

WHO Guideline Development Group for living clinical practice guidelines for COVID-19: therapeutics and clinical management

BIOGRAPHIES
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Overview

For the development of the WHO **Therapeutics and COVID-19: living guideline**, **Clinical management of COVID-19: living guideline** and **Drugs to prevent COVID-19: living guideline**, a formal Guideline Development Group (GDG) comprising individuals with broad expertise spanning multiple specialties and all regions was convened. This group also includes patient panel members.

The technical unit collected and managed declarations of interests (DOIs). In addition to the distribution of DOI forms, during meetings, the WHO Secretariat described the DOI process and an opportunity was given to GDG members to declare any interests not provided in written form.

WHO wants to acknowledge all the experts that contributed to the Guideline Development Group (GDG) and thank them for their commitment and support to achieve the evidence-based recommendations for care of patients with COVID-19.



Neill Adhikari

Neill Adhikari is an intensivist at Sunnybrook Health Sciences Centre and appointed to the Interdepartmental Division of Critical Care Medicine and Institute for Health Policy, Management and Evaluation, University of Toronto. His research interests include critical care delivery in under-resourced settings and clinical trials. He is co-PI of trials of vitamin C for sepsis, and blood pressure targets for vasodilatory shock. He co-leads the Toronto-Addis Ababa Academic Collaboration in critical care medicine. Neill participated in the WHO *Therapeutics and COVID-19: living guideline* (corticosteroids), *Drugs to prevent COVID-19: living guideline* (hydroxychloroquine and tixagevimab-cilgavimab) and served as Clinical Chair for the WHO *Clinical management of COVID-19: living guideline* (January 2021, November 2021). No conflict of interest.



Ahmed Alhadyan

Ahmed Alhadyan holds a Doctor of Optometry degree as well as a master's in Optometry and Vision Science from King Saud University in Saudi Arabia. He is trained to manage and treat vision and ocular health and to prescribe contact lenses and vision rehabilitation aids for various conditions. His interests include improving the quality of medical products, specifically optical and eye products, and new treatments for dry eyes. During the pandemic, he witnessed relatives hospitalized due to COVID-19 and recognizes the importance of developing new guidelines for positively impacting health. Ahmed participated in the WHO *Therapeutics and COVID-19: living guideline* (molnupiravir, nirmatrelvir, VV116). No conflict of interest.



Muna Al Maslamani

Muna Al Maslamani is Medical Director of the Communicable Disease Center and all COVID-19 cases in the State of Qatar. She is a Senior Consultant in Transplant Infectious Diseases and Assistant Head of the Infectious Diseases Division, Medicine Department at Hamad Medical Corporation, Qatar. In 2021, she became a Fellow of the Infectious Disease Society of America. In addition to clinical responsibilities, she holds several administrative and academic positions including Vice Chairperson for Quality and Patient Safety, Medicine Department; Fellowship Program Director for Infectious Disease; Associate Professor of Clinical Medicine at Weill Cornell Medicine-Qatar; and Associate Professor of Internal Medicine and Infectious Diseases in the Department of Clinical Academic Education, College of Medicine, Qatar University. Her role as a sponsor for the Clinical Care Improvement Training Program of the Quality Division and her involvement in the IHI Best Care Always Campaign has produced 55 quality improvement projects to date. She has received a number of research grants; has partnered with international researchers in conducting clinical research; and has published 67 publications to date. Muna participated in *Drugs to prevent COVID-19: living guideline* (hydroxychloroquine and tixagevimab-cilgavimab) and WHO *Therapeutics and COVID-19: living guidelines* (nirmatrelvir and VV116). No conflict of interest.



Wagdy Amin

Director General, Chest Diseases Department, Executive Manager of National Tuberculosis Programme (NTP), Egypt, Ministry of Health & Population. Wagdy Amin is a member of the Scientific Committee of COVID-19 and of the Scientific Committee of TB Control (MOHP, Egypt). He is interested in early diagnosis, treatment and control of TB and other chest infections, especially TB, drug-resistant TB and other chest diseases. He has long clinical experience as a pulmonologist and trainer in many fields in chest diseases and shared in developing TB, asthma and COPD guidelines and preparedness plans for influenza control.

During his work he has served as Clinical/Laboratory Coordinator (2003–2006), Training Coordinator (2006–present), TB/HIV Coordinator (2006–present), and Pandemic Influenza Focal Point (2006–2011). As Director, he has undertaken a variety of scientific activities: TB control courses in Cairo, in collaboration with Japan International Cooperation Agency (JICA) and WHO for training more than 250 members working in TB control in Eastern Mediterranean Region countries; TB control training for IEMSA members in collaboration with the Cairo Anti-Smoking, Tuberculosis and Chest Diseases Association in Cairo 2014; and various training courses in the field of multidrug-resistant TB and hospital management; and research studies in the field of chest diseases and TB and other infectious diseases such as influenza and COVID-19. He is also passionate about driving anti-smoking campaigns. Wagdy participated in the *Clinical management of COVID-19: living guideline* (January 2021, advanced respiratory support, March 2022), the WHO *Therapeutics and COVID-19: living guideline* (corticosteroids, lopinavir, IL-6 RB, casirivimab and imdevimab, JAK inhibitors, sotrovimab, molnupiravir, nirmatrelvir, remdesivir) and *Drugs to prevent COVID-19: living guideline* (hydroxychloroquine and tixagevimab-cilgavimab). No conflict of interest.



André Ricardo Araujo da Silva

André Ricardo Araujo da Silva is Professor of Paediatrics at the Federal Fluminense University, Niterói, Brazil (UFF), where he leads the Teaching Laboratory of Prevention and Control of Healthcare-associated Infections and coordinates the Scientific Initiation Program of Medicine course. His primary academic focus is infectious disease in children, particularly antimicrobial stewardship, infections by multidrug-resistant bacteria, infections in critically ill children and COVID-19. He holds a postdoctoral degree in antimicrobial stewardship in children from Dr von Hauner Children's Hospital, Ludwig-Maximilians-Universität, Germany. During the COVID-19 pandemic he attended to more than 350 confirmed children with COVID-19 in Brazil and published a number of articles/pre-prints on COVID-19. André Ricardo participated in the WHO *Clinical management of COVID-19: living guideline* (advanced respiratory support), the WHO *Therapeutics and COVID-19: living guideline* (management of critical COVID-19: ARDS, fluvoxamine, colchicine, sotrovimab, remdesivir, casirivimab and imdevimab, nirmatrelvir, molnupiravir), *Drugs to prevent COVID-19: living guideline* (hydroxychloroquine and tixagevimab-cilgavimab) and the WHO MISC Severe COVID-19 Working Group Network. No conflict of interest.



Diptesh Aryal

Diptesh Aryal is an Intensivist and the ICU Coordinator at Nepal Medciti Hospital (Bhaisepati Lalitpur, Nepal). He gained his MD (Anesthesia) from Tribhuvan University, Institute of Medicine, and completed his Clinical Fellowship training in Critical Care Medicine at St Michael's Hospital, Canada. He was formerly associated with Tribhuvan University, Institute of Medicine. Diptesh participated in the WHO *Clinical management of COVID-19: living guideline* (advanced respiratory support) and the WHO *Therapeutics and COVID-19: living guideline* (fluvoxamine, colchicine, sotrovimab). No conflict of interest.



Abdullah Balkhair

Abdullah Balkhair is Senior Consultant in Infectious Diseases and Head of the Infectious Diseases Unit and Infection Control Department, Sultan Qaboos University, Oman. He has 16 years' experience in the practice of infectious diseases in a referral teaching hospital (SQUH) and many years in academia. His area of interest is emerging and re-emerging infections and infections in the critically ill, and he has authored many publications in peer-reviewed journals and received several research grants. He is currently leading the COVID-19 Task Force Team at Sultan Qaboos University Hospital in Oman. He participated in the WHO *Clinical management of COVID-19: living guideline* (May 2020). No conflict of interest.



Corrado Barbui

Corrado Barbui holds a postdoctoral degree in Psychiatry from the University of Verona, Italy, and was trained in epidemiology, clinical psychopharmacology and health services research at the Mario Negri Institute for Pharmacological Research, Milan, and the Institute of Psychiatry in London, where he joined the editorial team of the Cochrane Collaboration Depression Anxiety & Neurosis Group. Returning to Italy, he conducted research in evidence-based mental health and pharmacoepidemiology at the University of Verona. In 2002 he was appointed Lecturer in Psychiatry and, in 2013, became Director of the WHO Collaborating Centre for Research and Training in Mental Health and Service Evaluation of the University of Verona. Under the leadership of WHO, he was involved in the development of the mhGAP Programme as an expert methodologist. In 2015, he was appointed Full Professor of Psychiatry. In 2017, he founded Cochrane Global Mental Health, a Cochrane network that supports the production, dissemination and implementation of systematic reviews relevant to mental health in low- and middle-income countries. He participated in the WHO *Clinical management of COVID-19: living guideline* (May 2020). No conflict of interest.



Frederique Jacquierioz Bausch

Frederique Jacquierioz Bausch is a general medicine internist and specialist in tropical and travel medicine, currently working as a Senior Physician, Department of Primary Care, University Hospitals of Geneva, with a joint appointment at the Center for Emerging Viruses. Previously Clinical Professor at the Tropical Medicine Institute von Alexander Humboldt, Cayetano Heredia Hospital and University in Lima, Peru, and Clinical Assistant Professor at Tulane School of Public Health and Tropical Medicine in New Orleans, USA, she served as a WHO consultant to provide clinical technical support during the 2013–2016 Ebola outbreak in West Africa, contributing significantly to the development of clinical guidelines and training material for the management of viral haemorrhagic fevers. She currently oversees the COVID-19 outpatient testing centres at the University Hospitals of Geneva and serves on the Hospitals Taskforce for COVID-19 evidence appraisal and clinical institutional guidance. Her current research focuses on the predictive factors of COVID-19 infection and adverse outcomes in the outpatient population. Frederique participated in the WHO *Clinical management of COVID-19: living guideline* (January 2021), the WHO *Therapeutics and COVID-19: living guideline* (lopinavir, ivermectin, casirivimab and imdevimab, IL-6 RB, molnupiravir, remdesivir, nirmatrelvir, VV116) and *Drugs to prevent COVID-19: living guideline* (hydroxychloroquine and tixagevimab-cilgavimab). No conflict of interest.



Julie Benbenishty

Julie Benbenishty is a nurse currently working as an Academic Consultant to the clinical nurses working at Hadassah Hebrew University Medical Center in Jerusalem, Israel, and Assistant Professor teaching a master's in Clinical Nursing at the School of Nursing. She has been a member of European Society of Critical Care Medicine since 2000 and in 2014 was awarded an honorary membership – the first nurse. She is Vice President of the European Federation of Critical Care Nurses and heads the European critical care doctoral educated nurses' group. In 2022 she was awarded an ambassadorship to the World Federation of Critical Care Nurses. Her PhD, from the University of Plymouth, United Kingdom, was on the topic of the nurse's role in the transition from curative to palliative care in intensive care. She has published several books and peer-reviewed articles on topics current in critical care nursing and medicine. Julie participated in the WHO *Clinical management of COVID-19: living guideline* (awake prone positioning). No conflict of interest.



Martin Brodsky

Martin Brodsky is an Associate Professor of Physical Medicine and Rehabilitation and Pulmonary and Critical Care Medicine at Johns Hopkins University. He is also member of the Outcomes After Critical Illness and Surgery Group, a multidisciplinary clinical and research group dedicated to understanding and improving patient outcomes after critical illness and surgery at Johns Hopkins University. His peer-reviewed research publications and book chapters largely focus on swallowing and swallowing disorders and laryngeal injury after endotracheal intubation. Brodsky's research programme is funded by NIH – studying the effects of critical illness and critical care medicine on swallowing and the airway and their long-term outcomes; and FDA – studying the progression of dysphagia in neurodegenerative and rare disorders. He is a Fellow of the American Speech-Language-Hearing Association, an Associate Editor for *Dysphagia*, and a Section Editor for *Archives of Physical Medicine and Rehabilitation*. He also serves as a member the Editorial Board for the *American Journal of Speech-Language Pathology*. Martin participated in the WHO *Clinical management of COVID-19: living guideline* (rehabilitation of people with post COVID-19 condition, 2022). See Annex 1.



