

HEALTH AND MEDICINE DIVISION

Board on Health Care Services / Board on Population Health and Public Health Practice

**Committee on Unequal Treatment Revisited:
The Current State of Racial and Ethnic Disparities in Health Care**

**VIRTUAL PUBLIC SESSION
WEDNESDAY, FEBRUARY 1, 2023
2:00PM - 4:00PM ET**

2:00 pm	Welcome to the Study Sponsor Representatives and Introductory Remarks <i>Georges Benjamin, Committee Co-chair</i> <i>Jennifer DeVoe, Committee Co-chair</i>
2:10	Remarks Regarding the Committee's Statement of Task National Institute on Minority Health and Health Disparities Perspective <ul style="list-style-type: none"> • <i>Monica Webb Hooper, Deputy Director, National Institute on Minority Health and Health Disparities</i> • <i>Nathan Stinson Jr., Director, Division of Community Health and Population Science, National Institute on Minority Health and Health Disparities</i> • <i>Gnieszha Y. Dinwiddie, Health Scientist Administrator, Office of the Director, National Institute on Minority Health and Health Disparities</i> National Institute of Nursing Research Perspective <ul style="list-style-type: none"> • <i>Shannon N. Zenk, Director, National Institute of Nursing Research</i> Agency for Healthcare Research and Quality Perspective <ul style="list-style-type: none"> • <i>Robert Otto Valdez, Director, Agency for Healthcare Research and Quality</i>
2:50	Committee Discussion with Sponsor Representatives and Panel <i>Georges Benjamin, Committee Co-chair</i>
3:30	Invited Presentation: The <i>Unequal Treatment</i> Report, 20 Years Later <i>Brian Smedley, Equity Scholar and Senior Fellow, Urban Institute; Study Director, 2003 Institute of Medicine Consensus Report 'Unequal Treatment'</i>
3:40	Discussion and Q&A <i>Jennifer DeVoe, Committee Co-chair</i>
4:00	Adjourn <i>Georges Benjamin, Committee Co-chair</i> <i>Jennifer DeVoe, Committee Co-chair</i>

Speaker Bios

Gniesha Dinwiddie, Ph.D., is a Health Scientist Administrator in the NIMHD Office of the Director. She is an expert in cardiovascular disease epidemiology, social determinants of health, affective disorders, immigrant health, racial health disparities and health equity. Dr. Dinwiddie develops funding opportunities, strategic initiatives and programs, conducts portfolio reviews, and represents NIMHD on NIH-wide, NIH Roadmap, and HHS-wide committees. Prior to joining NIMHD, she was a health scientist at AHRQ and a Scientific Review Officer at NIH's Center for Scientific Review (CSR). Before joining the federal government in 2016, Dr. Dinwiddie held faculty appointments at the University of Maryland, College Park as an assistant professor, and associate faculty in the Hopkins Center for Health Disparities Solutions at the Johns Hopkins Bloomberg School of Public Health, where she conducted research on the macrosocial determinants implicated in affective disorders and cardiovascular disease risk for disparity populations and the biosocial pathways that inform differential risk. Dr. Dinwiddie received her B.A. in social science from the University of California, Irvine; an M.A. in African American studies from the University of California, Los Angeles; and a Ph.D. in medical sociology from the University of Pennsylvania. She completed post-doctoral training in the Office of Population Research at Princeton University, where her research focused on identifying the environmental and social risk factors that condition stress exposure increasing vulnerability to affective disorders in health disparity populations.

Monica Webb Hooper, Ph.D., is Deputy Director of the National Institute on Minority Health and Health Disparities (NIMHD). Dr. Webb Hooper is an internationally recognized translational behavioral scientist and clinical health psychologist. She has dedicated her career to the scientific study of minority health and racial/ethnic disparities, focusing on chronic illness prevention and health behavior change. Her program of community engaged research focuses on understanding multilevel factors and biopsychosocial mechanisms underlying modifiable risk factors, such as tobacco use and stress processes, and the development of community responsive and culturally specific interventions. Her goal is to contribute to the body of scientific knowledge and disseminate findings into communities with high need. Before joining NIMHD, Dr. Webb Hooper was a Professor of Oncology, Family Medicine & Community Health and Psychological Sciences at Case Western Reserve University. She was also Associate Director for Cancer Disparities Research and Director of the Office of Cancer Disparities Research in the Case Comprehensive Cancer Center. Dr. Webb Hooper completed her doctorate in clinical psychology from the University of South Florida, internship in medical psychology from the University of Florida Health Sciences Center, and her Bachelor of Science from the University of Miami.

Brian Smedley, Ph.D., is among the inaugural class of Equity Scholars at the Urban Institute, where he conducts research and policy analysis to address structural and institutional forms of racism that impact the health and well-being of people of color. Formerly, Dr. Smedley was Chief of Psychology in the Public Interest at the American Psychological Association (APA), where he led APA's efforts to apply the science and practice of psychology to the fundamental problems of human welfare and social justice. Among his prior positions, he was co-founder and Executive Director of the National Collaborative for Health Equity, co-Director of the Robert Wood Johnson Foundation Culture of Health Leadership National Program Center, and Vice President and Director of the Health Policy Institute of the Joint Center for Political and Economic Studies. Dr. Smedley also was a Senior Program Officer at the Institute of Medicine (IOM), where he served as Study Director for the IOM report *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care*, among other reports on diversity in the health professions and minority health research policy. Among his awards and distinctions, Smedley has been honored by the American Public Health Association, the Congressional Black Caucus, the Rainbow/PUSH coalition, and the American Psychological Association.

