

Building Data Capacity for Patient-Centered Outcomes Research: An Agenda for 2021 to 2030

Workshop 3: A Comprehensive Data Ecosystem for Patient-Centered Outcomes Research

Biographical Sketches of Speakers and Moderators

LYNN BLEWETT is the Director of the State Health Access Data Assistance Center (SHADAC) a research and policy center that supports state efforts to monitor and evaluate programs and reforms to increase access to needed health care. She is also a Professor of Health Policy in the School of Public Health, University of Minnesota. Her research includes Medicaid payment reform, the evolving healthcare safety net and measures to monitor population health outcomes. Dr. Blewett brings expertise in state and federal health data resources including federal surveys such as the Current Population Survey (CPS), the American Community Survey, the National Health Interview Survey, and the Behavior Risk Factor Surveillance System which are all accessible through SHADAC's interactive online Data Center. Dr. Blewett also heads up a project funded by the Robert Wood Johnson Foundation to provide expertise in the use of data analytics to inform and monitor implementation of the Affordable Care Act. Dr. Blewett was instrumental in establishing Minnesota's University-based Census Research Data Center (RDC) which has a health services research and policy focus. She is also Principal Investigator of the Integrated Health Interview Series (IHIS), a project funded by the National Institute Child Health and Human Development (NICHD) to harmonize and integrate over 50 years of the NHIS and make it accessible via a web-portal for academic and policy research. Dr. Blewett earned a masters degree in public affairs and a doctorate degree in health services research from the University of Minnesota.

JOHN F.P. BRIDGES is professor and vice chair of academic affairs in the Department of Biomedical Informatics at The Ohio State University (OSU) College of Medicine. He is also a professor in the Department of Surgery and an adjunct professor in both the Division of Epidemiology at the OSU College of Public Health and Department of Health Behavior and Society at the Johns Hopkins Bloomberg School of Public Health. Prior to joining OSU he was on the faculty of the Johns Hopkins Bloomberg School of Public Health, the Department of Tropical Hygiene and Public Health within University of Heidelberg School of Medicine, and the Department of Epidemiology and Biostatistics within the Case Western Reserve University School of Medicine. He has previously held positions in the Department of Economics at the Weatherhead School of Management at Case Western Reserve University, the National Bureau of Economic Research, Center for Medicine in the Public Interest, and the Center for Health Economics, Research and Evaluation in Australia. He is internationally recognized for this contribution to the science of patient engagement and patient-centered outcomes research. He was the founding editor of *The Patient – Patient-centered Outcomes Research* in 2008. He has also been the founding chair of numerous patient-centered working groups, special interest groups, and task forces at the International Society of Pharmacoeconomics and Outcomes Research (ISPOR), and received the ISPOR Bernie O'Brien New Investigator Award and

Distinguished Service Award. He has a Ph.D. in economics from the City University of New York.

ATUL BUTTE (NAM) Atul Butte, MD, PhD is the Priscilla Chan and Mark Zuckerberg Distinguished Professor and inaugural Director of the Bakar Computational Health Sciences Institute at the University of California, San Francisco. Dr. Butte is also the Chief Data Scientist for the entire University of California Health System, the tenth largest by revenue in the United States, with 20 health professional schools, 6 medical schools, 6 academic health centers, 10 hospitals, and over 1000 care delivery sites. Dr. Butte has been continually funded by NIH for 20 years, is an inventor on 24 patents, and has authored over 200 publications, with research repeatedly featured in the New York Times, Wall Street Journal, and Wired Magazine. Dr. Butte was elected into the National Academy of Medicine in 2015, and in 2013, he was recognized by the Obama Administration as a White House Champion of Change in Open Science for promoting science through publicly available data. Dr. Butte is also a founder of three investor-backed data-driven companies: Personalis (IPO, 2019), providing medical genome sequencing services, Carmenta (acquired by Progenity, 2015), discovering diagnostics for pregnancy complications, and NuMedii, finding new uses for drugs through open molecular data. Dr. Butte trained in Computer Science at Brown University, worked as a software engineer at Apple and Microsoft, received his MD at Brown University, trained in Pediatrics and Pediatric Endocrinology at Children's Hospital Boston, then received his PhD from Harvard Medical School and MIT.