Darren Brown

Darren Brown is a clinical academic Physiotherapist specializing in HIV, disability and rehabilitation at Chelsea and Westminster Hospital NHS Foundation Trust, London. Darren is the Chair of Long COVID Physio, an international peer-support, education and advocacy, patient-led association of physiotherapists living with Long COVID. Darren has experience of living with Long COVID and works internationally on research and education about Long COVID disability experiences, and safe Long COVID rehabilitation. Darren participated in the WHO *Clinical management of COVID-19: living guideline* (rehabilitation of people with post COVID-19 condition, 2022). No conflict of interest.



Erlina Burhan

Erlina Burhan is a pulmonologist with more than 16 years' experience in pulmonology and respiratory medicine in Indonesia, where she is spearheading the fight against TB. Burhan undertook research in Namibia during her postgraduate studies at Heidelberg University, Germany. Since then, she has been Head of the Infection Division Department of Pulmonology and Respiratory Medicine, Faculty of Medicine, Universitas Indonesia. Other positions held include: Head of the Professional Organization Coalition against Tuberculosis; member of the Board of Directors for the International Union Against Tuberculosis and Lung Diseases; and Head of the TB Assembly of the Asia Pacific Society of Respirology. During the COVID-19 pandemic, she has acted as Head of the COVID-19 Commando Team Persahabatan National Lung Hospital and contributed to COVID-19 guidelines, training health care workers, and advising on health policy in Indonesia. Erlina participated in the WHO *Clinical management of COVID-19: living guideline* (January 2021) and the WHO *Therapeutics and COVID-19: living guideline* (hydroxychloroquine, lopinavir, ivermectin, casirivimab and imdevimab, IL-6 RB, nirmatrelvir, remdesivir, sotrovimab) and *Drugs to prevent COVID-19: living guideline* (hydroxychloroquine and tixagevimab-cilgavimab). No conflict of interest.



Carolyn S Calfee

Carolyn S Calfee is Professor of Medicine and Anesthesia at the University of California San Francisco (UCSF), where she attends in the intensive care units. Her primary academic focus is the pathogenesis and treatment of acute respiratory distress syndrome (ARDS). Current research projects include: molecular subphenotypes of ARDS and precision medicine in critical care; the role of environmental exposures, including smoking, air pollution and novel tobacco products, in susceptibility to lung injury; and novel treatments for ARDS. During the COVID-19 pandemic, she has been the UCSF clinical lead and steering committee member for the NIAID-funded Immunophenotyping Assessment in a COVID-19 Cohort (IMPACC) study and is one of the lead PIs for the I-SPY COVID Trial, a Phase-2 platform clinical trial of novel treatments for COVID-19 associated ARDS. Carolyn participated in the WHO *Therapeutics and COVID-19: living guideline* (corticosteroids, remdesivir, ivermectin, casirivimab and imdevimab, IL-6 RB, JAK inhibitors, nirmatrelvir, remdesivir) and the WHO *Clinical management of COVID-19: living guideline* (advanced respiratory support, March 2022). See Annex 1.



Bin Cao

Bin Cao is Vice President of China-Japan Friendship Hospital, Director of Department of Pulmonary and Critical Care Medicine, China-Japan Friendship Hospital; Vice Director of the National Center for Respiratory Medicine; Vice President of the Institute of Respiratory Medicine, Chinese Academy of Medical Sciences; Member of the Chinese Academy of Medical Sciences, Yangtze River Distinguished Professor of Ministry of Education; Professor of Capital Medical University; Professor of Tsinghua University-Peking University Joint Center for Life Sciences. He is President-elect of the Chinese Thoracic Society; Associate Editor of *Clinical Respiratory Journal*; Editorial advisory board member of *EBioMedicine*; and committee member of the Antiviral Group (AVG) of the International Society of Influenza and Other Respiratory Virus Diseases (ISIRV).

As a senior expert in respiratory infections, his research mainly focuses on the current key issues concerning acute respiratory infections and emerging infectious diseases, including: epidemiology, clinical characteristics, and treatment of viral pneumonia; molecular and cellular basis of the pathogenesis of influenza and COVID-19; and diagnosis and treatment strategy and drug resistance of infections by drug-resistant pathogens. He has published more than 200 peer-reviewed articles and reviews, among which 8 representative papers are published in the *Lancet* or *NEJM*.

Cao has been intensively engaged in frontline clinical work in Wuhan since the COVID-19 outbreak and drafting the first and second edition of COVID-19 diagnosis and treatment guideline of China. He is leading the antiviral clinical trials in China, including remdesivir (Yeming W, et al. *Lancet*, 2020) and lopinavir-ritonavir (Cao B et al., *NEJM*, 2020. PMID: 32187464). He acts as the leading investigator for 6-month consequences of COVID-19 in patients discharged from hospital: a cohort study (Huang C, et al., *Lancet*, 2021. PMID: 33428867). He has been honoured with the title of National Outstanding Individual in the Fight against COVID-19 in 2020, Distinguished Respiratory Academic Contribution Award in 2018, National Award for Science and Technology Progress (Grand Prize) in 2017, Yangtze River Distinguished Professor of Ministry of Education in 2015, and Wu JiePing-Paul Janssen Medical-Pharmaceutical Award in 2014. Cao participated in WHO *Clinical management of COVID-19: living guideline* (May 2020) and the WHO *Therapeutics and COVID-19: living guideline* (corticosteroids). No conflict of interest.



Maurizio Cecconi

Maurizio Cecconi is an anaesthesiologist and intensive care specialist and Chair of the Department of Anaesthesia and Intensive Care Units at Humanitas Research Hospital, Milan, Italy. He is Professor of Anaesthesia and Intensive Care and Vice-President of the MEDTEC School at Humanitas University, Milan. Previous to his current appointments, he worked for 14 years as an NHS Consultant at St George's Hospital, London, UK. His research focus is on improving outcomes in perioperative care, as well data science and the physiology of shock, acute respiratory failure and sepsis. He is the President-elect of the European Society of Intensive Care Medicine and part of the Executive Committee of the Surviving Sepsis Campaign. Maurizio participated in the WHO *Clinical management of COVID-19: living guideline* (May 2020, January 2021, advanced respiratory support), the WHO *Therapeutics and COVID-19: living guideline* (corticosteroids, lopinavir, ivermectin, casirivimab and imdevimab, IL-6 RB, molnupiravir, nirmatrelvir, fluvoxamine, colchicine, remdesivir, VV116) and *Drugs to prevent COVID-19: living guideline* (hydroxychloroquine and tixagevimab-cilgavimab). No conflict of interest.



Binila Chacko

Binila Chacko is an intensive care physician and currently heading the Division of Critical Care Medicine at Christian Medical College (CMC), Vellore, India. Binila is involved in patient care and has teaching responsibilities for medical students, postgraduate and advanced ICU trainees. She is the coordinator for the BASIC and CaRe programmes associated with the Chinese University of Hong Kong. Her special interests in critical care include toxicology, tropical diseases, antimicrobial stewardship, ARDS and ECMO. She has a passion for research and has been a PI and co-investigator for several research projects. She has several publications and book chapters to her credit. Binila participated in the WHO *Clinical management of COVID-19: living guideline* (advanced respiratory support), the WHO *Therapeutics and COVID-19: living guideline* (remdesivir, molnupiravir) and *Drugs to prevent COVID-19: living guideline* (hydroxychloroquine and tixagevimab-cilgavimab). No conflict of interest.



Duncan Chanda

Duncan Chanda is a Clinical Researcher and Infectious Diseases Clinician based at the University Teaching Hospital (UTH) in Lusaka. He is Director of Adult Infectious Diseases Centre (AIDE). The Infectious Diseases Centre is a lead institution in HIV/AIDS, TB, hepatitis and neglected tropical diseases. He has authored more than 25 publications in peer-reviewed journals and has undertaken and participated in a number of research projects in various roles over the last 18 years. In addition to managing the Centre he is also directs a TB research laboratory. He holds a postgraduate diploma and MSc from the London School of Hygiene and Tropical Medicine and possesses postgraduate training in virology and immunology from the University of Nagasaki, Japan, and Lausanne University, Switzerland. Chanda is currently actively involved in COVID-19 related research, and in clinical management of COVID-19 patients; and capacity building and training in clinical case management and critical care for COVID-19 patients. Duncan participated in the WHO *Clinical management of COVID-19: living guideline* (January 2021, November 2021, infectious period) and the WHO *Therapeutics and COVID-19: living guideline* (remdesivir, hydroxychloroquine, lopinavir, ivermectin, casirivimab and imdevimab, IL-6 RB, JAK inhibitors, sotrovimab, molnupiravir, nirmatrelvir, remdesivir, VV116). No conflict of interest.



Malachy Clancy

Malachy Clancy is the Occupational Therapy Team Leader for Good Shepherd Penn Partners where he practices at the Hospital of the University of Pennsylvania. Clancy's clinical expertise are in the areas of cardiopulmonary disorders and intensive care rehabilitation. He is Board Certified in Physical Rehabilitation by the American Occupational Therapy Association. He is actively involved in research related to COVID-19 including exploring functional trajectories and rehabilitation outcomes. Malachy participated in the WHO Guideline Development Group for Post COVID-19 Condition. Malachy participated in the WHO *Clinical management of COVID-19: living guideline* (rehabilitation of people with post COVID-19 condition, awake prone positioning). No conflict of interest.



Bronwen Connolly

Bronwen Connolly is a critical care physiotherapist, and Senior Lecturer in Critical Care at Queen's University Belfast, UK. The recipient of three previous National Institute for Health Research (NIHR) fellowships (doctoral, postdoctoral, clinical trials), her research interests focus on acute respiratory and rehabilitation physiotherapy; the recovery, long-term outcome and survivorship of post-critical illness patients; and clinical trial methodology around complex rehabilitation interventions. Her current work includes development of a core outcome set for trials of physical rehabilitation in critical illness, and leading a multiprofessional team developing a randomized controlled trial investigating the effectiveness of mucoactive drugs in acute respiratory failure. She is involved with a number of major national and international research organizations, including the NIHR Critical Care Specialty Group, the UK Critical Care Research Group, and the International Forum for Acute Care Trialists. Bronwen participated in the WHO *Clinical management of COVID-19: living guideline* (May 2020). No conflict of interest.



Graham Cooke

Graham Cooke is NIHR Research Professor of Infectious Diseases at Imperial College London. Although currently focused on COVID-19, his main work concentrates on precision medicine for management of infectious diseases, particularly for viral hepatitis and acute infection. From 2011–2019, he led the clinical workstream for the Medical Research Council (MRC) Stratified Medicine Consortium (STOPHCV). He was chief investigator on the STOPHCV-1 trial and currently has clinical studies running in the UK and Viet Nam, in collaboration with the MRC Clinical Trials Unit. He is active in promoting access to medicine and is Chair of the WHO Committee on the Selection and Use of Essential Medicines, responsible for updating and maintaining the WHO Essential Medicines List (EML). He led the Commission on Accelerating the Elimination of Viral Hepatitis and, in 2019, was appointed to the Expert Groups in HIV and hepatitis (the latter as convenor) for the Infected Blood Inquiry. Graham participated in the WHO *Therapeutics and COVID-19: living guideline* (corticosteroids). No conflict of interest.



Edith Cup

Edith Cup is Occupational Therapist and Senior Researcher at the Department of Rehabilitation at Radboud University Medical Center and teaches neurorehabilitation and innovation at HAN University of Applied Sciences, Nijmegen, the Netherlands. Her expertise is in the field of chronic neurological diseases and development and testing of (interdisciplinary) fatigue self-management interventions and outcome measures. She is co-author of several evidence and practice-based guidelines including the Dutch occupational therapy guidelines for persons with COVID-19. Currently she is involved in a large cohort study evaluating allied health care in patients recovering from COVID-19 in the Netherlands. Edith participated in the WHO *Clinical management of COVID-19: living guideline* (rehabilitation of people with post COVID-19 condition, 2022). See Annex 1.



