

Potential Research Priorities to Inform Readiness and Response to Highly Pathogenic Avian Influenza A (H5N1): A Workshop

Committee

Nahid Bhadelia

Chair

Nahid Bhadelia, M.D., M.A. is the Founding Director of Boston University Center for Emerging Infectious Diseases Policy and Research. She is a board-certified infectious diseases physician and an Associate Professor at the BU School of Medicine. She served the Senior Policy Advisor for Global COVID-19 Response for the White House COVID-19 Response Team in 2022-2023 as well as the interim Testing Coordinator on the White House MPOX Response Team. Between 2011-2021, Dr. Bhadelia helped develop and then served as the medical director of the Special Pathogens Unit (SPU) at Boston Medical Center, a medical unit designed to care for patients with highly communicable diseases. She was also previously an associate director for BU's maximum containment research program, the National Emerging Infectious Diseases Laboratories. She has provided direct care and helped lead medical and research response to multiple viral hemorrhagic fever outbreaks in East and West Africa. Dr. Bhadelia's research focuses on global health security and pandemic preparedness, including medical countermeasure evaluation and clinical care for emerging infections, diagnostics evaluation and positioning, infection control policy development, and healthcare worker training. She is a member of the National Academies Forum on Microbial Threats and was previously a member of the National Academies Ad Hoc Committee on Current State of Research, Development, and Stockpiling of Smallpox Medical Countermeasures.

Georges C. Benjamin

Member

Georges C. Benjamin, M.D. is well-known as a health leader, practitioner, and administrator. Dr. Benjamin has served as the executive director of the American Public Health Association, the nation's oldest and largest organization of public health professionals, since December 2002. He is a former secretary of Health for the state of Maryland. Dr. Benjamin is a graduate of the Illinois Institute of Technology and the University Of Illinois College Of Medicine. 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. He serves on several nonprofit boards such as Research!America, the University of Maryland Medical System and, the Reagan-Udall Foundation. He is a member of the National Academy of Medicine. In April 2016, President Obama appointed Benjamin to the National Infrastructure Advisory Council, a council that advises the president on how best to assure the security of the nation's critical infrastructure.

Rick A. Bright

Member

Rick Bright, Ph.D. is an international subject matter expert in biodefense, emergency preparedness and response, pharmaceutical innovation, vaccine, drug and diagnostic development. He is currently an advisor to numerous public and private organizations, an Executive Board Member for the NY Academy of Science's International Science Reserve, on the Board of Directors of FIND Dx, a member of the Science and Technical Advisory Board of the 100 Day Mission, a Sr. Fellow at the Foreign Policy Association, and a member of the Council on Foreign Relations. Prior, Dr. Bright served as the Deputy Assistant Secretary for Preparedness and Response and the Director of the Biomedical Advanced Research and Development Authority (BARDA), in the U.S. Department of Health and Human Services where he directed public-private partnerships that led to the FDA approval of over 60 new vaccines, drugs, and diagnostics for public health and national security threats. Dr. Bright has extensive experience in the biotechnology industry where he held senior leadership and executive management roles. He has also held senior scientific leadership positions in non-governmental organizations where he championed innovative vaccine development and expanded vaccine manufacturing capacity to multiple developing countries. He also spent a decade in vaccine, therapeutics, and diagnostics development at the U.S. Centers for Disease Control and Prevention. For this work, Dr. Bright received the Charles C. Shepard Science Award for Scientific Excellence. Dr. Bright received a Ph.D. in Immunology and Molecular Pathogenesis from Emory University and a B.S. magna cum laude with honors in Biology and Physical Sciences from Auburn University at Montgomery.