Nathan Stinson Jr., Ph.D., M.D., M.P.H., serves as Director of the Division of Community Health and Population Science at the National Institute on Minority Health and Health Disparities (NIMHD), where he oversees the extramural scientific programs on minority health and health disparities. He began his federal career in Arizona as a medical officer with the U.S. Public Health Service (USPHS) Commissioned Corps, where he practiced family medicine at the Indian Health Service's Chinle Comprehensive Health Care Facility on the Navajo reservation. Dr. Stinson later served as Deputy Director of the Division of Community and Migrant Health and as Director of the Division of Programs for Special Populations in the Bureau of Primary Health Care, Health Resources, and Services Administration within the Department of Health and Human Services (HHS). In 1999, he was appointed Deputy Assistant Secretary for Minority Health and Director of the Office of Minority Health at HHS. During that tenure, he served as a senior advisor to the Assistant Secretary for Health and the Secretary at HHS. Dr. Stinson also served as President of the Health Literacy Foundation in Munster, IN, and the director of the Center for Optimal Health and a professor of family and community medicine at Meharry Medical College in Nashville, TN. Dr. Stinson holds a Ph.D. in environmental biology from the University of Colorado, an M.D. from the University of Colorado Health Sciences Center, and an M.P.H. in health care administration from the Uniformed Services University of the Health Sciences. Dr. Stinson has received numerous honors including the Louis B. Stokes Leadership Award – National Medical Association, Silver and Gold Award for Excellence in Humanitarianism, Citizenship, and Professionalism – University of Colorado, NIH Director's Awards, U.S. Surgeon General's Exemplary Service Medal, Outstanding Service Medal, Commendation Medal, Achievement Medal, and Crises Response Service Award – USPHS.

Robert Otto Valdez, Ph.D., M.H.S.A., was appointed Director of Agency for Healthcare Research and Quality's (AHRQ) in February 2022. He was previously the Robert Wood Johnson Foundation (RWJF) Professor Emeritus of Family & Community Medicine and Economics at the University of New Mexico (UNM). From 1993 through 1997, Dr. Valdez served at the U.S. Department of Health and Human Services as Deputy Assistant Secretary for Health (Public Health Service) and simultaneously as Director of Interagency Health Policy (Centers for Medicare and Medicaid Services). Before joining DHHS in 1993, he served as a Special Senior Advisor to the Clinton White House on healthcare reform. He chaired the Healthcare Reform Benefits Workgroup and was a member of the Analytic Modeling Workgroup. He previously served in the Office of Child Health for the Health Care Financing Administration during the Carter Administration. In 2008, Dr. Valdez was the Founding Executive Director of the RWJF Center for Health Policy at UNM. He previously served as the founding Dean at the Drexel University School of Public Health. From 1985 through 1999, he was a Professor of Health Services at the UCLA School of Public Health. He directed the health services doctoral studies program, the MBA/MPH program, in collaboration with the UCLA Anderson School of Business. He served as Associate Director of the Chicano Studies Research Center. Dr. Valdez started his career as the lead child health researcher for the historic RAND Health Insurance Experiment. Internationally recognized as an expert in health services research, the U.S. healthcare system, and health policy analysis, he has led numerous global healthcare initiatives with the Pan American Health Organization and the University of California. His health promotion and disease prevention work with Univision Communications Corporation, "Salud es Vida: ¡Enterate!" was recognized with journalism's prestigious Peabody Award. In 1998, he served as Special Senior Advisor to the White House Initiative on Educational Excellence for Hispanic Americans. His public service includes serving as Chairman of the New Mexico Community Foundation, the American Hospital Association Foster G McGaw Prize Committee, and the Public Health Institute, one of the nation's largest non-profit public health agencies serving communities across California and internationally.

Shannon Zenk, Ph.D., M.P.H., RN, FAAN., is the Director of the National Institute of Nursing Research. Dr. Zenk was previously a Nursing Collegiate Professor in the Department of Population Health Nursing Science at the University of Illinois Chicago (UIC) College of Nursing, and a fellow at the UIC Institute for Health Research and Policy. Dr. Zenk was elected as a fellow of the American Academy of Nursing in 2013, received the President's Award from the Friends of the National Institute of Nursing Research in 2018, was inducted into the International Nurse Researchers Hall of Fame in 2019, and elected as a member of The National Academy of Medicine in 2021. She has spent time as a visiting scholar in Rwanda and Australia. She earned her bachelor's in nursing, magna cum laude, from Illinois Wesleyan University, Bloomington; her master's degrees in public health nursing and community health sciences from UIC; and her doctorate in health behavior and health education from the University of Michigan, Ann Arbor. Her predoctoral training was in psychosocial factors in mental health and illness, funded by

the National Institute of Mental Health. Her dissertation examined racial and socioeconomic inequities in food access in metropolitan Detroit. She completed postdoctoral training in UIC's Institute for Health Research and Policy's Cancer Education and Career Development Program, funded by the National Cancer Institute, in 2006. Dr. Zenk's own research focuses on social inequities and health with a goal of identifying effective, multilevel approaches to improve health and eliminate racial/ethnic and socioeconomic health disparities. Her research portfolio has included NIH-supported work into urban food environments, community health solutions and veterans' health. Through pioneering research on the built environment and food deserts, Dr. Zenk and her colleagues increased national attention to the problem of inadequate access to healthful foods in low-income and Black neighborhoods. They have since examined the role of community environments in health and health disparities. Recognizing that restricting empirical attention to the communities where people live and not the other communities where they spend time may misdirect interventions, Dr. Zenk led early research adopting GPS tracking to study broader "activity space" environments in relation to health behaviors. She and her colleagues have also evaluated whether the effectiveness of behavioral interventions differs depending on environmental context and, most recently, how environmental and personal factors interact to affect health. This work has leveraged a variety of technologies and emerging data resources such as electronic health records. Energy balance-related behaviors and conditions have been a major focus.

