

**ReTHINK HEALTH SYSTEM DYNAMICS MODELING  
SCIENCE ADVISORY MEETING**

**Participant Bios**



**DENISE ANTHONY**

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Denise L. Anthony, PhD, is Associate Professor and past-Chair (2007-11) in the Department of Sociology at Dartmouth College. She is also Research Director of the Institute for Security, Technology, and Society (ISTS) at Dartmouth, and a faculty affiliate at the Center for Health Policy Research at the Dartmouth Institute for Health Policy and Clinical Practice. Denise's research interests include collective action and trust, economic sociology and the sociology of health care. She has explored mechanisms for producing cooperation, trust and social capital in a variety of settings, from micro-credit borrowing groups to online groups such as *Wikipedia*. In health care, she has studied variation in managed care practices and physician referral behavior. More recently her work examines variation in patient preferences for medical care, the use and implications of information technology in health care, including compliance with HIPAA requirements, and for the privacy and security of protected health information in health care delivery. Her multi-disciplinary research has been published in journals in sociology as well as in health policy and computer science, including among others the *American Sociological Review*, *Social Science and Medicine*, *Health Affairs*, and *IEEE Privacy & Security*. She has received grants from the National Science Foundation and the Department of Health and Human Services Office of the National Coordinator for Health IT SHARP program, among others.

Prior to her appointment at Dartmouth, Denise was a Robert Wood Johnson Health Policy Post-doctoral Scholar at the University of Michigan from 1997-1999. She has a PhD in Sociology (1997) from the University of Connecticut.



**MARK BORSUK**

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Mark E. Borsuk, PhD, is Assistant Professor of Engineering in Dartmouth's

Thayer School of Engineering. Mark's research concerns the development and application of mathematical models for integrating scientific information on natural, technical, and social systems. The goal of this work is to improve insight into system functioning and provide a rational basis for policy and management. Research activities focus on: 1) the development of quantitative methods of identifying causes of system behavior using data collected under uncontrolled condition, 2) Applying causal information to probabilistically predict system response to human activities, and 3) Combining predictions with preference assessments to support rational decision making. These activities involve the use of statistical techniques of model selection, inference, and uncertainty representation, usually from a Bayesian perspective. Applications to date have focused on the natural environment, but recent projects have added significant components related to human health.



**ELLIOTT FISHER**

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Elliott S. Fisher, MD, MPH, is Professor of Medicine and Community and Family Medicine at Dartmouth Medical School and Director of the Center for Health Care Research and Reform of the newly formed Dartmouth Institute for Health Care Policy and Clinical Practice. He received his undergraduate and medical degrees from Harvard University and completed his residency in internal medicine at the University of Washington where he also was a Robert Wood Johnson Clinical Scholar and received a master's in Public Health. At Dartmouth, he was a founding director and is now Senior Associate of the VA Outcomes Group, teaches in undergraduate and graduate programs, and is the Principal Investigator on the Dartmouth Atlas of Health Care.

Elliott's research focuses on exploring the causes of the twofold differences in spending observed across U.S. regions and health care systems and the impact of the variations on the quality, outcomes and costs of care. His work demonstrating that higher spending regions and health systems do not achieve better outcomes or provide higher quality health care has had a major impact on current thinking about both the need and the opportunity to improve the efficiency of the US health care system. He is also actively involved in national efforts to improve measures of health system performance and to reform payment systems. Elliott has served on major national committees focusing on these issues and is currently co-chair of the National Quality Forum initiative to develop framework for measuring the efficiency of health care. He has served on the National Advisory Council of the Agency for Healthcare Research and Quality (AHRQ) and was recently elected to membership in the Institute of Medicine of the National Academy of Sciences.



**MARY FLANAGAN**

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Mary Flanagan, MA, MFA, PhD, is an innovator focused on how people create and use technology. Her groundbreaking explorations across the arts, humanities, and sciences represent a novel use of methods and tools that bind research with introspective cultural production. As an artist, her work ranges from game-inspired systems to computer viruses, embodied interfaces to interactive texts; these works are exhibited internationally. As a scholar interested in how human values are in play across technologies and systems, Mary has written more than 20 critical essays and chapters on games, empathy, gender and digital representation, art and technology, and responsible design. Her three books in English include the recent *Critical Play* (2009) with MIT Press. Mary founded the Tiltfactor game research laboratory in 2003, where researchers study and make social games, urban games, and software in a rigorous theory/practice environment. She is the Sherman Fairchild Distinguished Professor in Digital Humanities at Dartmouth College.