Meghan F. Davis

Member

Meghan F. Davis, D.V.M., Ph.D., M.P.H. is an Associate Professor and Doctoral Program Director in Environmental Health and Engineering at Johns Hopkins Bloomberg School of Public Health, and she is Co-Director for the Johns Hopkins P.O.E. Total Worker Health Center in Mental Health. The goals of her research are to reduce microbe-mediated diseases at the human-animal interface and to promote systematic methods for One Health research. She received her D.V.M. from the University of California at Davis School of Veterinary Medicine in 2000, and her M.P.H. and Ph.D. from Johns Hopkins Bloomberg School of Public Health in 2008 and 2012, respectively. She most recently served on the NAS Committee on Building Capacity in Pakistan.

Rachel K. Herlihy

Member

Rachel Herlihy, M.D., M.P.H. is the State Epidemiologist and Deputy Chief Medical Officer at the Colorado Department of Public Health and Environment. Dr. Herlihy directs medical and epidemiologic activities for the Department including communicable disease reporting, surveillance, and investigation efforts. She led Colorado's epidemiologic response to the COVID-19 pandemic, and is currently leading the state's human epidemiologic response to H5N1 avian influenza. Dr. Herlihy represents the Department in a variety of settings including legislative and executive hearings, as a lead media spokesperson, and with various technical and lay audiences. She has been with the Department since 2011 and has been Colorado's State Epidemiologist since 2017. Rachel earned her MD and BS degrees in Bacteriology, and Medical Microbiology and Immunology at the University of Wisconsin. She completed an internal medicine internship at the University of Virginia and a preventive medicine residency at Johns Hopkins University including an MPH from the Johns Hopkins Bloomberg School of Public Health. Previously, Rachel was the Deputy State Epidemiologist for Utah, and the Deputy Director for the Department of Defense's Infectious Diseases Clinical Research Program in Bethesda, Maryland.

Michelle Kromm

Member

Michelle Kromm, D.V.M., M.P.H., M.A.M., DACVP is a board-certified poultry veterinarian with over 15 years of experience in food safety, emergency disease management, and antimicrobial stewardship. She earned her Doctor of Veterinary Medicine and Master of Public Health degrees concurrently from Iowa State University and the University of Iowa in 2006, followed by a master's degree specializing in poultry medicine from the University of Georgia in 2007. After completing her education, Dr. Kromm joined Jennie-O Turkey Store, a Hormel Foods subsidiary, as a staff veterinarian. She advanced through multiple leadership roles, ultimately becoming Vice President of Animal Health and Welfare at Hormel Foods in 2019. In this role, she managed animal health, welfare, and preharvest food safety programs. Dr. Kromm has contributed to multiple task forces and committees focused on food safety, antimicrobial resistance, and emergency disease preparedness. Notable committees include the Executive Committee of National Turkey Federation, National Institute for Antimicrobial Resistance Research and Education and multiple AVMA committees. Her consulting practice, Food Forward LLC, is dedicated to enhancing food system resilience through strategic risk mitigation, with a focus on food safety, animal health, and sustainability.

Andrew T. Pavia

Member

Andrew T. Pavia, M.D., FAAP, FIDSA is the George and Esther Gross Presidential Professor and Chief of the Division of Pediatric Infectious Diseases at the University of Utah and Director of Hospital Epidemiology at Primary Children's Medical Center. His current research focuses on the epidemiology, diagnosis and management of influenza and other respiratory and emerging infections. He was a member of the Board of Directors of the Infectious Diseases Society of America and chaired the Pandemic Influenza and Bio-emergencies Task Force. He served two terms as a member of the Board of Scientific Counselors of the Director of the Office of Infectious Diseases at the U.S. Centers for Disease Control and Prevention (CDC) and has served as a member of the National Biodefense Science Board, and the National Vaccine Advisory Board. He has been an adviser to CDC on pandemic influenza- and anthrax-related issues and served on CDC Team B during the 2009 H1N1 and the 2020 Covid-19 pandemics. He has served on committees for the National Academies of Sciences, Engineering, and Medicine (NASEM), exploring the distribution of antivirals during influenza pandemics and the prepositioning of countermeasures for anthrax. During the Covid-19 pandemic he served on the NIH Covid-19 Treatment Guidelines Panel. He received his B.A. and M.D. degrees at Brown University. He trained as a resident and chief resident at Dartmouth Hitchcock Medical Center, as an Epidemic Intelligence Service officer and Preventive Medicine Resident at the CDC, and an infectious disease fellow at the University of Utah.