JULIE BYNUM is the Margaret Terpenning Professor of Medicine in the Division of Geriatric Medicine and Vice Chair for Faculty Affairs in the Department of Internal Medicine at the University of Michigan. She is also a Research Professor in the Institute of Gerontology, Geriatric Center Associate Director for Health Policy and Research, and a member of the Institute for Healthcare Policy and Innovation. She was previously on the faculty at Dartmouth Medical School where she received prestigious career development awards from the Robert Wood Johnson Physician Faculty Scholar Program and the National Institute of Aging Beeson Scholar Program. She is known for leading interdisciplinary research teams to study questions about the complex drivers of quality and costs for older adults and how to improve health care policy and performance using national administrative data. She currently leads a portfolio of NIH-funded research that examines the quality of care, diagnosis, and treatment of people with Alzheimer's Disease and related dementia in the community, nursing homes, and assisted living and is the director of The Center to Accelerate Population Research in Alzheimer's. In addition, she has been an Atlantic Philanthropies Health & Aging Policy Fellow, was a member of the National Academy of Medicine (NAM) Committee that published "Vital Signs: Core Metrics for Health and Health Care Progress" and wrote a commissioned paper for NAM on population research in Alzheimer's Disease. She is currently a member of the National Academy of Medicine Forum on Aging, Disability and Independence and was on a member NAM workshop planning committee on adverse consequences of cancer treatment. She has an M.P.H. from the Johns Hopkins School of Hygiene & Public Health, and an M.D. from the Johns Hopkins University School of Medicine.

RUTH CARLOS is a Professor of Radiology and serves as the Assistant Chair for Clinical Research at the University of Michigan. Dr. Carlos' work encompasses cost-effectiveness

analysis, patient preference measurement, and meta-analysis and systematic reviews in diagnostic imaging. Her research also seeks to understand the effectiveness of maternally directed interventions to improve vaccine uptake in their adolescent daughters. Dr. Carlos brings her specific expertise in evaluating cultural barriers to adolescent HPV vaccination in African-American mothers and developing and pilot-testing tailored interventions directed at these cultural barriers. She also co-directs the Program on Women's Health Care Effectiveness Research (PWHER) in the Department of Obstetrics and Gynecology at the U-M Medical School. Dr. Carlos currently chairs the GE AUR Research Radiology Academic Fellowship (GERRAF), a national program supporting early stage investigators in health services research and care delivery. She received her medical degree from and completed her diagnostic radiology residency at the University of Chicago, and fellowship at the University of Michigan in Ann Arbor, joining the faculty at the University of Michigan in 1998. She has received a Master's Degree in the School of Public Health at the University of Michigan.

ALISON CERNICH is the Deputy Director of the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD). In this role, she assists the NICHD Director in overseeing the institute's programs supporting research on child development, developmental biology, nutrition, HIV/AIDS, intellectual and developmental disabilities, population dynamics, reproductive biology, contraception, pregnancy, and medical rehabilitation. Prior to this position, Dr. Cernich was the Director of NICHD's National Center for Medical Rehabilitation Research (NCMRR), where she managed a \$72 million research portfolio aimed at improving the health and wellbeing of people with disabilities. As NCMRR Director, she led the development and revision of the congressionally mandated NIH Research Plan on Rehabilitation (PDF 443 KB), an effort that included coordination with 17 institutes and centers and multiple external stakeholders. Before joining NICHD, Dr. Cernich served as Deputy Director of the Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury at the U.S. Department of Veterans Affairs (VA), where she coordinated prevention, education, research, and clinical care efforts for service members and veterans diagnosed with traumatic brain injury (TBI). Prior to her 10 years with the VA, Dr. Cernich was the TBI Liaison to the Department of Defense, the chief of neuropsychology and Director of the Polytrauma Support Clinic at the VA Maryland Health Care System, and a funded investigator through the VA Rehabilitation Research and Development Service. Dr. Cernich received her doctoral degree in clinical psychology from Fairleigh Dickinson University and completed postdoctoral training in cognitive neuroscience at the National Rehabilitation Hospital in Washington, D.C.

