CSHS and use the hashtag CSHSustain to take part in the discussion.
Welcome and Introduction

Lincoln Smith

On behalf of Altarum Institute, and our Center for Sustainable Health Spending, welcome to the fourth annual Sustainable Health Spending Symposium. Altarum is a non-profit research institute with approximately 400 employees spread across the country. We are in one sense your typical contract research and consulting organization working within the health sector. We work across the public health, healthcare delivery and clinical research space, engaged in a wide variety of activities within those sectors.

Yet, we are not typical in the sense that we stray from the beaten path. We do not have shareholders because we are a non-profit. Instead, we take the proceeds from our work and channel them into an internally chartered research agenda across four topics: early childhood development; consumer choice in health care; elder care and advanced illness; and the center that is putting on this symposium—sustainable health spending. We take those resources to build a research agenda, some of the fruits of which you see here, as well as partner with other organizations to appropriately and effectively scale that work.

As I said, the fourth center has led to today’s symposium, Sustainable U.S. Health Spending: The Quest for Value. I do love that word, “quest.”

First, my most important duty is thank yous. On behalf of Altarum and the center, I want to energetically thank the Robert Wood Johnson Foundation, and our project officer, David Adler, who is here today. This is the third consecutive year they have provided financial support to the symposium, allowing us to build momentum around this event. Thus, we are very appreciative. Huge thanks to all of our panelists. We have four all-star panels as well as two terrific moderators, Ceci Connolly of PwC and Joanne Kenen from POLITICO. These folks could have chosen to be many places today and yet they chose to be here, and we are truly humbled and appreciative for that.

We will ensure time for question and answers, including some of those from our webcast audience. Do not worry if you miss any of the conversation as there will be a full meeting video as well as a manuscript produced after the symposium. Lunch follows the presentations where you can continue the debate. A hearty thank you to Paul Hughes-Cromwick, Marijka Lischak, and Chris Weaver and his entire team for making this all work so smoothly.

I mentioned I liked the word “quest,” and I promise I do not have my own presentation, but I am going to make a few comments. What a terrific word. When we launched the health focus for Altarum (previously a portfolio company), we were puzzling about the truly intimidating health challenges and especially how to create lasting value. One of our board members exclaimed that only three words mattered: “follow the money.” That is what we set out to do with the senior team, led by Charlie Roehrig, of the Center for Sustainable Health Spending. The aim was to begin to track, on a timely basis, where the money was going within healthcare spending and to begin to understand the cost drivers as well as opportunities for change.

We do indeed track spending, which is relatively easy (no offense to CSHS). Of course, measuring value is significantly more challenging. The Institute of Medicine reports that 30% of all the money spent in U.S. health care does not truly add value. Within Medicare, there is perhaps 10% fraud, and maybe another 8% of improper payments. Assessing value is not easy. Consider preventable harm: Is it 98,000 deaths a year, or 200,000 or 400,000? Spending the money is easy, achieving value is much tougher. I read a report
suggesting that up to 12% of doctors are incompetent, according to studies by their own professional colleagues. No surprise that it is not easy to remedy that situation.

We spend approximately $3 trillion a year on health care in this country. Every one of those dollars resides in someone’s future business plan. Actually, they are in multiple organizations’ business plans because everyone is competing for those dollars.

“Quest” is clearly an appropriate term. Defined as an adventurous journey, it is a continuing adventure to figure out how to identify what things to do, what knobs to turn, what policy triggers to pull, et cetera, to obtain real value. There will be severe, well-organized opposition to successful approaches, which makes it that much more intriguing to hear the ideas that folks present today. I trust that each of the panelists will be provocative as they illuminate some of the challenges in creating that value as we go forward.
I. Health Spending in 2014: What’s Happening?

Ceci Connolly

I am thrilled to be here for the third year in a row. This is starting to feel like a reunion for me! Thank you for inviting me. To keep the proceedings on schedule I have brought my whip, but since this is such a light, easy topic, we will surely be able to breeze right through it!

I was reflecting on our discussion at this event a year ago and my recollection was that we spent a good bit of time talking about a phrase that I loved and had beaten into my head by Peter Orszag, “bending the cost curve.” (Please do not go back to the video to check my memory!) I fondly remember those days of sitting in your office at the old Executive Office Building and contemplating bending the cost curve. Last year we debated whether the healthcare cost curve had truly been bent. I believe there is solid evidence that we have indeed seen progress on this front and that we are not on that double-digit cost trajectory that we witnessed for such a long time in health care. Yet, important questions remain in explaining why the trend has changed and what lies ahead.

Pointedly, I am eager to hear panelists address the question of whether it is enough to simply bend the cost curve or whether we must get healthcare spending closer to GDP growth (or below it!). A handful of localities across the country are committed to doing that, and it is interesting to talk with these leaders to learn about their approaches. Is this something that we as a society are committed to, or do we desire to spend even more on health care?

When we pivot to our second panel on value, to whose value are we referring? Is it the consumer’s value? The employer’s? With all of the attention on exchanges and government policies, it is easy to lose sight of the massive burden healthcare expenditures place on employers. Is it the government’s notion of value? Of course, the federal government is the biggest purchaser of health care in our country, and this will continue if not accelerate in the future. Peter and others will talk about Medicare spending trends and related healthcare implications.
I am looking forward to this discussion. Everyone knows or should know our prestigious speakers; please consult the meeting materials for their full bios. We will start with Peter Orszag. Many of you know him from his time in the Obama administration. He is now a banker at Citibank and thus has much fancier shoes. (That is what they said when I left journalism.) Larry Levitt is from the Kaiser Family Foundation and happens to be one of my favorite healthcare tweeters, so you should immediately follow him if you do not already. Please follow me also, because we have a lot of fun engaging in this dialogue on Twitter. The esteemed Stuart Altman, from Brandeis University, rounds out the panel.

**Peter Orszag**

**Health Spending in 2014: Keep Your Eye on Medicare Ball**

I think we are here at a very important moment. I focus on Medicare specifically today because there is a properly raging debate about how much of the deceleration that we have experienced over the past few years in total healthcare spending is due to the economy. What is interesting about Medicare is that there is no good reason to believe that Medicare has a significant cyclical component. Thus, focusing on Medicare is beneficial because it provides a purer measure of whether something structural is changing. A second benefit of analyzing Medicare is that its enrollment is gradually rising, rather than in a large one-off step function, as is the case for total healthcare spending.

Figure 1 illustrates the dramatic deceleration that has occurred across private insurance and Medicare and to some degree, Medicaid, although the latter is complicated by several policy changes. Note that Medicare has decelerated faster than private insurance. If this were all a cyclical story, we should expect the reverse.

**Figure 1**

Recent deceleration in health spending

![Graph showing growth in real per enrollee health spending by payer](image)

There has been much discussion as to whether the period of deceleration that has occurred is over. I can assure you that for Medicare it is not. We have timely data in Medicare, and this extends through June 2014 (Figure 2). Medicare rose a whopping $5 billion, or 1.2% in nominal terms, relative to the previous
fiscal year. That is negative when adjusted for beneficiary growth and price inflation. This is highly unusual and attests to the deceleration continuation. I have a bet – it may even be with some people in this room – that Medicare spending growth for this fiscal year would not exceed 3%, nominal. In order to hit 3%, the fourth quarter would have to rise about 8%, year over year. I am happy to double down with anyone on that bet!

*Figure 2*

**Monthly Budget Review, June 2014**

<table>
<thead>
<tr>
<th>Major Program or Category</th>
<th>FY 2013</th>
<th>Preliminary FY 2014</th>
<th>Estimated Change</th>
<th>Billions of Dollars</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>DoD—Military*</td>
<td>458</td>
<td>432</td>
<td>-26</td>
<td>-26</td>
<td>-5.6</td>
</tr>
<tr>
<td>Social Security Benefits</td>
<td>590</td>
<td>627</td>
<td>28</td>
<td>28</td>
<td>4.7</td>
</tr>
<tr>
<td>Medicare</td>
<td>367</td>
<td>372</td>
<td>5</td>
<td>5</td>
<td>1.2</td>
</tr>
<tr>
<td>Medicaid</td>
<td>198</td>
<td>218</td>
<td>20</td>
<td>20</td>
<td>10.0</td>
</tr>
<tr>
<td>Unemployment Insurance</td>
<td>56</td>
<td>37</td>
<td>-19</td>
<td>-19</td>
<td>-33.9</td>
</tr>
<tr>
<td>Other Activities</td>
<td>816</td>
<td>810</td>
<td>-7</td>
<td>-3</td>
<td>-0.3</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>2,494</td>
<td>2,496</td>
<td>1</td>
<td>5</td>
<td>0.2</td>
</tr>
<tr>
<td>Net Interest on the Public Debt</td>
<td>194</td>
<td>202</td>
<td>8</td>
<td>8</td>
<td>4.1</td>
</tr>
<tr>
<td>Troubled Asset Relief Program</td>
<td>-9</td>
<td>-5</td>
<td>5</td>
<td>5</td>
<td>n.m.</td>
</tr>
<tr>
<td>Net Outlays for GSEs</td>
<td>-82</td>
<td>-86</td>
<td>14</td>
<td>14</td>
<td>n.m.</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>2,697</td>
<td>2,625</td>
<td>28</td>
<td>32</td>
<td>1.2</td>
</tr>
</tbody>
</table>

More specifically, what evidence do I have for the proposition that Medicare lacks a strong cyclical component? There are three main reasons. First, and most fundamentally, the majority of Medicare beneficiaries have wrap-around insurance, whether Medigap or employer- or retiree-based coverage. Their net out-of-pocket expenditures are low. Moreover, income for the majority of Medicare beneficiaries comes from Social Security that is protected against economic fluctuations. There is simply not much in the way of theoretical factors to suspect that the business cycle would significantly affect utilization within Medicare.

Second, using a difference-in-difference approach, we can compare the states that were hardest hit during the downturn with those that were hit less hard. Using either total healthcare spending or private insurance, there is a clear relationship – the states hit the hardest economically were the ones experiencing the largest health spending deceleration – suggesting a cyclical component. Figure 3 shows the picture for Medicare. Even if you cannot run regressions in your head, it is clear there is no correlation there, consistent with the business cycle not being a fundamental driver.
Finally, consider a macro approach and the history of Medicare’s previous spending decelerations. Figure 4 strongly supports the thesis that decelerations happen around recessions, before recessions, and after recessions; i.e., there is no consistent pattern.

Notice also from this chart that there was one other period where we had a sharp deceleration in Medicare: the late 1990s, and that subsequently reversed itself. So as Ceci asked, will the current slowdown continue? It did not then, and perhaps it will not now.

Figure 4

Medicare does not have a business cycle component
There is, however, a major difference between then and now. Then, the spending slowdown was dominated by low prices. We cut Medicare reimbursement rates, especially during the balanced budget agreement of 1997. The current deceleration, by contrast, is driven almost entirely by less utilization, a much different phenomenon. The Congressional Budget Office (CBO) analyzed the most recent deceleration, breaking it down by various causal factors. Figure 5 shows a 320 basis point deceleration in total for Medicare spending per beneficiary, but the change in the average payment rate was less than 20 basis points; i.e., less than 10%. According to the CBO analysts, the “financial crisis and economic downturn” clocked in at a whopping zero basis point contribution. Most of the total slowdown is accounted for by unexplained utilization deceleration. What is happening here and what are the implications?

Figure 5

What’s different this time

Table 1. Contributions of Various Factors to Annual Growth in Per-Beneficiary Spending for the Elderly in Parts A and B of Medicare

<table>
<thead>
<tr>
<th>(Percentage points)</th>
<th>2000 to 2005</th>
<th>2007 to 2010</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Spending Growth</td>
<td>7.1</td>
<td>3.8</td>
<td>-3.2</td>
</tr>
<tr>
<td>Potential Contributors to the Slowdown</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Growth in average payment rate</td>
<td>2.7</td>
<td>2.5</td>
<td>-0.2</td>
</tr>
<tr>
<td>Growth in demand by beneficiaries</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Changes in the age and health status of beneficiaries</td>
<td>0.0</td>
<td>-0.3</td>
<td>-0.3</td>
</tr>
<tr>
<td>Growth in the proportion of beneficiaries enrolled only in Part A</td>
<td>-0.1</td>
<td>-0.3</td>
<td>-0.2</td>
</tr>
<tr>
<td>Growth in the use of prescription drugs</td>
<td>-0.5</td>
<td>-0.6</td>
<td>-0.1</td>
</tr>
<tr>
<td>The financial crisis and economic downturn</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Changes in supplemental coverage</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Unexplained Contribution to Growth</td>
<td></td>
<td></td>
<td>-2.4</td>
</tr>
</tbody>
</table>

I believe that providers are starting to respond to what they perceive to be a change in the payment structure, even though that has largely not yet occurred. Formal and informal surveys show that the majority of providers are expecting a substantial portion of their revenue will be value-based payment of some sort within the next three to five years. That represents a massive change relative to the roughly 10% of such payments we see today. Akin to redirecting the aircraft carrier, you need to start turning an organization as soon as possible, rather than waiting until it is too late. Hospital CEOs are trying to redirect their organizations today.
Hospitals are engaged in many activities (e.g., cutting readmission rates) that will be reinforced by more payment reform (Figure 6). And therein lies the current policy danger. If we do not realize the expectations of a shift to value-based payment, many of the programs that are only now being put in place will be shelved (Figure 7). Conversely, if we do realize those expectations, we will be thrust on a dramatically different fiscal path than the *Washington Post* and the *New York Times* and others suggest. It is already the case that Medicare spending this year is $1,000/beneficiary lower than what was projected as recently as 2010 (Figure 8). If the deceleration were to be reinforced and continued, everything you think you know about the nation’s long-term fiscal balance would be wrong. If this spending continues to slow, we are no longer on the catastrophically dire long-term fiscal path that is the source of so many editorials.
Figure 7

UNH Study: Cost of Cancer Patients under Bundled Payments ($ Millions)

![Bar chart showing total and chemotherapy drug costs under predicted and actual scenarios.]

Figure 8

What would happen if it continued?

Projected Medicare Spending as a Share of GDP, 2013–2085

![Graph illustrating projected Medicare spending with current law projection and using average annual growth rate from 2008–2012.]

Source: Medicare Trustees (2012); Social Security Trustees (2012); CEA calculations.
Ceci Connolly

How does Medicare Advantage fit into your analysis?

Peter Orszag

Medicare Advantage (MA) is included in the aggregate Medicare numbers. As you know, there have been some MA payment changes. Official MA projections assume that the penetration rate remains flat, at just under 30%. I strongly suspect this rate will go higher. Of the new beneficiaries rolling into Medicare (i.e., the 65 year olds), about half are ultimately selecting MA. The new cohort has grown up with Health Maintenance Organizations, and managed care settings, more generally. I think we will see, asymptotically, the MA penetration rate approaching 50 to 60%.

To me, it is fascinating that here in Washington; both sides of the political spectrum agree that we need to move towards capitated payments with a risk adjustment at the front end and a quality adjuster at the back end. Yet the central difference between the approaches preferred by the Republicans and Democrats seems small. The Democrats want to solve this through Accountable Care Organizations version 3.0 and have the payment go to the providers. The Republicans are in favor of a premium support model or having Medicare Advantage supercharged, and have the payment go to the insurance companies. That is the difference! Interestingly, Senator Wyden’s new Better Care, Lower Cost Act (don’t you love these bills’ names), allows the payment to go to either one, thereby bridging that divide.

I think Medicare Advantage is going to continue to expand. While it is difficult to determine the effect of Medicare Advantage enrollment on net spending, the majority of beneficiaries are still in fee-for-service plans; Medicare Advantage cannot be driving this entire deceleration.
Larry Levitt

专为未来而设计的美国健康支出：追求价值

我希望我们的新兴共识不会导致一个无聊的演讲！我想以一个趣味问答开始，以确保大家都精神集中。这里有两组数据（图1）：一组表示实际的季度健康支出年比年增长，另一组来自一个随机数字生成器，范围大致相同。

Which is which?

Figure 1

One series shows year over year change in health spending by quarter, the other random numbers

Without prolonging the suspense, the blue series is the actual data. You can clearly see how close it is to the random series, and just how volatile are the actual numbers. The inescapable conclusion is that total health spending, as Peter emphasized for Medicare, is incredibly low by historical standards. We have never seen growth rates this low for even one year, let alone for five years.

I would like to focus on the most recent data for which we have good data, the first quarter of 2014. On Twitter and elsewhere, there was considerable misplaced consternation about what had happened in that quarter. Initially, the federal government estimated a double-digit increase in health spending growth from the fourth quarter of 2013 to the first quarter in 2014 (at an annual rate). This produced a mini-panic, even though these data are notoriously unreliable, and particularly for this year as they included an estimate of newly insured individuals and their impact on health spending.

Sure enough, in the subsequently revised data, as the Altarum folks pointed out very effectively, the estimates were revised down in a dramatic fashion. There were downward revisions to growth in the rest of the economy but not as significantly as health, which was essentially flat and included healthcare services and drugs. Euphoria shortly replaced panic, though that reaction was also misplaced. As you can see in Figure 2, these numbers do jump around considerably. In light of the extreme reactions to the data, it is noteworthy that growth for the first quarter increased a little over 4%, right in line with the average for the last five years, which was 4.3%.
Figure 2

**Year over year change in health spending by quarter, 2009-2014**

Average = 4.3%

Source: KFF analysis of BEA data (health care services and pharmaceutical/medical products).

Figure 3 shows total health spending on the y-axis where I have truncated it to illustrate the changes more clearly. Again, the fourth quarter is very much in line with what we have been seeing over the last couple of years, and in fact, the anomaly might have been the fourth quarter of 2013, when spending looked high. To repeat, after taking account of the volatility, the inescapable conclusion is that health spending is still growing unbelievably slowly.

Figure 3

**Health spending in Q1 2014 was largely in line with recent trends...Q4 2013 was a bit of an anomaly**

Source: KFF analysis of BEA data (health care services and pharmaceutical/medical products).
My main interpretation, which I have discussed extensively with Peter and others, is that the economy is a major cause of this slowdown, both low economic growth in recent years and very low inflation. This reflects analysis we did with Charlie Roehrig and Tom Getzen suggesting that health spending fluctuations are tied very closely to changes in the economy over time, but with a very significant lag. In fact, the lag between changes in gross domestic product (GDP) and changes in health spending growth is up to six years; that is, the cumulative effect of changes in the economy do not show up in health spending until six years later. What we have observed for health spending is largely due to the severe slowdown in the economy, in particular, the great recession. If these historical patterns hold, we would expect spending growth to hit a low in 2013 and then start edging up in 2014 and the years ahead (Figure 4).

Some caveats are in order. First, I believe the economy explains most of what is going on here, but it is by no means the only factor. Certainly, Peter’s focus on Medicare is pertinent. Its rate of growth fell even faster than what would have been expected, due solely to changes in the economy.

Second, our econometric analysis is best understood as an illustrative model of long-term trends, not a precise forecast. I would be reluctant to bet on health spending growth for 2014, or even 2015, but as the economy improves, growth in health spending will eventually tick up.

Third, I have presented a very high-level, aggregate perspective on total health spending. A micro view of different sectors will obviously illustrate other considerations. Growth in Medicare is largely unrelated to changes in the economy and is far more amenable over certain periods to policy changes than is private spending. Indeed, the historically slow growth in Medicare spending suggests that private spending may actually be increasing at a faster rate and is starting to edge up this year.

I would now like to turn briefly to the biggest area of uncertainty this year, the effect of the Affordable Care Act (ACA) and the newly insured on health spending. As I said, government economists predicted a massive increase in health spending in the first quarter, due largely to more people gaining insurance and their pent-up demand as they entered the healthcare system. Should we have expected a 10% jump in health spending in the first quarter? The short answer is no, due to the relevant lags. There was a surge in

Figure 4

Health spending growth, actual vs. predicted

Source: Analysis by the Kaiser Family Foundation and the Altarum Center for Sustainable Health Spending.
enrollment in March, but those people did not actually gain insurance until the second quarter, and, of course, that coverage only begins the process of seeking and obtaining care.