**Unequal Treatment Revisited:
The Current State of Racial and Ethnic Disparities in Health Care**

Statement of Task

An ad hoc committee of the National Academies of Sciences, Engineering, and Medicine will examine the current state of racial and ethnic healthcare disparities in the U.S. This work will include support for the infrastructure and activities required to update the 2003 Unequal Treatment report. The update will highlight the major drivers of healthcare disparities, provide insight into successful and unsuccessful interventions to reduce disparities, identify gaps in the evidence base, and propose strategies to close those gaps. The committee will consider ways to scale and spread effective interventions to reduce racial and ethnic disparities in health care and make recommendations to advance health equity.

NASEM will conduct a scoping review of the literature on racial and ethnic healthcare disparities in the years since the Unequal Treatment report (2003-2022). This task will also provide a comprehensive status update on the implementation of the IOM report recommendations, as well as whether specific healthcare disparities have improved, remained the same, or worsened. The topics will include but are not limited to:

- Societal factors such as bias, racism, discrimination, intersectionality, stereotyping and intersectionality at the individual (clinical and non-clinical staff), interpersonal, institutional, and health system levels.
- Technology factors, such as bias in diagnostic tools and algorithms used in clinical practice and decision-making, and variability in access to broad band internet and other telecommunication technologies, as well as digital inequality
- Geographic factors, such as variability in the social determinants of health, language and English proficiency, and access to both social services, (including those not directly related to health care), language, and health care services for acute and chronic conditions in different communities
- Policy factors, such as federal and state laws and regulations and public health programs
- Health care factors, such as the coverage and design of health plans, institutional or clinic-based access, and the demographic and specialty profile of the clinical workforce
- The impact of clinical training and education in perpetuating disparities, and ways to improve training, enhance cultural competency, and diversify the health care workforce.
- The committee will also consider ways to scale and spread effective interventions to reduce racial and ethnic disparities in health care.

The review and summary of findings will focus on the Office of Management and Budget (OMB) defined racial and ethnic groups, report disaggregated findings where possible (e.g., by country of origin or national heritage). The literature review should also:

- Incorporate evidence on racial and ethnic disparities in healthcare measured by access, utilization and quality of care given that major advancements related to healthcare policy (e.g., ACA), demographic shifts, and public health emergencies (e.g., COVID-19) have differentially impacted people from racial and ethnic groups and may have exacerbated disparities.
- Examine healthcare disparities across the spectrum of healthcare settings with an emphasis on primary care in the continuity outpatient setting but also including specialty outpatient care, emergency or urgent care, and hospital care.
- Examine racial and ethnic healthcare disparities across the lifespan (e.g., between racial and ethnic minority children and older adults compared with their White counterparts and the relationship between adverse childhood experiences [ACEs] and how these pathways develop into health disparities in later life).
- Determine the interventions that have been most effective at the local, state, and federal levels for reducing racial and ethnic disparities in healthcare using the intervention strategies outlined in the previous report as a guide.
- Identify the institutional, community based, or community engaged approaches that have addressed racial and ethnic disparities in healthcare access, utilization and quality of care and quantify those with the most positive impact.
- Determine the community engaged research approaches that are most replicable and scalable.

Drawing on this detailed literature review, and supplemented by public input, the committee will apply its expert judgment in order to develop recommendations with a focus on advancing health equity.

Committee on Unequal Treatment Revisited: The Current State of Racial and Ethnic Disparities in Health Care

Committee Members

Georges C. Benjamin, M.D., is a well-known health policy leader, practitioner, and administrator. He currently serves as the Executive Director of the American Public Health Association (APHA), the nation's oldest and largest organization of public health professionals. At APHA, he serves as the publisher for the *American Journal of Public Health*, the *Nation's Health Newspaper* and APHA Press, the associations book company. Dr. Benjamin has published several articles on public health ethics, Covid-19, and health equity, and is nationally known for his contributions. He is board-certified in internal medicine, a Master of the American College of Physicians, a fellow of the National Academy of Public Administration, and a fellow emeritus of the American College of Emergency Physicians. Dr. Benjamin serves on several nonprofit boards such as Research!America, the Truth Foundation, the Environmental Defense Fund, Ceres, and the Reagan-Udall Foundation. Dr. Benjamin is a former Secretary of Health for the state of Maryland. He is also a former member of the National Infrastructure Advisory Council, a council that advises the President on how best to assure the security of the nation's critical infrastructure. He is a graduate of the Illinois Institute of Technology and received his M.D. at the University of Illinois College of Medicine. Dr. Benjamin has chaired or co-chaired several National Academies' convening activities. He was previously the chair of the National Academies' Division Committee for the Health and Medicine Division. He is a member of the National Academy of Medicine.

Jennifer E. DeVoe, M.D., DPhil., is a practicing family physician and health services researcher based in Portland, Oregon. She is the John and Sherrie Saultz Professor and Chair of the Department of Family Medicine at Oregon Health & Science University (OHSU). In her role as chair, she oversees nearly 250 faculty, 100 resident physicians, and several large primary care clinics. Dr. DeVoe also serves as the inaugural director of OHSU's Center for Primary Care Research and Innovation and is the co-Principal Investigator of the Building Research in Implementation & Dissemination to Close Gaps and Achieve Equity in Cancer Control Center. She and her team were early pioneers in leveraging electronic health records in health disparities research. She conducts a portfolio of research evaluating natural experiments that impact access to primary care, and she studies community-based interventions that aim to reduce health disparities. Dr. DeVoe earned her MPhil and DPhil degrees in economic and social history from Oxford University and her M.D. from Harvard Medical School. She completed her family medicine residency at OHSU. Dr. DeVoe previously chaired the 2018-19 National Academies' Committee on Vibrant and Healthy Kids: Aligning Science, Practice, and Policy to Advance Health Equity and served as a member of the 2020-21 Committee on Implementing High-Quality Primary Care: Rebuilding the Foundation of Health Care. She is a member of the National Academy of Medicine.