LESLEY CURTIS is Professor and Chair of the Department of Population Health Sciences in the Duke School of Medicine. A health services researcher by training, Dr. Curtis is an expert in the use of Medicare claims data for health services and clinical outcomes research, and a leader in national data quality efforts. Dr. Curtis serves as co-PI of the FDA's Sentinel Innovation Center, Co-Investigator of the Data Core for the FDA's Sentinel Initiative to monitor the safety of FDA-regulated medical products, and Chair of the Data Quality Subcommittee for the National Evaluation System for health Technology (NEST) Coordinating Center that generates real-world evidence for health technology and medical devices. She serves as co-Investigator of the coordinating center for PCORI's National Clinical Research Network (PCORnet), working with health systems and patient networks to develop a harmonized network infrastructure that

leverages health systems and electronic health record data for robust observational and interventional research. She received her PhD from the University of Rochester.

ANGELA DOBES is vice president of the Crohn's & Colitis Foundation's IBD Plexus program, a research information exchange platform designed to centralize data and biosamples from diverse research initiatives to advance science, accelerate precision medicine, and transform the care of IBD patients. She has previously worked for clinical technology and pharmaceutical organizations, where she has led implementation of various technology solutions focused on business optimization and accelerating the delivery of new therapies to patients safely. She has also conducted research in the fields of managed care and patient engagement and is a member of the IBD Partners Research Team. She is currently serving as principal investigator on a study to enhance engagement, research participation, and collaboration through the IBD Partners Patient Powered Research Network. She has an M.A. in Public Health from the Icahn School of Medicine at Mount Sinai.

LAURA ESSERMAN is a surgeon and breast cancer oncology specialist practicing at the University of California, San Francisco Breast Care Center. She directs the UCSF Clinical Breast Cancer Program and co-leads the Breast Oncology Program, the largest of the UCSF Helen Diller Comprehensive Cancer Center's multidisciplinary programs. She is a professor of Surgery & Radiology at UCSF and faculty at the UCSF Helen Diller Family Comprehensive Cancer Center. . As part of this program, her research has focused on tailoring treatment to biology. This requires the integrations of translational science, bioinformatics, medical and clinical informatics, systems integration, and clinical care delivery. Dr. Esserman has led the I-SPY TRIALS, a collaboration among NCI, FDA, more than 28 cancer research centers, and major pharmaceutical, biotech companies, and the not for profit sponsor, Quantum Leap Healthcare Collaborative. Additionally, Dr. Esserman led the creation of the University of California-wide Athena Breast Health Network, a learning system designed to integrate clinical care and research as it follows 150,000 women from screening through treatment and outcomes. As part of the network, she has spearheaded the development of the WISDOM study to learn how to improve breast cancer screening by testing and comparing the safety and efficacy of a personalized screening strategy informed by each woman's breast cancer risk and preferences against the standard of annual screening. She recently collaborated with her pulmonary and critical care colleagues to launch the I-SPY Covid Trial, to rapidly screen agents to improve outcomes for critically ill Covid patients. Dr. Esserman earned her undergraduate degree at Harvard University and completed her medical and surgical training at Stanford University. She completed a postdoctoral fellowship in breast oncology at Stanford and later earned a master's degree from the Stanford Graduate School of Business.

PAT FURLONG is the Founding President and CEO of Parent Project Muscular Dystrophy (PPMD), the largest nonprofit organization in the United States solely focused on Duchenne muscular dystrophy (Duchenne). Its mission is to improve the treatment, quality of life, and long-term outlook for all individuals affected by Duchenne through research, advocacy, education, and compassion. Ms. Furlong is the mother of two sons who lost their battle with Duchenne in their teenage years. She has served on the boards of the Genetic Alliance and the Muscular Dystrophy Coordinating Committee, U.S. Department of Health & Human Services and on the data safety monitoring board for both the Rare Diseases Clinical Research Network

and the Cooperative International Neuromuscular Research Group. She was a member of the National Institute of Medicine Committee on Accelerating Research and Development for Rare Diseases and Orphan Products. Ms. Furlong graduated from Mt. St. Joseph College in Cincinnati, Ohio with a BS in Nursing. She attended Graduate School at Ohio State University.

CONSTANTINE GATSONIS is the Henry Ledyard Goddard University Professor of Statistical Sciences, Director of Statistical Sciences, and Professor of Biostatistics at Brown University. He was founding director of the Center for Statistical Sciences and the founding chair of the Department of Biostatistics at Brown University. He is a leading authority on the evaluation of diagnostic and screening tests, and has made major contributions to the development of methods for medical technology assessment and health services and outcomes research. He is a world leader in methods for applying and synthesizing evidence on diagnostic tests in medicine and is currently developing methods for Comparative Effectiveness Research in diagnosis and prediction and radiomics. Since 2016 he has served as a statistical consultant for the New England Journal of Medicine. He was the Founding Editor-in-Chief of Health Services and Outcomes Research Methods, and currently serves as Associate Editor of the Annals of Applied Statistics and Academic Radiology. He is an elected fellow of the American Statistical Association (ASA) and received a Long-Term Excellence Award from the Health Policy Statistics Section of the ASA. He has a Ph.D. from mathematical statistics from Cornell University.