About three to four million people gained insurance during the first quarter of 2014 through Medicaid and health insurance exchanges. That would increase spending by maybe a quarter of a percent. With 8 to 10 million more people enrolling in the second quarter, based on recent surveys, we can expect a bump in spending of perhaps between half and three-quarters of a percent. I think this is real, but it is not at all clear that we will see even one-half of one percent growth show up in the spending data, given the volatility I earlier emphasized. Either way, it will certainly not break the bank.

Some final thoughts. First, as I said, growth in total spending is very low by historical standards, with no clear signs yet of deceleration or acceleration. We should all resist the temptation to read too much into month-to-month or even quarter-to-quarter changes. Altarum will certainly point out these jumps, as they should, and as we value, but we should be reluctant to declare trends prematurely. The improved economy will likely put upward pressure on spending, but when and by how much, is uncertain.

I believe there is much more to the slowdown than changes in the economy, including direct and indirect effects of the ACA. More people gaining insurance will push spending up, but it will not lead to a surge, and the effect may be so small as to not even be noticeable. While averages and aggregates can be instructive, and examining trends in total spending, is clearly important, they mask important variation by sector, whether it is the payers such as Medicare or Medicaid, or the various services and goods in the health economy. Total health spending is growing very slowly right now while drug spending is rising rapidly, both prices and utilization. It is obviously important to look behind the aggregate numbers.

Finally, I am in a room full of economists so I probably don’t need to review the math of compounding; that is, even very small changes in the rate of growth imply substantial changes over time. A one-percentage point change in the rate of growth translates to approximately two trillion dollars over 10 years. Even in the health sector, that is real money!

Peter Orszag

We have had plenty of back-and-forth on this issue. I urge substantial caution with these types of analyses. We have roughly 40 years of data and 6 to 10 variables to explain the observed variation. The risk of econometric over-fitting is very high, and I have two concerns. One is that small changes in specification cause substantial changes in the results. The second is whether the results make intuitive sense. Why exactly does it take six years for healthcare spending to respond fully to a recession? There was considerable press attention to the specific numerical estimate, that the recession was responsible for 77% of the slowdown. While everyone agrees the economy played some role, whether it was 25% or 80% or somewhere in between is, I think, is beyond the capabilities of 40 years of macro, time series data.

Larry Levitt

I agree with Peter not to pay too much attention to the precise numbers, but I do not think the economy explains as little as a quarter of the slowdown. We can all agree that the economy plays a major role in spending changes, both in output and inflation. The economy is operating in an extremely low inflation environment, which is very different from other times when we saw high growth in healthcare costs. Nevertheless, I am confident that as the economy continues to expand, we will see upward pressure on healthcare costs.
Stuart Altman

Spending for Health Care Will Continue to Grow Less Rapidly

Most health spending analysis occurs at the national or federal level. Yet there are parts of the country that are working to keep their health spending in line with economic growth (e.g., their state gross domestic product). The presentations thus far are certainly relevant, but much of the action is shifting to proactive states, and I would suggest you spend more time examining what is going on in Massachusetts. It is the only state with legislation stipulating that total growth in spending (including Medicare, Medicaid and private insurance) must grow at a slower rate than the long-term growth in state GDP. I chair the commission charged with executing that policy, which, besides this meeting, is why I am visiting Washington. I am trying to learn from others exactly how to do this!

Figure 1

We all know that healthcare spending is growing much less rapidly (Figure 1), but will this continue? I think it will. It was 45 years ago this month (in 1969) that my good friend Uwe Reinhardt and I met at Johns Hopkins. Perhaps we had just seen The Graduate movie and, instead of saying, “follow the money,” we adopted the mantra, “It’s health care, stupid.” With that history, I want to introduce a concept to you, “The Reinhardt/Altman Thesis.” (Uwe’s name is first is because he is older than I am, and he promises that whenever he mentions this, it is going to be the Altman/Reinhardt Thesis!)

In the past, healthcare spending has been driven by the cost of care, which I call the reimbursement model. In the future, spending limits will predominantly drive the cost of care, which I call the payment model. This will fundamentally change the delivery system, so I want to strongly support what Lincoln Smith said in his introductory remarks, “follow the money!”

We talk a lot about changes in the delivery system. If a reimbursement model is driving the delivery system, which says that whatever amount is spent, the money will be found somewhere, we will not
change the spending pattern. I think that those exclusively examining changes in the delivery system are focusing on the wrong side. If instead, we change the payment system to restrict the total amount of money, the delivery system will adjust because it has no other choice.

Our thesis is that we will spend less money. Why? Because we are going to spend less money! I said that several years ago to a *New York Times* reporter. I spent a half hour with this reporter, covering all of the correct topics, and, of course, I was brilliant. As is typical, the article shortchanges me, saying, “Altman says the reason why we will spend less money is we will spend less money.” Someone wrote to me that the quote was the dumbest statement he had ever seen. However, the truth of the matter, in my opinion, is that it is not a dumb statement, that if you spend less money, you are going to spend less money.

*Figure 2*

![Growth in Enrollment by Payer Source, 2006 - 2022](image)

Why am I confident about a continuing trend of slow healthcare spending growth? Government-sponsored patients and payments will become a greater force, driven by demographics and the growing number of Medicaid recipients. Figure 2 shows very low growth for private enrollment through the year 2022. The flip side of growing public enrollments is slower growth in payment amounts, thus spending growth from government programs will not grow in proportion to growth in enrollment or service use.
Government payments will dominate the healthcare system as private growth shrinks and public growth expands (Figure 3). These estimates by the Centers for Medicare and Medicaid Services (CMS) actuaries are subject to debate but are still the most objective indicators we have. Note that these total payment growth rates for the public sector mask the interplay of very high enrollment growth and restricted payment rates, especially for Medicaid.

*Figure 3*

![Total Health Insurance Payments by Payer (Percent of Total)](image)

In the past, healthcare providers have counted on higher private insurance payments to make up for the shortfall in government payments. Whether you call it cost shifting or reality, you cannot find a private delivery system that does not count on anywhere from a 10 to almost 100% difference from private insurance to make up for stingy government rates. States such as West Virginia and California are emblematic of these differentials. In Massachusetts, the difference is about 30%, and maintaining this will be increasingly difficult in the future. I created this chart several years ago, and it was so hard I have not revised it (Figure 4). As the percentage of the population being insured and ultimately cared for by the private delivery system falls, it is increasingly difficult for providers to find the dollars to make up for the shortfall in government payments.
I estimate that the differential has leveled-off at about 30%. In order for the same margins for private insurance to persist, their rates would need to be almost 140% higher. Moreover, there is no indication that either Medicare or Medicaid will suddenly become more generous; the reverse would be much more likely. There is simply no way that public/private payment differentials will expand.

The March 2014 MedPAC report analyzed Medicare fee-for-service (FFS) and private insurance spending growth differences with the predictable result that “It’s the prices, stupid” (Figures 5 and 6). Even though utilization is the main driver of the reduction in spending growth, public and private sector comparisons point primarily to high private prices as the key differentiator. In other words, even with the slowdown, the price growth on the private side is significantly larger than on the Medicare side.
Figure 5

**Employer-Sponsored Health Insurance Spending Increases More than FFS Medicare 2010-2011**


Figure 6

**Employer-Sponsored Health Insurance Prices Increase More Than Medicare 2010-2011**

Will the private sector sit idly by and accept high payments? Every indication I have is that private insurance companies have had enough, as have the employers that are in fact paying the bills. Employers are requiring workers to absorb more of the increases in premiums and pay higher co-payments. Over the last decade or so, private premiums have gone up almost 100% and, more importantly, what workers are paying is rising even faster (Figure 7). The comparisons to wages and inflation are especially telling. All of a sudden, what had been a hidden benefit, concealed from most workers’ perspective on wages, is now staring them in the face. We have gone from “If the employer pays it, I don’t pay it” to “I’m now paying it.” This change is having dramatic implications for the way that employees are accessing care.

The private insurance companies are now getting aggressive again, despite the balance of power shifting to providers in many locales. Employers and private health plans are developing techniques to lower spending growth including:

- Requiring insured to buy high-deductible health plans;
- Increasing the use of “limited” or “tiered” networks using “value-based” criteria;
- Linking payments to lower-priced providers via “reference pricing”; and
- Using different forms of bundled or global payments.

Importantly, the largest growth in private insurance is in high-deductible health plans with predictable consequences for spending restraint (Figure 8). Note that this uptake is coming at the expense of health management organization (HMO) coverage. With limited payment growth, healthcare providers will be required to develop more cost-effective delivery systems. I will turn it over to the next panel to explain how that will happen!
Session I. Questions and Answers

Ceci Connolly

Fabulous, Stuart, and no pressure on the next panel! Thank you, gentlemen, for a quick and breezy look at the healthcare cost landscape that leaves time for Q&A. I was pleased, Stuart, that you brought up the private market and the striking growth in high-deductible plans, but is lower utilization a good thing?

Peter Orszag

It obviously depends on what kind of lower utilization, but every piece of research we have, from the old RAND experiment to newer work by Doyle and Gruber, suggests that there are massive opportunities to reduce utilization without harming health outcomes. This is apart from specific, targeted issues where under-utilization is quite serious. In general, constrained utilization is a good thing and results in a system producing higher value.

Stuart Altman

While at Brandeis, we often make the case that there are subpopulations in this country where utilization is clearly too low, America is not known as a place for having inadequate healthcare utilization. I support Peter’s view that, if anything, we need to lower our utilization pattern. The outcome will not be perfect, and some people will deny themselves needed care. I was not a big champion of high-deductible plans in the beginning, but my economics grounding in the power of incentives kept kicking and pushing me. Since we have now mostly excluded preventive care from the high deductible, these plans are an important tool to lower utilization and reduce the 30 to 40% healthcare system waste, three-quarters of which is unnecessary care.
Ceci Connolly
You are now a supporter of high-deductible plans?

Stuart Altman
By themselves, they are not going to turn the system around or bend the cost curve. They are part of a bigger package. I do not want to over-emphasize them, and they should be seen in the context of a half a dozen significant policy changes. The reality of a high-priced system is that people need to find ways of reducing expenditures and, in spite of many public health advocates proclaiming the end of the world, we have to live with them and the other cost-reducing forces.

Larry Levitt
I hope that there are no public health people in the room! I would emphasize what Stuart said that having a preventive benefit with no cost sharing is a redeeming feature that is increasingly part of all insurance plans.

We have a tendency to believe in American exceptionalism, focusing on ourselves and no one else, but an Organisation for Economic Co-operation and Development report showed that in developed European countries, there was also a slowdown in health spending beginning approximately in 2002. Do you have any comments about that?

Peter Orszag
There is obviously an economic component to the slowdown, but I think the implication that people take away from those cross-country studies is that the decelerations everywhere are cyclical only. I would again say you should be very careful because in many countries, there were policy changes that have been implemented in response to the financial crisis, and those have helped to constrain healthcare spending. It is true that healthcare spending slowed here and there, but that does not mean it is entirely cyclical and there is no structural component.

Larry Levitt
I agree, and it is part of why it is so hard to tease out the effects of the economy from policy changes, since they are clearly not independent. Policymakers respond to changes in the economy. Any time there is less income, there is an incentive to spend less on health care. Historically that has been much easier in other countries than here. We observe this phenomenon now with Medicare, where we are in the midst of dramatic changes begun under the Affordable Care Act (ACA), and we now look a bit more like other countries.

Stuart Altman
I would like to reinforce Peter’s comment. There was a conference last year in Israel with a number of European representatives. They bemoaned the fact that during the economic crisis, they had limited control over the very restrictive monetary policy given the centralized European Central Bank. It is a classic example of “follow the money” as they were squeezing their finances, causing, incidentally, more people to opt out of the public system. It reinforces conservative biases, some of which I share, that if the public sector funding is overly constrained, more people will seek private care.


Al Dobson, PhD – President of Dobson DaVanzo

Our internal research closely tracks findings presented by Stuart. Some out-of-pocket costs are $10,000 or higher, which is more than the average person’s savings. Insurance is clearly not what it used to be! Consider the roughly 50% of people with private insurance who quite recently had very low out-of-pocket costs and now face substantial deductibles and other cost sharing. In addition to confronting out-of-pocket costs exceeding savings, their real wages are flat or actually falling due, in part, to the high price of health care. There is an amazing pushback on private insurance to pay for fewer services, and the average insured individual is wondering, “What on earth is happening?” I do not have this amount of money.” The demand for health care will fall on the private side as well. These changes are having a profound impact on how insurance works. It used to protect our finances, but not anymore. Thank you, Stuart, for presenting amazing findings.

Ceci Connolly

I certainly hear from the provider community and their concern that many of these individuals will simply not pay, which will result in a newfound uncompensated debt burden at some of the health systems.

Stuart Altman

I do like the analogy about turning a battleship around, and the financial worries faced by provider systems where the future is already here, or close, as they anticipate forthcoming payment changes. However, I do not think that the delivery system is changing nearly as quickly as the rhetoric suggests, with the extensive talk of accountable care organizations (ACOs) and bundled payments. Change is slow, and I think you are correct, Ceci, about their fears.

Al Dobson

It is especially interesting that hospitals are cutting their costs in anticipation of less future revenue. The actuaries are testifying to this, yet it is extremely unusual to observe cost cutting in advance of future policy changes. Hospitals look at Medicare and Medicaid Disproportionate Share Hospital payment reductions, private insurance trends, etcetera, and they realize they need to change their behavior because the funding simply will not be there.

Peter Orszag

I would emphasize looking at the internal incentive structure, within hospitals, for the physicians. Even in the most progressive places, such as Massachusetts, where they are responding to the alternative quality contract, they still have, fundamentally, the fee-for-service engine, with perhaps a pool of 10 or 20% taken out, and a value-based bonus added back in. The policies are in complete conflict with one another. The analogy people use to describe this situation is that the worst place to be is one foot on the dock, and the other foot on the boat, especially as the boat moves away from the dock. That is the position faced by many physicians, operating within this very awkward transition period with conflicting signals.

Paul Hughes-Cromwick

A question from our wonderful Web audience: How is price variation for some medical procedures affecting inflation, and is there any relationship to quality?

Peter Orszag

There is very little relationship to quality, and in fact, in some cases it might be the inverse. The variation between the United States and other countries is primarily with prices; the variation within private insurance in the United States is mostly price. The variation within the United States in Medicare is mostly not price. Depending on the nature of the analysis, either price lies at the center or is a bit player, but everyone agrees that prices vary substantially in the United States with no clear correlation to quality.
Ceci Connolly

Is the transparency movement going to continue, and what effect will it have on behavior?

Stuart Altman

We are further along in Massachusetts than most if not all other states. We have a law on the books that requires insurance companies to give to anyone who asks, exactly the price they will pay in each setting. I think most people have no idea yet how to do that. Over time, if in fact we really do begin to look at price, it will have an effect, but it is now limited. Individuals have a gut feeling that services are more expensive at hospital A versus hospital B, and they know that, no matter where they go, health care is expensive, but we have not seen any place in the U.S. where transparency is fundamentally changing the system. We like to believe that eventually it will.

Larry Levitt

In a world without high deductibles and high patient cost sharing, there is an argument that more transparency leads to higher prices, as a hospital can raise prices based on the higher prices of its competitors. In an arena where there are high deductibles, a different dynamic prevails and consumers are more focused. I see it having an effect, and I think it will continue, but there will be challenges as we typically overestimate what consumers understand regarding insurance. We need to make price transparency easier to understand before it will have a huge effect.

Peter Orszag

Transparency is in general a wonderful thing, and it should help. It is more than the deductibles and the copays that are relevant, however. We have a significant issue, though, with increasingly concentrated local hospital markets. As CBO and others have noted, transparency is potentially problematic in a highly concentrated sector. The capacity for two dominant hospitals in the local area to collude if they know what the other one is charging is not a trivial matter.

Uwe Reinhardt

I think that Peter is right that with a lag structure, if you put enough lags in, you can explain damn near anything. I do not know if you noticed, but this panel slyly shifted to a negative lag structure! In the normal lag structure, a variable today is a function of what some other variable was a year ago, two years ago, et cetera. They are now telling us a variable today is a function of what will happen next year and the year after. That lag structure is even more wonderfully equipped to explain everything! For example, we can show that GDP today is related to Hillary Clinton becoming President two years from now. I think we are on very treacherous ground. The more honest conclusion is that we do not know what the hell is going on here, and we all have our own theory. That is what I take away listening to this panel.

Ceci Connolly

I think we should go home now.

Peter Orszag

We are obviously speculating when we attempt to explain current behavior. However, surveys of what executives are expecting or discussions with management help to understand why they are committed to cutting their readmission rates. Yes, they may reflect a little bit of benevolence, but “following the money” would generate the opposite response since, for almost all hospitals today, reducing readmission rates is a net financial loser. The lost revenue on the readmitted patients dwarfs the penalty for most hospitals, especially those that are far outside that penalty range. They are changing care processes in preparation for future policy.
Uwe E. Reinhardt

For readmissions, perhaps, but I do not think they are especially significant.

Peter Orszag

No, it is not a huge driver, but it provides an interesting vignette: Why are they doing that?

Uwe E. Reinhardt

My problem is to understand why a physician today with capacity, would not recommend an MRI since he knows, five years from now, there will be all hell to pay. Why not make hay while you still can?

Peter Orszag

Hospital systems in the U.S. are hiring physicians as salaried employees to control more directly how they practice. Outpatient imaging provides a good example of another hospital motive. The probability that clinical decision-support software will force the provider to justify an order, if it does not seem indicated, is higher today than it was five years ago. It is not universal, but it is much higher than it was when hospital executives did not pay attention to this. Now, operating under an alternative quality contract, or in an ACO setting, inappropriate scans are coming out of the bottom line. When they were an add-on, no one cared about the variation; suddenly it matters a lot. The stock valuation on the companies that are doing clinical variation analysis and are allowing providers and ACO groups to look at how their doctors are performing and benchmarking are off the roof. People are thinking, and I want to emphasize the expectations may be wrong, about what will pay off in the near future.

Larry Levitt

I agree. We hear repeatedly from CEOs that they are cutting costs because they are under siege. I ask why, and they point to the ACA, claiming it is killing them. When pressed about what has gone into effect, they cannot identify specific provisions but rather express their terror over general policy changes, and are cutting costs in anticipation. Of course, it is very hard to separate this ACA concern from when they were also under siege by a very slow growing economy. We will need to go back in three to five years and ask them again, when they are constructing new buildings and installing new imaging facilities.

Charles Roehrig

I have a unified theory of negative and positive lag structures, which goes to Peter’s question of why it would take six years for the economy to have an effect. With a recession, the federal and state governments slowly run into deficit problems; their debt builds and it takes a few years for CBO to assess the dire budgetary situation. After a period, expectations build that leaders will take action because the situation is desperate, and those are the expectations I think you are talking about. The recession has direct effects as people lose insurance and reduce spending, but it also has indirect effects by creating pressure for structural changes to solve the long-term problems. You can call that an impact of the recession or not, but it correlates and to me it makes sense to relate it to the recession.

Stuart Guterman, MA – Vice President for Medicare and Cost Control – The Commonwealth Fund

I have two observations. First, going all the way back to the cost-shifting analysis Stuart and I did at ProPAC years ago, it bothered me that people often forgot that costs were the denominator in the payment-to-cost ratio. Looking at the difference between public payments relative to cost and private payments relative to cost, there was an implicit assumption that costs were fixed. People are now realizing that costs are in fact not fixed, and the pressure can push them down instead of pushing prices up. I think this is an important realization. Second, what I take from this panel is that we only do not know what we are talking about if we view healthcare spending as a spectator sport, which it is not. We are not just surmising what spending is going to be next year. I noticed a change in terminology Larry was using from, “This is what costs are going to be” to “This is what the pressure is going to be on cost.” I think it is important to look at it that way.
Ceci Connolly
Closing thoughts?