**JOSEPH HELBLE**

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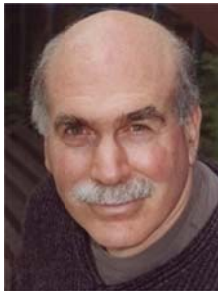
Joseph J. Helble, PhD, is the 12th Dean of the Thayer School of Engineering at Dartmouth College and a Professor of Engineering, positions he has held since 2005. Prior to his tenure at Dartmouth, Joseph was the Roger Revelle Fellow of the American Association for the Advancement of Science (AAAS), enabling him to spend an academic year addressing technology and environmental policy issues in the office of U.S. Senator Joseph Lieberman.

Previously, Joseph was a member and later chair of the Department of Chemical Engineering at the University of Connecticut, with research in the areas of air pollution, CO<sub>2</sub> capture, aerosols, and nanoscale materials production. He also initiated what has become a campus-wide program to produce biodiesel fuel from waste vegetable oil. From 1987 to 1995, he was employed as a research scientist and manager at Physical Sciences Inc. in Andover MA, specializing in environmental and energy technology development. In 1993, he also worked at U.S. EPA headquarters in Washington, D.C. as a science and policy fellow of AAAS.

Joseph has served on several EPA Science Advisory Board panels, and is presently on the

editorial boards of two scientific journals. He is the author of over 100 publications in the areas of air pollution, aerosols, nanoscale ceramics, and air quality, and 3 U.S. patents related to nanoscale powder production. He was a recipient of a young faculty Career Award from NSF, an outstanding young faculty award from the University of Connecticut School of Engineering, and the inaugural environmental faculty leadership award from the University of Connecticut.

Joseph is a 1982 *summa cum laude* chemical engineering graduate of Lehigh University and a 1987 chemical engineering PhD graduate of the Massachusetts Institute of Technology.



**GARY HIRSCH**

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Gary Hirsch, SM, has been consulting with organizations on management strategy and organizational change for the past 40 years. He has worked with clients in diverse areas such as health care, human services, education, and news media. He specializes in applying System Dynamics and Systems Thinking. His work in health care has focused on the health of populations and prevalence and treatment of chronic illness, improving the performance of health care delivery systems, creating the capacity to respond to health emergencies such as disasters and pandemics, and improving oral health and delivering dental care. He is the co-developer of several simulation-based learning environments including a Health Care Microworld, another called Mastering the Transition to Capitation, and a simulation created for the CDC called HealthBound that enables users to try their hand at health reform.

Gary received SB and SM degrees from MIT's Sloan School of Management with concentrations in System Dynamics and Public Sector Management. He then set up a Health and Social Systems Group at Pugh-Roberts Associates and managed it for 11 years. After leaving Pugh-Roberts, he became an independent consultant, working with a number of firms including Institutional Strategy Associates and Innovation Associates. Gary is the author of three books and numerous journal articles and conference presentations. Gary has been an adjunct faculty member for courses at MIT and the Harvard-MIT Division of Health Sciences. He is President of the Metrowest Free Medical Program, an organization that provides care to people without health insurance.



**JACK HOMER**

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Jack Homer, PhD, is a management consultant and expert in System Dynamics simulation modeling. His models assist organizations looking for a formal yet

flexible approach to strategic planning and policy design. In 1997, Jack received the Jay W. Forrester Award from the International System Dynamics Society for best contribution to the field in the preceding five years. In 2008, as part of a 9-person team, he received the 2008 inaugural Applied Systems Thinking Prize of the ASysT Institute for collaborative work on a problem of national significance (chronic disease and health policy).

Since 1989, Jack has developed original models for companies including AEP, AT&T, Aventis, BellSouth, BP, Campbell Soup, CIGNA, CSX Transportation, Dow Chemical, Eastman Chemical, Educational Testing Service, Ford Motor Co., Georgia-Pacific, GlaxoSmithKline, Harley-Davidson, Hughes Aircraft, KLA-Tencor, Mars, Nortel, Novartis, and Standard & Poor's, and for public agencies including the National Institute of Justice, the Minnesota Department of Health, the Texas Department of Health, the Academy for Educational Development, the National Alliance of State and Territorial AIDS Directors, the U.S. Centers for Disease Control and Prevention, the U.S. Department of Veterans Affairs, and the U.S. Food and Drug Administration.



**CHRISTINA INGERSOLL**

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Christina Ingersoll, MBA, is a recent graduate from the MIT Sloan MBA program, where she was the first MBA recipient of the Sustainability Certificate in its inaugural year. At Sloan, she was an active student leader and served as a teaching assistant for seven different classes. Since graduating in 2010, Christina has been working in curriculum development at MIT and also the Harvard Kennedy School where she is part of the teaching staff for the multi-institute sustainability science doctoral seminar.