TODD GILMER is Professor and Chief, Division of Health Policy in the School of Public Health at University of California, San Diego. His research has focuses on three areas: health insurance, risk adjustment in Medicaid, cost-effectiveness of diabetes care, and mental health services. Dr. Gilmer specializes in research design and data analysis, the use of large data sets including those from Medicare, Medicaid, and commercial health plans, national surveys and census data, mixed methods that combine analysis of health insurance claims with qualitative interviews and focus groups, and the evaluation of community-based interventions to improve the health of vulnerable populations. Dr. Gilmer's recent work has examined the comparative effectiveness of supporting housing programs for persons with serious mental illness who are homeless and the importance of fidelity of these programs to the Housing First model of permanent supported housing; the effectiveness of behavioral health integration and complex care management in Medicaid managed care; the use of peer providers in mental health programs designed for transitional age youth; and service use after first episode of psychosis. Dr. Gilmer leads teams of health services researchers to provide data analysis and performance monitoring for San Diego County Behavioral Health Services, and in studying innovative service delivery models in San Diego and Los Angeles Counties. He received his PhD in economics from the University of Washington.

ROBERT GOERGE is a senior research fellow at Chapin Hall at the University of Chicago. He is also a senior fellow and founder of the Master's Degree in Computational Analysis in Public Policy at the University of Chicago Harris School of Public Policy. He is also a senior fellow at the Computational Institute. His research is focused on improving the available data and information on children and families, particularly those who require specialized services related to maltreatment, disability, poverty, or violence. At Chapin Hall, he is principal investigator for the Family Self-Sufficiency Data Center, the Linking Federal Data to Local Data project, and the

National Survey for Early Care and Education. He is also cochair and cofounder of the International Society for Child Indicators. He currently serves on the National Academies of Sciences, Engineering, and Medicine Committee on National Statistics. He has a Ph.D. in Social Policy from the University of Chicago.

ADI GUNDLAPALLI is the Chief Public Health Informatics Officer of the Center for Surveillance, Epidemiology, and Laboratory Services, at the Centers for Disease Control and Prevention. In this role, he leads an interdisciplinary team to meet the evolving data and information needs of public health, thereby enhancing informatics capability. Prior to coming to CDC, Dr. Gundlapalli was the Chief Health Informatics Officer for the VA Salt Lake City Health Care System and infectious diseases staff physician in Utah. He was a tenured professor of Internal Medicine at the University of Utah School of Medicine and a physician at University of Utah Hospitals and Clinics. He is board certified in internal medicine, infectious diseases, and clinical informatics. His clinical and research interests include infectious diseases, clinical immunology, bio-surveillance (and biodefense), preparedness for public health emergencies, infection prevention and hospital epidemiology, and healthcare for vulnerable populations. Dr. Gundlapalli received his medical degree from the Madras Medical College in Madras (now called Chennai), India. He received further training at the University of Connecticut Health Center where he earned a PhD in immunology and completed an internal medicine residency. In Utah he completed a three-year clinical and research fellowship in infectious diseases at the University of Utah School of Medicine and a master's degree (with a thesis) in biomedical informatics.

GEORGE HRIPCSAK (NAM) is Vivian Beaumont Allen Professor and chair of the Department of Biomedical Informatics at Columbia University. He is also the director of medical informatics services for New York-Presbyterian Hospital. He is also a board certified internist. He led the effort to create the Arden Syntax, a language for representing health knowledge that has become a national standard. His current research is on the clinical information stored in electronic health records. Using data mining techniques, he is developing the methods necessary to support clinical research and patient safety initiatives. As chair of the American Medical Informatics Association Standards Committee, he coordinated the medical informatics community response to the Department of Health and Human Services for the health informatics standards rules under the Health Insurance Portability and Accountability Act of 1996. He is an elected fellow of the American College of Medical Informatics, a fellow of the New York Academy of Medicine, and a member of the National Academy of Medicine. He has an M.D. and M.S. in Biostatistics from Columbia University.