Peter Orszag
Regarding prices and utilization, historically the view was if you only push down prices, it is not a sustainable path, in part because there is an offset by doctors who will try to make it up in volume. First, new research in the *American Economic Review* on physician responses suggests the opposite result—that when you cut prices, which was done differentially in the late 1990s, the supply response is what you would expect, that it constrains provider supply. Second, new evidence from Chapin White, who previously worked at CBO, suggests that price constraints on hospitals and other providers also lead to more long-lasting declines in utilization. It is the opposite of what we had traditionally thought. While surely not definitive, it hints at another path to bending the cost curve beyond direct utilization changes that operates through the price channel.

Larry Levitt
I agree with Stuart that we spend what we aim to spend, and it is critical to focus on the pressures in the system. In recent years, we have had our feet on the brakes due to the economy, policy changes at the state and federal level, and efforts by private payers. We must avoid taking our feet off the brakes and putting them on the accelerator, because the process can quite easily work in reverse.

Stuart Altman
I spend significant time with providers, big hospitals, and so on, and there is no question that, right or wrong, they expect the flow of dollars in the future will be severely constrained. The battle occurring between the CEO and the CFO is very real. The CEOs are saying that we need to slow down our cost growth because there is going to be less money. The CFO, of course, is saying that we need to keep admissions coming in. I think the CEOs are winning that battle, but it is a tough one, and the analogy of the boat and the dock is very real. I hear it incessantly. CEOs are actually complaining that they are urging lower cost growth and yet are acting within a payment system that continues to support fee-for-service. They actually want us to move the payment system more rapidly towards global payments, because they have committed themselves to it.
II. Health Care Delivery: How to Best Increase Value & Quality?

Harold D. Miller

*Win-Win-Win Approaches to Accountable Care: How Payment Reform Can Enable Providers to Willingly Control Health Care Spending (Without Harming Patients)*

Note: This presentation originally included 51 slides that have been excerpted due to space constraints. The full set is available on the website.

Introduction by Ceci Connolly

We will now pivot from cost to a discussion of value. I am hoping we will hear from our panelists in terms of whose value we are addressing and their respective perspectives.

Harold D. Miller

Stuart Altman asked us to solve this problem, and, rather than try to predict the future, I will discuss concrete approaches to how we could actually change the healthcare system for the better.

Let us imagine we are in a different country that had a recent, historic legislative success called the ACA, the Affordable Car Act. In this country, the goal was that every citizen should have affordable transportation, since people need to get to work to be productive. The method used to achieve this goal was to give all citizens insurance to buy cars. Of course, with insurance paying for the car instead of the driver, a major concern was how to control the cost of cars, so the payers established fee schedules for all of the car parts (Figure 1). They called it HCPCS, the Hierarchical Car Parts Compensation System. In addition to controlling the cost of the parts, payers wanted to avoid having the autoworkers charge too much, which led the Automobile Manufacturing Association (the “AMA”) to set up the Car Parts Token (CPT) system, which defined how autoworkers would be paid for installing each car part.
In a system based on paying for parts, cars ended up with many unnecessary parts. Since payment was based on parts, not on quality, cars would frequently be “readmitted” to the factory with malfunctions where they would be repaired at no cost under the insurance plan. This occurred even though the “Joint Commission” accredited all the providers, and the “National Committee on Quality Autos” certified all the autoworkers.

Not surprisingly, spending on cars grew rapidly, both as a percentage of gross domestic product and as a percentage of the government budget, leading to a search for new ways to control costs. One solution was cutting the amounts paid for parts and the fees paid to workers doing the assembly. However, this merely led to the use of more parts in each car, and caused the factories to consolidate so that they could better resist the fee cuts.

Then came the idea of paying for bundles—for example, instead of paying for individual engine parts, pay for an entire engine. Thus, the DRG (Driving Related Groups) system was born. However, although this led to each bundle (e.g., the engine) being assembled more efficiently, there was no control over how many or what types of bundles were used, so cars were built with progressively bigger engines. Drivers got many unnecessary bundles, including those that were actually dangerous or harmful, because payment was based on how many bundles were used.

Payers then introduced the idea of consumer-directed car payments—charging high co-payments, co-insurance, and deductibles to consumers. While this led consumers to think twice before buying a car at all, if they needed a car, they discovered that the Ferrari cost the same amount as the Ford, even under their high-deductible car insurance claim, so more and more expensive cars were manufactured and sold. Moreover, with high deductibles and copayments, people did not bother to change the oil or otherwise maintain their cars because they knew that, under their insurance, they could get a new engine or other new parts if the old ones failed, so more and more expensive repairs were needed.
Would a *Shared Savings Program* solve the problem? Under this plan, payers would continue to pay everyone for the parts and installation, and they would sell the cars on that basis. Accountants would review the cars that were sold and calculate how many parts were used and how much the parts cost. If it turned out that one manufacturer had produced a car at lower cost than others, a bonus of up to 50% of the difference in the cost of the parts would be given to the manufacturer, but only if the minimum savings threshold was achieved and the quality targets were met.

The result of this complex system was that some factories reduced the number of parts, but not enough to realize shared savings, so they were unhappy. Some factories spent more to meet the quality targets than they received in shared savings, so they too were unhappy. Some factories omitted parts where there were no quality measures, which left the consumers unhappy. In the end, most of the factories and workers lost money, and they reverted to business as usual.

Was there a better way? Rather than paying for parts, it would make more sense to pay for complete cars that included a warranty, i.e., an agreement to fix avoidable problems at no extra charge. Instead of charging high copays, coinsurance, and deductibles, it would make more sense to have people pay the last dollar, not the first dollar. The consumer could then have enough money to buy a high-quality car, and it would be up to them to decide if they wanted to pay the extra money for the Ferrari (Figure 2). Instead of charging high amounts for maintenance, it would make more sense to encourage consumers to maintain their car so it would last as long as possible. Finally, since the real goal is to provide affordable transportation, not necessarily affordable cars, it would make more sense to provide the flexibility to pay for bus fare, taxi fare, ride sharing, etc., if that would help the driver get to work at a more affordable cost.

*Figure 2*

### Have People Pay the Last Dollar, Not the First Dollar for Cost-Share

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<tr>
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The lessons from the Affordable *Car* Act have obvious parallels for the Affordable *Care* Act. Instead of paying for individual services, we should pay for what patients need—effective management of their health problems. Instead of asking the consumers to pay the first dollar, have them pay the last dollar of costs (i.e., the extra costs incurred for non-essential options). Instead of requiring high payments for preventive care, reduce or eliminate cost sharing so patients would get the inexpensive services that would help them stay healthy.
In health care, our goals and our payment systems are completely misaligned. We want doctors to keep us healthy, but we pay them for surgeries, tests, and other procedures. Indeed, when their patients stay healthy, doctors are not paid at all—which is not exactly a prescription for success in controlling costs and improving quality. We want hospitals to have well-equipped emergency rooms, surgery suites, imaging centers, and cardiac catheterization labs ready to go 24/7 to treat us expeditiously if we have an emergency or a heart attack. However, we do not pay hospitals to be ready for emergencies; we pay them to do surgeries, tests, and procedures.

How would you pay providers so they would voluntarily avoid unnecessary procedures? Here is a hypothetical example. Assume that a physician does a certain kind of procedure, sees 300 patients per year, and is paid $100 to evaluate each patient as to whether the patient needs the procedure. She decides that 200 patients need the procedure and is paid $600 for each procedure. It is an inpatient procedure, and the hospital gets $7,000 for each procedure performed. The payer spends more than $1.5 million to treat the 300 patients (Figure 3).

Figure 3

Example: Reducing Avoidable Procedures

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Optional Procedure for a Condition

- Physician evaluates all patients
- Physician performs procedure on 2/3 of evaluated patients
- Up to 10% of procedures may be avoidable through patient choice or alternative treatment

Let us further assume that 10% of the patients, who currently receive the procedure, might be treated effectively without the procedure or might decide not to have the procedure if they fully understood the risks. If the health plan implemented a prior authorization or other utilization control program to reduce the number of procedures, it might be able to reduce its spending by 10%, but under the current payment system, this would negatively affect the doctor’s and hospital’s revenues, so there would be little incentive for them to cooperate (Figure 4).

What if we paid more, e.g., $150, to the physician to spend time with each patient and engage in a shared decision making process to help them decide whether to have this procedure? This approach would clearly be better for the patient, the physician would earn more money even after doing fewer procedures, and the health plan would have substantial savings. This is a win for the patient, win for the physician, and a win for the payer. However, what about the hospital? Does it have to lose in this scenario (Figure 5)?
It is critical to think clearly about what it should mean for a hospital to *win* in the future. What should matter most to hospitals is their margin, not their revenues (“no margin, no mission”), but the way we pay hospitals forces them to increase revenues as the only path to achieve higher margins. However, if we understand the hospital’s cost structure, we can pay it in a way that reduces spending without hurting its
margins. Here is an example of how the payment can be changed in win-win way based on the hospital’s cost structure.

In Figure 6, we will assume that 50% of the hospital’s costs are fixed in the short run—paying for the cath lab, the surgery suite, et cetera, which must be financed whether or not they have patients. We will assume that 45% of the costs are variable, e.g., items such as stents or knee implants that the hospital does not pay for if the patient does not get the procedure. Finally, we will assume that the hospital has been generating a 5% margin on these procedures. What would happen if the hospital reduced the number of procedures by 10%, from 200 to 180?

*Figure 6*

**Adequacy of Payment Depends On Fixed/Variable Costs & Margins**

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The fixed costs do not change, so the hospital still needs to get the $700,000, as before. With 10% fewer procedures, the hospital will spend 10% less on variable costs (from $630,000 to $567,000). Since the doctor is getting 2% more payment, we should also improve payment for the hospital by increasing its margin by 2%, from $70,000 to $71,400. As shown in Figure 7, when you add it all up, the hospital gets 4% less revenue than before, but this would not be a concern for the hospital, since it still covers its fixed and variable costs and it receives a higher contribution margin. It can do this with 4% less revenue, but not 10% less revenue. The payer is also spending 4% less than before; it is not saving 10%, but it is saving an amount that the physician and hospital could willingly agree to achieve.

The result is a true win-win-win for all parties. The hospital gets less revenue but a higher margin, and the payer still saves money. The doctors are also making more money, and the patients are no longer receiving a procedure they do not actually need.

What payment model actually supports this? Not a shared savings program and not tweaking the fee schedule. In this example, providers are serving 300 patients and spending $5,167 per patient. If the hospital and doctors think they can treat those patients, with that condition, for 4% less, we should give them the money and let them determine how to pay themselves inside that budget. This *condition-based payment*, unlike fee for service or even procedure-based bundles, gives them the flexibility and accountability to take better care of those patients (Figure 8).
As this example illustrates, bundling, warranties, and condition-based payment approaches can be designed in ways that are better for the patient and better for physicians and hospitals, and they will still lower overall spending (Figure 9).
In fact, these opportunities exist across every specialty. In cardiology, orthopedics, psychiatry, and maternity care, there are ways to reduce spending without hurting patients. Fifty major specialty societies have produced lists of procedures they could do less frequently without hurting patients. Although there are barriers in the current payment system to realizing these opportunities, the good news is that there are solutions to moving forward (Figure 10).

**Figure 9**

**Better Payment Models Allow Win-Win-Win Approaches**

<table>
<thead>
<tr>
<th>BUILDING BLOCKS</th>
<th>HOW IT WORKS</th>
<th>HOW PHYSICIANS AND HOSPITALS CAN BENEFIT</th>
<th>HOW PAYERS CAN BENEFIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bundled Payment</td>
<td>Single payment to 2+ providers who are now paid separately (e.g., hospital+physician)</td>
<td>Higher payment for physicians if they reduce costs paid by hospitals</td>
<td>Physician and hospital offer a lower total price to Medicare or health plan than today</td>
</tr>
<tr>
<td>Warranted Payment</td>
<td>Higher payment for quality care, no extra payment for correcting preventable errors and complications</td>
<td>Higher payment for physicians and hospitals with low rates of infections and complications</td>
<td>Medicare or health plan no longer pays more for high rates of infections or complications</td>
</tr>
<tr>
<td>Condition-Based Payment</td>
<td>Payment based on the patient’s condition, rather than on the procedure used</td>
<td>No loss of payment for physicians and hospitals using fewer tests and procedures</td>
<td>Medicare or health plan no longer pays more for unnecessary procedures</td>
</tr>
</tbody>
</table>

There Are Win-Win-Win Solutions Through Better Payment Systems

<table>
<thead>
<tr>
<th>Opportunities to Improve Care and Reduce Cost</th>
<th>Barriers to Accountable Payment Models</th>
<th>Solutions via Accountable Payment Models</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiology</td>
<td>- Use less invasive and expensive procedures when appropriate</td>
<td>- Condition-based payment covering CABG, PCI, or medication management</td>
</tr>
<tr>
<td>Orthopedic Surgery</td>
<td>- Reduce infections and complications</td>
<td>- Episode payment for hospital and post-acute care costs with warranty</td>
</tr>
<tr>
<td>Psychiatry</td>
<td>- Reduce ER visits and admissions for patients with depression and chronic disease</td>
<td>- Joint condition-based payment to PCP and psychiatrist</td>
</tr>
<tr>
<td>OB/GYN</td>
<td>- Reduce use of elective C-sections</td>
<td>- Condition-based payment for total cost of delivery in low-risk pregnancy</td>
</tr>
</tbody>
</table>

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These strategies also apply to other specialties, but they must all overcome the barriers in the current payment system (Figure 11).

**Figure 11**

**Examples from Other Specialties**

<table>
<thead>
<tr>
<th>Opportunities to Improve Care and Reduce Cost</th>
<th>Barriers in Current Payment System</th>
<th>Solutions via Accountable Payment Models</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neurology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduce unnecessary hospitalizations for epilepsy patients</td>
<td>No flexibility to spend more on preventive care</td>
<td>Condition-based payment for epilepsy</td>
</tr>
<tr>
<td>Reduce strokes and heart attacks after TIA</td>
<td>No payment to coordinate w/ cardio</td>
<td>Episode or condition-based payment for TIA</td>
</tr>
<tr>
<td>Gastroenterology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduce unnecessary colonoscopies and colon cancer</td>
<td>No flexibility to focus extra resources on highest-risk patients</td>
<td>Population-based payment for colon cancer screening</td>
</tr>
<tr>
<td>Reduce ER/Admits for inflammatory bowel d.</td>
<td>No flexibility to spend more on care mgmt</td>
<td>Condition-based payment for IBD</td>
</tr>
<tr>
<td>Oncology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduce ER visits and admissions for dehydration</td>
<td>No flexibility to spend more on preventive care</td>
<td>Condition-based payment including non-oncolytic Rx and ED/hospital utilization</td>
</tr>
<tr>
<td>Reduce anti-emetic drug costs</td>
<td>Payment based on office visits, not outcomes</td>
<td></td>
</tr>
<tr>
<td>Radiology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduce use of high-cost imaging</td>
<td>Low payment for reading images &amp; penalty for 2x</td>
<td>Global payment for imaging costs</td>
</tr>
<tr>
<td>Improve diagnostic speed &amp; accuracy</td>
<td>Inability to change inapprop. orders</td>
<td></td>
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</tbody>
</table>

It is important to emphasize that current programs are not fundamentally changing the payment system. Medical-home programs add tiny pay-for-performance supplements or monthly or shared-savings payments on top of the same fee-for-service base. Accountable care organizations add shared-savings payments also on top of the same fee-for-service system. These small add-ons do not fix the fundamental barriers that exist in the current fee-for-service system. Although Medicare and other payers are implementing bundled payment systems, these are currently only for hospital, procedure-based episodes (e.g., for hips and knees). There are no condition-based payments.

If we wish to reduce health care spending without rationing, we need to implement true payment reforms, not more pay-for-performance and shared-savings programs added on top of the broken fee-for-service payment system. The payment reforms should involve every specialty, not only primary care. They should be designed to enable the physicians to redesign care at lower cost without harming patients and give the doctors and hospitals the means to remain financially viable.

In addition, we should reject the notion that we have to test new payment systems, particularly in artificial demonstration programs, before they can be implemented broadly. We should let willing providers come forward and put these payment models in place to be able to change care and then evolve the models over time, which is the way we’ve actually done all the major payment reforms in the country over the past 30 years.

Finally, we need to get the patients involved in the right way, which is to create benefit designs that encourage them to maintain and improve their health and to make value-based choices about their providers and services. You can learn much more by accessing free materials at the Center for Healthcare Quality and Payment Reform website.
Kate Goodrich

CMS and Health System Transformation

It is very difficult to follow Harold’s excellent presentation, and I will say at the outset that we agree on many of these issues. Figure 1 describes the framework for transition from a pure fee-for-service system to one based on global payments and alternative payment structures. This comes from an article published in the *Journal of the American Medical Association*, written by my boss, Patrick Conway; Marilyn Tavenner; and Rahul Rajkumar. Obviously, I believe this framework is relevant for the Centers for Medicare and Medicaid Services (CMS), but I also think it is relevant for private payers.

*Figure 1*

<table>
<thead>
<tr>
<th>Category 1: Fee for Service – No Link to Quality</th>
<th>Category 2: Fee for Service – Link to Quality</th>
<th>Category 3: Alternative Payment Models on Fee-for-Service Architecture</th>
<th>Category 4: Population-Based Payment</th>
</tr>
</thead>
</table>
| Description                                      | At least a portion of payments vary based on the quality or efficiency of health care delivery | • Some payment is linked to the effective management of a population or an episode of care  
• Payments still triggered by delivery of services, but, opportunities for shared savings or 2-sided risk | • Payment is not directly triggered by service delivery so volume is not linked to payment  
• Clinicians and organizations are paid and responsible for the care of a beneficiary for a long period (eg, >1 yr) |

Examples

**Medicare**

• Limited in Medicare fee-for-service  
• Majority of Medicare payments now are linked to quality

• Hospital value-based purchasing  
• Physician Value-Based Modifier  
• Readmissions/hospital Acquired Condition Reduction Program

• Accountable Care Organizations  
• Medical Homes  
• Bundled Payments

• Eligible Pioneer accountable care organizations in years 3 – 5  
• Some Medicare Advantage plan payments to clinicians and organizations  
• Some Medicare-Medicaid (duals) plan payments to clinicians and organizations

**Medicaid**

Varies by state

• Primary Care Case Management  
• Some managed care models

• Integrated care models under fee for service  
• Managed fee-for-service models for Medicare-Medicaid beneficiaries  
• Medicaid Health Homes  
• Medicaid shared savings models  
• Medicaid waivers for delivery reform incentive payments  
• Episodic-based payments

• Some Medicaid managed care plan payments to clinicians and organizations  
• Some Medicare-Medicaid (duals) plan payments to clinicians and organizations


Category 1 describes where we have been, representing a traditional fee-for-service payment system with absolutely no link to quality metrics. Category 2 describes fee-for-service–based systems that have some, though limited, links to quality, whether it is pay for reporting or pay for performance. The Affordable Care Act (ACA) authorized many of these initiatives. These hark back to the tiny payments that Harold mentioned, which are prevalent with current programs. Category 3 illustrates a shift toward alternative payment models, but the models are still built upon the fee-for-service structure. They include accountable care organizations, medical homes, and bundled payments. Category 4 summarizes to where most of us believe we need to move, population-based payments. We have limited examples of this within Medicare and Medicaid. However, we have almost entirely moved beyond Category 1.
With the majority of CMS payments falling under Category 2 or Category 3, our goal is to have an increasingly large share of payments to all providers shift from fee-for-service to alternative and global payment models. However, I think we will face a steep learning curve. I am a quality expert, not an economist, but I think we need to allow for payers within CMS, but also private payers, to experiment with these types of structures to determine what works over time. Ultimately, we would like to align at least the quality measures across the different payers and then potentially different payment structures.