Christina is the co-developer of the *Cool Farm Tool* a model for greenhouse gas emissions quantification at the farm level which is used as a decision support tool around the world. She has deep experience in systems thinking, model development and on-ground deployment, and a research interest in the use of models to affect policy decisions. Christina is thrilled to be able to contribute to the ReThink Health project.



**LAURA LANDY**

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Laura K. Landy, MBA, guides the Fannie E. Rippel Foundation's commitment to "Seeding Innovations in Health" in her role as President and CEO (2006) and as a member of the Board of Trustees (1998). She is founder and Chair

of ReThink Health, a Foundation initiative which convenes and challenges renowned change leaders and experts from in and outside of health to bring new thinking to how we improve population health, provide better quality care, and lower costs. ReThink Health's action-research projects develop models and tools to foster the leadership and environments required for successful innovation and sustainable change.

As President of Applied Concepts, a consulting firm she established in 1983, Laura brought business and strategic thinking to the interface between social issues and market dynamics in the areas of health, higher education, financial services, social services and culture. Her health-related activities included a multi-year relationship with Pfizer; the redesign of New Jersey's local public health system; a partnership with AT&T applying emerging technology to healthcare administration; redesign of an urban healthcare system; and the creation of strategic alliances between health, business and cultural institutions.

Among her many academic activities, Laura created and directed the Institute for Nonprofit Entrepreneurship at NYU's Stern School of Business and served as Associate Director of NYU's Center for Entrepreneurial Studies. She was also a member of the adjunct faculty of Columbia University and New York University where she received her MBA. Laura was recently elected a Fellow of the New York Academy of Medicine.



**BOBBY MILSTEIN**

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Bobby Milstein, PhD, MPH, both supports and studies innovations to improve health and health equity. He is a creative catalyst who often consults on the use of dynamic, democratic processes to transform health systems. With an educational background that combines cultural anthropology, behavioral science, and systems science, he specializes in large-scale institutional change and understands the need to align multiple lines of action. Bobby created the Hygeia Dynamics Policy Studio to provide a forum for diverse actors to acquire the foresight and motivation needed to craft powerful responses to pressing priorities. He also directs a portfolio of health system change initiatives for the Fannie E. Rippel Foundation and is a visiting scientist at the MIT Sloan School of Management.

From 1991 to 2011, Bobby worked at the *Centers for Disease Control and Prevention*, where he founded the Syndemics Prevention Network, chaired the agency's Behavioral and Social Science Working Group, and coordinated planning/evaluation activities for new initiatives on chronic disease, environmental health, reproductive health, emergency preparedness, and health

system improvement. He was the principal architect of CDC’s framework for program evaluation, helped establish the agency’s Preparedness Modeling Unit, and published a monograph entitled, *Hygeia’s Constellation: Navigating Health Futures in a Dynamic and Democratic World*, which was recommended by the CDC Director as “required reading for all health professionals.” Bobby is a co-founder of the annual NIH-CDC Institute on Systems Science and Health, and a co-developer of the *HealthBound Policy Simulation Game* as well as the *Prevention Impacts Simulation Model*, both award-winning tools that bring greater structure, evidence, and creativity to the challenge of health system change.

Because of his sensitivity to the many concepts, methods, and moral considerations that guide public health ventures, Bobby is a trusted advisor to citizen organizations, government officials, philanthropic investors, and other innovators.



**AL MULLEY**

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Albert G. Mulley, MD, MPP, is Director of the Dartmouth Center for Health Care Delivery Science at Dartmouth College and Professor of Medicine at Dartmouth Medical School. He graduated from Dartmouth College in 1970 and was awarded MD and MPP degrees from Harvard Medical School and the Kennedy School of Government in 1975 before spending 35 years on the Harvard faculty and the staff of Massachusetts General Hospital where he was the founding Chief of the General Medicine Division and Director of the Medical Practices Evaluation Center.

Al’s research has focused on the use of decision theory and outcomes research to distinguish between warranted and unwarranted variations in clinical practice. This work has led to development of research instruments and approaches, including shared decision-making programs, to support clinicians and patients in their decision-making roles, and to catalyze both learning collaboratives and clinical trials. These approaches have been shown to decrease utilization of high cost medical and surgical interventions while improving measures of decision quality, including stronger associations between patients’ personal preferences for health outcomes and the care that they receive.