LISA IEZZONI (NAM) is professor of medicine at Harvard Medical School and the Health Policy Research Center at Massachusetts General Hospital. After spending 16 years as co-director of research in the Division of General Medicine and Primary Care at Boston's Beth Israel Deaconess Medical Center, she joined the then Institute for Health Policy at Massachusetts General Hospital as associate director in 2006 and served as director of the newly-named Health Policy Research Center from 2009-2018. Her research focuses on risk adjustment methods for predicting cost and clinical outcomes of care, and on health care experiences and outcomes of persons with disabilities. She served on the National Committee on Vital and Health Statistics and Secretary's Advisory Committee on Health Promotion and Disease Prevention Objectives

for 2020. She has served on the editorial boards of the *Annals of Internal Medicine*, the *Journal of General Internal Medicine*, *Health Affairs*, *Medical Care*, *Health Services Research*, and the *Disability and Health Journal*, among others. She is a member of the National Academy of Medicine. She has an M.D. from Harvard Medical School and an M.Sc. from the Harvard School of Public Health.

GEORGE ISHAM (NAM) (*Chair*) is a senior fellow at the HealthPartners Institute and a senior advisor for the Alliance of Community Health Plans. Previously, he served as a senior advisor to the board of directors and the senior management team of HealthPartners, and prior to that, he was HealthPartners' medical director and chief health officer, responsible for quality of care and health and health care improvement. He has been active in health policy, serving as a member of the Center for Disease Control and Prevention (CDC) Task Force on Community Preventive Services, the Agency for Healthcare Research and Quality's United States Preventive Services Task Force, as a founding co-chair of National Committee for Quality Assurance's committee on performance measurement as well as founding co-chair of the National Quality Forum's Measurement Application Partnership. He is a founding member of the advisory board for the National Guideline Clearinghouse and has served on advisory board for the National Quality Measures Clearinghouse as well as the advisory committee to the director of the CDC. He is an elected member of the National Academy of Medicine and was also recognized as a national associate of the Institute of Medicine for his committee service. He has an M.D. from the University of Illinois, Chicago and an M.S. in preventive medicine and administrative medicine from the University of Wisconsin, Madison.

JACOB KEAN is a Research Scientist with the Department of Veterans Affairs Informatics and Computing Infrastructure (VINCI) at Salt Lake City VA Health Care System and an Associate Professor in Health System Innovation and Research in the Department of Population Health Sciences at the University of Utah. He was previously a Research Scientist at the Regenstrief Institute and on the faculty at Indiana University School of Medicine. Dr. Kean served as a Visiting Scientist at the Boston University Rehabilitation Outcomes Center, a Visiting Scholar at the Center for Rehabilitation Research Using Large Datasets at the University of Texas Medical Branch, and a VA Career Development Awardee. His expertise lies at the nexus of these training areas: the creation and operation of research networks and the evaluation of network care practices using patient-centered outcomes. He is the Director of the Population Health Science – U Health Learning Health System, Principal Investigator (PI) of the Cerebral Palsy Research Network Data Coordinating Center, PI of the DoD-funded Optimizing Rehabilitation InterventiONs (ORION) for Cognition Following Complex Traumatic Brain Injury network, and Co-PI of the VA-funded Brain Injury Data Sharing Project, all of which are EHR-based learning health systems focused primarily on the care of persons with acquired neurological disorders. Dr. Kean has a Ph.D. from Indiana University Bloomington in Speech and Hearing Sciences. He also completed the NIH Training Institute for Dissemination and Implementation Research in Health and a post-doctoral Master's degree in Measurement, Evaluation, Statistics and Assessment at the University of Illinois – Chicago.

MEAGAN KHAU is the Director of the Data and Policy Analytics Group (DPAG) at the Centers for Medicare & Medicaid Services (CMS) Office of Minority Health (OMH). DPAG conducts research, data collection, and analyses to identify targets to reduce health disparities

and improve quality of care, care transitions, access to care, and beneficiary satisfaction for the vulnerable populations. DPAG is also involved in developing and implementing initiatives and data analyses to support cross-component/cross-agency collaborations to improve data collection, analysis, and reporting of race and ethnicity, primary language, disability, gender, and other characteristics associated with health disparities. Prior to joining CMS OMH, Meagan was the Deputy Director of the Division of Pharmacy in the Center for the Medicaid and CHIP Services, managing the operations of the Medicaid Drug Rebate Program, supporting system developments, ensuring program compliance, and implementing new policies and regulations. Ms. Khau received her Master of Health Administration from the University of Southern California and B.A. in Sociology from the University of California, Irvine.