I would like to discuss quality measures in detail and talk about where we see the evolution of value-based purchasing. I use “value-based purchasing” as shorthand for the entire transformation occurring in this realm (Figure 2). The initial programs (FY2012–FY2013), interestingly, have been limited to dialysis facilities with the Quality Incentive Program as well as the Hospital Value-Based Purchasing Program (HVBP). These are traditional measures that providers have developed themselves or that they understand and that have been in use for a long time. The focus has been on getting people to report measures; there has been less emphasis on the performance of those measures.

Figure 2

Moving to the second tier, for FY2014–FY2016, some of these are in place already and show an expansion of pay for performance or pay for value to include physicians through the value-based payment modifier. We at CMS and others have been developing new measures that address Department of Health and Human Services priorities, including outcome-based measures; measures of harm; patient experience; and, of course, cost. We look to increasing provider engagement to drive quality improvement through programs, such as the Learning and Action Networks, and Learning Collaboratives, which have come out of the Quality Improvement Organizations (QIO) Program and the Innovation Center models.

For the longer term, FY2017 and beyond, we want measures and value-based purchasing and incentives that can actually drive quality improvement. To obtain measures that are patient centered, are outcome oriented, and address all six of the National Quality Strategy priorities will take a considerable amount of work. Continued quality improvement support and engagement of the clinical community are extremely important with the ultimate goal of having a greater share of payment linked to quality.

Where are we right now? We have the HVBP, penalties for excess readmissions, and the healthcare–acquired conditions program. These all come from the ACA. We have worked diligently over the last 2 years to align the measures that we use in these programs with existing programs related to pay for...
reporting (the Electronic Health Care Record [EHR] Incentive Programs and the Hospital Inpatient Quality Reporting Program). For physicians and other clinicians, we have the Value-Based Payment Modifier and the Medicare Shared Savings Program, which align with the Physician Quality Reporting System (PQRS) and the EHR Incentive Programs. Lastly is the End Stage Renal Disease (ESRD) Bundle and Quality Incentive Program.

A coming attraction from the latest sustainable growth rate patch bill is the Skilled Nursing Facility Value-Based Purchasing (VBP) Program. This is not the VBP program of my hopes and dreams since, by law, it includes only readmissions as the quality measure. We hope to get future legislation that could allow the incorporation of more measures, because obviously readmissions are not the be-all, end-all to measure quality for any care setting.

I would like to mention our recently proposed or finalized changes to measurement policies. We published our Physician Fee Schedule Rule, which proposed significant changes to the PQRS and the Value-Based Payment Modifier. We added an efficiency domain to HVBP in our final rule last year. We are rebalancing our portfolio of measures across all of our programs to include more outcome measures and reduce the number and the weight of the process measures. This year for the HVBP, we proposed to reduce the weight of the process measures to 10%, lower than it has ever been.

Regarding the proposed Physician Value Modifiers and the PQRS, I believe these are more challenging than the facility-based programs because of the incredible variation in the scope of practice for physicians, and because not all physicians are accustomed to reporting measures, unlike most facilities. We have received justifiable criticism for having too many measures (about 300) in the physician program, many of which are “low-bar measures.” This year, we have proposed to remove more of those measures than ever before, about 73. We are trying to add more patient-reported outcome performance measures in the Qualified Clinical Data Registry and others across the National Quality Strategy domains. Much has been said about overutilization, and we have some good, appropriate use measures, but more work is needed on this dimension.

Feedback we have received from the multi-stakeholder group that advises us on quality measures (the National Quality Forum Measure Applications Partnership) suggests we should require that physicians and other clinicians report on a certain number of crosscutting measures focused on population health improvement, including influenza vaccinations, smoking cessation, body mass index, and medication reconciliation. All physicians who see patients would have to report on some of those measures.

Because we highly value patient experience as a quality domain within CMS, we are also proposing to require patient experience surveys for large group practices: the Consumer Assessment of Healthcare Providers and Systems Clinician and Group Surveys. Over time, we may want to require these surveys for smaller group practices. We also proposed increasing the percentage of payment that is at risk in the Value Modifier program from 2% to 4%. Recall that this is the rule that proposes the policies now for physicians, because by the 2017 payment year, all physicians who bill Medicare are subject to the value modifier. We would also like to increase the number of measures on Physician Compare over 2 years.

For the ESRD Quality Incentive Program, a similar transition is under way; that is, to more outcomes, safety, and patient experience measures.

I also want to highlight that a big cost to Medicare and Medicaid occurs in the post-acute care setting. We have a number of programs for the variety of post-acute care settings: long-term acute care, inpatient rehab, hospice, and home health. We have been working to have similar measures across those programs with the goal of ultimately being able to track the quality of care for a patient across the spectrum for an entire episode of care.

What is next for achieving the long-term vision that I mentioned earlier for value-based purchasing? We have successfully aligned measures across like programs, and we are working with private payers to consider the right measures for different conditions that we can use across both the public and private
sectors. However, we still have significant, detailed (“weedy”) work to align data sources, data collection vehicles, standards for electronic Clinical Quality Measures, and measurement periods.

We have been criticized, again justifiably, for not giving sufficiently rapid and meaningful provider feedback. It is critical for those working on the front lines to know how to improve care in their practices. With our claims-based measures system, it has been hard to do that more than about once a year. We are shifting our data source to be more toward registries and electronic health records, which does naturally allow for feedback that is more frequent. Within one of our registry reporting options, we require feedback to physicians at least four times a year. There are certified EHR modules that can actually give real-time, point-of-care feedback.

We need to align our policy principles across programs to, for example, reward for (1) improvement, (2) measure weighting, and (3) amount of payment at risk, instead of only achieving a certain benchmark. We have statutory constraints to be able to do that in some programs. It is also challenging because physicians may not always report the same measures every year. How do you tell if they are improving if they are reporting different measures?

We are very interested in thinking about how, over time and within each program, we may hold providers accountable for the health of the population or the community in which they practice. To do this, you must have good population health metrics, which we do not have currently. In the future, you might imagine we would base at least a small percentage of the performance scores of physicians upon metrics of the health of their communities. It could be admission rates or smoking cessation rates or whatever, but I submit that providers have some responsibility for the health of the community in which they practice. We are working with the National Quality Forum to think through issues such as determining the proper metrics.

The final step is providing assistance for frontline providers to make improvements. Although there are superb leading organizations engaged in excellent work to improve outcomes for their patients, many others are struggling to learn best practices. At CMS, we have a couple of ways we can provide assistance: the Center for Medicare and Medicaid Innovation models and the QIO 11th statement of work. However, I strongly believe that progress must come from beyond the government walls and outside of Baltimore. It has to come from communities and states and from private payers as well.

Ceci Connolly

Before we go to Kavita, Kate, I would love for you to share with this audience a vignette of patient centeredness and quality. Take my mother, 74 years old, living in Florida. What will change for her as a Medicare beneficiary? What is a concrete example?

Kate Goodrich

I think about my mother, who lives with me, a 76-year-old Medicare beneficiary with multiple chronic conditions. She represents our goal of looking at the whole patient and trying to improve the outcomes, which we know are most important to them—a holistic approach versus delivery of their care on a condition-by-condition basis. There has been substantial research on what matters to patients like your mother and my mother in improving their care. We know it is not things like getting their A1C levels less than 8, or getting their blood pressure below 140/90, yet that is what we measure and emphasize. In fact, many of those measures actually work against one another! We are thinking about creating measures that indicate improvement in function over time, improvement of symptoms over time, reducing admissions to the hospital, shared decision-making, et cetera. Those are difficult concepts to measure, but there is significant good work under way. If we focus on these issues, particularly for those vulnerable patient populations with multiple chronic conditions, we will probably go further in improving not only their health but also their experience within the healthcare system.
Kavita Patel

Health Care Delivery: How to Best Increase Value and Quality

Before proceeding to my presentation, I would like to comment on healthcare spending trends, as discussed this morning. I continue to practice hospital medicine. I tend to look at the physician payment component of the health spending graphs, and there are clearly aspects that contrast with the slow, overall spending trends. For example, isolating the physician’s spending component of the total shows decreases in hospital-based services and increases in ambulatory services. This makes it fraught to abstract the total message. I have been looking at comprehensive cancer centers and the adjusted growth rate compared to the chained Consumer Price Index. Interestingly, focusing on some of the nation’s leading cancer centers, their adjusted growth rate has not only been increasing over the last several years, but at rates that are much higher than any of the ones we saw even in the tumultuous years of high Medicare spending rates. A major cancer center in Massachusetts has a growth rate of 8%–10% in the past 2 years. I am not an advocate that everything should be subspecialized and compartmentalized, but I think that in this conversation about value, there are specific factors that should be considered when we look at the overall spending picture.

Figure 1 highlights alternative payment activity in the commercial sector, including a wide spectrum of models. This activity builds on what Kate described for Medicare. One noteworthy distinction for specialty payments concerns the additional amount for medical homes in the commercial sector that, using cancer as an example, may be $250–$350 per patient per month (on top of fee-for-service payments). This is real money, and it highlights the aggressiveness of the commercial sector trying to promote quality advances, whether it is additional payments for following pathways or otherwise.

WellPoint released such an initiative in six states and plans to release a broader program, where it will pay $350 per active patient per month with cancer treatment to follow evidence-based pathways. It provides its own technology for practices that do not have an existing solution. Although I completely agree with this morning’s conversation that our delivery system is still characterized by a majority of the country...
operating on a fee-for-service basis, the commercial sector has identified cancer and cardiology trends and has adopted very aggressive tactics to slow spending growth.

Figure 2 is a Brookings favorite. As a current practitioner, I lie at the bottom left-hand corner in my traditional fee-for-service, relative value unit (RVU)–based productivity measured system. I occasionally receive reports on multiple quality measures that explain how I am doing. Yet, none of us truly cares about these metrics because they do not have a significant financial impact our bottom lines. Most of us practice in a salaried setting, and the vast majority of our salaries remain based on RVU fees, with only 5%–10% of our pay “at risk.” As you know, doctors are very smart at calculating how much these metrics affect their bottom line and how much pain it is worth to meet the various targets.

Figure 2

We devote significant time in Washington to discussing the upper right-hand corner. We look to places such as Massachusetts, Oregon, and other pioneers across the country to lead the way. However, just as the World Cup has again taught me the lesson that you should not put all your eggs in player (Lionel Messi!), we do not want to rely on one state to teach the country what to do. A country such as Germany, which has taken decades to develop its system of teamwork, teaches us that true systemic change is the way to go, and that often does not make frequent news headlines.

Much has happened since 2010, and I note the shift from the patient-centered medical home (PCMH) being the in-vogue term for value in the delivery system to accountable care organizations (ACOs). I will be a friendly cynic to ACOs and argue, much like the conversation this morning on overall Medicare spending growth, that ACOs should be seen as a stepping-stone to sift out which organizations are going to lead and aggressively accept risk, in both financial and clinical domains. This will leave many organizations behind, akin to any bell curve, and they will be forced to redefine their organizational priorities.

We do substantial work with private payers and health systems. It is interesting to witness the cognitive dissonance confronting the C-suite leadership and their understanding that they need to establish a change trajectory for their systems. Compare this with the lines of service that are acquiring physicians at a
breakneck pace, viewing salaried doctors as a revenue center. It is only a matter of time until the same doctors are seen as a cost center. This doctor-buying craze, especially for cardiologists and oncologists, is not, in my view, a sustainable trend.

The basic concept behind this PCMH-ACO movement is to reduce the total cost of care (Figure 3). I agree completely with Harold that this approach will not create a win-win-win strategy unless you can chart a pathway where doctors feel comfortable that their payments will not be further cut. Yet, there will inevitably be somebody operating in that red bar, practicing wastefully, who deserves our focused attention. Regardless of whose numbers you accept (e.g., from the Institute of Medicine), we can all agree that there is a degree of waste that the Hospital Value-Based Purchasing Program and some of these public programs forthrightly attack. We all know, however, that one person’s waste is another’s revenue.

*Figure 3*

PCMH and ACO Models Explained

I would like to highlight some important value opportunities. The Medicare Payment Advisory Commission (MedPAC), the Office of the Inspector General (OIG), and the Government Accountability Office have repeatedly pointed out the excess Medicare rates for lab services. The payment rate differentials between hospital outpatient departments and ambulatory surgical centers provide a $15 billion savings opportunity, according to the OIG. On very many occasions, MedPAC has noted the unfairness of the site-of-service payment differentials. Of course, these have been a premium accelerator for systems to acquire the physicians, referred to above, as revenue centers (at least for now).

There are specific examples for efficiencies from every specialty (Figure 4). My experience working on the Hill and in the administration taught me to determine what to leverage from a policy standpoint. I worry that Congress views some of these trends and thinks it should legislate a specialty-specific approach. I think we saw some attempt at being generic in the recent sustainable growth rate fix legislation, where Congress they put forward a pathway for “alternative payment models.” That is the correct approach; however, we have already seen the commercial sector act aggressively here, whether it is reference pricing for colonoscopies or in oncology, where they are committed to shifting the dynamic. Using Harold’s litmus test, is everybody a winner in that scenario? I think the jury is still out, but certainly we have had a great deal of experience in oncology, cardiology, and gastroenterology with private payer contracts that are trying to drive and accelerate a shift to value.
Ceci asked the million-dollar question of how any of this matters for a patient. From my perception as a provider, I get a popup on my electronic record chart that reminds me that this patient is in an ACO. Then, as someone steeped in health policy, I likewise ask the patient, who has already received letters not only from my own institution, but also from the Centers for Medicare and Medicaid Services (CMS) and others. They reply by asking if I can still be their doctor. That is what they and we care about. They do not care about any of the other details, nor do they really care about why we are implementing these policies. This could change as we do a better job of explaining what “it” is, because even most doctors do not understand what “it” is. When we consider this question of value, I am bullish on finding ways to learn from what we are seeing in the private sector, which is taking off much more rapidly than what we are able to adopt in the public sector. However, to play the devil’s advocate, the private sector is not necessarily pursuing outcomes that represent wins for everyone involved.

There has been considerable discussion around the development and growth of narrow networks. Insurers will inevitably describe them as high-value networks. I think there is a tremendous amount to learn from what is happening in what is not a new concept—how we see systems, providers, physicians, and the general market reacting to this growth development. Indeed, we see many of these systems themselves becoming insurers, trying to gain an advantage, thus shifting the dynamic between how an insurer operates and how a provider operates. Some will be left behind, including large academic centers. For example, the Fred Hutchinson Cancer Research Center, in Seattle, Washington, was left out of all exchange plans, along with some other comprehensive cancer centers. That trend will continue.

Ceci Connolly

Kavita, you have a blog discussing site-of-service differential payments. Would you briefly describe this and identify the potential solutions to what may be a growing problem?

Kavita Patel

MedPAC has reiterated the obvious position, that we need a legislative solution. However, for Medicare, there have been creative, administrative solutions. When Jonathan Blum was the CMS deputy
administrator, he oversaw an approach that blended some of the evaluation and management coding and rates for outpatient specialties, in a way that mitigated a portion of that differential—or, at least, started us down a pathway for progress. Providers from major systems fall back on the argument that there is a difference in care for a set of services depending on the delivery site. Yet there are many instances, such as echocardiograms in cardiology and other basic procedures, where the evidence for such a differential is lacking. There are huge savings opportunities for the Medicare program, but it is also critical to step back and address overall healthcare value—for what are we actually paying, something that we should all be questioning, in both the public and the private sector.

Session II. Questions and Answers

Web Audience Question
Harold’s model has physicians spending more time with patients. To make this work, we need more physicians. How do we get there, and why is this so hard?

Ceci Connolly
Do we need more physicians?

Harold D. Miller
I do not buy that notion. I think we need more physicians in certain parts of the country. A key issue is that physicians need to spend more time with some of their patients and less with others. Today, if a patient wants to discuss a problem on the phone, the doctor is not paid to answer the call or to send an email. Practices in the nation that have operated under different payment models have found that they can restructure care in a way that is much more patient friendly by respecting the patient’s time. It also enables the physician to spend more time with the patients who really need it, in a way that could actually better manage their care. The problem today is that we pay for the same widgets for everybody rather than giving the flexibility to adapt care to what the patient needs. It all comes back to flexibility and accountability. If we paid physicians in a more flexible fashion across primary care, OB/GYN, et cetera, they would find different ways to deliver care more effectively, which would probably reduce the shortage of physicians.

Ceci Connolly
Do you foresee an uptick in state fights over practice licensing?

Kavita Patel
Absolutely. We already see this issue with telehealth, which is, comparatively, very easy, a no-brainer. We still have many restrictions on whether a physician from one state can see, virtually, a patient in another state. This is one example, along with promoting advanced practice nurses. I also agree that we may not need more physicians. An average primary care physician’s panel includes about 2,000–3,000 patients. If we were smarter about the types of patients we need to see, the panel size could rise to as high as 10,000, which is what Group Health and some in Germany have done, since they are better at discriminating between who should actually have time with the doctor and who should not.

Harold D. Miller
As long as you force nurse practitioners and doctors to fight over who receives the office visit fee, that tension will exist. However, if we start to pay based on outcomes, physicians will suddenly find that extenders are actually very helpful. Instead of taking the physician’s income, they are enabling them to manage their patient population more effectively. Similarly, OB/GYNs resist having nurse midwives doing deliveries, until you start paying them for better pregnancy management. Suddenly, they discover that having nurse midwives, as part of the team, is a winning solution to manage normal pregnancies and is far preferable to having doctors waiting for hours in the delivery suite.
Paul B. Ginsburg

On these turf battles between physicians and other professional groups, it strikes me that there has always been a control issue at work. Physicians have been very receptive to bringing others into their practices and hoping that they are paid, but when they practice independently, that is where the fighting arises. Perhaps with broader payment systems, those fights will end, but I believe the doctors wanted that control luxury. I have heard favorable things here about developing payment approaches that are specific to a specialty or a condition, that there is significant potential for this. What are the logistics of this process? To what degree can the resources at the Centers for Medicare and Medicaid Services (CMS), and even for private insurers, quickly get us to a system where they cover a large proportion of spending with specialty-specific and condition-specific approaches?

Harold D. Miller

It is important to realize that there are not 10,000 different payment models, but rather a small number of different concepts that need to be particularized to the individual specialty for the conditions they are managing. Figure 9 in my presentation, on bundles and warranties and condition-based payments, illustrates how these can be combined in a different fashion for different goals. In some cases, the best approach is a bundle for a specific procedure. In other cases, we need a condition-based payment. The American Medical Association is developing categories of these models to make it easier for CMS and other payers to implement them, adding the details where necessary to adjust for different specialties and conditions. If the patient has multiple conditions, you have many specialists working to manage those conditions in a joint way, but you now have a better way to allocate the responsibility among them.

Kate Goodrich

We obviously have constraints on how we can move forward at CMS, but the next round of models from the Center for Medicare and Medicaid Innovation will be specialty specific, starting with oncology and others. They will also be looking to build on successful models established by payers in the private sector.

Harold D. Miller

I would like to challenge this notion that the private sector is doing a better job than government. CMS deserves a huge amount of credit for what it has accomplished. For example, the Bundled Payment for Care Improvement Initiative has four payment options for 48 different diagnosis groups from which one can choose. That is 144 different payment models, representing a historic change from CMS promulgating a one-size-fits-all approach to providing 148 choices depending on capabilities at a provider level. This is far more than any private payer has done, anywhere in the country. CMS still needs to move it outside the hospital realm into the ambulatory care setting, but I think it deserves a lot of credit for being able to put that system in place. Many private payers are way behind the curve on that.