Al’s work aimed at improving the quality of health care decision making has influenced the agendas of many public and private organizations engaged in clinical care as well as medical research and education. He was a founding director of the Foundation for Informed Medical Decision Making and continues to serve as senior clinical advisor. He has also served on multiple committees of the Institute of Medicine, of professional societies and as a consultant and



visiting professor to government agencies, health care organizations, and academic medical centers in North America, Europe and Asia.



**DAVE O'NEILL**

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David D. O'Neill, JD, MPH, is a senior program officer in the California HealthCare Foundation's Market and Policy Monitor program, which promotes greater transparency and accountability in California's health care system. Within that program, Dave manages projects to track and analyze market changes, including those resulting from the Affordable Care Act, such as Accountable Care Organizations and their implications for effective hospital-physician integration.

Prior to joining CHCF, Dave held senior management positions with numerous health care organizations in California, including Alameda Hospital in Alameda, Saint Joseph Medical Center in Burbank, Providence Hospital in Oakland, and Alta Bates Hospital in Berkeley. He also served as divisional senior vice president of Voluntary Hospitals of America, with responsibility for the 13 western states.

Dave received a bachelor of arts from the University of Notre Dame, a doctorate of law from the Northwestern University School of Law, and a master's of public health from the University of California, Berkeley. He is a fellow in the American College of Healthcare Executives (FACHE®).



**LEIGH SCHERRER**

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Leigh A. Scherrer is Foundation Associate at the Fannie E. Rippel Foundation. In this capacity, she supports the Foundation's mission and goals through grants administration, database management, programmatic research, project support, and communications development. Her work in support of the ReThink Health Dynamics project has opened her to new learning about the use of system models and gaming to inform and enable innovation. Leigh joined the Foundation after her college coursework and experiences working for a medical scheduling and claims management company inspired an interest in the healthcare system. She graduated summa cum laude from Penn State in 2009 with a BA in Sociology.





**JON SKINNER**

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Jonathan S. Skinner, PhD, is John Sloan Dickey Professor in economics and professor, Dartmouth Institute for Health Policy and Clinical Practice, Dartmouth Medical School. He received his PhD in Economics from UCLA, and taught at the University of Virginia before moving to Dartmouth. Research interests include the economics of health and health care, the incidence of the Medicare program, and the savings behavior of aging baby boomers. He is a research associate with the National Bureau of Economic Research, an associate editor of the *American Economic Journal: Public Policy*, and a former editor of the *Journal of Human Resources*. He was elected to the Institute of Medicine of the National Academies in 2007.



**ROBERT SHUMSKY**

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Robert A. Shumsky, PhD, has research and teaching interests in operations management and decision science. His current research focuses on the interactions among quality, flexibility and efficiency in service systems.

Robert has conducted research on the U.S. air traffic management system and studied transportation operations for state agencies and the Federal Aviation Administration. He has also served as a consultant for both manufacturing and service operations, including call centers and health care providers.

Prior to joining Tuck, he was a faculty member at the Simon School of Business at the University of Rochester. He holds a PhD and MS in Operations Research from the Massachusetts Institute of Technology, and a BA in Applied Mathematics from Harvard University.



**JOHN STERMAN**

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John D. Sterman, PhD, is the Jay W. Forrester Professor of Management at the MIT Sloan School of Management, and Director of MIT's System Dynamics Group. His research includes systems thinking and organizational

learning, computer simulation of corporate strategy, and the theory of nonlinear dynamics. He is the author of many scholarly and popular articles on the challenges and opportunities facing organizations today, including the book *Modeling for Organizational Learning* and the award-winning textbook *Business Dynamics*.

John's research centers on improving managerial decision making in complex systems. He has pioneered the development of "management flight simulators" of corporate and economic systems. These flight simulators are now used by corporations and universities around the world. His recent research ranges from the dynamics of organizational change and the implementation of sustainable improvement programs to experimental studies assessing public understanding of global climate change. John received his undergraduate degree from Dartmouth College and his PhD from MIT Sloan School of Management.



**CHRIS TRIMBLE**

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Christopher R. Trimble, MBA, has dedicated the past ten years to studying a single challenge that vexes even the best-managed corporations: how to execute an innovation initiative. His work came to fruition with the publication of *The Other Side of Innovation: Solving the Execution Challenge*, with Vijay Govindarajan, which was released in September 2010 and was reviewed by *The Economist*.

