

Biography of the members of the Guideline Development Group:

Public health and social measures for mitigating the risk and impact of epidemic and pandemic influenza: an update of 2019 guidance

Dr Allison Aiello is the James S. Jackson Healthy Longevity Professor of Epidemiology at the Columbia University Mailman School of Public Health and Columbia Aging Center. For almost two decades, she has been at the forefront of research on infectious disease prevention and detection in community settings. Her pioneering work focuses on leading studies on respiratory infection prevention, including assessing the effectiveness of hand hygiene, mask usage, and self-isolation in reducing community transmission. The findings from these studies have been instrumental in shaping global and national pandemic preparedness guidelines in both clinical and community environments. Dr Aiello's research also explores the impact of social inequalities on infectious diseases and aims to promote health equity in infection prevention. She is a recognized expert in her field and has served on several panels and writing groups for guidelines related to pandemic preparedness and infection prevention, including the Institute of Medicine, World Health Organization, and the joint Society for Healthcare Epidemiology/Infectious Disease Society of America/Association for Professionals in Infection Control and Epidemiology. As Deputy Director of the Longitudinal Study of Adolescent to Adult Health (Add Health) Wave VI, a cooperative agreement grant with the National Institutes of Health, Dr Aiello is co-leading one of the most comprehensive life course health studies in the United States. Through her extensive research and leadership, she has made significant contributions to the field of epidemiology and infectious disease prevention, and her work continues to shape our understanding of how to promote healthier communities.

Dr Morenike Alex-Okoh is a public health expert and currently the Head of Department of Public Health at the Federal Ministry of Health, Nigeria. In this role, Dr Alex-Okoh is responsible for the coordination of public health activities and interventions at the national level, and ensures functional and effective linkages with the subnational level. As the Director Public Health and Head of Department, Dr Alex-Okoh oversees and leads thirteen Divisions / teams responsible for the development of public health policies and the guidelines for their implementation. One of these Divisions is the Port Health Services (Point of Entry) Division. Dr.Alex-Okoh is no stranger to the Point of Entry (POE) where, since 1992, she rose through the ranks, was operational lead for the POE response during the EVD outbreak in 2014, operational and administrative lead for the POE response during the COVID-19 pandemic as the Point of Entry Lead, serving as POE Pillar Lead on the Presidential Task Force on COVID-19, prior to assuming the role of Head of the Department of Public Health. In recognition of her role in the Point of Entry, Dr.Alex-Okoh was invited to facilitate WHO trainings in ICAO Annexes & WHO International Health Regulations (2005) Core Capacities in Johannesburg South Africa (11 -15 February 2019) and Regional Training on Public Health Events Management on Ships in AFRO (3 -11 September 2019 in Dar-Es-Salaam Tanzania). Dr.Alex-Okoh obtained a Bachelor of Medicine and Surgery Degree (MBBS) in 1988, from the University of Benin, a Master in Public Health (MPH) in 1999 from the University of Lagos and a Fellowship in Public Health from the National Postgraduate Medical College of Nigeria in 2012. She is a great team player, a consummate public health professional and is committed to the advancement of public health at all levels to ensure global health security.

Dr Judith Bueno de Mesquita is Senior Lecturer in International Human Rights Law and Co-Deputy Director of the Human Rights Centre, Essex Law School, University of Essex. For two decades, her research has been focused on the intersection of human rights and global public health. She has undertaken research on COVID-19 and human rights for the WHO, Independent Panel on Pandemic Preparedness and Response, and has recently supported drafting of human rights guidelines for public health emergencies published by the International Commission of Jurists and the Global Health Law Consortium. She has previously worked as a consultant on sexual and reproductive health and human rights with WHO and UNFPA, and has extensively worked with the mandate of the UN Special Rapporteur on the right to health, including as a Senior Research Officer in 2001-08. She has a LLM in International Human Rights Law (Essex), MA in History (Cambridge) and is completing a PgDip in Public Health (LSHTM).

Professor Benjamin Cowling joined the School of Public Health (SPH) at HKU in 2004. Prior to moving to Hong Kong, he graduated with a PhD in medical statistics at the University of Warwick (UK) in 2003, and spent a year as a postdoc at Imperial College London (UK). Professor Cowling has been the Head of the Division of Epidemiology and Biostatistics since 2013. He is responsible for teaching the introductory module in epidemiology on the MPH curriculum, and is the chairman of the Departmental Research Postgraduate Committee. Prof Cowling is a co-director of the WHO Collaborating Centre for Infectious Disease Epidemiology and Control at HKU SPH.