JAMES LEWIS is a Professor of Medicine and Epidemiology, Senior Scholar in the Center for Clinical Epidemiology and Biostatistics, and Associate Director of the Inflammatory Bowel Disease program at the University of Pennsylvania's Perelman School of Medicine in Philadelphia, Pennsylvania. Dr. Lewis has been actively involved in clinical research related to inflammatory bowel diseases, medication safety, and optimizing medical therapies for more than 20 years. More recently, he has focused on the impact of diet on the gut microbiome and the course of inflammatory bowel disease. His work has been funded by the NIH, AHRQ, PCORI, CDC and numerous foundations and corporate sponsors. Dr. Lewis previously served as the Chair of the National Scientific Advisory Committee and a member of the National Board of the Crohn's & Colitis Foundation. He is currently the lead scientist for the Foundation's IBD Plexus Research Collaborative and co-PI of SPARC-IBD, a multicenter prospective cohort study of patients with inflammatory bowel disease. Dr. Lewis received his MD and his MSCE in Pharmacoepidemiology from the University of Pennsylvania School of Medicine.

MARSHA LILLIE-BLANTON is Associate Research Professor in the Milken Institute School of Public Health at George Washington University. She is a public health professional with more than 30 years of experience working on health and health care access issues facing vulnerable populations. Her professional career has woven together opportunities to pursue scholarship and teaching in academia with efforts as a practitioner grounded in the realities that confront marginalized communities. She previously served as the Chief Quality Officer and Director of the Division of Quality and Health Outcomes at the Center for Medicaid and CHIP Services at the Centers for Medicare & Medicaid Services (CMS). With a budget of \$500 million over 6 years, she had responsibility for establishing a health care quality measurement and reporting program for Medicaid and CHIP, oversight of state contracts for annual external quality reviews of Medicaid managed care organizations, developing the state-federal partnership in quality improvement activities, and conducting the first-ever nationwide survey of Medicaid beneficiaries' experiences of care. Prior to her position with CMS, Dr. Lillie-Blanton held senior-level positions with the Henry J. Kaiser Family Foundation and the U.S. Government Accountability Office (GAO). Dr. Lillie-Blanton holds a bachelor's degree from Howard University and a master of health science and doctorate degree from the Johns Hopkins University Bloomberg School of Public Health.

MIGUEL MARINO is an associate professor with joint appointments in the School of Public Health Division of Biostatistics and the Department of Family Medicine at Oregon Health & Science University. His research focuses on: the development and implementation of novel

statistical methodology to address complexities associated with the use of electronic health records (EHRs) to study changes in policy; using EHRs to study health disparities; validation of EHRs as a reliable source for observational studies; pragmatic randomized trials; and preventive health maintenance. He currently serves as representative-at-large for the Western North American Region of the International Biometric Society, as the statistical editor for the *Annals of Family Medicine Journal*, and is the lead biostatistician for the national evaluation initiative, EvidenceNOW: Advancing Heart Health in Primary Care. He was selected by the National Academy of Medicine as an Emerging Leader in Health and Medicine Scholar. He has a Ph.D. in biostatistics from Harvard University.

ELIZABETH MCGLYNN (NAM) is vice president for Kaiser Permanente Research and executive director for the Center for Effectiveness & Safety Research at Kaiser Permanente. She is also interim senior associate dean for research and scholarships at the Kaiser Permanente Bernard J. Tyson School of Medicine. She is an internationally known expert on methods for evaluating the appropriateness and quality of healthcare delivery. She has led major initiatives to evaluate health reform options under consideration at the federal and state levels. She is the lead of Kaiser Permanente & Strategic Partners Patient Outcomes Research To Advance Learning (PORTAL) Network. She is a member of the National Academy of Medicine and serves on a variety of national advisory committees. She was a member of the Strategic Framework Board, which provided a blueprint for the National Quality Forum on the development of a national quality measurement and reporting system. She chaired the board of AcademyHealth, served on the board of the American Board of Internal Medicine Foundation, and served on the Board of Providence-Little Company of Mary Hospital Service Area in Southern California. She serves on the editorial boards for *Health Services Research* and *The Milbank Quarterly* and is a regular reviewer for many leading journals. She has a Ph.D. in Public Policy from RAND Graduate School.