Vu Quoc Dat

Vu Quoc Dat is a lecturer at the Department of Infectious Diseases, Hanoi Medical University, Viet Nam and an intensivist at the National Hospital for Tropical Diseases, a tertiary referral hospital for infectious diseases in northern Viet Nam. He completed the Career Development Fellowship with the WHO Special Programme for Research and Training in Tropical Diseases and undertook his PhD training at the Oxford University Clinical Research Unit in Viet Nam. He has expertise in clinical management of severe or life-threatening infections, zoonotic diseases, and emerging and re-emerging infectious diseases in resource-constrained settings. His research interests focus on interventions to emerging health issues related to infectious diseases, particularly in critical care settings, and on the capacity of health care systems in response to sepsis and severe acute respiratory infection. He served as a member of the national technical working groups for the development of national guidelines for the management of infectious diseases. Dat participated in the WHO *Clinical management of COVID-19: living guideline* (January 2021, November 2021, advanced respiratory support, infectious period), the WHO *Therapeutics and COVID-19: living guideline* (lopinavir, ivermectin, casirivimab and imdevimab, IL-6 RB, JAK inhibitors, sotrovimab, molnupiravir, nirmatrelvir, remdesivir, VV116) and *Drugs to prevent COVID-19: living guideline* (hydroxychloroquine and tixagevimab-cilgavimab). No conflict of interest.



An De Sutter

Professor An De Sutter is Head of the Center for Family Medicine in the Department of Public Health and Primary Care at Ghent University, Belgium. She received her MD from the KU Leuven University and her PhD from Ghent University in 2005 and has been working as a family doctor at the Community Health Center, Rabot, Belgium for 13 years. She joined Ghent University in October 2018. An participated in the WHO *Clinical management of COVID-19: living guideline* (January 2021) and the WHO *Therapeutics and COVID-19: living guideline* (JAK inhibitors, sotrovimab, molnupiravir). No conflict of interest.



Simon Décarry

Simon Décarry is Assistant Professor of Rehabilitation at the University of Sherbrooke in Québec. He has been involved in Long COVID research since April 2020, having received a grant from Fondation du CR-CHUS to conduct a safety pilot clinical trial of interdisciplinary rehabilitation for Long COVID, one of the first studies in this field. In December 2020, his team was also among the to team up with the myalgic encephalomyelitis community to warn rehabilitation professionals about the harms of graded exercise therapy in this population. This initiated a global movement focusing on the Stop.Rest.Pace approach to safe rehabilitation. He was recently mandated by the SPOR Evidence Alliance, COVID-END and the Canadian Institutes of Health Research to conduct living systematic reviews of care models and management options for Long COVID. In August 2021, he joined the WHO expert committee for post COVID-19 condition. Simon participated in the WHO *Clinical management of COVID-19: living guideline* (rehabilitation of people with post COVID-19 condition, 2022). No conflict of interest.



Bin Du

Bin Du is Director and Professor, Medical ICU, Peking Union Medical College Hospital. He is President of the Chinese Association of Critical Care Physicians; and President of the Chinese College of Critical Care Medicine. He is Past President, Asia Pacific Association of Critical Care Medicine; and Past President, Chinese Society of Critical Care Medicine. Du participated in the WHO *Clinical management of COVID-19: living guideline* (January 2021, November 2021), the WHO *Therapeutics and COVID-19: living guideline* (remdesivir, lopinavir, ivermectin, casirivimab and imdevimab, IL-6 RB) and *Drugs to prevent COVID-19: living guideline* (hydroxychloroquine and tixagevimab-cilgavimab). No conflict of interest.



Vuyiseka Dubula

Vuyiseka Dubula is Director of the Africa Centre for HIV/AIDS Management (University of Stellenbosch). She is recognized in South Africa and globally for her leadership in social movements and NGOs for human rights of people living with HIV. She has a PhD in development studies from the University of Kwazulu-Natal, South Africa and is the founder of the Activist Centre for Education and Development, which facilitates skills and economic development for women living with HIV. She has served on various boards in South Africa, Canada and United States: Lancet National Commission for High-Quality Health Systems; National Ministerial Committee on Medicines Procurement; Office of Health Standards and Compliance; UNAIDS High-Level Commission on HIV Prevention; and the Stephen Lewis Foundation. Vuyiseka participated in the WHO *Clinical management of COVID-19: living guideline* (January 2021) and the WHO *Therapeutics and COVID-19: living guideline* (remdesivir, hydroxychloroquine, lopinavir, ivermectin, casirivimab and imdevimab, IL-6 RB). No conflict of interest.



Jake Dunning

Jake Dunning is Head of Emerging Infections and Zoonoses at Public Health England (PHE). His clinical infectious diseases practice is at the Royal Free Hospital, London. His clinical and laboratory research interests include influenza, respiratory and enteric viral diseases, emerging and zoonotic infections, and contact and airborne high-consequence infectious diseases, including Ebola virus disease, avian influenza, MERS and monkeypox. He conducts research on the clinical characterization and mechanisms of disease, as well as clinical trials of experimental treatments, at PHE and the University of Oxford, Imperial College London and University College London. Since January 2020, he has been part of PHE's National Incident Management Team for COVID-19 and contributes to national and international guidance. He is an active researcher within the International Severe Acute Respiratory and Emerging Infection Consortium. Jake participated in the WHO *Clinical management of COVID-19: living guideline* (May 2020) and WHO *Therapeutics and COVID-19: living guideline* (corticosteroids). No conflict of interest.



Arifa Jahan Ema

Arifa Jahan Ema is an early career researcher currently working as a Lecturer in Occupational Therapy at the Bangladesh Health Professions Institute. She has been involved in undergraduate teaching and developing the MSc in OT programme curriculum. She was awarded the Australia Awards Scholarship to pursue an MPhil from Monash University, Australia. Her research interests are primarily in education participation of persons with disabilities, community reintegration, accessibility, employment, policy on disability and COVID-19. She also works as a governing panel member of the International Spinal Cord Society OT special interest group. Arifa Jahan participated in the WHO *Clinical management of COVID-19: living guideline* (rehabilitation of people with post COVID-19 condition, 2022). No conflict of interest.



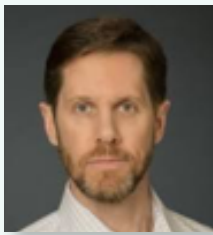
Pamela Enderby

After qualifying as a Speech and Language therapist, Pamela Enderby worked in the NHS in London and Bristol where she set up the first alternative and augmentative communication centre and the Speech and Language Therapy Research Unit. She moved to Sheffield where she held the positions of Head of Department and Dean of the Faculty of Medicine. She has been Clinical Director of the South Yorkshire Comprehensive Local Research Network and Chair of Sheffield Healthwatch. She has served on and chaired the Board of the Royal College of Speech and Language Therapists and acted as President the Society for Research in Rehabilitation. She is currently President of the International Association of Communication Sciences and Disorders. Her areas of research interest include outcome measurement, assessment, technology in rehabilitation, evaluation of rehabilitation and speech and language therapy. In 2012 she was recipient of the Robin Tavistock award for her contribution to aphasia research. Pamela participated in the WHO *Clinical management of COVID-19: living guideline* (rehabilitation of people with post COVID-19 condition, 2022). See Annex 1.



Niamh Flynn

Niamh Flynn is the Team Lead Physiotherapist for respiratory medicine at University College Hospital London. She graduated from the University of Limerick, Ireland, with a BSc in Physiotherapy in 2015. She started her career at Barts Health NHS Trust rotating across their different sites including St Barts Hospital, a centre of excellence for heart care, working in their intensive care unit. She then moved to University College Hospital London in 2017. During the COVID-19 pandemic she worked on creating guidance on proning for the awake patient, CPAP, breathlessness and exercise during COVID-19 and has a special interest in the management of patients with airway stents. She is in the process of creating and publishing a physiotherapy guideline to help the management of this patient group. Last year, she completed a cardiorespiratory physiotherapy master's module at University College London. Niamh participated in the WHO *Clinical management of COVID-19: living guideline* (awake prone positioning). No conflict of interest.



Rob Fowler

Rob Fowler is critical care physician and Professor of Medicine at the University of Toronto and Chief of the Trauma, Emergency and Critical Care Program at Sunnybrook Health Sciences Centre. He is the Director of the Dalla Lana School of Public Health's Institute of Health Policy, Management and Evaluation Clinical Epidemiology Graduate Training Program and the Chair of the Canadian Critical Care Trials Group. His clinical and academic focus includes access and outcomes of care for critically ill patients and infection-related critical illness. He has assisted or worked with the WHO during the SARS, pandemic, avian influenza and MERS outbreaks, and the Ebola outbreaks in Guinea, Liberia, Sierra Leone and the Democratic Republic of the Congo, and the COVID-19 pandemic. Rob participated in the WHO *Clinical management of COVID-19: living guideline* (May 2020). No conflict of interest.



Stephen Freedman

Freedman is Professor of Pediatrics and Emergency Medicine at the University of Calgary. He completed his residency at the Hospital for Sick Children in 2000 and a paediatric emergency medicine fellowship in 2003 at the Children's Memorial Hospital. He obtained an MSc in Clinical Investigation at Northwestern University. He is the Past-Chair of Pediatric Emergency Research Canada and the Alberta Children's Hospital Foundation Professor in Child Health and Wellness.

His research focus is on applying clinical research to improve outcomes in children seeking emergency department care. His focus is on the use of innovative, multidisciplinary approaches to solve complex problems. He has published over 190 peer-reviewed manuscripts and is the principal investigator on numerous multicentre clinical trials with funding support from CIHR and the NIH. Most recently he received CIHR funding to lead two multinational paediatric COVID-19 studies and NIH funding to evaluate an intervention for Shiga toxin producing *E. coli* infected children. Stephen participated in the WHO *Clinical management of COVID-19: living guideline* (November 2021) and in the WHO *Therapeutics and COVID-19: living guideline* (nirmatrelvir). No conflict of interest.



María Del Olmo Gabina

María Gabina, 41 years old, lives in La Solana, Castilla la Mancha, Spain. She has two children, Rodrigo and Alonso, and works as an insurance saleswoman. As well as laughing (lots) with friends, she likes walking and playing the clarinet in the town's municipal band. Eight-year-old Alonso was affected by MIS-C following COVID-19 infection in January 2021; he had an aneurysm in the left coronary artery and remains under medical review, but now leads a totally normal life (with medication – adiro and cloridrogrel). Maria participated in the WHO *Clinical management of COVID-19: living guideline* (November 2021). No conflict of interest.



Simon Gane

Simon Gane graduated in Medicine from the University of Cape Town and is currently a Consultant Rhinologist and ENT surgeon at the Royal National ENT Hospital and Moorfield's Eye Hospital. He runs a tertiary and often a quaternary rhinology practice, where the most complex sinonasal patients are referred for advanced surgery and medical intervention. Mr Gane also holds an MPhil from University College London Department of Medicine in Olfaction (disorders of smell function and smell loss) and runs the dedicated smell loss and dysfunction clinic. He publishes in leading peer-reviewed journals with the most recent publication in *Nature Communications* on post-infectious smell dysfunction. He was one of the first clinicians to recognize smell loss as a defining symptom of COVID-19 infection. The associated clinical report has been the most cited clinical paper in *Rhinology*. Simon participated in the WHO *Clinical management of COVID-19: living guideline* (rehabilitation of people with post COVID-19 condition, 2022). See Annex 1.



Monica Garrido

Monica Garrido participated in the GDG panel for WHO in the capacity of a patient panel member. In October 2020 her daughter, Alma Fernandez, suffered from COVID-19 and experienced symptoms related with MIS-C around 1 month after her infection. Alfredo Tagarro, Infanta Sofia in San Sebastian de los Reyes Hospital, Madrid, was in charge of her treatment from the very beginning of the MIS-C symptoms. Currently (November 2021) Alma weighs 38 kg and her height is 141cm. She is in perfect health and enjoys life even though she remains under medical review. Monica participated in the WHO *Clinical management of COVID-19: living guideline* (November 2021). No conflict of interest.



Heike Geduld

Heike Geduld is Associate Professor and Head of the Division of Emergency Medicine at Stellenbosch University in Cape Town, South Africa. She is President of the College of Emergency Medicine of South Africa and Immediate Past President of the African Federation for Emergency Medicine. Heike participated in the WHO *Clinical management of COVID-19: living guideline* (May 2020, January 2021, November 2021, advanced respiratory support), the WHO *Therapeutics and COVID-19: living guideline* (remdesivir, lopinavir, casirivimab and imdevimab, ivermectin IL-6 RB, JAK inhibitors, sotrovimab, molnupiravir, nirmatrelvir, VV116) and *Drugs to prevent COVID-19: living guideline* (hydroxychloroquine and tixagevimab-cilgavimab). No conflict of interest.