Uwe E. Reinhardt

Kate, do I understand correctly that you ultimately want to peg an individual doctor’s pay to population health in the community? I would urge you not to do that, because we did something similar, the sustainable growth rate payment system, and I hear it did not work out so well! CMS should focus on a few things that it knows it can do well and demonstrate progress to the world, rather than dreaming about things that even theoretically are problematic. Philosophically, punishing somebody for something over which he or she has no control is a bad idea. Kavita, your Figure 1 suggests that in the private sector all payments are linked to quality. That is not my impression. If you were to say this represents a survey of insurers who are toying and experimenting with these approaches, among their many patients, I would accept it. To suggest that these are American healthcare trends makes me incredulous. I do not think Princeton pays any providers in that way (and they are not stupid)!
Kavita Patel

This information comes from a survey of the payers and includes both their existing programs and their planned or intended models for value-based contracts. The survey response is far from 100%, and it illustrates the diverse range of alternative payment models—that there is a very heterogeneous conception of these.

Ceci Connolly

It is striking to me that the large colors in your pie chart begin at fee-for-service.

Kavita Patel

Yes, at least half of these contracts, both current and planned, are fee-for-service, with some uplift, as we call it, for quality or pay for performance. Even with token steps, such as $2 payments for someone measuring A1C for blood pressure, can lead payers to claim they are implementing new payment models. Although many are involved in these baby steps, other payers are going further.

Stuart Guterman

Regarding Uwe’s question, I believe the Catalyst for Payment Reform’s scorecard showed that 10.9% of private sector payment was related to quality.

Joanne Lynn, MD, MA, MS, Director, Center for Elder Care and Advanced Illness, Altarum Institute

I wonder whether much of what we are trying to do is constrained by the categories we are using. We talk about hospital-based quality measures or paying physicians a certain way or somehow paying for population health. The raison d’être for health care is the suffering of people. They arrive with different needs. Sometimes we can keep them healthy. However, the true reason for a healthcare system is that people get sick and suffer versus keeping them healthy until they somehow evaporate at the end of life. The category that absorbs so much of current funding comes with aging. For almost everybody here, it will embody the illnesses you suffer that are not preventable. Fifty years ago, these illnesses were rare, and medical care was typically inappropriate. You were 80 and demented and did not receive surgery. Now, most of us will spend a substantial portion of our healthcare dollars in the last 4 or 5 years of life. Yet we neglect to discuss this, and we do not talk about the boundary we have created between Medicaid and Older Americans Act services. We have barely mentioned Medicaid. We fail to highlight the way in which we have over-medicalized services and thereby insufficiently provide food and housing. The sequester took 12 million meals from Meals on Wheels, having an enormous impact on health. We need to create a category for the illnesses associated with aging, frailty, and disability. This should align with an integrated budget for housing, transportation, food, direct care, and medical care services. Instead, we hear of oncology and cardiology accountable care organizations (ACOs), which represents further fragmentation. I think the categorical approach we are taking is mistaken.

Harold D. Miller

It depends on the goal of the cardiology or oncology ACO. One slide in my fractured fairy tale tried to force the question of what is the goal. If it is to pay for health care, you get one result; if it is to maximize people’s functionality at each life stage, you end up with a very different result. There are innovative national models that illustrate the positive outcomes derived when payment flexibility facilitates the provision of non–healthcare services such as transportation. Today, we tell your mother, who cannot walk anymore, that the only way she can get health care is to visit the doctor’s office, rather than bring health care to her—not a very comforting motto. We can do it differently. We need to allow some people to die peacefully and comfortably with their families, not receive more treatments. If we only pay for treatments, that scenario will be much too rare. If instead, we emphasize our true goals, I think we will see many cardiologists, oncologists, and others provide the services and support that people need and want.
Oncology is a perfect example. We do not pay oncologists to help people with end-of-life discussions; we pay them to stick needles in people’s arms.

**Kavita Patel**

For dementia, from the *Assessing Care of Vulnerable Elderly* work and other studies in which you, Joanne, were involved, we learned that caregiver support is one of the best interventions. We have no way in our Medicare claims, payment system model to promote them. The programs that adopt such interventions are Medicare Advantage or other plans with global capitation. In my view, the ACO is a stepping-stone to get leaders to understand how to take on better clinical and financial risk. Within that landscape lie exactly those evidence-based services that are worth their weight in gold. I do not see ACOs as more fractured silos; I see them as building blocks to get us the system for which our society is clamoring.

**Harold D. Miller**

We need to build these things from the bottom up rather than the top down. If we would let doctors determine how they could improve the care of their patients and obtain the resources, we would see very different models than those we see today.

**Kate Goodrich**

I certainly agree. The healthcare system is too organized around silos, from the education system and from the social services system. Within the Medicaid programs, we are considering ways to blend them differently. Thinking about the prospects for ACO version 2.0 or 3.0 is very important. How can we feed incentives back into the community to better provide desired services? I agree with Kavita that our current view of these programs is immature; we are only taking incremental steps toward being able to combine the most important factors.
III. Disease Prevention Interventions: What’s the Value?

George Miller

Our session on disease prevention should be interesting because it will be conducted by a panel with diverse expertise that ought to give us varied perspectives on the value of prevention. I am sure most of you are aware of Alice Rivlin’s distinguished career in fiscal and monetary policy, but her expertise also extends to healthcare reform and prevention as exemplified by her Co-Chairing the Robert Wood Johnson Foundation Commission to Build a Healthier America. Dave Chokshi is currently the Director of Population Health and Improvement and Assistant Professor of Medicine in Population Health at New York University. He is a physician who previously served as a White House Fellow within the Department of Veterans Affairs and who has published extensively on topics in medicine and public health. Finally, Bobby Milstein is a Visiting Scientist at the Sloan School at MIT and Director of ReThink Health, and his extensive work in development and application of policy simulation models has helped highlight the value of investments in prevention.

Alice Rivlin

*The Value of Health and the Relative Unimportance of Health Care*

The title of this panel is “Prevention and Wellness, What Is it Worth?” I would submit that wellness, both mental and physical, is as close to an existential value as we are likely to get. It is more useful, in my opinion, as an existential value than happiness is. Happiness research is very much in vogue these days, and some of the results are very interesting. I think wellness is actually a more fundamental value than happiness, as we usually think of it.

People in good health feel better, they have more energy, and they perform better in any activity. They learn more, they play harder, they are more productive at work, and they contribute more to their families and their neighbors and their communities at any age. And yes, incidentally, they absorb fewer healthcare resources at any particular moment. I am an economist, and as an economist, I am frequently asked, “If Americans were healthier, would we have a higher GDP?” We certainly would, but that is not the main reason for caring about better health. I have nothing against measuring economic impact, both in terms of higher output and resources saved, but I do think we should be careful about getting too involved with or focused on GDP measures because they imply that only the healthiness of the current and future labor
force matters. That is not an appropriate stance, especially now when the portion of the population that is not working is growing faster than the portion that is.

I may have a personal bias, but I think the health of older people matters, and it matters more as there are more of us. This is true because healthier older people use less health care, and because their health and well-being are an existential value about which we should care. Health and wellness includes dying, and the new focus on end-of-life care seems to me both gratifying and important. It is important that people should not have to die in a hospital with tubes in their throat if they do not prefer this. It may cost more, but more importantly, dignified dying is less painful, less stressful, and a more satisfying experience to all concerned, including family and caregivers, as well as the person dying.

I am not against measuring worth, but it must be done correctly. Take a firm’s investment decisions. It is sensible for a CEO to ask whether investing in gym memberships or nutrition education or substance abuse treatment will contribute to the bottom line. He or she ought to ask such a question. Suppose, however, the answer is that these things are not worth it because the firm has a high turnover in its labor force and the benefits will accrue largely to other firms or to retirees. That may be the right answer for the company, but for the industry or the community, if the broader question were asked, there might be a different conclusion.

If the CEO’s question prompts the answer that workers will not actually use these benefits – they will not actually work out at the gym, eat better or drink less just because the benefits are offered – that again is an important conclusion, but it should not be the end of the conversation. Instead, it should be the moment at which the company asks, “Can we take other steps to raise the consciousness of our employees about health and infuse a culture of health that will lead to more positive results? Or, do we have to work with a broader community, with the rest of the industry, with our surrounding community?”

Prevention in the narrow sense of preventing specific diseases often presents a good opportunity for measurement, and one can build a case for the investment. Vaccines, clearly, and anti-smoking campaigns have proven value in economic terms. Here again, one has to be careful to measure the right universe, especially when benefits accrue slowly over time or to a diffuse population. The Brookings Institution is hosting a conference in October on this new treatment for Hepatitis C and that question [about improving population health] will be very relevant. If we can cure Hepatitis C, that may have benefits beyond the population of the particular insurance company or government that is considering whether it is worth paying for this. Or it may not – you have to figure it out.

For more general efforts to promote a culture of wellness in America, the important question is not how much it would be worth, but how much we know about how to do this and what are the most cost-effective approaches over time and over a broad population. We know two things for sure: America is not very healthy, no matter how you measure it and compare it with what we could be or with other countries; and improving our health has very little to do with health care.

We have been talking all morning about health care, and it is fascinating. It is very wonky, and I am a wonk and I love it. However, it simply does not have much to do with health. I am surprised by how often I get the question, “Does Sweden or the Netherlands, et cetera, have better health care because they have a single-payer system?” That may help a little, and it may explain why their healthcare spending is not as large a percentage of their GDP, but you need to look elsewhere. How they get to work – Did they ride a bicycle or not? What do they eat? How clean is their air? Many other issues are more important than how they pay their healthcare providers. We are early in this process, and what we do know is that this will take multiple skills and actors to be successful.

I served on the Robert Wood Johnson Commission, and we concluded that the three most important things that could be done to make America healthier did not focus primarily on health care.

The first was early childhood interventions. There is substantial evidence about the benefits of early childhood interventions, although it is not nearly as good as it ought to be. It is remarkable how seldom
children are followed over a long enough period to find out what happens to them as they grow up. If I hear about the Perry Preschool program one more time, I will scream, but it is cited so often because it is one of the few longitudinal studies from which one can draw meaningful conclusions.

The second focus to improve health should be community revitalization. You do not exercise if you are afraid to go out your front door because you might be shot. You do not eat very well if you cannot buy nutritious food in your neighborhood. Improvements in this area are going to take a different set of skills beyond health care.

Third, our commission stressed that we need to reorient healthcare delivery toward measures of population health. I think that is correct, but it is a small part of the picture. We can train doctors to pay more attention to the other things that are affecting their patients’ health, but we do not want an oncologist dispensing nutrition advice or advising you on exercise; he or she is not trained to do it and earns too much to use his or her skills in that way. We need the physicians integrated with professionals who do have those other skills.

The bottom line is that we need to measure health better, but we should not overly worry about what it is worth. We need to make a much more intensive effort, beyond health care, to learn which interventions are working, and how to implement them more widely.

George Miller

While we would all agree with your premise that health has intrinsic value and measuring its value economically is somewhat beside the point, it seems that we need ways to motivate people to invest in their health, and a part of this can come through measurement. How do you go about motivating better distribution of funds to health rather than health care?

Alice M. Rivlin

I do not think we know that yet and that is where I am suggesting that we need to be studying both the motivating and the mechanism. How do you actually get people to exercise more or eat better? The first line of defense of the economist (and I am one) is that you pay them to do those things. I am not sure that is right; we need to find out.

Dave Chokshi

The Role of Non-Clinical, Environmental Interventions in Promoting Health and Preventing Disease

I am a practicing primary care physician, and I want to begin my remarks about the value of prevention from that vantage point. Doctors bear witness to the consequences of prior unhealthy choices in poignant moments. For example, my patient, an ex-smoker who suffers from emphysema, tells me that she only wants to be able to breathe a little easier so that she can keep up with her grandkids.

I see people on both ends of a disease arc – a patient with cirrhosis whose skin glows yellow, and a young man who puts away two 6-packs a night, but does not realize that he suffers from alcoholism. Psychologists refer to this lack of realization as hyperbolic discounting, the human tendency to discount the value of future conditions by a factor that increases with the length of delay. We can use a simpler term: regret. I try to keep in mind that my job is as much about trying to prevent avoidable regret as it is about preventing avoidable disease. As Dr. Rivlin noted, prevention often has little to do with what we doctors do in clinics or in hospitals. A social-determinants-of-health framework argues that the most important contributors to health status lie outside of healthcare systems. This has implications for how we value prevention.
Although preventive approaches to disease are intuitively appealing – and they are frequently presented as a way to reduce costs – analyses have suggested that, overall, they are no more cost-effective than therapeutic interventions. It does raise the question: Are there some preventive interventions that are more cost-effective than others? With Tom Farley, the former Health Commissioner of New York, I undertook a systematic analysis of cost-effectiveness studies to get at least one perspective on this question.

We began by developing this typology (Figure 1) to categorize different types of preventive interventions.

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**Figure 1**: Typology of Preventive Interventions

- **Clinical**: Preventive interventions that occur within a healthcare setting.
  - Childhood immunization
  - Pap smears
  - Prophylaxis for hospital-associated venous thromboembolism

- **Non-clinical**: Preventive interventions that occur outside of healthcare settings.
  - Syringe exchange
  - School-based smoking prevention program
  - Reduction of sodium in processed foods
  - Increasing fresh food availability in low-income neighborhoods

- **Person-directed**: Preventive interventions whose proximate target is an individual or a group of identifiable individuals.
  - Cancer screening
  - Pap smears
  - Prophylaxis for hospital-associated venous thromboembolism

- **Environmental**: Preventive interventions whose proximate target is an element of the physical or social environment.
  - Syringe exchange
  - School-based smoking prevention program
  - Reduction of sodium in processed foods
  - Increasing fresh food availability in low-income neighborhoods

---

In medicine, we generally classify prevention based on disease course. Primary prevention aims to prevent new cases of disease, whereas secondary and tertiary prevention aim to mitigate the effects of disease, once it is already manifested. We proposed two overlapping dimensions to characterize further primary preventive interventions. The first, along the bottom, is environmental versus person-directed, which indicates whether the proximate target of an intervention is an element of the environment or of a specific individual. Along the top, clinical versus non-clinical, indicates where an intervention takes place, in or outside of a healthcare setting. For example, a person-directed prevention, which is conducted individual by individual, would be cancer screening or Pap smears, while environmental prevention, which would act on persons indirectly by altering the physical or social environment, would be a trans-fat ban.

We analyzed the contents of the Tufts Cost-Effectiveness Analysis Registry, which contained information on about 3,000 cost-effectiveness analyses as of December 2011, with 469 of these studies examining primary prevention. According to our definitions, the registry contained about 401 studies of clinical prevention, 37 studies of non-clinical, person-directed prevention, and 31 studies of environmental prevention. Again referring to Figure 1, from left to right, in the area of the blue circle that is not part of the intersection, there are about 401 studies of clinical prevention. In the area of intersection, there are about 37 studies of non-clinical, person-directed prevention; an example would be a syringe exchange program, which does operate person by person, but lies outside of a healthcare setting. There were about 31 studies that we classified as environmental prevention, which are both non-clinical, but do not operate individual by individual.

We found (Figure 2), with all the provisos that go along with any bibliometric study that is subject to publication bias, that environmental interventions (the blue bars), were generally more cost effective than clinical interventions (the green bars) and non-clinical, person-directed interventions (the orange bars). A greater portion of environmental interventions, about 46%, were cost saving compared with clinical
interventions, of which about 16% were cost saving, and non-clinical, person-directed interventions, of which about 13% were cost saving. Why might this be?

*Figure 2*

![Cost-Effectiveness of Categories of Preventive Interventions](image)


In an environmental model of prevention, people’s behavior is influenced by their physical and social environment. A British epidemiologist, Geoffrey Rose, first asserted that interventions that shift an entire risk distribution (the bottom panel in Figure 3) – an example would be a sodium reduction initiative to try to reduce population levels of blood pressure – are empirically, for many risk factors, more effective than approaches that seek to identify and treat high-risk individuals (the top panel in Figure 3).

*Figure 3*

![Prevention strategies](image)

It can be far less expensive to alter an environmental element to which many people are exposed than to interact with each person directly. Even if the effect of an altered environment on each person is small, the cumulative population effect can be large, and therefore cost-effectiveness can be favorable because the cost per person reached is small.

In a society oriented around preventing disease, or, to use the Robert Wood Johnson phrase, promoting a culture of health, I think we need to change both our healthcare system and our approach to public health. I would like to address briefly each of those domains.

I agree with Dr. Rivlin that we have to do a better job of measuring what matters. The ultimate goal we can encapsulate is the idea of longer, healthier lives for all, but a metric to get at this is elusive. One potential way is to break down a summary measure of health into components of morbidity and mortality (Figure 4). This is similar to a quality adjusted life year, but to make this meaningful not only at the population level but also for individual patients in the same way that we would keep track of someone’s net worth in terms of their assets and debts to help us prioritize financial decisions.

**Figure 4**

We can do the same thing with a summary measure, such as health-adjusted life expectancy (HALE), which can enable some personalized conversations about health decisions. We are getting more sophisticated in our ability to predict life expectancy and mortality, even at the individual level, and in capturing a patient’s self-reported qualitative health status. To give a concrete example, for a patient with pre-diabetes and hypertension, we could use these data to evaluate the relative and absolute importance of a set of different interventions, such as smoking cessation, an exercise program, or antihypertensive therapy.

Turning to the realm of public health, I believe many of the most difficult challenges are political. For environmental interventions, such as tobacco taxes – or, perhaps the most controversial example, soda bans – I think sound regulatory policy often falls prey to those who invoke “nanny-state” overreach. Public health regulation is falsely portrayed as a choice between responsibility of individuals and restriction of freedom. Rarely are the public health consequences of inaction presented as a regulatory choice. I think challenging this nanny-state framing could help balance the debate. The third row of the table in Figure 5 from our JAMA article is one example of how one might do that. Poverty, geography, and disproportionate
marketing of unhealthy products limit a person’s decisions, and the state has an interest in enabling individuals’ freedom to make healthy choices. In this paper, we proposed that as an example of what we called “savvy-state” framing.

Figure 5

<table>
<thead>
<tr>
<th>Nanny-State Framing vs Savvy-State Framing</th>
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</thead>
<tbody>
<tr>
<td>Nanny State</td>
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<tr>
<td>Mandates affecting behavior are a restriction on individual liberty</td>
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<tr>
<td>Taxes are heavy-handed instruments of government intervention</td>
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<tr>
<td>The state can provide information but not regulate a person’s decisions</td>
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<tr>
<td>Private markets facilitate the exercise of free consumer choice, allowing individuals to make healthy choices for themselves</td>
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<tr>
<td>Unhealthy behaviors are nobody's business but the individual's</td>
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</tbody>
</table>

Let me conclude by referring back to my patients. There is not a single clinic session that goes by where I do not see a patient who has obesity or diabetes, and the inexorable toll of those conditions makes the value of prevention clear in those cases. Personally, I can say it also motivates me to counsel my other patients – those overweight but not yet obese, or those with pre-diabetes and not yet diabetes. However, I realize, and I think in medicine there is a growing recognition and humility, that we have to do more. We have to work in concert across sectors. I would say that those are the curves that really need to be bent – the trajectories of avoidable mortality, avoidable disability, and avoidable regret.

George Miller

I am struck by the fact that significantly fewer – less than 10% – of the preventive interventions that you reviewed in the Tufts Registry were environmental ones. I think you touched on the reason for that in your talk, but I wonder if you could comment further. Is it the difficulty of measuring these kinds of impacts, or is it a historical lack of interest in measuring them that has caused that relatively small set of studies that have addressed those kinds of issues?