Margarita Alegria, Ph.D., is the Chief of the Disparities Research Unit at Massachusetts General Hospital, the Harry G. Lehnert, Jr. and Lucille F. Cyr Lehnert Endowed Chair at the Mass General Research Institute, and a Professor in the Departments of Medicine and Psychiatry at Harvard Medical School. From 2002-2015 she was the Director of the Center for Multicultural Mental Health Research at Cambridge Health Alliance. Dr. Alegria has published several articles on improving health care services delivery for diverse racial and ethnic populations. Her research focuses on the improvement of health care services delivery for diverse racial and ethnic populations, conceptual and methodological issues with multicultural populations, and ways to bring the community's perspective into the design and implementation of health services. She is currently the Principal Investigator of three National Institutes of Health-funded research studies. Dr. Alegria was recently a member

of the Robert Wood Johnson Foundation's National Commission to Transform Public Health Data. She was the recipient of the 2020 Rema Lapouse Award for Achievement in Epidemiology, Mental Health and Applied Public Health Statistics from the American Public Health Association. She obtained her B.A. in Psychology from Georgetown University and her Ph.D. from Temple University. Dr. Alegria is currently co-chair of the National Academies' Forum on Mental Health and Substance Use Disorders and serves as a member of the Division Committee for the Behavioral and Social Sciences and Education. She previously served as a member of the Committee on the Mental Health Workforce for Geriatric Populations and the Committee on Standardized Collection of Race-Ethnicity Data for Healthcare Quality Improvement. She is a member of the National Academy of Medicine.

John Zaven Ayanian, M.D., M.P.P., is the Alice Hamilton Distinguished University Professor of Medicine and Healthcare Policy and the Inaugural Director of the Institute for Healthcare Policy and Innovation at the University of Michigan. His research focuses on access to care, quality of care and health equity. He leads a multi-disciplinary team conducting the federally authorized evaluation of the Healthy Michigan Plan, which has expanded Medicaid to one million adults in Michigan. Dr. Ayanian has published extensively on health and healthcare disparities. He is the founding editor in chief of *JAMA Health Forum*. He is a member of American Society for Clinical Investigation and Association of American Physicians. He is a Master of the American College of Physicians. He has received the John Eisenberg National Award for Career Achievement in Research from the Society of General Internal Medicine and the Distinguished Investigator Award from AcademyHealth. He earned his AB degree in history and political science from Duke University, MD from Harvard Medical School, and MPP from the Harvard Kennedy School. He completed residency and fellowship training in primary care internal medicine at Brigham and Women's Hospital and a post-doctoral fellowship in health services research at the Harvard School of Public Health. Dr. Ayanian has served as a member on numerous National Academies' committees including the Committee on Accounting for Socioeconomic Status in Medicare Payment Programs, Committee on A National Surveillance System for Cardiovascular and Select Chronic Diseases, and Committee on Guidance for Designing a National Health Care Disparities Report. He is a member of the National Academy of Medicine.

Elaine E. Batchlor, M.D., M.P.H., is the Chief Executive Officer of MLK Community Healthcare, a state-of-the-art, CMS 5-star-rated hospital and health system that provides care to 1.3 million residents of the medically underserved community of South Los Angeles. In this role, as well as in her previous position as Chief Medical Officer for LA Care, the nation's largest public insurance plan, Dr. Batchlor has devoted her career to reducing health disparities and expanding health care quality and access for the most vulnerable communities. Her first-hand observations of the people, policy and payment challenges to health equity have been widely published, including in *Health Affairs*, *The Atlantic*, *The Washington Post*, *The Los Angeles Times* and more. Her innovative efforts to address provider shortages, payment inequities, and other structural and environmental obstacles to health earned her the James Irvine Foundation Leadership Award, and the Partners in Care Vision and Excellence in Healthcare Leadership Award.. An internist and rheumatologist by training, Dr. Batchlor received her M.D. from Case Western Reserve University School of Medicine and M.P.H. from UCLA Fielding School of Public Health. She is a member of the National Academy of Medicine.

Darrell J. Gaskin, Ph.D., M.S., is the William C. and Nancy F. Richardson Professor in Health Policy and Director of the Hopkins Center for Health Disparities Solutions in the Department of Health Policy and Management at the Johns Hopkins Bloomberg School of Public Health. Dr. Gaskin is a health services researcher and health economist and has published extensively on health and healthcare disparities. He is internationally recognized for his contribution. He seeks to identify and understand how contextual factors influence access to care, quality of care and health outcomes for minority, low socioeconomic status, and other vulnerable populations. His research strives to develop and promulgate policies and practices that address the social determinants of health and promote equity in health and well-being. He is a research associate of the

National Bureau of Economic Research. He serves on the Congressional Budget Office Panel of Health Advisors and the Board of Directors of the American Society of Health Economists. Dr. Gaskin has served in leadership roles in AcademyHealth, the American Public Health Association, the National Academy for State Health Policy, and the National Economics Association. He is a member of Maryland Department of Health's Advisory Committee on Minority Health, the Maryland Health Equity Policy Committee, Health Affairs' Health Equity Advisory Committee, and the National Institute of Neurological Disorders and Stroke Health Disparities Steering Committee. He is a 2019 recipient of the Presidential Early Career Award for Scientists and Engineers. Dr. Gaskin has a Ph.D. in public health economics from the Johns Hopkins University. He holds a M.S. in economics from the Massachusetts Institute of Technology, and a B.A. in economics from Brandeis University. He has served as a member of numerous National Academies committees including the Committee on Rising Midlife Mortality Rates and Socioeconomic Disparities, and the Committee on Valuing Community-Based, Non-Clinical Prevention Policies and Wellness Strategies. He is a member of the National Academy of Medicine.