Patrick O Gee

Patrick O. Gee, Sr is a former peritoneal and haemodialysis patient and current kidney transplant recipient since April 2017. Patrick retired from the Virginia Department of Corrections as a Major/Chief of Security. Patrick has an MSc in Criminal Justice (Public Administration) from the University of Richmond, in Richmond, VA, and a PhD in Justice, Law and Criminology. Patrick is the founder and CEO of iAdvocate, Inc., non-profit faith-based health and wellness organization.

Patrick serves in a number of capacities including: Quality Insights Renal Network 5 Chair, PAC & Medical Review Board of Directors; Patient Family Centered-Care Partners Advisory Board; Member of ASN's Diabetes Kidney Disease Collaborative Task Force American Association of Kidney Patients BOD; Center for Dialysis Innovation Patient Advisory Board; Kidney Research Institute Patient Advisory Committee; and APOLLO Research Study Steering Committee APOL1's Community Advisory Committee member, representing the Cleveland Clinic.

Patrick participated in the WHO *Clinical management of COVID-19: living guideline* (January 2021, November 2021, advanced respiratory support), the WHO *Therapeutics and COVID-19: living guideline* (corticosteroids, remdesivir, lopinavir, ivermectin, casirivimab and imdevimab, IL-6 RB, molnupiravir, nirmatrelvir, VV116) and *Drugs to prevent COVID-19: living guideline* (hydroxychloroquine and tixagevimab-cilgavimab). No conflict of interest.



Charles Gomersall

Department of Anaesthesia and Intensive Care, Chinese University of Hong Kong, Hong Kong SAR, China. His academic interests include respiratory protection against infectious diseases, weaning mechanical ventilation, ICU admission triage and large-scale critical care training. Charles participated in the WHO *Clinical management of COVID-19: living guideline* (May 2020). No conflict of interest.



Matthias Götte

Matthias Götte is a Professor of Medical Microbiology and Immunology at the University of Alberta, Canada and previously at McGill University Department of Microbiology and Immunology. In 2011, Götte was promoted to Professor, and received the Chercheur national award of the Fonds de la Recherche en Santé du Québec. In 2014, he took the position as Chair of the Medical Microbiology and Immunology Department at the University of Alberta. Research in his laboratory is focused on the study of viral replication, its inhibition and the problem of drug resistance. His interests evolved from studies on HIV and the hepatitis C virus to RNA viruses with high epidemic potential, including influenza, Ebola and SARS. Matthias participated in the WHO *Therapeutics and COVID-19: living guideline* (molnupiravir). See Annex 1.



Alla Guekht

Professor Alla Guekht is an Associate Professor of the Department of Neurology, Neurosurgery and Medical Genetics of the Russian National Research Medical University. She is Director of the Moscow Research and Clinical Center for Neuropsychiatry (since 2011) and Head of Neurology Clinic, Buyanov City Hospital, Moscow (since 2007). Professor Guekht's research focuses on the neurological and neuropsychiatric manifestations of post COVID-19. She is a member of the Post COVID-19 Condition Core Outcome Set project group. She is involved in the Neurology and COVID-19 WHO Forum, serving as a co-chair of the follow-up and long-term impact working group, with several papers on post COVID-19 conditions (neurological manifestations, cognitive impairment and others) published. She is the Elected Trustee of the World Federation of Neurology and the Vice-President of the International League Against Epilepsy. She plays a prominent role in the Russian Society of Neurologists as its Secretary-General; and for several years was the Chief Neurologist in Moscow. Alla participated in the WHO *Clinical management of COVID-19: living guideline* (rehabilitation of people with post COVID-19 condition, 2022). No conflict of interest.



Muhammad Haider

Muhammad Haider Omar started his primary education in a refugee school. From among 3 million Afghan refugees, he was selected to attend the prestigious Khyber Medical College, Peshawar, Pakistan. He graduated and completed his MBBS degree in 1999. In 2005 he started his postgraduate studies in pulmonology and completed his MCPS (membership) from the College of Physicians, Pakistan. In 2010 he moved to Dubai and practised as a pulmonologist and ICU registrar. In 2016 he received his MRCP in Internal Medicine from the Royal College of Physicians, London.

At the request of the Public Health Minister of Afghanistan, he returned to Afghanistan in 2019 and was appointed Senior Technical Specialist in charge of Jinnah Hospital ICU in Kabul. As the COVID-19 pandemic started, the Ministry of Public Health appointed him in charge of COVID-19 (Afghan Japan Hospital) ICU, where, as a critical case expert, he established the COVID-19 ICU and started to train other specialists to treat COVID-19 patients. In July 2020 he was selected by WHO as a national ICU consultant and trainer; he has trained more than 1000 doctors and nurses. He developed COVID-19 guidelines for the Ministry of Public Health in English and local languages and supervised the 38 COVID-19 hospitals in Afghanistan. Additionally, he currently trains non COVID-19 hospital ICU doctors across Afghanistan. Muhammad participated in *Drugs to prevent COVID-19: living guideline* (hydroxychloroquine and tixagevimab-cilgavimab) and WHO *Therapeutics and COVID-19: living guideline* (molnupiravir).



Brian Hall

Brian J Hall is a Professor of Global Public Health and the Founder and Director of the Center for Global Health Equity at NYU Shanghai. He is also an Associated Full Professor at the School of Global Public Health, New York University, and an Associate Faculty Member in the Department of Health, Behavior and Society at the Johns Hopkins Bloomberg School of Public Health. Professor Hall's research agenda utilizes qualitative and quantitative approaches to address diverse population health inequalities (mental health, behavioural addiction, and sexual health) among migrants and minoritized or at-risk communities. He is currently trialling culturally adapted scalable digital mental health interventions. He has conducted research on the mental health consequences of COVID-19 lockdowns among migrants and within the general population in China. Brian participated in the WHO *Clinical management of COVID-19: living guideline* (rehabilitation of people with post COVID-19 condition, 2022). No conflict of interest.



Nerina Harley

Nerina Harley works as a senior intensivist in the Royal Melbourne Hospital and NorthWestern Mental Health. She has also been the Director of Epworth HealthCare for 22 years and Co-Chair of the Critical Care Network, Victorian Department of Health and Human services for 5 years. Nerina participated in the WHO *Therapeutics and COVID-19: living guideline* (remdesivir, ivermectin, IL-6 RB, fluvoxamine, colchicine, sotrovimab, molnupiravir) and *Drugs to prevent COVID-19: living guideline* (hydroxychloroquine and tixagevimab-cilgavimab). No conflict of interest.



Rumina Hasan

Rumina Hasan is Consultant Clinical Microbiologist and Professor in the Department of Pathology and Laboratory Medicine at the Aga Khan University, Karachi, Pakistan, and Honorary Professor in the Department of Infectious and Tropical Diseases, London School of Hygiene and Tropical Medicine, UK. Her areas of interest include TB and antimicrobial resistance. She has served as Vice-Chair of the Global Laboratory Initiative (2012–2014) and member of the New Diagnostic Working Group (2011–2014). She is currently the Chairperson of the WHO Eastern Mediterranean Regional Green Light Committee. She also serves on the WHO Strategic Technical Advisory Group on Antimicrobial Resistance. Rumina participated in the WHO *Clinical management of COVID-19: living guideline* (May 2020). No conflict of interest.



Madiha Hashmi

Madiha Hashmi is Professor and Head of Department Critical Care Medicine at Ziauddin University, Karachi, Pakistan. She is also a Visiting Faculty at Aga Khan University Karachi, Pakistan, Honorary Physician, Mahidol Oxford Research Unit (MORU), Bangkok, Thailand and secretary, Faculty of CCM at College of Physicians & Surgeons Pakistan (CPSP).

She is a member of the World Sepsis Day Steering Committee, Founding Member Asia Pacific Sepsis Alliance (APSA) and is founder and President of Sepsis Alliance Pakistan (SoAP). She was President of Pakistan Society of Critical Care Medicine from 2015–2019.

To promote research in critical care in Pakistan she founded a trust and is the CEO of South East Asian Research & Education in Criticalcare Health (SEARCH). She conducted the first comprehensive national survey of critical care services in hospitals accredited for training in Pakistan. Pakistan Registry of Intensive Care (PRICE) is operational across the country through a collaboration of SEARCH and NCIS-MORU and is now part of the broader CRITCARE Asia network (CCA). She is PI from Pakistan for REMAP-CAP and operationalized the WHO/ISARIC CCP during the COVID-19 pandemic in ICUs across the country. She is also a member of the Board of Directors of International Severe Acute Respiratory & emerging Infections Consortium (ISARIC).

Madiha participated in the WHO *Clinical management of COVID-19: living guideline* (January 2021, November 2021, infectious period) and the WHO *Therapeutics and COVID-19: living guideline* (remdesivir, hydroxychloroquine, lopinavir, ivermectin, casirivimab and imdevimab, IL-6 RB). No conflict of interest.



David S Hui

David S Hui is Chairman of the Department of Medicine and Therapeutics and Stanley Ho Professor of Respiratory Medicine and Director of the Stanley Ho Centre for Emerging Infectious Diseases, Chinese University of Hong Kong, Hong Kong SAR, China. Since 2004, he has frequently served as an advisor to WHO on the clinical management of emerging severe acute respiratory infections. David participated in the WHO *Clinical management of COVID-19: living guideline* (May 2020, advanced respiratory support), the WHO *Therapeutics and COVID-19: living guideline* (corticosteroids, fluvoxamine, colchicine, molnupiravir, nirmatrelvir, VV116) and *Drugs to prevent COVID-19: living guideline* (hydroxychloroquine and tixagevimab-cilgavimab). See Annex 1.



Beverley J Hunt

Beverley J Hunt is an international expert on thrombosis and haemostasis based at Guy's & St Thomas' NHS Foundation Trust, London. From the start of the COVID-19 pandemic, she has been at the vanguard of preventing and treating patients with COVID-19-related thromboembolism.

She has sat on multiple National Institute for Health and Care Excellence (NICE) Guidelines Development Groups for both the management of venous thromboembolism and thromboprophylaxis in hospitalized patients and in COVID-19 patients. She was a member of the International Society of Thrombosis & Haemostasis Guidance writing group for COVID-19 thromboembolism management. She is a member of the organizing committees of the anticoagulation and antiplatelet arms of the WHO approved platform study of critically ill COVID-19 patients (REMAP-CAP) and a member of a UK Research and Innovation advisory committee to advise the RECOVERY trial.

She has given over 50 international webinars on coagulopathy and thrombosis management in COVID-19 infection. She gave evidence to the UK House of Lords Science and Technology committee hearing on managing COVID-19.

She is founder and Medical Director of Thrombosis UK and Chair of the Steering Group of World Thrombosis Day. Both are not for profit, aiming to increase awareness and improve care of thrombosis.

Beverley participated in the WHO *Clinical management of COVID-19: living guideline* (January 2021, November 2021, infectious period), the WHO *Therapeutics and COVID-19: living guideline* (ivermectin, casirivimab and imdevimab, IL-6 RB, JAK inhibitors, sotrovimab, molnupiravir, fluvoxamine, colchicine, nirmatrelvir, remdesivir and as Clinical Chair for molnupiravir, nirmatrelvir and VV116) and *Drugs to prevent COVID-19: living guideline* (hydroxychloroquine and tixagevimab-cilgavimab). No conflict of interest.



Mohammed Ismail

Mohammed Ismail graduated from Tribhuvan University Institute of Medicine, Kathmandu, Nepal, in January 2005. After completing his MBBS, he worked at Indira Gandhi Memorial Hospital (IGMH) in Male, Maldives, as a medical officer. In 2009, on a WHO Fellowship, he completed 4.5 years in respiratory medicine postgraduate studies at the University of Indonesia, Faculty of Medicine, Jakarta, Indonesia. He then returned to IGMH as a respiratory physician setting up respiratory medicine services, including deploying the latest diagnostic services, and has served as Head of Department since January 2021. He completed short-term training in interventional pulmonology in Athens, Greece; and thoracoscopy and pleural diseases in Marseille, France. During the COVID-19 pandemic, he was a member of the Clinical Management Advisory Team on COVID-19 patient management in the Maldives. He was part of the team which developed patient care and transfer pathways and provided training for health care professionals, while managing critically ill COVID-19 patients in IGMH ICU and the COVID-19 facility. He has also contributed to guidelines for the management of COVID-19 patients in the Maldives.