Notable articles include "Stop the Innovation Wars" in the July-August 2010 Harvard Business Review, with Vijay Govindarajan, which won a McKinsey Award, second place, for the magazine's best articles of the year, and "How GE is Disrupting Itself" in the October 2009 Harvard Business Review, with Jeff Immelt and Vijay Govindarajan.

Chris is on the faculty at the Tuck School of Business at Dartmouth. He is a frequent keynote speaker and has spoken all over the world. He has also published in the *MIT Sloan Management Review*, *California Management Review*, *BusinessWeek*, *Forbes*, *Fast Company* and *The Financial Times*. He holds an MBA degree with distinction from the Tuck School, and a bachelor of science degree with highest distinction from the University of Virginia.



**JUSTIN TROGDON**

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Justin G. Trogdon, PhD, is a health economist in RTI's Public Health Economics Program. His current research includes methods for estimating the cost of disease with applications in obesity, chronic disease, cancer, and tobacco; program evaluation and cost-effectiveness studies; systems modeling of cardiovascular disease; and the impact of social networks on obesity. Justin has managed projects in these topics for the Centers for Disease Control and Prevention, National Association of Chronic Disease Directors, and American Heart Association. His technical expertise includes a variety of econometric and statistical methods, including difference-in-difference methods; a variety of treatment effect estimators, including matching and propensity score estimators; maximum likelihood estimation; nonlinear instrumental variables; panel data instrumental variable estimators; multiple imputation methods; and dynamic discrete choice models. He has authored publications in the *Journal of Health Economics*, *Health Economics*, *Health Services Research*, *American Journal of Public Health*, *Medical Care*, *International Economic Review*, *Economic Inquiry*, and *Journal of Labor Economics*.



**RUTH WAGEMAN**

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Ruth Wageman, PhD, is Director of Research for ReThink Health and Associate Faculty in Psychology at Harvard University. She specializes in the field of Organizational Behavior, studying and teaching the design and leadership of task performing teams—especially the particular challenges faced by leadership teams. Ruth researches the conditions under which people are able to accomplish great things, especially in collaboration with one another. Her early work focused on how individuals' intrinsic enjoyment of learning could be enhanced or undermined by how they were rewarded and led. Ruth has since turned her attention for the last fifteen years to understanding and creating the critical conditions that enable *teams* of people to accomplish collective purposes, and to grow in capability over time. Her work with teams places a particular emphasis on self-governing teams, especially those with political and social change purposes. Ruth's current research focuses on creating and leading effective *leadership* teams, especially those at the tops of organizations; identifying the challenges faced by self-organizing volunteer groups; and the theory and practice of leadership development.

Ruth received her doctorate from Harvard University's Joint Doctoral Program in Organizational Behavior in 1994. She received her BA in Psychology from Columbia University in 1987, and returned there to join the faculty of the Graduate School of Business, making her the first

female alum of Columbia College to join Columbia's faculty. She joined the faculty of the Amos Tuck School of Business at Dartmouth College in 2000, and returned to Harvard in 2005 as Visiting Scholar in Leadership at the Kennedy School of Government. She joined Hay Group as its Director of Research in 2006 and focuses her work there on research that combines features of leadership development, system design, and work and organizational structure to understand and predict organizational effectiveness.



**BONNIE ZELL**

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Bonnie L. Zell, MD, MPH as Principal, Zell Community Health Strategies, LLC, is serving as Strategic Advisor, Community Health for Contra Costa County providing leadership for a regional community health initiative focused on achieving the Triple Aim – Population Health, Better Care Experience, and Lowered Per Capita Cost.

Previously Bonnie served as Senior Director, Population Health at the National Quality Forum where she continues to support the organization to advance population health strategies, methods and measurement to improve the health of individuals and populations within their communities.

She has a diverse background in healthcare, as a registered nurse, practicing OB/GYN physician and chief at Northern California Kaiser Permanente, and Medical Director at the Aurora Women's Pavilion in Milwaukee, Wisconsin.

Subsequently, she served as Healthcare Sector Partnerships Lead at the Centers for Disease Control and Prevention. In this role she focused on patient safety, healthcare quality, and primary prevention strategies to support initiatives through development of partnerships between key national stakeholders in public health and the healthcare delivery system with the goal of linking multi-stakeholder efforts to improve the health of regional populations.

Bonnie is an Institute for Healthcare Improvement Fellow and is a faculty member of the Triple Aim initiative. In addition, she is serving as faculty in the North Carolina Center for Public Health Quality. In this role, she is contributing to the development of the public health quality improvement curriculum and is serving as a trainer and coach for leaders and front line public health personnel who are integrating performance improvement strategies and techniques into day-to-day operations at all levels of their organization.