Valarie Blue Bird Jernigan, Dr.PH, M.P.H., is Professor of Rural Health and Medicine and Director of the Center for Indigenous Health Research and Policy at Oklahoma State University Center for Health Sciences. Dr. Jernigan has been the Principal Investigator or Co-Investigator on more than 10 NIH-funded trials to improve food systems and health in Indigenous communities. She led the National Heart, Lung, and Blood Institute-funded THRIVE study, the first randomized trial of healthy makeovers in tribally-owned convenience stores, the National Institute on Minority Health and Health Disparities-funded FRESH study, a farm-to-school intervention to support healthy eating patterns among Native American children, and a newly launched tribal community supported agriculture study to promote sustainable changes to the food environment and health in Osage Nation. Dr. Jernigan is the PI for the Center for Indigenous Innovation and Health Equity, funded by the Office of Minority Health, which supports community-based initiatives to restore traditional food systems and practices in American Indian, Alaska Native, and Native Hawaiian communities. Dr. Jernigan is a citizen of the Choctaw Nation of Oklahoma. She received her doctorate in public health from the University of California, Berkeley, and completed a postdoctoral fellowship in cardiovascular disease prevention at Stanford University. Dr. Jernigan was a member of the National Academies' workshop planning committee on Health Equity Approach to Obesity Efforts.

Thomas A. LaVeist, Ph.D., is the Dean and Weatherhead Presidential Chair in Health Equity at the School of Public Health & Tropical Medicine at Tulane University. His career has been dedicated to understanding the causes of inequity in health and its potential solutions. Dr. LaVeist is also the director and executive producer of *The Skin You're In*, a documentary series that discusses racial health inequities. He is also author of six books including *Minority Population and Health: An introduction to health disparities in the United States* (the first textbook on health disparities). As an award-winning research scientist, Dr. LaVeist has received the "Innovation Award" from National Institutes of Health, the "Knowledge Award" from the U.S. Department of Health and Human Services. He received his B.A. in sociology from the University of Maryland Eastern Shore, his M.A. in sociology from the University of Michigan, and his Ph.D. in medical sociology from the University of Michigan. He is a member of the National Academy of Medicine.

Monica E. Peek M.D., M.P.H., MSc., is the Ellen H. Block Professor of Health Justice at the University of Chicago, the Associate Vice-Chair for Research Faculty Development at the University of Chicago Department of Medicine, the Executive Medical Director of Community Health Innovations, Associate Director of the Chicago Center for Diabetes Translation Research, and the Director of Research/Associate Director of the MacLean Center for Clinical Medical Ethics. She is a health services researcher, bioethicist, and internist focused on health equity. Dr. Peek's research focuses on promoting equitable doctor-patient relationships among racial minorities, integrating medical and social needs of patients, and addressing discrimination and structural racism that impact health outcomes. She has published extensively on social determinants of health,

health disparities, and health care education. She has served on the National Advisory Council of AHRQ, the National Executive Council of the American Diabetes Association, the National Council of the Society of General Internal Medicine, and the International Board of Directors for Physicians for Human Rights. She is currently a consultant to CMEO Outfitters, where she provides health equity education to health providers. Dr. Peek received her M.D. from Johns Hopkins University School of Medicine, completed her residency at Stanford University Hospital, received her M.P.H from Johns Hopkins University School of Hygiene & Public Health, and her M.Sc. from the University of Chicago. Dr. Peek was a planning committee member of the National Academies' workshop series on Evolving Crisis Standards of Care and Lessons from COVID-19. She is a member of the National Academy of Medicine.

Vincent Guilamo-Ramos, Ph.D., M.S.N, M.P.H, FAAN., is Dean and Bessie Baker Distinguished Professor of the Duke University School of Nursing, Vice Chancellor for Nursing Affairs, Duke University, and Director of the Center for Latino Adolescent and Family Health. Dr. Guilamo-Ramos is a nurse practitioner dually licensed in primary care and psychiatric-mental health nursing. His research focuses on improving healthcare access, quality, and outcomes for Latinos and other populations experiencing structural adversity, with a focus on mitigating the mechanisms through which the social determinants of health (SDOH) shape health inequities. Dr. Guilamo-Ramos' research has been federally funded for over two decades by NIH and various other agencies. He has published extensively in leading peer-reviewed scientific and health journals, including *The Lancet Infectious Diseases*, *JAMA Pediatrics*, *Pediatrics*, and the *American Journal of Public Health*. In addition, Dr. Guilamo-Ramos and his CLAFH colleagues have developed and applied a novel framework and toolkit for SDOH mitigation (www.DUSONTrailblazer.com). He serves as a member of the HHS Presidential Advisory Council on HIV/AIDS, the HHS Panel on Antiretroviral Guidelines for Adults and Adolescents, the CDC/HRSA Advisory Committee on HIV, Viral Hepatitis and STD Prevention and Treatment. Dr. Guilamo-Ramos received a PhD in Social Welfare from SUNY Albany, an MSN degree from Duke University, and MPH, MSW, and MS degrees from New York University.