Prof Cowling's primary research focus is in infectious disease epidemiology. In recent years he has designed and implemented large field studies of influenza transmission in the community and the effectiveness and impact of control measures. His latest research has focused on the modes of respiratory virus transmission, influenza vaccination effectiveness, and immunity to infections at the individual and population level. He has strong links with China CDC, and the NIGMS-funded Harvard Center for Communicable Disease Dynamics.

Professor Cowling is a fellow of the Royal Statistical Society and a Fellow of the UK Faculty of Public Health. He is the Editor-in-Chief of Influenza and Other Respiratory Viruses, and an Associate Editor of Emerging Infectious Diseases. He has more than 500 publications listed in Scopus, including 66 articles with 66 or more citations (H-index of 66). Prof Cowling has received numerous awards including HKU Outstanding Young Researcher Award (2011), Croucher Senior Research Fellowship (2015), HKU Outstanding Researcher Award (2017), and RGC Senior Research Fellowship (2020). He was awarded an MBE in Queen Elizabeth II's 2021 birthday honours.

Professor John Edmunds's research interests centre on the use of mathematical models to guide infectious disease policy-making. He has published over 350 articles on topics ranging from HPV vaccination to the economics of pandemic influenza. He is a member of a number of national and international committees. He has been involved in pandemic planning for many years and was a member of the UK high-level scientific advisory group, SAGE, during the COVID-19 pandemic. He has also been a member of the NERVTAG (New and Emerging Respiratory Virus Threats Advisory Group) and is still a member of SPI-M (which provides modelling advice on pandemics) as well as various subcommittees of the Joint Committee of Vaccines and Immunisation (JCVI – the UK's vaccine policy advisory body).

Professor Vernon Lee is a preventive medicine physician with extensive global health experience in pandemic preparedness and response, infectious disease epidemiology and health policy and

management. He played an instrumental role in developing and implementing Singapore's COVID-19 pandemic response, and has also responded to the 2003 SARS outbreak, 2009 influenza pandemic, and the 2016 Zika outbreak in Singapore. Prof Lee previously served as Advisor to the Assistant Director General for Health, Security and Environment at the WHO headquarters in Geneva; Medical Epidemiologist in the WHO's Country Office in Indonesia; and Head of the Biodefence Centre in the Singapore Armed Forces. Through his work, Prof Lee has been involved in major global health security collaborations, and in developing pandemic preparedness plans, risk assessment and disease management programmes. He continues to serve on expert committees at the international level. An avid supporter of evidence-based health policy, Prof Lee has published about 200 scientific papers, many in top journals, including the New England Journal of Medicine (NEJM), Journal of the American Medical Association (JAMA), and the Lancet journals. He is an Adjunct Professor at the Singapore's Saw Swee Hock School of Public Health. Prof Lee graduated from medical school at the National University of Singapore. He also holds a PhD in epidemiology from the Australian National University, and the Master in Public Health and Master of Business Administration degrees from the Johns Hopkins University, USA.

Professor Hitoshi Oshitani is a professor for the Department of Virology of Tohoku University Graduate School of Medicine. Before joining Tohoku University, he was a regional advisor of the World Health Organization (WHO) Western Pacific Regional Office (WPRO) in Manila, the Philippines, from 1999 to 2005, where he was responsible for emerging diseases, including severe acute respiratory syndrome (SARS) and avian and pandemic influenza. He worked as a technical expert for Japan International Cooperation (JICA) in Zambia from 1991-1994. His main research interest is epidemiology and control of viral infections, particularly respiratory viruses such as influenza and respiratory syncytial viruses. His research group has been conducting research in Japan and other countries such as the Philippines, Mongolia, and Zambia. He is also a member of the Advisory Board and the Subcommittee on COVID-19 for the government of Japan.

Dr Pasi Penttinen is the Chief Executive Officer for Gulf CDC, based in Riyadh, Kingdom of Saudi Arabia. He is leading the establishment of this regional Center for Disease Prevention and Control in a scientific and managerial role. Dr Penttinen is a public health leader with a distinguished career of more than 20 years in managing and leading disease prevention and control activities in multiple countries, at local, national and international levels both in the public and private sector. Prior to his current role, Dr Penttinen led the establishment of epidemic intelligence activities at ECDC, led the scientific and programmatic work on the influenza and other respiratory viruses. He managed multiple public health emergencies for ECDC, including the 2009 influenza pandemic and the COVID-19 pandemic. His research interests include surveillance, pandemic preparedness, epidemic intelligence, surveillance of respiratory viruses and vaccines. Dr Penttinen has also worked with the national public health institutes in Finland and Sweden and advised a large privately funded public health program in Papua, Indonesia with components on primary health care, TB, HIV-STI and malaria control. Dr Penttinen studied at University of Kuopio for his MD and PhD degrees, University of Helsinki for his specialization in Healthcare management and Harvard School of Public Health for his MPH. He is married, has three sons, and tries to be active on twitter as @ppenttin.