DAVID MELTZER (NAM) is Fanny L. Pritzker Professor in the Department of Medicine, chief of the section of Hospital Medicine, and faculty in the Department of Economics and Harris School of Public Policy at the University of Chicago. He is also Director of the Center for Health and the Social Sciences and of the Urban Health Lab at the University of Chicago. His research explores problems in health economics and public policy with a focus on the theoretical foundations of medical cost-effectiveness analysis and the cost and quality of hospital care. Since 1997 he has developed the inpatient general medicine services at the University of Chicago as a Learning Health Care System to produce knowledge on how to improve the care of hospitalized patients, mobilizing the clinical care process to generate and learn from diverse data from electronic health records, claims data, patient interviews, and bio-specimens on over 100,000 patients. He is the lead of the University of Chicago network site as part of the Chicago Area Patient Centered Outcomes Research Network. He is the recipient of numerous awards, including the Lee Lusted Prize of the Society for Medical Decision Making, the Health Care Research Award of the National Institute for Health Care Management, and the Eugene Garfield Award from Research America. Meltzer is a research associate of the National Bureau of Economic Research, elected member of the American Society for Clinical Investigation, and past president of the Society for Medical Decision Making. He is also a member of the National Academy of Medicine. He has an M.D. and Ph.D. in Economics from the University of Chicago.

VINCENT MOR (NAM) is the Florence Price Grant professor of community health in the Brown University School of Public Health and a research health scientist at the Providence Veterans Administration Medical Center. He has been principal investigator of 40+ NIH-funded grants focusing on use of health services and outcomes of frail and chronically ill people. He has evaluated the impact of programs and policies including Medicare funding of hospice, changes in Medicare nursing home payment, and the introduction of nursing home quality measures. He co-authored the Congressionally-mandated Minimum Data Set (MDS) and was architect of an integrated Medicare claims and clinical assessment data structure used for policy analysis, pharmaco-epidemiology and population outcome measurement. Dr. Mor developed summary measures using MDS data to characterize residents' physical, cognitive and psycho-social functioning. These data resources are the heart of Dr. Mor's NIA-funded Program Project Grant, "Changing Long Term Care in America," which examines the impact of Medicaid and Medicare policies on long-term care. These data are also at the core of a series of large, pragmatic cluster randomized trials of novel nursing home-based interventions led by Dr. Mor. He received a MERIT award from NIA, a Robert Wood Johnson Health Policy Investigator award, and the Distinguished Investigator award from AcademyHealth. He received his PhD at the Florence Heller School for Advanced Studies in social welfare, Brandies University.

MARC NATTER is a pediatric rheumatologist and researcher in bioinformatics at the Boston Children's Hospital Computational Health Informatics Program (CHIP) whose research centers broadly upon the development and implementation of scalable software platforms that enable new ways of collecting and sharing research data for chronic diseases research. He is the chief informatics architect of the multi-site CARRA Registry for pediatric rheumatic diseases, leads development of patient-facing technology for the Harvard Medical School-led SCILHS Clinical Data Research Network, and coordinates data integration and patient-facing technology for the PARTNERS Patient Powered Research Network and other projects. He received his MD from S.U.N.Y. at Stony Brook, School of Medicine.

ALLISON OELSCHLAEGER is the Chief Data Officer and Director of the Office of Enterprise Data & Analytics (OEDA) at the Centers for Medicare and Medicaid Services (CMS). In this role, Allison focuses on maximizing the value and impact of CMS data for internal and external users. She oversees CMS' data and information product portfolio and directs efforts to make CMS data sets available to external organizations. Allison also manages the development of advanced analytics using CMS data that help inform policy decisions and evaluate programs. Before joining CMS, Allison worked at the Lewin Group where she specialized in program evaluation and data analysis. She is a graduate of Georgetown University.