Dave A. Chokshi

I think that is a key observation. I would attribute it to both of those things, as well as to a lack of funding, which relates to both of them as well. One of the things that we reviewed was comparing the set of environmental interventions for which there were cost-effectiveness studies with the list of environmental interventions recommended by the Community Preventive Services Task Force, which is the lesser-known sibling to the U.S. Preventive Services Task Force. We found that the vast majority of the interventions that recommended by the Community Preventive Services Task Force were not studied – were not in that list of environmental interventions for which there were cost-effectiveness analyses. This gets to Dr. Rivlin’s point as well; there is a paucity of data and research on these topics.
Bobby Milstein

Can Smarter Investments Unlock the Potential for Health and Resilience?

I am going to take a pragmatic and dynamic approach and ask, “How can smarter investments unlock the potential for health and resilience?” In particular, I address both health and economic consequences of various kinds of prevention investments, and emphasize an analytic framework where such interventions are introduced under realistic and regional conditions.

Why regional? In this country, there is great variation around demography, aging, and inequity, which leaves people with different levels of health status, risk and vulnerability, and trajectories around disease progression. There is also enormous variation around quality of care, utilization, the cost of care, demand–supply balances in the availability of care, and now, increasingly, profound changes in insurance expansion in the wake of the Affordable Care Act (ACA) and the economic recession and recovery. Also, the themes that we have heard this morning about differences in a particular region in its healthcare delivery payment reform structure, and the kinds of financing that are available to make critical investments, can make an enormous difference.

Capturing the regional variation in these important factors is among the things that the ReThink Health Dynamics Simulation Model was built to do. It represents the next generation of work building off a paper that we published in Health Affairs that used a national-level model called HealthBound. I want to summarize key insights from that paper, because what we will be doing this morning is extending that analysis down to a regional level in thinking about some additional forms of prevention investments. As shown in Figure 1, the punchline from the HealthBound work was that various attempts to improve the health of a population could deliver progressively different kinds of impacts in health and cost.

Figure 1: Summary of Results from HealthBound Model
Coverage can certainly make some improvement in population health, here measured by avoidable deaths, but there is a price tag to that and we have seen this repeatedly. By adding an emphasis on clinical preventive services in the form of better care, in addition to expanded coverage, you can end up reducing deaths even more, and even lowering the price tag. It is still a costly enterprise. Far more dramatic impacts can come by adding investments in healthier behaviors and safer environments; the kinds of things that we have been talking about here and reflected in those environmental interventions that Dave Chokshi mentioned. The cost impacts are different over time. The upfront initial investment is quite high, and it takes some time to see the eventual economic returns. Short-term time horizon models cannot offer a fair assessment of these types of investments as it takes at least a couple of decades for the full effects to accumulate.

What we have done with the ReThink Model is to consider regional variations in the way that care is delivered, the cost of care, and the contours of risk and vulnerability in health status, and we have created a model that is a realistic and simplified representation of a local health system. We have calibrated the model with colleagues across the country to represent nine specific communities. We have also developed a nationally representative “Anytown, USA” version scaled at 1:1,000, representing a population of 300,000 people instead of 300,000,000, but with the characteristics of the nation as a whole.

The ReThink Model offers a place-based, wide-angle view that gives us a framework for looking at a whole suite of scenario options, all in the same analytic environment. It gives us scores of metrics that we can use to trace through the consequences and the indirect pathways of investing in environmental interventions as well as more person-directed services. This is not the forum to go through the analytic framework, but the model allows us to map evidence from dozens of different databases and give leaders at a local region a way to play out scenarios of their own design and see what some of the likely consequences may be.

This model is a work in progress. That said, we have been developing it over quite a while and have confidence in its ability to represent history. The model matches dozens of historical data series and does a good job matching the different components of National Health Expenditures in the Personal Health Services categories (Figure 2). It provides a framework for thinking about how some of the dynamics of health and health care roll up into total costs.

Figure 2: Comparison of National Health Expenditure Account Data with ReThink Health Model Simulation

Replicating History

The ReThink Health model closely matches 26 historical data time series (2000-2010), by population segment, including those from the Census, Vital Statistics, National Health Expenditure Accounts (NHE), and the American Hospital Association (AHA/ASH). For example....
The story of the model’s baseline, even before we get into investments of any kind, can be told quickly. The model looks at the entire population of a region, in particular capturing the aging of the population. It represents the rise of uninsurance through the recession and the eventual decline as projected by the Centers for Medicare & Medicaid Services (CMS) Office of the Actuary in the way that ACA insurance expansion is expected to unfold. It also captures a variety of other risks that go beyond uninsurance and access to health care, including the enormously high proportion of people in this country that have high-risk behaviors leading to chronic diseases of various kinds, and injury. It also considers exposures to hazards in the environment and those who are living in great disadvantage and adversity, represented by the fraction of the population with incomes at or below 200% of the federal poverty level. This adds up to a worrisome trend in the growth of severe chronic disease, probably the principal driver of cost and morbidity, taking a toll on the productivity of the workforce.

The model shows a trend, going forward, of rising healthcare costs that in 2015 represent $2.6 billion (Figure 3). In the analysis, we consider what we could do with even 1% of that money. If we invested $26 million for a few years, what could that get us?

Figure 3: Baseline Health Care Spending in ReThink Health Anytown USA Scenario

I will share three scenarios. The first, summarized in Figure 4, begins with a true commitment to high-value preventive and chronic care. This is a suite of initiatives that probably travel together with an emphasis on eliminating the care that we have heard repeatedly this morning does not actually improve people’s health. We establish medical homes, so that the specialist and the emergency room are not the primary points of contact in the medical system. We improve the degree to which providers adhere to guidelines around preventive and chronic care, and, on individual side, the ability to participate in one’s own self-care and to come in routinely enough for medical care that might be necessary. We also improve the way that primary care is delivered for greater efficiency to deal with the notorious bottleneck in the availability of primary care, even for those with financial access.
**Figure 4: Scenario 1 Specifications**

### Scenario 1: High-value Preventive and Chronic Care

<table>
<thead>
<tr>
<th>Investments</th>
<th>Financing</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Coordinate care</td>
<td>• 1% Innovation fund ($26M x 5 yrs = $130M)</td>
</tr>
<tr>
<td>• Establish medical homes</td>
<td>• Per capita payment</td>
</tr>
<tr>
<td>• Improve preventive and chronic care</td>
<td>• Gain sharing agreements</td>
</tr>
<tr>
<td>• Support self-care</td>
<td></td>
</tr>
<tr>
<td>• Redesign primary care for efficiency</td>
<td></td>
</tr>
</tbody>
</table>

*Definitions and assumptions about effect size, cost, and time delay are available at: [http://www.rippelfoundation.org/docs/interventions.pdf](http://www.rippelfoundation.org/docs/interventions.pdf)*

The scenario is financed in three ways. One is an initial temporary innovation fund of 1% of the total health care spent in the region ($26 million, for five years). We also recognize the critical nature of removing the perverse incentives of a fee-for-service system and assume per capita payment and contingent global payments of the kind that we have been talking about this morning. The scenario also assumes gain-sharing agreements such that, if costs were below specific benchmarks, the insurer and those involved with delivering the care would split that savings. We have assumed a 50:50 split in this scenario, but this could be represented in various ways.

The direct effects of this scenario are not so surprising. None of these changes is a magic wand; they do not make care perfect, but they do improve the adequacy of preventive and chronic care, lowering over time the prevalence of severe, chronic disease. It takes quite a while for the full effects of even this clinical initiative to unfold. You begin to see lower utilization in some of the most expensive areas of the system. This is a story of a health system that has migrated from one waiting for the most expensive tertiary settings to deliver care, to one that is centered much more in the community and is far more focused on prevention.
If we play this out for that same 20 to 25 years, there is about an 8% decline in avoidable deaths and a 10% decline in costs (Figure 6). That is not the advertised 30% reduction – it is a mix of some service lines that do decline around 30%, but others that decline less, and still others that are even increasing, including primary care visits and self-care products, which are now being used even more. The price tag for implementing this scenario is $84 per capita as it stabilizes out over time.

**Figure 6: Scenario 1 Simulated Results**

### Scenario 1: High-value Preventive and Chronic Care

<table>
<thead>
<tr>
<th></th>
<th>Deaths</th>
<th>Total Cost of Care</th>
<th>Program Spending</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>number</td>
<td>per capita</td>
<td>per capita</td>
</tr>
<tr>
<td>Baseline</td>
<td>4,307</td>
<td>$11,883</td>
<td>--</td>
</tr>
<tr>
<td>Care</td>
<td>-8.2%</td>
<td>-10.7%</td>
<td>$84</td>
</tr>
</tbody>
</table>
We have taken the $26 million a year, for five years, or $130 million of up-front capital, and leveraged it to obtain better health at lower cost. This scenario (Figure 7) leaves resources above and beyond the price tag of implementation, raising the question, “What more could we do if we invested even more, or differently?”

Figure 7: Scenario 1 Opportunities to Leverage Investment

The next scenario builds on the platform of Scenario 1, adding two initiatives, an emphasis on healthier behaviors like smoking, nutrition, and physical activity, and opportunities to eliminate hazards in the environment (Figure 8). We do not change the financing whatsoever; this is still the same $130 million up-front investment over five years, and the same healthcare delivery system that is paying for value instead of volume, and offering gain sharing to the cast of characters involved in implementation.

Figure 8: Scenario 2 Specifications

Scenario 2: Care and Protection

<table>
<thead>
<tr>
<th>Investments</th>
<th>Financing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coordinate care</td>
<td>• 1% Innovation fund</td>
</tr>
<tr>
<td>Establish medical homes</td>
<td>($26M x 5 yrs = $130M)</td>
</tr>
<tr>
<td>Improve preventive and chronic care</td>
<td>• Per capita payment</td>
</tr>
<tr>
<td>Support self-care</td>
<td>• Gain sharing agreements</td>
</tr>
<tr>
<td>Redesign primary care for efficiency</td>
<td></td>
</tr>
<tr>
<td>Enable healthier behaviors</td>
<td></td>
</tr>
<tr>
<td>Reduce environmental hazards</td>
<td></td>
</tr>
</tbody>
</table>

* Definitions and assumptions about effect size, cost, and time delay are available at: http://www.rippelfoundation.org/docs/Interventions.pdf
The direct effects here show up in places far outside the doctor’s office (Figure 9). We see the fraction of the population with high-risk behaviors begin to decline. This U.S. population goes from 60% high-risk behaviors down to around 30%. There are still plenty of people coming into Dr. Chokshi’s office with risk factors, but far fewer than there were historically. People are encountering fewer hazards in their workplaces, homes, and neighborhoods. It also shows up in lower chronic disease prevalence, but it takes some time for that effect to build. In the first few years, on that metric, there is no distinguishable impact, yet over time, it gets progressively bigger.

**Figure 9: Scenario 2 Selected Metrics over Time**

**Scenario 2: Care and Protection**

The impacts on death are much larger (Figure 10). We are up to 18% fewer deaths and another 8% decline in costs, so, for the price tag of $140 per capita, we are getting much more value in terms of health of the population and the healthcare system cost. We have the same sort of jump-start capital relying on the gain-sharing agreements to begin to be more self-reliant. In comparing the scenarios, you can see the relative impacts of limiting the initiative to a clinical enterprise versus one that has much more reach.

**Figure 10: Scenario 2 Simulated Results**

**Simulated Results**

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Deaths</th>
<th>Total Cost of Care</th>
<th>Program Spending</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>4,307</td>
<td>$11,883</td>
<td>--</td>
</tr>
<tr>
<td>Care</td>
<td>-8.2%</td>
<td>-10.7%</td>
<td>$84</td>
</tr>
<tr>
<td>Care + Protection</td>
<td>-18.4%</td>
<td>-17.6%</td>
<td>$140</td>
</tr>
</tbody>
</table>
In our final scenario (Figure 12), we think about some of the conditions that lead to greater vulnerability to disease and injury in the first place. Adding investments that look at the living wage, tax credits, housing vouchers – things that expand the socioeconomic opportunities for families – is the last step in the story I am telling.

**Figure 12: Scenario 3 Specifications**

**Scenario 3: Care, Protection, and Pathways**

<table>
<thead>
<tr>
<th>Investments</th>
<th>Financing</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Coordinate care</td>
<td>• 1% Innovation fund ($26M x 5 yrs = $130M)</td>
</tr>
<tr>
<td>✓ Establish medical homes</td>
<td>• Per capita payment</td>
</tr>
<tr>
<td>✓ Improve preventive and chronic care</td>
<td>• Gain sharing agreements</td>
</tr>
<tr>
<td>✓ Support self-care</td>
<td></td>
</tr>
<tr>
<td>✓ Redesign primary care for efficiency</td>
<td></td>
</tr>
<tr>
<td>✓ Enable healthier behaviors</td>
<td></td>
</tr>
<tr>
<td>✓ Reduce environmental hazards</td>
<td></td>
</tr>
<tr>
<td>✓ Expand socio-economic pathways to advantage for families (in 2020)</td>
<td></td>
</tr>
</tbody>
</table>

*Definitions and assumptions about effect size, cost, and time delay are available at: [http://www.rippelfoundation.org/docs/Interventions.pdf](http://www.rippelfoundation.org/docs/Interventions.pdf)*

In Scenario 3, the impacts show up in different places. We are actually beginning to change the class structure of the population so that there are not as many people who are disadvantaged and exposed to the conditions that enable high-risk behaviors and other hazards. This produces a relatively modest gain, but a significant one that shows up not only in healthcare costs but also in the productivity of people, and yields
less absenteeism and “presenteeism” (Figure 13). We are going beyond the classical health and healthcare framework here and are beginning to think about social equity and productivity as other motivating factors for beginning to make these sorts of investments.

**Figure 13**

**Scenario 3: Care, Protection, and Pathways**

The price tag for Scenario 3 is much larger (Figure 14) but, in the end, it might depend on what we are trying to achieve with these sorts of investments. It may be that health is not only a good value, but it might actually be affordable and, in fact, we may not be able to afford not to do it for very much longer.

**Figure 14: Scenario 3 Simulated Results**

**Simulated Results**

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Deaths</th>
<th>Total Cost of Care</th>
<th>Disadvantage</th>
<th>Workforce Productivity</th>
<th>Program Spending</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>4,307</td>
<td>$11,883</td>
<td>0.353</td>
<td>$18,681</td>
<td>--</td>
</tr>
<tr>
<td>Care</td>
<td>-8.2%</td>
<td>-10.7%</td>
<td>-4.2%</td>
<td>+1.1%</td>
<td>$84</td>
</tr>
<tr>
<td>Care + Protection</td>
<td>-18.4%</td>
<td>-17.6%</td>
<td>-7.3%</td>
<td>+2.1%</td>
<td>$140</td>
</tr>
<tr>
<td>Care + Protection + Pathways</td>
<td>-18.2%</td>
<td>-17.6%</td>
<td>-21.4%</td>
<td>+7.5%</td>
<td>$414</td>
</tr>
</tbody>
</table>
We at ReThink Health do not only study these phenomena, we work with leaders across the country and equip them with tools to begin to think about where their own investments might be directed. We learn with them about what it takes to get unstuck, and to make some of the investments that might unlock great human potential and economic resilience.

**George Miller**

Our recent work on obesity prevention has highlighted the fact that costs have increased as we became better able to treat obesity-related conditions over the past 25 years. We are spending more money on treatment, and, as a result, people are living longer, and continuing therefore to spend money on care. It may be that this also holds for other types of chronic diseases. If we do not take these kinds of trends into account, our estimates may be undervaluing prevention, as in the future, it becomes more valuable to prevent things that are becoming more expensive to treat. Without going into some of the technical details, to what extent do you capture that in your modeling?

**Bobby Milstein**

There is a compensating issue when people who might otherwise have died are living longer. That is one of the reasons why decision support tools are needed as leaders come together and consider what might happen. They are typically only thinking about the things in their sphere of influence, and it is quite hard to imagine for an aging population, growing sicker, and otherwise receiving various kinds of care. What is the incremental investment in various kinds of prevention? That is not something that people can ordinarily do in their head. We have seen repeatedly, in places where people are equipped with tools that play out the logical consequences of the evidence that is published across different journals and data sets, they begin to actually negotiate priorities for investment very differently and can find consensus in ways that are astounding.

**Session III. Questions and Answers**

**Web Questions**

What are the expectations of the self-management initiatives for implementing change in patient empowered health and wellness? For Bobby Milstein: It seems simple, so what is preventing it from happening?

**Dave A. Chokshi**

Speaking as a physician, I think the expectations are quite low. The evidence of self-management being able to alter significantly disease trajectories is quite depressing. That is not to say that we should not do it and not try to do better, but I think the literature shows that the interventions that we have now are in dire need of improvement.

**Bobby Milstein**

The wisdom of investing in prevention and stopping problems before they happen is simple, and we are beginning to assemble an evidence base to demonstrate that. What stands in the way is a fragmented health and healthcare enterprise where it is difficult to see this as a directed, integrated operation trying to support people’s health and deliver the care that is most necessary when it is most needed. What is our investment in health truly meant to deliver? Setting the conditions for diverse actors that span sectors, reaching from health and health care and other areas of social policy to be able to see themselves as stakeholders of a common health system – this is remarkably challenging. One of the founding members of ReThink Health was Eleanor Ostrom, who won the Nobel Prize for thinking about how people sustain common resources on which their lives depend. Setting up the conditions where we do not fall prey to the tragedy of the commons but instead work out arrangements where we can collectively invest in a health system that supports both health and resilience (sustainability) – that is the incredibly hard work. We are beginning to see shifts in some of the things across the country, even now.
Alice M. Rivlin

One of the things we ought to be thinking hard about is how to develop leaders who project the image of what one ought to do to stay healthy. I do not only mean presidents, I mean the leadership of the seventh grade – it has to be important for the “cool kids” to be doing it. I do not know how much we know about how to do that, but it seems to me it is tremendously important.

Bobby Milstein

I agree. Look at the evidence from the Truth Campaign as a way of beginning to turn the tide on youth tobacco use. It is an example of effectively disseminating the important message.

Stuart Altman

For those of us who spend a lot of time talking to various provider groups, particularly physicians, I need to raise a tough issue in linking this panel with the previous panels. I cannot tell you the number of times that I have talked to physician or hospital groups and heard them say, “Why are you bothering us and trying to change the way we practice medicine? What we need is prevention.” What they mean by prevention is that the problem lies with the patient, not with the delivery system. The reason people like me are loath to overemphasize prevention is that it is used by groups who do not want to change their behavior. Here is the critical issue. We have a growing population who believe there is a fixed percentage of the dollars that can be generated by tax systems in the public sphere; that to violate that is the cardinal political sin of America. With that said, there is a machine called coverage, which is on an automatic pilot, and it gobbles up more and more of the money, resulting in less and less money available to pursue the prevention themes you are discussing. If we do not determine a way to decrease care delivery expenditures to reinvest in prevention, we are waging a losing battle. It is important to understand what is going on in the world. There is a choice being made, and it is “Do not bother the care delivery system, but prevent people from living that alternative bad lifestyle.” This is not what you all are talking about, but it is the perception that is out there.

Bobby Milstein

One of the common, consistent themes of the earlier panels was the idea that there is now a shifting incentive, particularly under more and more per capita–based payment structures, to keep people away from the most expensive regions of the system. Running a hospital used to be like running a hotel with heads in beds, and now there is an incentive to invest in wider areas that can support population health management. We are talking about the full expression of that idea, of investing fully in the conditions that create a culture of health – as the Robert Wood Johnson Foundation has portrayed it – that can deliver important economic value, even to the actors who are repositioning themselves in the care delivery enterprise of disease care.

Stuart Altman

We want to believe that, but the reality is different. We may be on the same page, but the payment system is still fee-for-service, it is still about filling the beds. The talk is one way, the reality is another, and it would be nice to get the reality closer to the talk.

Bobby Milstein

Yes, but we are beginning to see signs of change. All innovations have diffusion to early adopters. The question is, “Can we accelerate diffusion toward this approach?”