Dr Antso Hasina Raherinandrasana is a junior researcher at the Public Health Department of the Faculty of Medicine, University of Antananarivo. Her research activities focus on the epidemiology and surveillance of infectious diseases in resource limited countries and access to care. From 2021 to March

2023, she was head of the Diseases Surveillance Unit at the Ministry of Health, Madagascar where she worked to improve the sentinel surveillance system for severe acute respiratory syndrome in order to get the most reliable data for public health decision making. She believes in the importance of community education as an effective public health intervention to control infectious diseases spread. Dr Raheerinandrasana has a Master in Public Health from Pasteur-CNAM School of Public health.

Dr Carrie Reed is an epidemiologist and Branch Chief for the Epidemiology and Prevention Branch of the Influenza Division at the US CDC. In her current role, Dr Reed oversees public health surveillance and research activities related to influenza in the United States, including disease surveillance, epidemiologic and clinical research studies, efforts to understand and improve the use of influenza vaccines, and pandemic planning. Prior to this, she has over 15 years of experience at CDC focused on the application of epidemiologic methods and mathematical modeling to address key questions about the disease burden of influenza and other respiratory viruses and the prevention of seasonal and pandemic influenza. Dr Reed has a Doctor of Science in epidemiology and MPH in epidemiology and biostatistics from Boston University School of Public Health.

Dr Jonathan Suk is a Principal Expert, Emergency Preparedness and Response, at the European Centre for Disease Prevention and Control (ECDC), where he has been working since 2007. Jonathan is currently coordinating ECDC preparedness work on pandemics, non-pharmaceutical interventions, After-Action Reviews, and capacity building as part of the European Initiative on Health Security. During the COVID-19 pandemic, Jonathan was strategic analyst to the ECDC response and led the production of ECDC outputs on COVID-19, schools, and children. During his time at ECDC, Jonathan has worked extensively on strategic preparedness planning and on the drivers and determinants of emerging infectious disease, with a particular emphasis on climate change. From 2014-2020 Jonathan held an Honorary Lectureship, Global Public Health Unit, University of Edinburgh. Jonathan has a BSc from McGill University and a PhD from the University of Edinburgh.

Dr Muhammad Tariq is a public policy, vaccine preventable diseases, supply chain systems, digital health and global health security practitioner. Social justice, health equity and science of implementation are his passions. In 2010, Dr Tariq planned and deployed the Country-WHO-USAID led H1N1 vaccination campaign. He also provided WHO led technical assistance to Egypt, Jordan and Morocco on various public health issues. Dr Tariq's academic and professional associations include University of Washington, University of Witwatersrand, University of Health Sciences and National University of Sciences and Technology.

Dr Sibongile Walaza is a medical doctor with MSc in Epidemiology and Biostatistics and a PhD in Public Health from the University of Witwatersrand, Johannesburg, South Africa. She is the Epidemiology section lead for the Centre for Respiratory Disease and Meningitis at the National Institute for Communicable Diseases (NICD) in South Africa. In this position she is responsible for the implementation of the surveillance programmes within the centre, in particular she has been responsible for developing the protocols for the expanded surveillance for severe respiratory illness and the pneumonia surveillance and field implementation of these protocols. She leads the team that is responsible for the epidemiology analysis and reporting of SARS-CoV-2 case data in South Africa. She has a joint appointment as a lecturer at the School of Public Health, University of the Witwatersrand and has co-

supervised Msc Students in the field of epidemiology. She has published a number of peer-reviewed articles in the field of influenza and other respiratory illnesses. She has contributed to the development of guidelines for prevention and management of influenza in South Africa and is a member of the National influenza planning Committee. She has worked as an investigator on phase III clinical trials of novel Microbicides.

Dr Sonam Wangchuk is Programme Director of the Royal Centre for Disease Control at the Ministry of Health in Bhutan. He is member of several National Technical Advisory groups covering relevant public health topics (immunization, tuberculosis, malaria, vector borne diseases). He also provides in-service training for health workers on laboratory sciences, field epidemiology, and he mentors postgraduate students. Dr Wangchuk has published more than 40 articles in various journals mainly on infectious diseases preventions and control. He holds a PhD in Medical Science from the Oita University, a Master in Microbiology from the Mahidol University, and a bachelor's degree in Medical Technology from the Pondicherry University.