Currently, he serves as a member of the National Tobacco Control Board, the Gan Regional Hospital Governing Board, and is Clinical Focal Point for Tuberculosis, and Chair of the Maldives Technical Advisory Group on Tuberculosis, in addition to giving inpatient and outpatient care at the department and teaching medical students. He is an active member of international societies such as the Asia Pacific Society of Respiriology, the European Respiratory Society and the American College of Chest Physicians. Mohammed participated in *Drugs to prevent COVID-19: living guideline* (hydroxychloroquine and tixagevimab-cilgavimab) and WHO *Therapeutics and COVID-19: living guideline* (molnupiravir). No conflict of interest.



Michael Jacobs

Michael Jacobs is Clinical Director of Infection at the Royal Free Hospital in London. He trained at Oxford and London universities before completing a PhD in Virology. He is interested in all aspects of clinical infectious diseases with a special interest in serious viral infections and medical countermeasures. He is director of the UK High Level Isolation Unit and is a member of the UK Advisory Committee on Dangerous Pathogens. He worked at the centre of the UK response to the West Africa Ebola outbreak, and now serves on several national and international COVID-19 advisory committees. He was NHS England Programme Director for High Consequence Infectious Diseases. He was knighted in 2016 for services to the prevention and treatment of infectious diseases. Michael participated as Clinical Chair in the WHO *Therapeutics and COVID-19: living guideline* (remdesivir, hydroxychloroquine, lopinavir, casirivimab and imdevimab, IL-6 RB, JAK inhibitors, remdesivir). Michael will not participate in the molnupiravir guideline due to his conflict of interest. See Annex 1.



Fabian Alberto Jaimes-Barragan

Fabian Alberto Jaimes-Barragan is a Professor of Medicine at the Department of Internal Medicine, Antioquia University, Medellín, Colombia. He is also Research Director at the Fundación Hospitalaria San Vicente, Medellín, since 2017 and Editor-in-Chief for IATREIA. His research interests focus on the epidemiology of sepsis in Colombia and Latin American, early identification of sepsis in the emergency department, adaptation and validation of sepsis and organ dysfunction scores, development of new interventions to improve sepsis identification and outcomes and methodological aspects of the development of predictive instruments. Fabian participated in the WHO *Clinical management of COVID-19: living guideline* (infectious period), the WHO *Therapeutics and COVID-19: living guideline* (remdesivir, sotrovimab, molnupiravir, fluvoxamine, colchicine, nirmatrelvir and VV116) and *Drugs to prevent COVID-19: living guideline* (hydroxychloroquine and tixagevimab-cilgavimab). No conflict of interest.



Fyezah Jehan

Jehan is an Associate Professor and Head of Paediatrics Infectious Diseases at the Aga Khan University, Pakistan. Her work in the COVID-19 pandemic is focused on guideline and policy development for vaccine use and management of COVID-19 in children and adults in Pakistan. She is an advisor to the WHO for matters related to maternal newborn, child and adolescent health and nutrition (STAGE-MNCAH-member) and an active clinician and a researcher in global MNCH. Her most recent work with UNICEF Pakistan and the Ministry of National Health Services has resulted in the curriculum development and national training of paediatricians, for the management of COVID-19 in children in Pakistan. She has conducted several systematic reviews, sat on guideline review committees, and served as a GDG member for WHO. Fyezah participated in the WHO *Therapeutics and COVID-19: living guideline* (molnupiravir, remdesivir) and *Drugs to prevent COVID-19: living guideline* (hydroxychloroquine and tixagevimab-cilgavimab). No conflict of interest.



Sushil Kumar Kabra

Sushil Kumar Kabra is Professor of Paediatrics at the All India Institute of Medical Sciences, New Delhi, India, where he is responsible for clinical services, teaching, training and research at the Department of Paediatrics (Paediatric Pulmonology and Intensive Care). His research interests include: acute respiratory infections in children, paediatric tuberculosis and cystic fibrosis. He has contributed to numerous publications and is Editor-in-Chief of the *Indian Journal of Pediatrics*. Sushil participated in the WHO *Clinical management of COVID-19: living guideline* (January 2021, November 2021, advanced respiratory support, infectious period) and the WHO *Therapeutics and COVID-19: living guideline* (hydroxychloroquine, lopinavir, ivermectin, casirivimab and imdevimab, IL-6 RB, sotrovimab, molnupiravir, fluvoxamine, colchicine, nirmatrelvir, remdesivir). No conflict of interest.



Seema Kanda

Patient Partner, Niagara Region of Ontario, Canada, completed a dental assisting programme at Niagara College, Ontario, and BA at McMaster University. Her vocation to care, combined with her father's serious heart condition, made Seema realize the importance of patient understanding and participation in the medical decision-making process. She was one of the first in her workplace to contract COVID-19, which triggered rapid changes to work practices. Seema and her immediate family all suffered to various degrees with COVID-19. Her brother required mechanical ventilation for 6 weeks and was one of a few, locally, to survive. He continues to recover at home, receiving various therapies. Seema is now using her personal experience of COVID-19 to become an active patient partner in the decision-making process regarding treatment options. Seema believes through sharing patient experiences and making constructive suggestions patient care protocols can be improved and is taking the opportunity to contribute as a voice for COVID-19 patients. Seema participated in the WHO *Clinical management of COVID-19: living guideline* (January 2021) and the WHO *Therapeutics and COVID-19: living guideline* (corticosteroids, remdesivir, hydroxychloroquine, lopinavir, ivermectin, casirivimab and imdevimab, IL-6 RB, fluvoxamine, colchicine). No conflict of interest.



Leticia Kawano-Dourado

Leticia Kawano-Dourado is a respiratory medicine physician and clinical researcher at the Research Institute, Hospital do Coração (HCor), São Paulo, Brazil. She is also an associate researcher of the Pulmonary Division (LIM09) at the University of São Paulo. Her research focuses on non-invasive support for acute respiratory failure, interstitial lung diseases and, more recently, COVID-19. She is a member of the COALITION COVID-19 Brazil, a collaborative research partnership among large hospitals in Brazil, supported by the Ministry of Health, created to accelerate the field of COVID-19 research. The COALITION COVID-19 Brazil is conducting several randomized controlled trials on COVID-19 drug repurposing: hydroxychloroquine and azithromycin (NCT04322123); dexamethasone (NCT04327401); anticoagulation – (NCT04394377); tocilizumab (NCT04403685) and also investigating the long-term consequences of COVID-19 on quality of life, functionality and depression/anxiety (NCT04376658). Leticia participated in the WHO *Clinical management of COVID-19: living guideline* (January 2021) and the WHO *Therapeutics and COVID-19: living guideline* (corticosteroids, remdesivir, hydroxychloroquine, lopinavir, ivermectin, casirivimab and imdevimab), and most recently as Clinical Chair for sotrovimab, convalescent plasma and molnupiravir. Leticia did not participate in the JAK inhibitor deliberations due to her conflict of interest. See Annex 1.



Carlote Kiekens

Carlote Kiekens is a Belgian Physical and Rehabilitation (PRM) physician, working in Italy since 2020, after 30 years at the University Hospitals Leuven – KU Leuven. She was Director of the Spinal Unit at the Montecatone Rehabilitation Institute in 2020–2021 and is currently head of the PRM unit at Ospedale San Giuseppe, IRCCS MultiMedica in Milano. She is Co-Director of Cochrane Rehabilitation, which she co-founded in 2016. She is the chair of the International Society of PRM (ISPRM)-WHO Liaison Committee, member of the European Academy of Rehabilitation Medicine, Senior Fellow of the European Board of PRM, and ISCoS Fellow. She chairs the Professional Practice Committee at the European Union of Medical Specialists PRM Section. She is Specialty Chief Editor of the Strengthening Rehabilitation in Health Systems section of *Frontiers in Rehabilitation Sciences*. Carlote participated in the WHO *Clinical management of COVID-19: living guideline* (rehabilitation of people with post COVID-19 condition, 2022). No conflict of interest.



Yae-Jean Kim

Yae-Jean Kim is a paediatric infectious diseases specialist and Professor of the Department of Pediatrics, Sungkyunkwan University School of Medicine, Samsung Medical Center, Seoul, Republic of Korea. She is a board member of the Korean Society of Infectious Diseases, the Korean Society of Pediatric Infectious Diseases, and the Asia Pacific Society for Immunodeficiencies. She is also the co-lead for the Asian Network for Surveillance of Resistant Pathogens (ANSORP) Pediatric Group. Her area of special interest is respiratory viral infection and infection in high-risk patients. She is the co-author of a chapter on coronaviruses in Feigin and Cherry's *Textbook of Pediatric Infectious Diseases* (8th edition, 2018). Since 2015, having experienced the MERS outbreak in the Republic of Korea, she has been a frequent advisor on coronavirus infection to WHO and international societies. Yae-Jean participated in the WHO *Clinical management of COVID-19: living guideline* (May 2020, January 2021, November 2021) and the WHO *Therapeutics and COVID-19: living guideline* (corticosteroids, remdesivir, hydroxychloroquine, lopinavir, ivermectin, casirivimab and imdevimab, IL-6 RB, JAK inhibitors, fluvoxamine, colchicine, sotrovimab, molnupiravir). No conflict of interest.



Niranjan Kissoon

BC Children's Hospital and UBC Global Child Health, Department of Paediatrics and Emergency Medicine, University of British Columbia (UBC), Vancouver, Canada. Niranjan Kissoon is Past President of the World Federation of Pediatric Intensive and Critical Care Societies; and Professor, Pediatric and Surgery at UBC. He is Vice-Chair of the Global Alliance for Sepsis, Co-Chair World Sepsis Day, and Vice-Chair of the International Pediatric Sepsis Initiative and the Pediatric Surviving Sepsis Campaign Guideline Committee. Niranjan participated in the WHO *Clinical management of COVID-19: living guideline* (May 2020, January 2021, November 2021, advanced respiratory support, infectious period), the WHO *Therapeutics and COVID-19: living guideline* (corticosteroids, lopinavir, ivermectin, casirivimab and imdevimab, IL-6 RB, sotrovimab, molnupiravir, fluvoxamine, colchicine, nirmatrelvir, remdesivir) and *Drugs to prevent COVID-19: living guideline* (hydroxychloroquine and tixagevimab-cilgavimab). No conflict of interest.



Sanjeev Krishna

Sanjeev Krishna is Professor of Molecular Parasitology and Medicine at St George's University of London and an infectious diseases physician at St George's University Hospitals NHS Foundation Trust. After a degree in Natural Sciences at Cambridge and a medical degree at Oxford, he studied clinical malaria in Thailand and then returned to Oxford to complete a DPhil on the transport proteins of malaria parasites as new drug targets. His interests have expanded to other neglected infections including sleeping sickness, tuberculosis and threat organisms. He was elected a Fellow of the Academy of Medical Sciences in 2004 and awarded an ScD by the University of Cambridge in 2007. He advises multiple international bodies, including the Foundation for Innovative New Diagnostics, the Wellcome Trust and the Indian Department of Biotechnology. He has inaugurated the Centre for Affordable Diagnostics and Therapeutics (cad.t.org.uk) to accelerate delivery of diagnostics and therapeutics to least advantaged populations. CADT is repurposing affordable drugs to manage cancers through high-quality clinical trials and carrying out technology transfer for the manufacture of diagnostics through social enterprise.

Sanjeev participated in the WHO *Clinical management of COVID-19: living guideline* (January 2021, advanced respiratory support), the WHO *Therapeutics and COVID-19: living guideline* (corticosteroids, lopinavir, IL-6 RB, casirivimab and imdevimab, JAK inhibitors, sotrovimab, molnupiravir, fluvoxamine, colchicine, nirmatrelvir, remdesivir) and *Drugs to prevent COVID-19: living guideline* (hydroxychloroquine and tixagevimab-cilgavimab). No conflict of interest.