Anabel Rodriguez

Member

Anabel Rodriguez, Ph.D., M.P.H. is an Assistant Professor at Texas A&M. Her research, outreach, and training efforts have focused on improving occupational health, safety, and well-being among Spanish and Indigenous-speaking agricultural working populations in rural regions. Most recently, her work has focused on identification and prevention of tuberculosis and influenza, health service access in health 'deserts', including, vaccine access, utilization, hesitancy, and systemic barriers, education on vaccine-preventable infectious diseases, pandemic relief payments for wages lost, and understanding social determinants of health associated with agricultural occupations (i.e., dairy farm workers, fresh fruit and vegetable, seasonal, migrant, and H-2A visa guest farmworkers, and sorting and grading bodega workers) in the Texas Panhandle and U.S.-Mexico border communities of the Rio Grande Valley and El Paso. Dr. Rodriguez is the proud daughter of Mexican immigrants and seasonal migrant farmworkers from the Rio Grande Valley.

David Stiefel

Member

David Stiefel, M.S. serves as a Director for the Nuclear Threat Initiative's (NTI) Global Biological Policy and Programs team. Previously, David served on the National Security Council (NSC) staff, most recently as the Acting Senior Director for Global Health Security and Biodefense. While at the NSC, David led the drafting, signing, and release of National Security Memorandum (NSM) -15 and the National Biodefense Strategy; was key to the drafting, signing, and release of NSM -16; coordinated improvements for biological incident response; revitalized key biodefense bilateral relationships; and oversaw key policy efforts related to biosafety, biosecurity, global health security, biological weapons nonproliferation, mitigating biotechnology risk, and international pandemic preparedness and health negotiations. David previously worked as an environmental consultant, a defense contractor at the Defense Threat Reduction Agency, and a national security policy analyst at the United States Department of Agriculture. David is an adjunct faculty at Georgetown and the William and Mary. David has a BS in Geology & Environmental Sciences, Media Arts & Design, and Jazz Studies from James Madison University; a MS from Georgetown University in Biohazardous Threat Agents and Emerging Infections Disease; and he is currently a PhD Candidate at the University of Virginia in Foreign Affairs.

Richard J. Webby

Member

Richard Webby, Ph.D. is a Member of the Department of Host-Microbe Interactions at St Jude Children's Research Hospital, Memphis TN. He is also Director of the World Health Organization Collaborating Center for Studies on the Ecology of Influenza. He is a virologist with a research focus on influenza at the human-animal interface; research that has included studies with A(H5) influenza viruses. He is a Fellow of the American Academy of Microbiology and completed his PhD in Virology from the University of Otago, New Zealand. He has previously participated in the 2005 Institute of Medicine John R. La Montagne Memorial Symposium on Pandemic Influenza Research.

Nora Wineland

Member

Nora Wineland, D.V.M., M.S., DACVPM is the State Veterinarian. Dr. Wineland works closely with the staff of the Michigan Department of Agriculture and Rural Development's Animal Industry Division (AID), part of the Bureau of Food Safety and Animal Health. Together, they work collaboratively with other agencies, stakeholders, and animal health partners to achieve the mission of protecting, regulating, and promoting animal health throughout the state. Dr. Wineland has been serving as the State Veterinarian since 2018 and led AID from 2018 to 2023. Prior to joining MDARD, she worked extensively in regulatory medicine designing and implementing national disease eradication programs, developing national livestock health studies, and serving as the first head of the U.S. Department of Agriculture's Center for Animal Welfare. These experiences helped her to develop a broad network of partnerships and to value collaboration in all her work. Dr. Wineland earned her DVM from Michigan State University and later received a Master's in Epidemiology from Colorado State University. Also, she is board certified in veterinary preventive medicine.