Brian Rivers, Ph.D., M.P.H., is the Director of the Cancer Health Equity Institute and Professor of Community Health and Preventative Medicine at the Morehouse School of Medicine. Dr. Rivers is nationally and internationally recognized as a thought leader in health disparities research. Dr. Rivers' research portfolio has endeavored to expand the application of population-based intervention science to address cancer health disparities in clinical and community-based settings, utilizing multi-level, multi-domain, and multi-sectoral approaches, such as novel technological platforms and iterations of the Patient Navigation model. Dr. Rivers has presented his novel and innovative research findings in diverse settings including the First Congress on Oncology Clinical Trials (Lagos, Nigeria), Movember International Prostate Cancer Consortium (Queensland, Australia), The Atlantic Magazine, The People vs Cancer, South by Southwest (SXSW) conferences, and the National Press Foundation. Dr. Rivers is an active member in the American Association for Cancer Research (AACR) community and serves in several leadership capacities, such as the steering committee for the inaugural AACR Cancer Disparities Progress Report, Chairperson for AACR Minorities in Cancer Research Council, Conference Co-Chair for the 11th AACR Conference on Cancer Health Disparities, and Co-Chair for the AACR Think Tank on Cancer Health Disparities. Dr. Rivers also serves as Co-Chair for the Georgia Cancer Control Consortium (GC3), a state-funded entity responsible for developing the state's cancer plan and maintaining the cancer prevention and control infrastructure. Dr. Rivers is a retired member of the National Advisory Council on Minority Health and Health Disparities of the National Institutes of Health. Dr. Rivers holds a Ph.D. in health behaviors from the University of Alabama at Birmingham School of Public Health, M.P.H. in social and behavioral sciences from the Morehouse School of Medicine, and a B.S. in Biology, from Vanderbilt University.

Sara Rosenbaum J.D., is Professor Emerita of Health Law and Policy at the Milken Institute School of Public Health, George Washington University, where she previously held the Harold and Jane Hirsh Professorship and

served as founding Chair of the School's Department of Health Policy. She has devoted her career to advancing the health of medically underserved populations. She has served on numerous governmental and other committees, including the Centers for Disease Control and Prevention (CDC) Director's Advisory Committee and the CDC Advisory Committee on Immunization Practice. She was appointed by Congress as a founding Commissioner of Congress's Medicaid and CHIP Payment and Access Commission (MACPAC), which she chaired from January 2016 through April 2017. Professor Rosenbaum is the recipient of many honors and awards, among which are the National Academy of Medicine's Adam Yarmolinsky Medal, the American Public Health Association Executive Director Award for Service, and the Association of Schools and Programs of Public Health Welch-Rose Award for Lifetime Contributions to the Health of the Public. Professor Rosenbaum also is a past recipient of GW's Trachtenberg Prize for Research. She received her J.D. from Boston University Law School, and her B.A. in American studies from Wesleyan University. She is a member of the National Academy of Medicine.

Ruth S. Shim, M.D., M.P.H., is the Luke & Grace Kim Professor in Cultural Psychiatry in the Department of Psychiatry and Behavioral Sciences at the University of California, Davis, and Associate Dean of Diverse and Inclusive Education at the University of California, Davis School of Medicine. Dr. Shim is an expert on mental health equity, structural racism in medicine, and diversity, equity, and inclusion in academic medicine. She is co-editor of the books, *"The Social Determinants of Mental Health"* and *"Social (In)Justice and Mental Health"* and serves on the Editorial Boards of *Psychiatric Services*, *JAMA Psychiatry*, *Community Mental Health Journal*, and *American Psychiatric Publishing*. She is a member of the Board of Trustees of the Robert Wood Johnson Foundation. She received an MPH in health policy from Rollins School of Public Health at Emory University and an MD from Emory University School of Medicine. Dr. Shim is currently an at-large member of the National Academies' Forum on Mental Health and Substance Use Disorders, and served as a member of the Committee on the Science of Changing Behavioral Health Social Norms.

Kosali Simon, PhD., an economist, is a Distinguished Professor and Herman Wells Professor at Indiana University, Bloomington, O'Neill School of Public and Environmental Affairs where she is also an O'Neill Chair, and the Associate Vice Provost of Health Sciences for the campus. Dr. Simon studies impacts of state and federal health policies on health and related outcomes and disparities among at-risk populations, and has spoken at conferences and other professional venues on the effects of federal and state policies on pharmaceutical and related markets. She has published research on racial equity and inequity in healthcare, specifically related to cancer treatment, opioid use disorder, and Covid-19. She is editor of *Journal of Health Economics (JHE)*, and co-editor of *Journal of Human Resources*. Dr. Simon is a member of the US Congressional Budget Office's panel of health advisors. She is President-elect of the American Society of Health Economists (ASHEcon). Dr. Simon received her Ph.D. in Economics from the University of Maryland. She currently serves on the National Academies' Roundtable on Population Health Improvement. She is a member of the National Academy of Medicine.

Paul C. Tang, M.D., M.S., is an Adjunct Professor in the Clinical Excellence Research Center at Stanford University and an internist at the Palo Alto Medical Foundation (PAMF). He was formerly chief innovation and technology officer at PAMF and vice president, chief health transformation officer at IBM Watson Health. He has over 25 years of executive leadership experience in health information technology within medical groups, health systems, and corporate settings. Dr. Tang was co-chair of the federal Health Information Technology Policy committee from 2009-2017. He has served as board chair for several health informatics professional associations, including the American Medical Informatics Association. He received his B.S. and M.S. in electrical engineering from Stanford University and his M.D. from the University of California, San Francisco. He has served on numerous National Academies' committees and previously chaired the committee that produced the *Patient Safety: A New Standard for Care* report and *Key Capabilities of an Electronic Health Record System* report. He is a member of the National Academy of Medicine.