Uwe Reinhardt

The situation is even worse because, if we do save on health care, we may not be able to harvest this money, for it may go into roads or better cars, and may not go to what you want. What you need is a different structure, where someone has a stake in population health, and I am not sure we do. I agree with Stuart (but we are both economists).
Dave A. Chokshi

I agree with what these perspectives, particularly with the assessment that things are indeed changing, both in terms of how people are thinking but also in the funding flows, which I agree are incipient. Here are two concrete examples. First, in the second round of the Healthcare Innovation Awards announced by CMS there were four categories, and one of them addressed population health and prevention. Second, there is creative thinking about using community health needs-assessment funding, which is changing under the Affordable Care Act, to try to redirect money from non-profit hospitals – which theoretically, with coverage expansion, should have to spend less of their money on uncompensated care – and channel that toward the types of activities that we are discussing.

Christine Zambricki, CRNA – Chief Executive Officer – America’s Blood Centers

I am from America’s Blood Centers, and our members provide over half the blood supply in the United States. My background is as an advanced practice nurse; I am a certified registered nurse anesthetist. I am particularly interested in Dr. Chokshi’s environmental or state model, because of my experience as a clinician. I provide anesthesia to many people who are having joint surgery because they are overweight, cardiac surgery because they are obese, vascular surgery because of hypertension or obesity. When we do our pre-anesthetic evaluation, we say to the patients, “You are a smoker. Are you aware that there is a link between your smoking and the fact that you need surgery?” Without question, patients know being obese is not good and smoking is not good. There is little doubt about this. I know it is heresy, but I am not fond of the idea of spending much money on education to tell people about health behaviors because I believe, from my experience, that they already know. I would like to hear more about whether there are models of environmental or state intervention in other countries that actually have data showing education leads to a reduction in unhealthy behaviors and promotes that whole wellness concept. I do not have much confidence in the programs that simply layer on more education, and those soft interventions of calling people, because I do not think that is the problem.

Dave A. Chokshi

I resonate with the way that you articulate things, and I think any clinician would also espouse that same spirit of humility, to know that many of the things that we do ultimately do not make a dent in some of the fundamental risk factors with which our patients present. The full answer to your question is difficult. There are not examples that spring to mind of comprehensive policy approaches in this way. There have been disease-specific approaches; for example, the North Karelia Project in Finland. There have been sodium reduction initiatives in other countries. There is an interesting example of food taxes in places that people would traditionally think are conservative, such as in Mexico, as well as food taxes passed in Hungary and Romania, which are traditionally more conservative politically as well. I think there is more of an embrace of those types of approaches elsewhere. In the United States, for the reasons that we have mentioned, it has been more challenging. New York City has been the classic paradigm: Under Mayor Bloomberg and his Health Commissioners, where the smoking ban – many people forget – created as much of a firestorm of controversy as the soda ban, when it was initially introduced. Now we have this raft of legislative packages from smoking regulations to tobacco taxes that have been shown to have prevented about 450,000 people from taking up smoking, and saved what is estimated to be 1,500 lives a year. Thus, I think there are some promising points of light out there, but it connects to the previous conversation, which is that this is not an either-or proposition. If we look at the last 50 years of reduction in cardiovascular disease morbidity and mortality, success has stemmed from the healthcare system and public health working together, rather than favoring one over the other.
Janet Corrigan, PhD, MBA, MsEng – Distinguished Fellow – Dartmouth Institute for Health Policy and Clinical Practice

The discussions today have focused heavily on Medicare and private payment. I want to point out that there is quite a bit of relevant innovation going on in the Medicaid side, such as the State Innovation Model (SIM) grants, which are all-payer, but typically start with Medicaid. For example, Hennepin Health in Hennepin County, Minnesota, has a global budget for Medicaid. It is also an area where the social service dollars typically reside at the county level. They have managed to put together a global capitated budget, both health care and capitated social services, for low-income Medicaid beneficiaries, funding for housing support and job support, and all the kinds of things that Bobby referred to, and they are tracking the impact on reduced healthcare expenditures. We are now seeing quite a few 1115 waivers in New York State and elsewhere under Medicaid that allow for dollars from the healthcare side to flow into housing supports as long as they can then show a reduction of healthcare spending. This process is becoming more institutionalized. In addition, one other area where there is substantial innovation through the SIM grants, is in states setting up trust funds at the regional level. Both Texas and now California are going down that road. These trust funds receive a match of Medicaid for local dollars, and sometimes community benefit dollars. That is another way to begin to get that seed money at the community level for investment in population health and prevention. Last, but not least, there are early design efforts going on in a couple of states as accountable care organizations (ACOs) attain greater penetration, to take a slice of the ACO shared-savings pool through a state mandate and require that it be invested in the population and wellness trust at the regional level that it is serving. I think we are seeing the very beginning of some of these efforts and demonstrations.
IV. Health Spending and Value Roundtable: What Lies Ahead in 2015 & Beyond?

Joanne Kenen

This is my third year moderating at this meeting, and I will steal a few seconds from our esteemed panel to note two items. First, the environment seems very different this year. In 2012, while technically not still in the recession, it felt that way. We knew the economy was weak, and we had no idea what would happen to the Affordable Care Act (ACA). Forget the forthcoming website debacle; we did not know how many ACA would cover. Now we know it counts in the millions. I also notice that there are fewer charts with 30-year time frames than we had before. There is much more discussion of current activity because so much is going on now. Second, while we have been sitting here, the Congressional Budget Office (CBO) released an update. It projects that we will not need the Independent Payment Advisory Board for at least 10 more years, because of Medicare spending restraint. After that, watch out! By 2039, we will have deficits exceeding the post–World War II era, and public debt will be 106% of gross domestic product (GDP), a focus of last year. We all know what gets the blame—Medicare, health care, ACA subsidies, Social Security, and rising interest rates.

Charles Roehrig

Health Spending and the Long Reach of the Recession

Linc Smith did a nice job of thanking folks, but I want to re-thank Paul Hughes-Cromwick, who is really the mastermind behind these panels. He pulled everybody together and even had to find hotel rooms at the last minute. I also thank the Robert Wood Johnson Foundation for its funding. You met George Miller, my colleague in the Center for Sustainable Health Spending, who moderated the last panel. Ani Turner, our deputy director, is also here. She produces our monthly labor brief. If you have health employment questions, she is the person to ask.

My talk today builds upon work I and others presented at last year’s symposium. Gene Steuerle suggested that to understand the health care cost curve, we should be looking at the share of the growth in income that goes to health, rather than the overall share, the average spending growth rate, or the “excess” growth. I presented evidence that this share was heading toward an asymptote of about 30%. Today, I revise that to 26%, mostly because the government revised upward the historical GDP series since then.

This marginal share of 26% represents a societal preference that has been in effect since about 1980. If that preference persists, we can think of it as the underlying growth path. Given this underlying spending path, I want to look at what the recession’s effect might have been, or at least what correlates with the timing of the recession, and then discuss what it means for the future. My results suggest that the recession has
pulled health spending well below the path projected in 2007. However, the recession has also resulted in lower long-term economic growth projections, and this lowers the underlying path of health spending.

Figure 1 plots real per capita national health expenditures, taken from the national health expenditure accounts, against real per capita potential (full employment) GDP. I use potential GDP to smooth out some of the business cycle noise. Between 1980 and 2007, the slope is consistent at 0.26. The main deviations occur during the managed care era in the late 1990s, when it drops below the line, and then the managed care backlash, from 2001 to 2003, when it returns to the line. It thus appears that we want to spend about 25% of our extra money on health and leave 75% for everything else.

I call this the marginal propensity to spend on health (MPSH) because it is analogous to the marginal propensity to consume we all learned about in introductory economics. In order to convert this into an underlying growth path for health spending, we need to apply a growth in real per capita GDP to it. From 1980 through 2007, real per capita GDP grew at about 2% per year with substantial year-to-year variation but no overall trend.

Let us declare 2% real economic growth as the underlying pattern during that period. I compute the underlying growth path by applying the 26% MPSH to the uniform 2% annual economic growth, which eliminates the year-to-year noise (Figure 2). Note that the elasticity is equal to 0.26 divided by S, where S is the overall health share of GDP.
In 1981, the underlying growth path for real per capita health spending was 6%, and it falls steadily, reaching 3.3% in 2007. Converting to excess spending (over and above the growth rate in real per capita GDP), it drops from 4% to 1.3%. Thus, the large reduction in excess growth that we have encountered from 1980 through 2007 is fully explained by a constant MPSH. I have run this through 2007 because that is the year just before the recession, and I want to set that as the starting point. Let us now examine what happened to health spending headed post-2007.

According to my calculation, the CBO 10-year projection, released in 2007, suggested full-employment economic growth of about 1.7% per year, representing a decline from the 2% rate we had observed in the 1980–2007 period. Assuming that the MPSH would remain at 26%, we can project the underlying growth path for real per capita health spending.

I have drawn this for the entire period to highlight the trends (Figure 3). The red boxes are actual real per capita health spending taken from the health accounts (no smoothing). Note that the actual figures are drifting below what the underlying growth path would be. I submit that this represents the recession’s effect, through both direct and indirect means. I have also inserted a line to show the path of health spending if it responded immediately and fully to the actual change in GDP. The recession resulted in real per capita GDP in 2009 dropping 5% below its 2007 level. Immediate adjustment is represented by a reduction in health spending that equals 26% of this decline. It is clear from this chart that health spending remains well above where it would be if it had fully adjusted to today’s GDP level.
Another observation from this chart is the severity of the recent recession compared to previous ones and how much time has passed without a return to the pre-recession economic growth path. With a more typical business cycle, recovery would have returned economic growth to its long-term path, and health spending (which had drifted below the line) would accelerate to that long-term line. Larry Levitt mentioned earlier this expected acceleration that is associated with economic recovery.

This is where the plot thickens—or, at least, becomes more complex (Figure 4). The blue line shows the path we would have expected health spending to be on, as of 2007, with 1.7% growth in the economy. The red line represents a change in expectations. CBO is now projecting that annual growth in real per capita GDP will be about 1.2% per year between 2007 and 2024, a significant reduction from the previous projection of 1.7%. We are facing much slower economic growth than we thought we were before the recession. This long-term growth slowdown is partly due to real effects of the recession and partly due to other factors in the CBO projection model. In any case, the red line represents the underlying growth path of health spending implied by the 26% MPSH and the revised, long-term economic projection. While the recession has lowered the rate of growth in health spending well below the expected path at the time, it has also reduced the expected path itself. There is no longer a major acceleration required to bring health spending back to its underlying growth path, because that path itself is lower.
Let me convert this into the kind of numbers with which we are most familiar. We do not typically talk about the growth in real per capita health spending. Rather, we talk about the growth in total national health expenditures, as produced by Steve Heffler (who is in the audience today) and his team at the Centers for Medicare and Medicaid Services. Between 2007 and 2013, national health expenditures grew about 3.8% annually. The underlying path predicted in 2007 was about 5%. Thus, health spending has grown about 1.2 percentage points slower than the growth path anticipated prior to the recession. However, the new underlying path, reflecting the downward revision to long-term economic growth, is about 4.2% per year. Thus, the actual growth rate in health spending is only about 0.4 percentage points below the new underlying path. Not much acceleration is needed to return actual health spending to its long-term path: 5% growth this year and 5.5% next year would do it. Note that the revised path is “GDP plus 0.7,” whereas the old path was “GDP plus 0.9.”

I want to conclude with two important points. First, the conclusion that health spending is on a lower underlying growth path is not good news. To reduce the rate of growth in health spending because economic growth has slowed means that we get less of everything. For every dollar we do not grow, we get 26 cents less health care and 74 cents less of everything else that we might have had. Second, we should not confuse this underlying growth path with the “do-nothing” path. We have been on this path since 1980 because of substantial effort put forth to control health spending. If we do not continue to work at least that hard, we are unlikely to stay on that path, and with the aging of the population, it is likely to be harder to keep our MSH at 26%. The “underlying” growth path is NOT the “do-nothing” path. It is more a prediction that we will do whatever it takes to hold spending to this path so that it does not take up more than a quarter of our extra income over time.
Paul Ginsburg

Six Factors that Will Determine the Future Health Care Spending Trajectory

Rather than a precise forecast like Charlie’s, based on growth rates and a marginal propensity to consume health, I have identified six areas that I think are the most difficult to predict but, nevertheless, quite relevant in determining our future cost trends. I focus on the next 5 to 8 years as a period that peers down the road but not so far as to be almost meaningless.

1. Growth in the Economy

We have experienced some very encouraging recent numbers on job creation, and the question is whether this will lead to faster growth of gross domestic product than we’ve had or whether economic growth will falter once again. The main source of optimism is the work by Reinhart and Rogoff that says that the slow growth in recent years is not surprising given the severity of the financial crisis. Their analysis of financial crises around the world over hundreds of years strongly predicts subsequent disappointing economic growth. However, at 6 to 7 years past the financial crisis, we may actually be at the point of repaired balance sheets whereby more rapid growth can resume. That is the optimistic case. Democratic and Republican economists are both pessimistic: Democrats argue that inadequate fiscal stimulus is holding growth in check; Republicans claim that the regulatory burden is too high for rapid growth. Since neither of these constraints, if they are the relevant constraints, is going to change soon, both of these perspectives present pessimistic forecasts. We spent considerable time today discussing the role that growth in the economy plays in health spending growth. While the short-term cyclical interpretation is controversial, for the longer term, you simply cannot escape from the force that economic growth has on healthcare spending.

2. The Role of Technological Change

David Cutler addressed decelerating technological change a year ago at this meeting and since then in other meetings. Obviously, the important question is whether the slow rate of technological change will continue. There are multiple scenarios. One is that the slowing could be a reflection of the law of diminishing returns; that is, the easier technological advances have already been introduced. Alternatively, we could be seeing a continued flow of new technologies, but today’s marketplace is less receptive to new technologies that do not have substantial benefits in improved outcomes. Another possibility is that we now have greater demand for cost-saving technologies than in the past, and this would lead to a larger offset to the cost-increasing technologies. Payment reform and increased patient cost sharing could certainly be creating demand for more cost-saving technologies. Of course, the recent experience could be one of these pauses that happened in the past and we did not notice because it has been too difficult to study the hastening and slowing of the cost impact of technologies over long periods.

3. Growth and Early Success of Provider Payment Reform

The enthusiasm of providers, insurers, and policymakers for provider payment reform has been very impressive. I was also encouraged by Kate Goodrich’s presentation here today recognizing that some key policy adjustments will be needed in Medicare to move forward. For accountable care organizations, I think that improvement in patient attribution, some kind of beneficiary engagement, and better quality measurements would be critical for this mechanism to further progress. My sense is that the considerable provider participation in both Medicare and private insurer plans is not because there is a strong business case, but because of the possibility that this reflects the future and providers want to get started. Another need for Medicare policy evolution is developing benchmarks that are not entirely provider specific and to avoid updating them with provider-specific spending data, which would undermine any business case. The alignment of public and private payers is critical, because this is a major risk factor for providers. If less
than half of their patients are ever going to be covered under these post–fee-for-service mechanisms, they could be in trouble. I am uncertain about the degree of activity of private payers in investing in these approaches. We hear a lot about promising innovations by private plans. There was an encouraging survey from the Blue Cross and Blue Shield Association about the percentage of dollars that were part of these plans. Yet, it is also known that many plans have not departed far from fee-for-service, and their business models are not strongly behind such changes. I do not know if we will be lucky, in the sense that private and public payers will be aligned, or whether special steps will be required to make this happen. Ultimately, of course, the biggest uncertainty is how well these payment approaches will work. I would not want to put a lot of stock in evaluations of what is happening now because the models are evolving so quickly.

4. The Trend Toward Greater Patient Cost-Sharing

The experience of patients paying more for care at the point of service has advanced substantially over the past 10 years. I think current developments will push it further. We hear increasing anecdotes that the “Cadillac tax” is driving changes in large employers’ plans. The Cadillac tax could certainly be repealed, but I think it will be sustained, if only because of the revenue implications and the fiscal constraints of the federal government. My guess is that it will be refined. There is substantial growth potential of defined contribution approaches by employers, and the rollout of single carrier models of private insurance exchanges, will, if I am correct, allow employers to sustain self-insurance. This makes me more optimistic about the future role of exchanges, as they become a vehicle for employers to reduce their contributions. There is tremendous potential for what I call community-level impacts of greater patient cost sharing. If one patient pays more for their care than they did last year, but all the other patients pay the same, there will be a smaller effect on behavior of that one patient than if all patients were going through this together, leading to the system adapting to patients having greater cost concerns. We have had this discussion in the past. I remember when the RAND Health Insurance Experiment was under way how one issue was whether through this randomized controlled trial, by not capturing community-level effects, researchers would underestimate the effect of cost sharing.

5. The Impact of Large and Continuing Medicare Hospital Payment Rate Cuts

The cost-shifting literature suggests that hospitals will reduce their costs in response to current and future rate cuts. This public payment discipline appears to have been a major catalyst in the movement toward provider payment reform and quite dramatic cost reduction strategies by hospital systems. Rather than waiting for these cuts to manifest themselves, hospital CEOs are taking action today.

6. Network Innovation

We have witnessed a substantial shift toward narrower networks in the Affordable Care Act exchanges, coupled with significant potential for these networks to become important in private exchanges. The real uncertainty comes from the response of regulators. They could severely constrain this approach, although regulators I have heard have expressed sensitivity about the importance of narrow networks to consumers seeking affordable health insurance. Under network innovation, the degree to which broad measures of costs are used rather than unit prices could substantially drive the system toward efficiency. There is a striking parallelism between some of the approaches used in provider payment reform and some of the measurements of provider-level costs that are used to create more limited networks.
Michael Kleinrock

**Timely Pharmaceutical Data Key to Predicting Spending Trends**

I provide granular forecasts for a living, but today I will provide you with an opportunity to see inside the IMS brain, and give a thematic presentation. Timely data truly matter. We are currently looking at May 2014 data. They inform us about this year and next, but only after we segment and understand the past appropriately, based on our knowledge of trends.

In contrast to a straight line or consistent trajectory for healthcare spending, our view is that the most important driver is innovation, which goes in cycles. In particular, the drug spending cycle is approximately 20 years, and the depth of the recession hit in the middle of the worst part of that cycle. We are emerging from the so-called patent cliff in 2012 that coincides with stronger economic growth following the depth of the recession.

We became addicted to the disappearance of billions of dollars of savings per year that kept the lid on drug spending—that is, $15–$20 billion of drug expiry savings for the U.S. market. In 2012, the total was $30 billion of savings; in 2013, it was only $19 billion. We expect this to level off to $15 billion of savings per year for the next 5 years—that is, a total of $98 billion over the last 5 years and about $75 billion for the period 2015–2019, hence a significantly lower level of savings from the historic norm. This phenomenon will lift future drug spending growth simply by not being there.

We have a boatload of innovation involving truly amazing therapies, but this time around, there is a significant difference, and it concerns specialty therapeutics. What is a specialty drug? These are high cost, are complex, and can involve complicated distribution. They also address chronic conditions, which usually mean they are associated with treatments that are expensive and long lasting.

Our propensity is to presume that drugs are not cures, because few, if any, have been. We consider the drug pipeline and attempt to predict spending, and we are skeptical. I think about health technology assessment and real-world evidence for the effectiveness of medications. We are cynical about clinical trials showing results in a somewhat artificial, rigged scenario. We can be unwilling to accept the promise and the hope. As gadget freaks, we rush to purchase Fitbits. Yet we are chastened by realizing that many amazing advances are simply not that amazing. This partially explains why the industry has moved away from investigating cardiometabolic diseases, because there is a diminishing return on many of these diseases.