Arthur Kwizera

Arthur Kwizera is Senior Lecturer in Anaesthesia and Intensive Care at Makerere University College of Health Sciences and a staff intensivist at the Mulago National Referral Hospital ICU, Uganda. After completing his specialist anaesthesia and intensive care training in Uganda, he received further training from the University of British Columbia in Canada and an interventional pulmonology fellowship in Venice, Italy. He is part of international collaborations looking at acute care in resource-limited settings with particular emphasis on respiratory failure sepsis management and anaesthesia/intensive care education. He is a member of the Surviving Sepsis Campaign Guidelines Taskforce. His research work is centred on epidemiology, pathophysiology and management of acute organ dysfunction and corresponding life support interventions in low-resource settings. He is a Cambridge THRiVE PhD fellow with a focus on acute lung disease, especially acute respiratory failure and acute respiratory distress syndrome, and on novel, low-cost strategies to manage acute respiratory failure in the low-resource African acute care settings. Arthur participated in the WHO *Clinical management of COVID-19: living guideline* (May 2020, January 2021, advanced respiratory support, March 2022) and the WHO *Therapeutics and COVID-19: living guideline* (corticosteroids, remdesivir, hydroxychloroquine, lopinavir, ivermectin, casirivimab and imdevimab, IL-6 RB, molnupiravir, nirmatrelvir). No conflict of interest.



Jon Henrik Laake

Jon Henrik Laake is a specialist in cardiothoracic anaesthesiology and intensive care medicine and Senior Consultant at the Division of Critical Care and Emergencies, Rikshospitalet Medical Centre, Oslo University Hospital, Oslo, Norway. He is Deputy Chair of the Norwegian Society of Anaesthesiology and Chair of the Acute Respiratory Failure Taskforce of the Scandinavian Society of Anaesthesiology and Intensive Care Medicine. He has held several positions in Scandinavian and European anaesthesia and intensive care societies. He has led or participated in several guideline panels, including Scandinavian guidelines for the management of acute respiratory distress. His research focus is acute respiratory failure and sepsis, and general critical care medicine. Jon participated in the WHO *Therapeutics and COVID-19: living guideline* (corticosteroids). No conflict of interest.



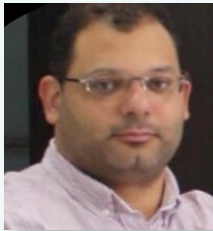
Francois Lamontagne

Francois Lamontagne is a critical care specialist – clinician-scientist at the Université de Sherbrooke, Canada, where he founded the Unité de recherche clinique et épidémiologique (URCE), a methods centre in support of investigator-initiated clinical research conducted at the Centre de recherche du CHUS. Lamontagne has received peer-reviewed funds from the Canadian Institutes of Health Research and the Fonds de Recherche du Québec – Santé (FRQS). He specializes in clinical trials of resuscitation interventions such as the 65 trial (minimization of vasopressor use – PMID 32049269) and the ongoing LOVIT trial (intravenous vitamin C – PMID 31915072; NCT03680274). Having contributed clinically and academically to the response to Ebola outbreaks in West Africa and the Democratic Republic of Congo, he developed an expertise in global health and outbreak preparedness research, which he applies to the current COVID-19 pandemic (PMID 32215641). He is a member of the International Steering Committee of the REMAP-CAP trial, a large adaptive platform trial designed to study emerging pandemics, co-Scientific Director of the CIHR-funded Canadian Sepsis Network, and co-Director of the Réseau québécois COVID-19 et pandémies, recently funded by the FRQS. Francois participated as the Methods Chair in the WHO *Therapeutics and COVID-19: living guideline* (corticosteroids, sotrovimab, casirivimab and imdevimab, remdesivir, nirmatrelvir). Francois serves as part of the International Steering Committee of REMAP-CAP and did not participate in the deliberations of the antivirals. He also served as Methods *Chair for Drugs to prevent COVID-19: living guideline* (hydroxychloroquine and tixagevimab-cilgavimab). See Annex 1.



Yee-Sin Leo

Professor Yee-Sin Leo is the Executive Director of the National Centre for Infectious Diseases, Singapore. As an adult infectious disease specialist, Professor Leo has led her team through multiple outbreaks in Singapore. These include Nipah in 1999, SARS in 2003, the pandemic influenza in 2009, Zika in 2016 and multiple surges of dengue. She successfully managed Singapore's first imported case of monkeypox in May 2019. Her current priority is now in the fight against COVID-19. Professor Leo has published more than 200 scientific papers. Her experience and expertise in outbreak management is frequently called upon as advisor and conference speaker at national, regional and international level. Apart from her clinical and administrative duties, she is also heavily involved in research and teaching. Her research interests include dengue, influenza, emerging infections, HIV and COVID-19. She has won many awards among which is the most prestigious Public Service Star, in recognition of her outstanding battle against SARS. Other awards include the Excellence Star Award 2005, Red Ribbon Award 2014 and National Healthcare Group Distinguished Senior Clinician Award 2016. Yee-Sin participated in the WHO *Clinical management of COVID-19: living guideline* (November 2021, advanced respiratory support), the WHO *Therapeutics and COVID-19: living guideline* (corticosteroids, lopinavir, ivermectin, casirivimab and imdevimab, IL-6 RB, JAK inhibitors, sotrovimab, molnupiravir, fluvoxamine, colchicine, nirmatrelvir, remdesivi, VV116) and *Drugs to prevent COVID-19: living guideline* (hydroxychloroquine and tixagevimab-cilgavimab). No conflict of interest.



Thiago Lisboa

Thiago Lisboa is a critical care researcher at the Coração Hospital (São Paulo, Brazil) and has been an Intensivist at the Porto Alegre Hospital for 20 years. He is an active member of the Brazil's Intensive Care Network's Scientific Committee since 2013 and a Professor at the Grand de Sol University (Porto Alegre, Rio Grand de Sol, Brazil) and at the La Salle University (Canoas, Rio Grand de Sol, Brazil). Thiago participated in the WHO *Clinical management of COVID-19: living guideline* (advanced respiratory support), the WHO *Therapeutics and COVID-19: living guideline* (sotrovimab, molnupiravir, nirmatrelvir) and *Drugs to prevent COVID-19: living guideline* (hydroxychloroquine and tixagevimab-cilgavimab). No conflict of interest.



Rebecca Livingston

Rebecca Livingston is the Clinical Lead Physiotherapist for the United Kingdom's first post COVID-19 service at University College London Hospital, established in May 2020. She has been appointed by NHS England as the Post COVID-19 specialty adviser for London, and co-chairs the Allied Health and Therapies Long Covid Network for London. During the peaks of the COVID-19 pandemic, Rebecca worked in critical care, including on an acute CPAP unit, and regularly engaged with national media to improve wider understanding of both acute and post COVID-19 care. Rebecca also works treating people with breathing pattern disorder and chronic lung disease, and is the clinical lead for the outpatient respiratory physiotherapy service at University College London Hospital. Rebecca participated in the WHO *Clinical management of COVID-19: living guideline* (rehabilitation of people with post COVID-19 condition, 2022). No conflict of interest.



Rakesh Lodha

Rakesh Lodha is a medical doctor specialized in Paediatrics and currently works for the All India Institute of Medical Science in New Delhi, India. His expertise covers paediatric infectious diseases, critical care medicine, asthma, tuberculosis, sepsis and respiratory physiology. Rakesh participated in the WHO *Clinical management of COVID-19: living guideline* (infectious period) and the WHO *Therapeutics and COVID-19: living guideline* (nirmatrelvir, fluvoxamine, colchicine, sotrovimab, molnupiravir, VV116). No conflict of interest.



Pisake Lumbiganon

Pisake Lumbiganon is Professor of Obstetrics and Gynecology, Convenor of Cochrane Thailand, and Director of the WHO Collaborating Centre on Research Synthesis in Reproductive Health based at the Faculty of Medicine, Khon Kaen University, Thailand. He is currently President Elect of the Asia & Oceania Federation of Obstetrics and Gynaecology. He has published more than 150 papers, including many Cochrane reviews in various international journals. Formerly, Dean of the Faculty of Medicine at Khon Kaen University 2009–2013 and President of the Royal Thai College of Obstetricians and Gynaecologists from 2016–2018. In 2019 he received an honourable fellowship from the Royal College of Obstetricians and Gynaecologists. His main areas of interest include maternal and perinatal health, evidence-based practices, systematic review and meta-analysis. He participated in the WHO *Clinical management of COVID-19: living guideline* (May 2020). No conflict of interest.



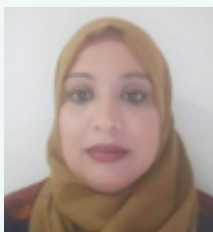
Flavia Machado

Flavia Machado is Head of the Intensive Care Section of Anesthesiology, Pain and Intensive Care Department at the Federal University of São Paulo, Brazil. Machado is the CEO of the Latin America Sepsis Institute (LASI), an organization devoted to the quality improvement process, multicentre studies in the field of sepsis, and awareness campaigns. She is a member of the Executive Board of the Global Sepsis Alliance. She has contributed to the 2012 and 2016 Surviving Sepsis Campaign International Guidelines, and is now Head of the Hemodynamic Group on the 2020 Board. She is a member of the Executive Committee and Chair of the Scientific Committee of the Brazilian Research in Intensive Care Network (BRICNET). She is founder member of the Latin America Intensive Care Network (LIVEN) and of the International Sepsis Forum (ISF) Council since 2014. Flavia participated in the WHO *Clinical management of COVID-19: living guideline* (May 2020, January 2021, November 2021) and the WHO *Therapeutics and COVID-19: living guideline* (corticosteroids). No conflict of interest.



Imelda Chipso Mahaka

Imelda Chipso Mahaka is Country Director for the Pangaea Zimbabwe AIDS Trust in Harare, Zimbabwe, providing programmatic and operational oversight to the organization. She has been involved in policy advocacy, community engagement and implementation around HIV prevention and treatment optimization including scale-up of treatment and access to diagnostics and monitoring. Imelda has extensive experience in HIV/AIDS and behavioural research on sexual and reproductive health, working particularly with adolescents. She sits on a number of study trials committees representing communities. She is a member of the Viral Load, DSD and PrEP Technical Working Groups, coordinated by the Ministry of Health and Child Care, Zimbabwe, and served as secretariat to the Laboratory Partnership Forum for a number of years. Imelda has participated in the WHO *Clinical management of COVID-19: living guideline* (January 2021) and the WHO *Therapeutics and COVID-19: living guideline* (remdesivir, hydroxychloroquine, lopinavir, ivermectin, casirivimab and imdevimab, molnupiravir). No conflict of interest.



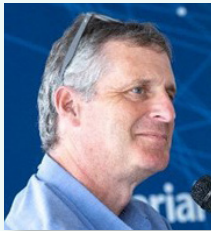
Hela Manai

Hela Manai is an emergency doctor at the Emergency Medical Service Tunis, Tunisia, with a number of years of solid practice experience. Since 2016, she has co-led the simulation unit within the Emergency Medical Service Tunis and teaches medical students and residents at the Faculty of Medicine, Tunis. She has been involved in several research projects and international workshops in the field of emergency medicine. Hela participated in the WHO *Clinical management of COVID-19: living guideline* (May 2020, January 2021, November 2021, advanced respiratory support, infectious period), the WHO *Therapeutics and COVID-19: living guideline* (corticosteroids, lopinavir, ivermectin, casirivimab and imdevimab, molnupiravir, fluvoxamine, colchicine, remdesivir, nirmatrelvir, VV116) and *Drugs to prevent COVID-19: living guideline* (hydroxychloroquine and tixagevimab-cilgavimab). No conflict of interest.



Claire McLintock

Claire McLintock ONZM, FRACP, FRCPA, MBChB (Edin) is a haematologist at Auckland City Hospital, Auckland New Zealand. She has a special interest in thrombosis and haemostasis, and haematological and medical problems in pregnancy. She is a co-author of the American Society of Hematology's guidelines on management of VTE in pregnancy and on the diagnosis of von Willebrand's Disease. She has served in many roles which include President International Society of Thrombosis and Haemostasis (2018–2020), and remains on the Executive Committee as Immediate Past-President, President of the Society of Obstetric Medicine of Australia and New Zealand (2008–2010). She is recognized as an expert in haematological and medical complications in pregnancy and is an invited speaker at many in-person and virtual conferences around the world, lecturing on topics ranging from VTE prevention diagnosis, and treatment in pregnancy, bleeding disorders in women and pregnancy, management of haematological disorders in pregnancy including COVID-19, and also pregnancy-specific complications such as pre-eclampsia, post-partum haemorrhage, thrombocytopenia. Claire participated in the WHO *Clinical management of COVID-19: living guideline* (January 2021, session on anticoagulation). No conflict of interest.