Reginald Tucker-Seeley, ScD., is the Vice President of Health Equity at ZERO-The End of Prostate Cancer. In this role, he leads the development and implementation of ZERO's health equity strategy to reduce racial/ethnic and place-based disparities in prostate cancer. Prior to joining ZERO, he was the inaugural holder of the Edward L. Schneider chair in gerontology and Assistant Professor in the Leonard Davis School of Gerontology at the University of Southern California (USC). Prior to joining USC, he was an Assistant Professor of Social and Behavioral Sciences at DFCI and HSPH. Dr. Tucker-Seeley's research has focused on social determinants of health across the life course, such as the association between the neighborhood environment and health behavior; and on individual-level socioeconomic determinants of multi-morbidity, mortality, self-rated physical, mental, and oral health. His research has also investigated the association of financial hardship with health across the cancer continuum from prevention to end-of-life care. Dr. Tucker-Seeley has a longstanding interest in the impact of health policy and social policy on racial/ethnic minorities and across socioeconomic groups. He has experience working on local and state level health disparities policy, and has developed, and taught courses focused on measuring and reporting health disparities. Dr. Tucker-Seeley was a Robert Wood Johnson Health Policy Fellow with a placement in the United States Senate. He currently serves as a board member at the American Board of Internal Medicine Foundation and at the National Patient Advocate Foundation/Patient Advocate Foundation. He is also the chair-elect of the Health Equity and Outcomes Committee of the American Society of Clinical Oncology. Dr. Tucker-Seeley completed an M.A. and Sc.D. in public health (social and behavioral sciences) at the Harvard T.H. Chan School of Public Health (HSPH) and a postdoctoral fellowship in cancer prevention and control at HSPH and the Dana-Farber Cancer Institute. He co-chaired the National Academies' workshop planning committee on Promoting Health Equity in Cancer Care, and currently serves as a member of the Roundtable on the Promotion of Health Equity.

Consuelo Hopkins Wilkins, M.D., MSCI, is Senior Vice President and Senior Associate Dean for Health Equity and Inclusive Excellence, Vanderbilt University Medical Center. Dr. Wilkins is a nationally recognized physician-scientist leader in health equity research focused on integrating social, cultural, and environmental factors into clinical and translational research. Throughout her career, Dr. Wilkins has led local and regional centers focused on the elimination of systemic inequities that disproportionately impact minoritized racial and ethnic groups including two NIH-funded centers addressing disparities in African Americans and Hispanic/Latinx populations. She is a member of the American Society of Clinical Investigation. She is a recipient of the prestigious Marion Spencer Fay Award. She earned a B.S. in microbiology and M.D. from Howard University. Dr. Wilkins completed Internal Medicine Residency at Duke University Medical Center; Geriatric Medicine fellowship at Washington University School of Medicine/Barnes-Jewish Hospital and a Master of Science in Clinical Investigation from Washington University School of Medicine. Dr. Wilkins is a member of the National Academy of Medicine.

Board on Population Health and Public Health Practice Liaison

Joshua Salomon, Ph.D. is a Professor of Health Policy at Stanford University School of Medicine, Associate Chair for Faculty Affairs and Strategy in the Department of Health Policy, and Senior Fellow at the Freeman Spogli Institute for International Studies. His research focuses on public health policy and priority-setting, with the aim of enhancing the evidence base for reasoned decision-making that improves population health and reduces disparities. He conducts policy modeling and program evaluation within three main substantive areas: (1) modeling and forecasting patterns and trends in major causes of global mortality and disease burden; (2) comparative assessment of public health and healthcare interventions and strategies; and (3) measurement and valuation of health outcomes. Dr. Salomon is Director of the Prevention Policy Modeling Lab, which is a multi-

institution research consortium that conducts health and economic modeling relating to infectious disease. Before joining the Stanford faculty, Dr. Salomon was Professor of Global Health at Harvard T.H. Chan School of Public Health, and previously served as a policy analyst at the World Health Organization. He is currently a member of the National Academies' Board on Population Health and Public Health Practice.

NASEM Project Staff

Francis Amankwah, M.P.H., is a Senior Program Officer in the Health and Medicine Division of the National Academies of Sciences, Engineering, and Medicine. He has nearly a decade of experience at the National Academies. He has managed consensus study committees and guided those committees in consensus building and has also served as the responsible staff officer for numerous workshops and convening activities. Among his recent work are the workshops on *Innovation in Electronic Health Records for Oncology Care, Research, and Surveillance*, *Promoting Health Equity in Cancer Care*, *Innovation in Cancer Care and Cancer Research in the Context of the COVID-19 Pandemic Care*, and *Suicide Prevention in Indigenous Communities*. He served as the responsible staff officer on the National Academies' congressionally mandated consensus study which produced the consensus report, *Medications in Single Dose Vials: Implications of Discarded Drug*. He also played an integral role in the development of the National Academies' consensus reports, *Guiding Cancer Control: A Path to Transformation*, and *Making Medicines Affordable: A National Imperative*. He is a recipient of the Health and Medicine *Veteran*, *Mount Everest*, and *Fineberg* staff achievement awards. He earned his M.P.H. and a graduate certificate in global planning and international development from Virginia Tech. He was raised in Ghana, West Africa, and earned his B.S. degree in agricultural science from Kwame Nkrumah University of Science and Technology.

Chidinma Chukwurah, B.S., is a Senior Program Assistant with the Board on Health Care Services at the National Academies of Sciences, Engineering, and Medicine. She provides administrative support for the National Cancer Policy Forum and other workshops and convening activities within the Health Care Services Board. The recent workshops she has supported include *Addressing Resistance to Immune Modulator Therapies for Cancer Treatment* and *The Potential Contribution of Cancer Geonomics Information to Community Investigations of Unusual Patterns of Cancer*. She was born and raised in Washington, DC. She earned her B.S. in health policy and administration from Penn State University.

Amira Daoud, M.A., is a Research Associate on the Board of Health Care Services in the Health and Medicine Division at the National Academies of Sciences, Engineering, and Medicine (NASEM). Prior to their position at NASEM, Amira was a Research Assistant at the Baylor College of Medicine's Center for Medical Ethics and Health Policy. At Baylor, they specialized in the Ethical, Legal, and Social Implications (ELSI) of genomic and neurological research. Amira is a bioethicist whose research interests focus on health equity, eliminating health disparities, Sexual and Gender Minorities (SGM) and minority communities' health, health care, and ethics. Amira obtained both their M.A. in Bioethics from New York University, where they wrote their master's thesis on the philosophical implications of a right to adequate health care for Sexual and Gender Minority People of Color. They obtained their B.A. in Philosophy with a Pre-Health Concentration from New York University.