Consider this trajectory. Five years ago, 65% of prescriptions were boring, generic (white) pills, while 35% were differentiated in some way. The latter might be an innovative, branded product that was still protected, it might be a biologic or specialty drug, or it might be a branded generic—a slightly better mousetrap. Today, that 35% has fallen to 20%. There has been a significant conversion to off-patent products and generics for most of those. Five years from now, only 15% of prescriptions will have some level of differentiation, three equal baskets of specialty and biologics, protected small molecule traditional brands, and branded generic items (better mousetraps).

When 85% of the volume of prescriptions in the U.S. market is commoditized, little white pills, the critical question becomes deciding how to pay for and use the 15% that are innovative products, representing truly amazing breakthroughs. This creates tremendous volatility regarding what is and is not successful from an industry perspective, and, sadly, drives it to focus on mitigating its financial risk in development expenditures.

With a new molecular entity costing $1.3 billion to develop, there is absolutely no incentive for an innovative company that has a very risky chance of getting a return on its investment to enter the market with a low price. It must guarantee that its innovation has a premium price, which also bolsters the perception of its effectiveness. There will always be inflation alongside this innovation, especially as it
increasingly becomes a smaller portion of the total unit sales. That is the challenging mechanism at work in this industry.

We also should be careful about what we wish for with low prices. Cures and vaccines are distinct. As we managed generic medicines for chronic conditions, the more competition, and the resulting low prices, the better. However, there is a concern about the floor becoming too low, generating a sustainability problem in the generic industry. We have seen this in the last 3–4 years with drug shortages—for example, a saline solution that we must import from Nordic countries today because we cannot make it properly here at the right price. Shortages are a serious issue for generic sustainability at those bottom prices.

At the same time, we must better appreciate that for a breakthrough therapy, which is vastly superior to previous options, it is essential for us to find a way to pay for it. Sometimes that means spreading the cost over time. We could alter insurance designs for true cures by a future funding scheme. This is a strange concept, but as was mentioned earlier, insurance is not what it used to be.

Payment silos in the U.S. healthcare system are important in the way they complicate matters and confuse us. Thus far, no one has mentioned our “favorite” new product: Sovaldi. Hepatitis C has previously been extremely difficult to treat and is reasonably expensive. Until the last few years, treatment mostly took place in an institutional setting—that is, frequent infusions as an outpatient. Pharmacy benefit managers (PBMs) were not exposed to this cost. We never expected to see a medicine that is so efficacious and tolerable. That has been the trade-off experienced with Incivek (now discontinued) and Victrelis, now seemingly bypassed with Sovaldi and likely new drugs in the next few years. This whole cluster of development around hepatitis C has transformed a chronic disease that has relatively small health spending in the direct treatment phase but has out-year sequelae of cirrhosis, liver cancer, transplants, and death. It carried a small drug cost because few could tolerate the treatment. Now, patients can tolerate the treatment, and we can spend billions of dollars treating people for this disease.

However, who will pay? This is my point about silos. PBMs and insurers in the private sector were not responsible for treating hepatitis C, in large part because patients would sit in the warehouse untreated until they reached Medicare. Now that we can successfully treat them, these payers are not used to this liability. They scream to the newspapers that the drugs are too expensive. Yet Sovaldi is actually cheaper for a sustained viral response than any other option for this disease. We should be paying for it.

It would be quite awkward to tell our children that we have healthcare therapies that provide real cures and we do not know how to pay for them. We must emphasize this financial issue. This issue is also important because of the uncertainties it introduces for drug and healthcare spending gyrations over the next few years. What happens when new drugs are approved for programmed cancer cell death—the next big thing? What happens to world healthcare spending when we decide, as the World Health Organization has recommended, that pre-exposure prophylaxis for HIV should be the new standard of care? These “future is now” innovations bring a choice: How do we divide that spending among the stakeholders? The silos matter because they determine how much of these drugs we actually use. The spending growth rate is akin to a piece of string; how long is it? I see demand for health care as a four-legged stool for patients: they access health care because they are sick; they recognize it; they believe the provider can help; and they can afford it. We have now been through a period where we affected each of these levers. We have people who are asymptomatic because they do not often go to the doctor, and they cannot afford care because of the recession. They lost confidence in medicine because, for example, Vioxx scared them into believing no drugs work.

Affordability is the essential factor. We are transitioning from a lack of demand to roughly 10 million newly insured, via Medicaid and exchange expansion. Will these people rush into the system and use health care at expected, high volumes? However, measuring healthcare spending and utilization in the U.S. is actually not a national or local issue, as everything occurs at the individual level.
Think about the recession and those levers. The downturn hit first in the four major cities with the biggest housing bubbles and slowly spread from there. What were the underlying illness levels? Cardiometabolic and other diseases are economically linked, with the southeast bearing the biggest brunt. For this part of the country, it is a double whammy with its illness profile and because of the economy. How will demand respond?

In 2013, drug spending grew 3.2% in the U.S., up from 1% in 2012, a large recovery. The annual numbers disguise dynamic growth. In 2013, the quarterly growth rates were minus 2%, 0%, 6%, and 9%. For the first quarter of 2014, drug spending grew by 12.5%. As of May, we are running at a 12% rate, year to date.

Less patent expiry is the biggest reason that negative growth has disappeared. Lipitor, Seroquel, Singulair, and Zyprexa are no longer contributing negatively to growth, because they are fully generic. In the last 3 or 4 years in the U.S. market, we typically get $10–$12 billion of spending from new medicines. Sovaldi launched in the last month of 2013. For fun, let us count it as beginning in 2014. We start with first quarter spending of $2.2 billion, the highest first quarter ever. In 2014, we will likely have a $10–$12 billion new product cohort on top of this amazing drug Sovaldi, which will add $7–$8 billion dollars of spending, for which we do not know how to pay or finance.

Prices are clearly driving much of the spending growth. Brands typically raise prices near the end of their protected life. They also pay higher rebates for it; thus, not much changes on a net basis. The significant change is a difference between 9% at the end of 2013 and 12% at the start of 2014, and 2 percentage points of that is Sovaldi. Although not that much change overall, we are in the recovery phase after the patent cliff.

What are the prospects for the next 5 years? My baseline growth rate falls in the 3%–5% range, but innovation will drive this up to perhaps a baseline of 5%–6%. 2014 will be significantly higher. The Affordable Care Act (ACA) is a true wild card. Thus far, new ACA patients have not substantially affected spending. Prescription growth, year to date, in 2014 is nearly flat. Where are the patients who are supposed to be increasing their healthcare utilization? Of course, it could be that with high-deductible health plans continuing to lower utilization for those with existing insurance, the extra (new) patients are filling that gap and slowing the decline. This question shows why granular data are so important. Moreover, we need to continue expanding analysis of longitudinal data, to track those patients to determine how their coverage and utilization are changing.

There is considerable uncertainty, but I believe that either spending will go straight to the moon because of this innovation I describe and new insured via ACA, or it will be flat. We can rule out further spending declines because there are not any significant patent expirations in the near term, and biosimilars will not lower spending anytime soon.

**Uwe Reinhardt**

**Sense and Nonsense in Defining “Value”**

I was hesitant to be on this panel and discuss value, and I truly do not want to be a buzzkill. My talk last year, emphasizing the continuing unaffordability of health insurance for a large portion of the income distribution, would have fit well into this morning’s first panel, that is, the Altman-Reinhardt Thesis, which I will now call it. The key driver is the change in the income distribution. From our paltry 1.7% gross domestic product growth, the bottom 90% of the income distribution will not see a penny; it will all go to the top. For the rest of the population, income is essentially flat and the money for insurance simply will not be there, and the system will adjust accordingly. That is what Stuart and I mean by a shift from reimbursement to payment.
Why am I reluctant to engage in a discussion of value? I do not know what it is, in English, German, or Chinese, and yet I hear it all the time. The good folks at the Center for Sustainable Health Spending suggested that I pretend I am on a couch and tell you my problem, and you will be my analyst. That is what I am going to do.

When you present at healthcare conferences, if you do not have “value” in your talk, attendees will give you very bad reviews. “Value” is now the rage on the health-care speaking circuit of the so-called “real world”—certainly in the U.S. I have heard of lectures on value-based health insurance, value purchasing, value pricing, value maximizing, innovating for value, the value-chain in health care, and many more value-blank (insert any noun). I am now working on a new health-care concept called Value Valuing.®

You should wonder what is going on here.

Figure 1, from a Google search, shows someone’s perspective on a healthcare value chain and does not even mention the patient. As an egghead, I ask myself what we mean by value, just as we academics try to prove that the glass of water in my hand is truly a glass of water—that is how we work!

Figure 1

This quest has a long, distinguished history. The first value-based fee schedule I discovered is Hammurabi’s Code in 1700 BC. For a particular operation, if it was a nobleman, there was a higher fee than for a free man, and for a slave, the lowest fee applied. That is value-based pricing! No nation does that anymore, except America. If a pediatrician sees a commercially insured child, it is a higher value than if it is a Medicare patient or a Medicaid patient; they get different “values.” One lesson here is that America has copied Hammurabi’s value-based pricing in health care. Essentially, our fee schedules say that a poor kid is worth less than a rich kid. Is that what you mean by value-based pricing?

It turns out that this question has occupied philosophers from the time of antiquity. Plato and Aristotle wrestled with it. So did the medieval scholastics. So did Adam Smith, David Ricardo, and other classical 18th century economists. The neoclassical synthesis and modern “value” concepts we teach in freshman
economics cannot easily be applied to health care. It was not until the late 19th century that economists such as Marshall and Jevons and others figured out what value is, or at least what we now teach.

On the healthcare conference circuit, we frequently see this definition of value in health care:

\[ \text{Value} = \frac{\text{Outcome}}{\text{Cost}} \]

We also find it in the literature on health policy. Michael Porter’s interesting book emphasizes value-based competition—that value in health care is the outcome per dollar of cost expended (Figure 2). He states this repeatedly, probably one time too many. As an economist, I demur. The first thing we teach students in freshman economics is that the value of something has zilch to do with the cost of that thing. How could that ratio make sense?

Figure 2

The first, and rather mild, objection to this simplistic definition of value is that “quality” or “outcomes” typically have multiple dimensions—in economic jargon, they are vectors of several metrics. We can try to solve that problem, however, by collapsing multidimensional outcomes into the one-dimensional quality-adjusted life year (QALY)—even though that approach remains controversial. Thus, we might rescue the Porter-Teisberg definition of value by rewriting it as:

\[ \text{Value} = \frac{\text{QALY}}{\text{Cost}} \]

QALYs arise from a particular treatment, and cost represents the dollars spent on that treatment.

My second and much more serious objection to that definition of value is the proposition (known to every properly bred economist) that the value of a thing has nothing whatsoever to do with the cost of producing it. Costs are not a function of value; value is not a function of cost. There is a Roman dictum, res tantum valet quantum vendi potest, which means, “A thing is worth what someone will pay for it.” This saying inspires the economist’s concept of value. Note that costs do not enter this definition. As an easy check, consider the times when you are ripped off: you pay a lot for something that cost very little, including certain pills, by the way.
We can flip the above equation (its inverse), and, magically, we have the cost-effectiveness ratio (CER):

\[
\text{CER} = \frac{\text{Cost}}{\text{QALY}}
\]

Now suppose I tell you that a particular treatment that costs $150,000 yields 3 added QALYs. Using the management consultant’s definition of value, we then have:

\[
\text{Value} = \frac{3 \text{ QALYs}}{\$150,000}
\]

Does that tell you anything, the value of a QALY? This does not make sense! How could this be value? I can turn the value expression on its head to get the CER:

\[
\text{CER} = \frac{\$150,000}{3 \text{ QALYs}} = \$50,000 \text{ per QALY}
\]

Does that ratio tell you what a QALY is worth? The CER tells you the cost per additional QALY obtained by this treatment. It does not tell you what that additional QALY is worth—that is, whether it is worth enough to justify the expenditure of $50,000. We must conclude that this expression, value equals outcome over cost, is simply wrong, yet it is widely used.

I take a strong position on this because the value equation, popular on the speaking circuit, is even infecting the minds of physicians. An article by Andrew Pollack, “Cost of Treatment May Influence Doctors” (The New York Times, April 17, 2014), reported that some medical societies “plan to rate the value of treatments based on the cost per quality-adjusted life-year, or QALY — a method used in Britain and by many health economists. The societies say that treatments costing less than about $50,000 a QALY would be rated as high value, while those costing more than $150,000 a QALY would be low value.” These physicians’ ideas about “value” are wrong, and worse, such definitions are not harmless.

What drives this confusion? I think the people who proffer the value equation (value equals outcome over cost) confuse the definition of the value of a thing with the process of comparing that value, however we define and measure it, with the cost of producing that thing—totally different concepts.

The net value added by a medical treatment, like Sovaldi, is the gross value (the value of the QALYs produced with Sovaldi) minus the total cost of producing that treatment (Figure 3). (By the way, what board of directors would allow this drug to be priced at $1,000 per pill? Journalists will notice that; at $895, no one would have said a word!) Is the net value positive or negative? If I know the cost and the gross value, I can figure out if this therapy is worth doing. This calculus is what we want. There is no way around ultimately having to put a dollar value on a QALY, or if we do not want to adjust for quality, on an added year of life.
Figure 3

Consider the following equation:

\[
\text{Net value added by a medical treatment} = \text{Gross value of the outcome produced by that treatment} - \text{Total cost of producing the treatment}
\]

What we really want to know is whether the net value is positive or negative.

And to know that we need to know the gross value (in $ terms) of the outcome produced by the treatment, assuming we know the cost.

There is no way around it.

The additional QALYs that the health system could wrestle from nature, given how we live, are shown on the horizontal axis (Figure 4). I show the cost per QALY on the vertical axis. The black line is the supply curve. Medical doctors tell us, “We can deliver additional QALYs, but only at increasingly higher prices because production costs rise.” If the system is operating inefficiently, we can address that—for example, by substituting outpatient care for hospitalization, avoiding unnecessary surgery by using drugs or changing patients’ behaviors—use your own favorite example. We hear figures as high as 30% waste in the system. However, once we are operating on this curve, we must decide if we are willing to buy additional QALYs at the price represented by C.

Figure 4

Ultimately, we cannot avoid putting a dollar value on the extra life-years or QALYs we wrestle from nature with medical treatments.
If we cannot agree in this country what a life year or QALY is worth, can we say anything about “value” in health policy? Even if we do not know what a clinical outcome is worth in dollars, we can say something about likely changes in value. We can make what economists call “ordinal” statements—for example, that a new treatment or management change is likely to improve or reduce net value added, whatever its absolute level may be.

That is the Sovaldi question. What makes it interesting and poignant is that many who need this drug are low-income individuals on Medicaid, and many are in prison or recently released. We might not closely identify with these people or appreciate them as upstanding citizens, further magnifying the financing issue. Given what we now do, Sovaldi is certainly cost-effective. (A forthcoming JAMA article will authoritatively address this.) There are two ways to think about this innovation. First, given what we now spend, including transplants, et cetera, relative to that, Sovaldi is cost-effective, particularly since it provides a cure. The alternative way would be to ask, do we have to pay a thousand dollars to engender this innovation? They spent $11 billion to develop it, and if everyone who could benefit from it gets it, they will generate $270 billion in revenue. That is a big return on investment! Would $500 per pill have been enough of an incentive to spur its invention? That is another question. We are debating both and we are confusing both.

Consider Figure 3 again. If either the cost of treatment falls for the same outcome or the outcome improves for the same cost, we know that the net value of the treatment has increased. It may remain negative—increasing from a very negative number to a less negative number. Knowing costs and outcome can tell us something about a change in value, but not about value itself. Nevertheless, understanding these changes is worth doing and is what we should be emphasizing.

Let me turn to other concepts of value. Traditional Medicare is often described as a fee-for-service program, in contrast to the “value pricing” allegedly found in the private sector. I also frequently hear payment by “capitation” or by “bundled payments” described as “value-based pricing.” This too is, for the most part, nonsense for at least four reasons:

1. Most health care in the private sector is still paid on a fee-for-service basis, just as it is for Medicare. There may be some minimal performance adjustments, but for the most part these private sector agents are still writing checks.

2. Only rarely are payments to providers in the private sector based on “quality” or “value of outcome.”

3. Genuine “value-based” pricing is still in its infancy everywhere—in the U.S. and abroad.

4. Fee-for-service payment is not necessarily associated with low quality of care (or inferior outcomes), nor are capitation or bundled payment necessarily associated with superior quality (superior outcomes). I can buy excellent-quality care via fee-for-service and lousy care with capitation and bundled payments; bundled payments and capitation are not synonyms for value-based pricing. Yet, on the speaking circuit, I hear these claims all the time. You should not fall for them!

As Peter Orszag said, the only way you would have value pricing is if you had a risk-adjusted payment up front, and then adjust the payment for quality. I believe you probably also need an ex post risk adjustment of some sort. That is value-based pricing.

There is a tremendous amount of confusion about value-based pricing, and I think, at some point in the future on the speaking circuit, we should be more precise in how to use that term. In general, our national conversation about health care would improve if people used the word “value” more sparingly and only then if they are able to define it in practical terms. Fuzzy language can beget fuzzy thinking.
Joanne Kenen

I think Washington is living and breathing this Sovaldi debate and many of us will see each other in forthcoming, dedicated meetings. I want to ask a final question for Paul. Today, we have heard much discussion about the effect of the recession and about anticipated provider behavior. You mentioned narrow networks—today’s answer to what happened in the 1990s with health maintenance organizations (HMOs) and the subsequent backlash. We see whining by consumers, and we are beginning to see regulatory activity both by the states and at the Centers for Medicare and Medicaid Services. Do you see this problem contained by managerial activity, or are you worried about this as a backlash 2.0?

Paul B. Ginsburg

I am worried. I think Affordable Care Act implementation came too quickly, before the insurers were ready. I do not think they understood how many people were going to sign up on public exchanges for these plans. There are basic problems with transparency, determining accurately who is in the network and who is not. The very rapid arrival of the new system probably does increase jeopardy. I do think it is different from the 1990s, because those individuals who selected plans with narrow networks decided this on their own (except in New Hampshire). In the 1990s, they were herded into HMOs, whereas today most of them know that they are making a trade-off to save money. I think this issue will get significant attention, and some of the forces have begun to appear. For example, the pediatric hospital is the most visible, where patients demand they be put into the network. We should not be cavalier about resolving these problems; they raise legitimate concerns.

Uwe E. Reinhardt

I think we can overdo this. Sometimes we worry too much with health care. Think about warfare. Any Marine will tell you that, before they go in, for example, for the Iraq invasion, they have meticulous plans. They know exactly where key sites are located with intricate maps, et cetera. Our son was there, and he said the minute they crossed the berm, a radio message told them to go in an entirely different direction with a very different mission. All the plans were gone and the Marines had to improvise, and look at what they did. I think the health system will evolve in that way. I have faith that the private insurers will cope with these problems, in the end. It will not always be pretty, but the nitpicking appearing in some of the business publications is absurd. What would they expect with major health reform? Would they judge the Iraq invasion in the same way? With health reform, we should expect glitches. The Aetna’s and the United’s of this world will iron out the problems, and even if they are forced to absorb short-run losses, I am not going to worry about them, as they will certainly make it in America.

Joanne Kenen

You are comparing health reform to the Iraqi battlefield?

Uwe E. Reinhardt

It is a battlefield, of course it is.

Michael Kleinrock

I think the patients’ having skin in the game, as we talk about so often, is problematic. As we continue to push costs to the patients, it is very important that we do not maintain unreasonable expectations about their capacity for rational behavior. My 7-year-old cannot do calculus, but if I told him that he had to if he wanted dessert, he sure would try. However, he does not have the requisite tools. Even with incomplete price transparency and provider ratings in their infancy, we somehow expect patients to make rational economic choices, as a key cost control mechanism. It does not make sense.
Joanne Kenen

When patients do try to make choices, even for those who are very well informed, it is still very difficult to have those choices respected. At a recent panel, with very knowledgeable participants, I asked how many had received unwanted medical treatments in the past year. All of them raised their hands.