Marc Mendelson

Having trained at St Mary's Hospital, London, University of Cambridge and Rockefeller University, New York, Marc Mendelson is Professor of Infectious Diseases and Head of the Division of Infectious Diseases and HIV Medicine at Groote Schuur Hospital, University of Cape Town. His focus is on national and international policy to mitigate antimicrobial resistance. He led the clinical working group of the South African Ministerial Advisory Committee on COVID-19 and worked as a frontline clinician in COVID-19 high care units. Marc participated in the WHO *Therapeutics and COVID-19: living guideline* (fluvoxamine, colchicine). No conflict of interest.



Giovanni Battista Migliori

Professor Giovanni Battista Migliori is specialist in Respiratory Medicine and Medical Statistics, has more than 30 years' global experience in technical assistance, research and training (50% of the global human TB workforces were trained by his "Sondalo" course). Director of the WHO Collaborating Centre for TB and Lung Diseases at Maugeri Research Institute, Tradate, Italy, he is Honorary Professor at Queen Mary University (London) and Visiting Professor at the University of Monterrey (Mexico) and Insubria (Italy). He has published more than 650 peer-review papers in different languages (h-index > 80) on TB, respiratory diseases and COVID-19. Former Secretary-General of the European Respiratory Society (ERS), he is currently Chief Editor of the *International Journal of Tuberculosis and Lung Disease* and Section Editor for TB of the *European Respiratory Journal* and Chair of the GTN (Global Tuberculosis Network). Giovanni Battista participated in the WHO *Therapeutics and COVID-19: living guideline* (fluvoxamine, colchicine, sotrovimab, remdesivir) and *Drugs to prevent COVID-19: living guideline* (hydroxychloroquine and tixagevimab-cilgavimab). No conflict of interest.



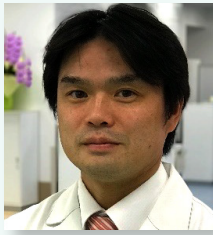
Greta Mino

Greta Mino is an infectious diseases paediatrician and researcher and practising physician at Alcivar Hospital in Guayaquil, Ecuador. For 21 years, Mino held the position of Head of the Infectious Diseases Department at Dr Francisco de Icaza Bustamante Children's Hospital. She is Past President of the Latin American Paediatric Infectious Disease Society. She served as national HIV programme consultant and HIV PMTCT programme coordinator for Ecuador's Ministry of Health. Additionally, she has advised the Pan-American Health Organization on influenza A(H1N1), and on the treatment of infectious diseases, surveillance of antibiotic resistance and control for HCAI, diarrhoeal disease and cholera. For the past 3 years, she has worked on the follow-up of patients with congenital Zika syndrome. Since 2020, she has taken part in the COVID-19 MIS-C response, launched by the Ecuadorian Ministry of Health and became an acting member of the WHO MIS-C group. Greta participated in the WHO *Clinical management of COVID-19: living guideline* (January 2021, November 2021) and the WHO *Therapeutics and COVID-19: living guideline* (remdesivir, hydroxychloroquine, lopinavir, ivermectin, casirivimab and imdevimab, IL-6 RB). No conflict of interest.



Amina Muazzam

Professor Amina Muazzam has a PhD in Applied Psychology and has a broad focus on research in health psychology. She is visiting faculty at Lakehead University, Canada and has been elected as Director-at-Large at the International Council of Psychologists, Canada (2018–2021 and 2022–2025). Currently she is Head of Department of Psychology and Director Research at Lahore College for Women University, Lahore, Pakistan, where she was a founder member of the International Resource Centre, looking after the Active Citizens Programme set up by the British Council as a model public sector university programme. She is actively involved in community projects with one recommended for a MacJannet award and another under consideration for a NextWorldNow grant. She has developed and validated many psychometrically sound scales for the assessment of educational, social clinical and health issues. Amina participated in the WHO *Clinical management of COVID-19: living guideline* (rehabilitation of people with post COVID-19 condition, 2022). See Annex 1.



Masahiko Mukaino

Masahiko Mukaino is a Physiatrist, and Associate Professor in the Department of Rehabilitation Medicine, Fujita Health University, Japan. He graduated from Kyushu University School of Medicine and holds a PhD from Keio University School of Medicine. He is a member of the Japanese Society of Rehabilitation Medicine and International Society of Rehabilitation Medicine. Since the initial stages of the COVID-19 epidemic in Japan, he has been involved in rehabilitation practice for patients in the acute, post-acute and chronic phases of the disease. He has also been conducting research on functioning assessment, rehabilitation programme development, and telerehabilitation for COVID-19 patients. Masahiko participated in the WHO *Clinical management of COVID-19: living guideline* (rehabilitation of people with post COVID-19 condition, 2022). No conflict of interest.



Srinivas Murthy

Srinivas Murthy is Associate Professor at the University of British Columbia in Vancouver, Canada. He is a paediatric infectious diseases and paediatric critical care physician and clinical epidemiologist. He has served as an advisor to WHO, Public Health Agency of Canada, and other public health agencies around the world since 2014. He holds research grant support from the Canadian Institutes of Health Research, the Wellcome Trust and the Bill & Melinda Gates Foundation, and his academic and clinical focus is on severe and emerging respiratory infections. Srinivas participated in the WHO *Clinical management of COVID-19: living guideline* (May 2020, January 2021, November 2021, advanced respiratory support, infectious period, awake prone positioning) serving as Clinical Chair. No conflict of interest.



Deshini Naidoo

Associate Professor Deshini Naidoo is currently Head of Department of Occupational Therapy at the University of KwaZulu-Natal, South Africa. Her research priorities focus on occupational therapy practices to promote accessible, equitable, rehabilitation within Southern Africa and practices to strengthen reintegration of persons with disability into the community, promoting early childhood development and addressing mental health areas of interest. An additional research priority is to improve the quality of health professions' education to ensure that graduates meet the needs of health care systems and of all populations they serve, especially marginalized communities and, recently, persons with post COVID-19 condition. Deshini participated in the WHO *Clinical management of COVID-19: living guideline* (rehabilitation of people with post COVID-19 condition, 2022). No conflict of interest.



Alice Namanja

Alice Namanja works as a Cardio-Respiratory Physiotherapist in the Department of Rehabilitation Sciences at Kamuzu University of Health Sciences, Blantyre, Malawi. Her clinical and research interests are in cardiovascular and respiratory health and rehabilitation across primary, secondary and tertiary prevention levels of care. She is currently a PhD student in the Faculty of Health Sciences at the University of Hull, working under the Sports Health and Exercise Science Research Group. Her PhD project aims to design a feasible and sustainable approach to enhancing healthy lifestyle change, targeting cardiovascular disease prevention, among people living with HIV in sub-Saharan Africa. Alice participated in the WHO *Clinical management of COVID-19: living guideline* (rehabilitation of people with post COVID-19 condition, 2022). No conflict of interest.



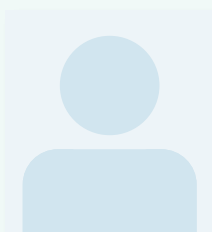
Emmanuel Nsutebu

Emmanuel Nsutebu is Chair of the African Sepsis Alliance and investigator for the African Research Collaboration on Sepsis. He is a consultant infectious diseases physician and Chief of Infectious Diseases at Sheikh Shakhboub Medical City, Abu Dhabi. He previously worked at the Royal Liverpool Hospital as Associate Medical Director for Deterioration and Sepsis and as a clinical advisor for the National Health Service England (sepsis and deterioration). He is a member of the Global Sepsis Alliance Board and Executive Committee. He is a member of the Abu Dhabi Government Health Service Infectious Disease and Infection Control Council; and the SEHA Critical Care Council. Both councils have led the health service response to the COVID-19 pandemic in Abu Dhabi. He is passionate about strengthening health services in low- and middle-income countries to care for severely ill patients such as patients with sepsis and emerging infections such as COVID-19. He has a special interest in sepsis, quality improvement, patient safety and clinical leadership. Emmanuel participated in the WHO *Clinical management of COVID-19: living guideline* (January 2021, November 2021, infectious period), the WHO *Therapeutics and COVID-19: living guideline* (remdesivir, lopinavir, ivermectin, casirivimab and imdevimab, IL-6 RB, molnupiravir, fluvoxamine, colchicine, nirmatrelvir) and *Drugs to prevent COVID-19: living guideline* (hydroxychloroquine and tixagevimab-cilgavimab). No conflict of interest.



Babatunde Gbolahan Ogundunmade

Babatunde Gbolahan Ogundunmade is a Neuro-Cardiopulmonary Physiotherapist with a special interest in human movement. He heads the Medicine/Cardiopulmonary Unit, Physiotherapy Department, University Teaching Hospital, Nigeria, where he serves as Coordinator of the Physiotherapy Continuing Education Unit. He is an alumnus of Premier University, University of Ibadan, where he obtained his first degree in Physiotherapy. He has MSc in Human Physiology from the University of Jos and trained further through the Tertiary Education Trust Fund Board of Trustees Special Intervention Training on Neurorehabilitation, Spinal and Critical Care Physiotherapy at Indraprastha Apollo Hospitals, New Delhi, India. He was appointed Chairman of the Nigeria Society of Physiotherapy COVID-19 Taskforce in November 2020. Babatunde Gbolahan participated in the WHO *Clinical management of COVID-19: living guideline* (rehabilitation of people with post COVID-19 condition, 2022). No conflict of interest.



Jessica Peter

Jessica Peter been a patient since 2005, diagnosed with systemic lupus erythematosus. In early 2021 her kidneys failed and she has been on haemodialysis since. She is in the midst of doing the “workout” for a kidney transplant. She has had experience being a patient in both government and private hospitals. Jessica participated in the WHO *Therapeutics for COVID-19: living guideline* (nirmatrelvir, VV116). No conflict of interest.



Natalia Pshenichnaya

Natalia Pshenichnaya has held various posts in infectious diseases, including: Head of the Infectious Diseases and Epidemiology Department at Rostov State Medical University; project officer on climate change and health in the WHO Russian Federation country office; and Head of the International Department of the National Medical Research Center of Phthisiopulmonology and Infectious Diseases in Moscow. Currently she is Deputy Director of clinical and analysis work at the Central Research Institute of Epidemiology, Rospotrebnadzor, Moscow. She has served on various WHO guideline development and advisory groups: clinical management of patients with Crimean-Congo Haemorrhagic Fever (2016–2019); clinical management of influenza (2019); and in 2020, the clinical advisory group on COVID-19 and WHO Clinical Network Knowledge Exchange on COVID-19. She was a member of: WHO-China joint technical mission to China to support the response operation for the COVID-19 outbreak 16–24 February 2020; Russian military-medical humanitarian mission on COVID-19 to Bergamo, Italy 22 March – 10 April 2020; WHO consultant for IPC and clinical management on COVID-19 in Tajikistan (August–September 2020). She is co-author of the Russian Federation national guidelines for the management of COVID-19. Natalia participated in the WHO *Clinical management of COVID-19: living guideline* (January 2021), the WHO *Therapeutics and COVID-19: living guideline* (corticosteroids, lopinavir, ivermectin, casirivimab and imdevimab, IL-6 RB, JAK inhibitors, sotrovimab, molnupiravir, fluvoxamine, colchicine, nirmatrelvir, remdesivir, VV116) and *Drugs to prevent COVID-19: living guideline* (hydroxychloroquine and tixagevimab-cilgavimab). No conflict of interest.



Nida Qadir

Nida Qadir is an Assistant Professor of Medicine in the Division of Pulmonary and Critical Care Medicine at the David Geffen School of Medicine, UCLA, USA. As the co-director of the division's Disaster and Pandemic Response Team, she spearheaded the creation of clinical guidelines for the management of COVID-19 patients at UCLA Health, and led the development of the institution's critical care surge plan. Her professional interests include critical care outcomes-based research, ICU recovery, and simulation in medical education. Her current research focuses on acute respiratory distress syndrome, shock and post-intensive care syndrome. She serves on the critical care editorial board for CHEST, the journal of the American College of Chest Physicians, and has served as faculty for numerous regional and international critical care simulation courses. Nida participated in the WHO *Clinical management of COVID-19: living guideline* (January 2021, infectious period), the WHO *Therapeutics and COVID-19: living guideline* (corticosteroids, lopinavir, ivermectin, casirivimab and imdevimab, IL-6 RB, fluvoxamine, colchicine, sotrovimab, molnupiravir) and *Drugs to prevent COVID-19: living guideline* (hydroxychloroquine and tixagevimab-cilgavimab). No conflict of interest.