MARC OVERHAGE (NAM) is the Chief Health Information Officer for Anthem, Inc and previously served as the Chief Medical Informatics Officer for Cerner and Siemens Health Services. He is an internationally recognized expert in health information modeling, standards, and interoperability as well as clinical decision support, health services research, and implementation science. Before that, he was the Director of Medical Informatics and a Research Scientist at the Regenstrief Institute, Inc., and Professor of Medicine and Regenstrief Professor of Medical Informatics at the Indiana University School of Medicine. He also is a member of the

medical staff of the Wishard Memorial Hospital. His research has focused on the use of informational interventions to modify provider behavior including computerized provider order entry, clinical decision support systems, and other forms of feedback. These systems require clinical data to drive them and have led him to begin developing approaches to health information exchange. In order to facilitate this work, he has engaged in developing clinical information standards, advising the federal government on policy-guiding health information technology, and developing sustainable models for providing health information services. He received his BA in Physics from Wabash College, and an MD in Medicine and a PhD in Biophysics from the Indiana University School of Medicine.

MITRA ROCCA is Associate Director of Medical Informatics, Office of Translational Science, Center for Drug Evaluation and Research, at the Food and Drug Administration (FDA). She joined the Food and Drug Administration (FDA) in 2009 as the Senior Medical Informatician responsible for developing the health information architecture of the Sentinel System. She serves as the lead for the FDA CDER health information technology (health IT) board focusing on the use of health IT to enhance regulatory decision making. She also serves as the FDA CDER lead to Health Level Seven (HL7), responsible for the review of HL7 draft standards. Prior to joining FDA, Ms. Rocca served as the Associate Director, Healthcare Informatics at Novartis Pharmaceuticals Corporation focusing on the reuse of the Electronic Health Record (EHR) in clinical research. She has served as the co-chair of the Health Level Seven (HL7) Clinical Interoperability Council (CIC) from 2012-2018. She is a fellow of the American Medical Informatics Association, and holds her advanced degree in Medical Informatics from the University of Heidelberg in Germany.

CLAUDIA STEINER is the Executive Director of the Institute for Health Research at Kaiser Permanente Colorado. Dr. Steiner served as Director for the Division of Healthcare Delivery Data, Measures and Research, in the Center for Delivery, Organization, and Markets within the Agency for Healthcare Research and Quality (AHRQ) until February of 2017. There she led the division's development and dissemination of data and software tools for use in research, policy analysis, quality improvement, and public reporting, with a particular focus on Healthcare Cost and Utilization Project (HCUP) and the AHRQ Quality Indicators. She conducted research in the areas of the influence of ambulatory surgery on standards of care, utilization, and clinical outcomes; the epidemiology of infectious diseases, including healthcare associated infections; the prevalence and factors associated with readmissions to the acute care setting; and the use and impact of new medical technologies. She was a practicing internal medicine physician for 25 years with the Johns Hopkins Community Physicians, and continues to serve as a practicing internist for adult patients with the Colorado Permanente Medical Group. Dr. Steiner earned her medical degree and completed residency training in Internal Medicine at the University of Colorado Health Sciences Center. Subsequently, she obtained a Masters of Public Health at the Johns Hopkins School of Hygiene and Public Health, while completing a research fellowship through the Department of Medicine at Johns Hopkins University.

MICKY TRIPATHI is the National Coordinator for Health Information Technology at the U.S. Department of Health and Human Services, where he leads the formulation of the federal health

IT strategy and coordinates federal health IT policies, standards, programs, and investments. Mr. Tripathi has over 20 years of experience across the health IT landscape. He most recently served as Chief Alliance Officer for Arcadia, a health care data and software company focused on population health management and value-based care, the project manager of the Argonaut Project, an industry collaboration to accelerate the adoption of FHIR, and a board member of HL7, the Sequoia Project, the CommonWell Health Alliance, and the CARIN Alliance. Mr. Tripathi served as the President and Chief Executive Officer of the Massachusetts eHealth Collaborative (MAeHC), a non-profit health IT advisory and clinical data analytics company. He was also the founding President and CEO of the Indiana Health Information Exchange, a statewide HIE partnered with the Regenstrief Institute, an Executive Advisor to investment firm LRVHealth, and a Fellow at the Berkman-Klein Center for Internet and Society at Harvard University. Prior to receiving his PhD, he was a Presidential Management Fellow and a senior operations research analyst in the Office of the Secretary of Defense in Washington, DC, for which he received the Secretary of Defense Meritorious Civilian Service Medal. He holds a PhD in political science from the Massachusetts Institute of Technology, a Master of Public Policy from Harvard University, and an AB in political science from Vassar College.