Christopher Lao-Scott, Senior Research Librarian, has been part of the National Academies' Research Center since 2017. He has worked on a diverse array of projects at the National Academies of Sciences, Engineering, and Medicine providing extensive research support. He has conducted literature reviews for several consensus studies including Premium Cigars Patterns of Use, Marketing, and Health Effects, Guidance on PFAS

Exposure, Testing, and Clinical Follow-Up, Reducing Racial Inequality in Crime and Justice: Science, Practice, and Policy; and Resilience for Compounding and Cascading Events.

Rose Marie Martinez, Sc.D., is Senior Board Director of the National Academies of Sciences, Engineering, and Medicine's Board on Population Health and Public Health Practice. The Board has a vibrant portfolio of studies that address high profile and pressing issues that affect population health. The Board addresses the science base for population health and public health interventions and examines the capacity of the health system, particularly the public health infrastructure, to support disease prevention and health promotion activities, including the education and supply of health professionals necessary for carrying them out. The Board has examined such topics as the safety of childhood vaccines and other drugs, systems for evaluating and ensuring drug safety post-marketing, pandemic influenza planning, the health effects of cannabis and cannabinoids, the health effect of environmental exposures, the integration of medical care and public health, women's health services, health disparities, health literacy, tobacco control strategies, chronic disease prevention, among others. Prior to joining the NASEM, Dr. Martinez was a Senior Health Researcher at Mathematica Policy Research where she conducted research on the impact of health system change on the public health infrastructure, access to care for low income populations, managed care, and the health care workforce. Dr. Martinez is a former Assistant Director for Health Financing and Policy with the U.S. General Accounting Office where she directed evaluations and policy analysis in the area of national and public health issues. Her experience also includes six years directing research studies for the Regional Health Ministry of Madrid, Spain. Dr. Martinez received the degree of Doctor of Science from the Johns Hopkins School of Hygiene and Public Health.

Sharyl J. Nass, Ph.D., serves as Senior Director of the Board on Health Care Services and Director of the National Cancer Policy Forum at the National Academies of Sciences, Engineering, and Medicine. The National Academies provide independent, objective analysis and advice to the nation to solve complex problems and inform public policy decisions related to science, technology, and medicine. To enable the best possible care for all patients, the board undertakes scholarly analysis of the organization, financing, effectiveness, workforce, and delivery of health care, with emphasis on quality, cost, and accessibility. The forum examines policy issues pertaining to the entire continuum of cancer research and care. For more than two decades, Dr. Nass has worked on a broad range of health and science policy topics that includes the quality, safety, and equity of health care and clinical trials, developing technologies for precision medicine, and strategies to support clinician well-being. She has a Ph.D. from Georgetown University and undertook postdoctoral training at the Johns Hopkins University School of Medicine, as well as a research fellowship at the Max Planck Institute in Germany. She also holds a B.S. and an M.S. from the University of Wisconsin–Madison. She has been the recipient of the Cecil Medal for Excellence in Health Policy Research, a Distinguished Service Award from the National Academies, and the Institute of Medicine staff team achievement award (as team leader).

Fellows and Consultants

Alicia Cohen, M.D., MSc, FAAFP, is a practicing family physician and health services researcher. She is an Investigator at the VA Center of Innovation in Long Term Services and Supports, and an Assistant Professor of Family Medicine and Health Services, Policy, and Practice at the Brown University Alpert Medical School and School of Public Health. Dr. Cohen's research aims to understand and improve patient, community, health system, and structural-level processes to identify and address adverse social determinants of health and advance health equity. She has published extensively on social determinants of health and social care integration, food insecurity, and health disparities, and her work has been cited in Congressional testimony on Veteran and

military hunger. She serves on the VA Health Equity Coalition, the Research Advisory Committee for the Social Interventions Research and Evaluation Network (SIREN), and the Government Affairs & Public Policy Committee for the national anti-hunger nonprofit Mazon. Dr. Cohen earned her MD from the Icahn School of Medicine at Mount Sinai and completed her family medicine residency at UCSF-Santa Rosa. She was a Robert Wood Johnson Foundation Clinical Scholar at the University of Michigan, during which time she earned her MSc in Health and Health Care Research. She is a James C. Puffer/American Board of Family Medicine Fellow with the National Academy of Medicine, and a VA Fellow on the National Academies' Roundtable on the Promotion of Health Equity.

Tracy Madsen, M.D., Ph.D., FAHA, FACEP, is a 2021 National Academy of Medicine Fellow in Emergency Medicine. Dr. Madsen is an Associate Professor of Emergency Medicine and Epidemiology at Brown University, the Vice-Chair of Research in the Department of Emergency Medicine, and serves as the Interim Director of the Division of Sex and Gender in Emergency Medicine. She has expertise in sex and gender-based medicine, acute cerebrovascular disease, stroke epidemiology and prevention, and disparities in the healthcare system and in the emergency medicine workforce. Dr. Madsen's research is funded by the National Heart, Lung, and Blood Institute. She has over 100 peer reviewed publications, speaks nationally and internationally on topics including stroke in women, health inequities in stroke, and disparities in the academic emergency medicine workforce. She is regarded as an expert in the field of stroke in women. She completed a master's degree in Clinical and Translational Research and a PhD in Epidemiology, both at the Brown University School of Public Health. Dr. Madsen received her MD from the Boston University School of Medicine and completed a residency (with last year as Chief Resident) at Brown University before completing a research fellowship in the Division of Sex and Gender Medicine at Brown University.

TBD, Editorial Consultant