Shalini Sri Ranganathan

Shalini Sri Ranganathan is a specialist in pharmacology and paediatrics at the University of Colombo, Sri Lanka. Professor Sri Ranganathan has over 20 years' experience in both pharmacology and paediatrics. Since 2007, she has regularly served as a member on the WHO Expert Committee on Selection and Use of Essential Medicines. She has won numerous medals and awards during her professional career for academic excellence and research. Her main interests are essential medicines for children, antimicrobial utilization, access to medicines, pharmacovigilance, paediatric dosage forms and rational use of medicines. She is a member of editorial boards of journals in Sri Lanka including the *Ceylon Medical Journal* and *Ceylon Journal of Medical Sciences*. She has authored over 80 publications. Shalini participated in the WHO *Clinical management of COVID-19: living guideline* (January 2021, November 2021, infectious period), the WHO *Therapeutics and COVID-19: living guideline* (ivermectin, casirivimab and imdevimab, IL-6 RB, JAK inhibitors, sotrovimab, molnupiravir, fluvoxamine, colchicine, nirmatrelvir, remdesivir) and *Drugs to prevent COVID-19: living guideline* (hydroxychloroquine and tixagevimab-cilgavimab). No conflict of interest.



Clare Rayner

Clare Rayner is a consultant physician in Occupational Medicine in the United Kingdom and has worked across many industrial sectors including transport, manufacturing, health, metals, chemical, construction, service and utilities. She is also an educator (trainer for the UK National Education Project for Health and Work and Honorary Lecturer at the Centre for Occupational and Environmental Health, University of Manchester) and has been a communication skills trainer for 27 years. During the pandemic, she has worked with patient support groups and doctors' groups, advocating for assessment and treatment for people with prolonged COVID-19-related health problems. With Long Covid Support Employment Advocates, she calls for fair working practices. She is Public Involvement (PI) Lead on a UK National Institute of Health Research on Long Covid, and represents patient communities the WHO-affiliated committee, ACT-A (Access to Covid Therapeutics Accelerator). She is a Long Covid Kids Champion. Clare participated in the WHO *Clinical management of COVID-19: living guideline* (rehabilitation of people with post COVID-19 condition, 2022). See Annex 1.



Bram Rochweg

Bram Rochweg is a practicing consultant intensivist and an Associate Professor in the Department of Medicine at McMaster University, Hamilton, Canada, with a joint appointment in the Department of Health Research Methods, Evidence and Impact. Bram is also a GRADE clinical practice guideline (CPG) methodologist and participated as the Methods Chair in the WHO *Therapeutics and COVID-19: living guideline* (remdesivir, hydroxychloroquine, ivermectin, IL-6 RB, molnupiravir, remdesivir). No conflict of interest.



Pablo Rojo

Pablo Rojo is a Paediatric Infectious Diseases Specialist at Hospital Universitario 12 de Octubre, Madrid, Spain. He is also Associate Professor of Complutense University, Madrid, Spain. He obtained his MD and PhD from Complutense University. He is a board member of the European Society of Paediatric Infectious Diseases (ESPID) and author and co-author of over 110 peer-reviewed scientific articles and book chapters. His main research activities are related to paediatric HIV, *S. aureus* and congenital CMV infection. He is associated with studies of the Spanish cohort of children infected with SARS-CoV-2 (EPICO), the DIAMONDS consortia and the BATS initiative and has participated in several COVID-19 trials on treatments and vaccines. He participated in the WHO working group on the definition of the multisystemic inflammatory syndrome in children (MIS-C) and in the WHO *Clinical management of COVID-19: living guideline* (November 2021). No conflict of interest.



Louise Rose

Louise Rose is Professor of Critical Care Nursing and Research Division Head at King's College London, and an honorary Professor in Critical Care at the Lane Fox Respiratory Unit at St Thomas' Hospital, London. Prior to joining King's she was Associate Professor at the University of Toronto. She remains the Research Director of the Prolonged Ventilation Weaning Centre in Toronto. Her research programme focuses on improving outcomes and the health care experience of mechanically ventilated patients across the care continuum from the emergency department, ICU, specialized weaning centre to in the home. Since commencing her research career she has been awarded over 100 peer-reviewed research grants and has over 215 peer-reviewed publications. During the pandemic she co-founded Life Lines – a philanthropic initiative that provided over 1400 4G-enabled tablets with a bespoke ICU virtual visiting solution to over 180 NHS hospitals enabling over 135 000 virtual visits nationwide. She recently received an MBE in the 2023 King's New Year's Honours list for this work. Louise participated in the WHO *Clinical management of COVID-19: living guideline* (awake prone positioning). No conflict of interest.



Saniya Sabzwari

Saniya Sabzwari is an Associate Professor in the Department of Family Medicine at the Aga Khan University, Karachi, Pakistan. She is a Fellow of the American Academy of Family Physicians. Her area of special interest is geriatrics. She established the first outpatient geriatric service in Pakistan, and developed geriatric undergraduate and postgraduate training programmes at the Aga Khan University in 2008. Her research focuses on community geriatrics, on which she has published several papers. She is also part of the Geriatric Special Interest Group for the World Organization of Family Doctors. Saniya has participated in the WHO *Clinical management of COVID-19: living guideline* (May 2020, January 2021) and the WHO *Therapeutics and COVID-19: living guideline* (remdesivir, hydroxychloroquine, lopinavir, ivermectin, casirivimab and imdevimab, IL-6 RB, JAK inhibitors, nirmatrelvir, remdesivir). See Annex 1.



Halima Salisu-Kabara

Halima Salisu-Kabara is a Practice Development Consultant, and the Sepsis Coordinator, SIDOK Sepsis Research Group, a multidisciplinary team in Nigeria. She initiated the Life Support Training Programme, Anaesthesiology/ICU, Aminu Kano Training Hospital, and pioneered emergency neurological life support training in Africa, starting with Nigeria (10–11 July 2023). Her passion is knowledge sharing and networking, sepsis and IPC education, and quality improvement in health care systems in low-resource settings. She participated in the expert content development group and external peer review group for the WHO *Global report on the epidemiology and burden of sepsis: current evidence, identifying gaps and future directions*. Presently, she is serving on many working groups, including COVID-19 Severity Classification and WHO Clinical Management. She is currently working with the Society for Women Development & Empowerment of Nigeria, as technical advisor, Community Care Services of the ACEII USAID-Funded Project with Georgetown Global Health Nigeria. Halima participated in the WHO *Clinical management of COVID-19: living guideline* (awake prone positioning). No conflict of interest.



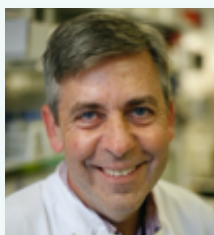
Rohit Sarin

Rohit Sarin is Principal Consultant of the National Institute of Tuberculosis and Respiratory Diseases, and Technical Advisor for the National Tuberculosis Elimination Program, for the Government of India. He is a fellow of the National College of Chest Physicians; executive member of the Tuberculosis Association of India; and member of the Delhi Tuberculosis Association, Association of Bronchology, and Indian Medical Association. Widely published at national and international level, he has received several awards, including, the national Dr PV Benjamin Memorial Oration Award given by the TB Association of Telangana, Hyderabad, 2019; the international Karel Styblo Public Health Prize, 2017; and the Dr PK Sen Gold Medal – the highest award given by the TB Association of India, 2012. Rohit participated in the WHO *Clinical management of COVID-19: living guideline* (May 2020, January 2021) and the WHO *Therapeutics and COVID-19: living guideline* (corticosteroids, hydroxychloroquine, lopinavir, ivermectin, casirivimab and imdevimab, IL-6 RB, JAK inhibitors, sotrovimab, molnupiravir, fluvoxamine, colchicine, remdesivir). No conflict of interest.



Manu Shankar-Hari

Manu Shankar-Hari's research programme aims to enable precision immunomodulation in critically ill patients adults with sepsis and acute respiratory distress syndrome (ARDS). Manu's core hypothesis is that treatable traits and modifiable biological networks could be determined with integration of clinical phenotype data with deep immune cell phenotyping. Manu participated in the WHO *Clinical management of COVID-19: living guideline* (November 2021, infectious period), the WHO *Therapeutics and COVID-19: living guideline* (ivermectin, casirivimab and imdevimab, sotrovimab, molnupiravir, nirmatrelvir, remdesivir) and *Drugs to prevent COVID-19: living guideline* (hydroxychloroquine and tixagevimab-cilgavimab). No conflict of interest.



Mike Sharland

Mike Sharland is a leading expert in antimicrobial prescribing, resistance and health care associated infection in children. He is the lead clinical advisor for the neonatal and paediatric programme of the Global Antibiotic Research and Development Partnership and Vice-Chair and AMR lead of the Penta Foundation, a global Paediatric Infectious Diseases research network. He chaired the Department of Health's National Expert Advisory Committee of Antimicrobial Prescribing, Resistance and Healthcare Associated Infection for 8 years. He has been an advisor to the WHO for many years. He is a member of the Expert Committee on the Selection and Use of Essential Medicines and Chair of the Antibiotic Working Group of the EML/EMLC, assisting with the development of the Access/Watch/Reserve (AWaRE) grouping of antibiotics and WHO global targets on use. Professor Sharland's principal research interest is optimizing the use of antimicrobials in children. At St George's University London he leads a major programme of research, including global cohort studies and clinical trials to improve the evidence base for antimicrobial prescribing. Mike participated in the WHO *Clinical management of COVID-19: living guideline* (January 2021) and the WHO *Therapeutics and COVID-19: living guideline* (remdesivir, hydroxychloroquine, lopinavir, ivermectin). No conflict of interest.



Yinzhong Shen

Yinzhong Shen is Chief Physician, Associate Professor of Shanghai Public Health Clinical Center, Fudan University, and a member of the Standing Committee for Tropical and Parasitic Diseases branch of the Chinese Medical Association. With experience of working at WHO headquarters in 2014 and 2016, he was invited by the WHO Western Pacific Region to share China's experience of COVID-19 clinical management with Pacific Island countries. His work focuses on clinical management and research in the field of infectious diseases. Yinzhong participated in the WHO *Clinical management of COVID-19: living guideline* (May 2020, January 2021), the WHO *Therapeutics and COVID-19: living guideline* (corticosteroids, lopinavir, ivermectin, casirivimab and imdevimab, IL-6 RB, JAK inhibitors, sotrovimab, molnupiravir, fluvoxamine, colchicine, nirmatrelvir, remdesivir, VV116) and *Drugs to prevent COVID-19: living guideline* (hydroxychloroquine and tixagevimab-cilgavimab). No conflict of interest.



Maria Asuncion Silvestre

Maria Asuncion Silvestre is a neonatologist and founder of the non-profit, Kalusugan ng Mag-ina Inc ("health of mother and child") in 2010, dedicated to the health of the mother-child dyad, emphasizing non-separation. With WHO Philippines, she collaborated on implementation of the Essential Intrapartum and Newborn Care (Unang Yakap – first embrace) Initiative in 2008. She is a member of the Independent Review Group for Early Essential Newborn Care of the WHO Western Pacific Region. She participated in WHO guidelines on optimal feeding of low birth weight, 2006; acceptable medical reasons for the supplementation annex to the revised Mother and Baby-Friendly Health Initiative, 2007; and counselling of women to improve breastfeeding outcomes, 2019. With the Asia-Pacific Center for Evidence-Based Healthcare, she co-authored *Painless evidence-based medicine*, 2008 and 2017. Maria participated in the WHO *Clinical management of COVID-19: living guideline* (May 2020). No conflict of interest.



Sally Singh

Sally Singh is Professor of Pulmonary and Cardiac Rehabilitation and Head of Pulmonary and Cardiac Rehabilitation Departments at the University of Leicester, United Kingdom. She has worked clinically in the field of pulmonary and cardiac rehabilitation for over 25 years. Her team has developed and is delivering a COVID-19 rehabilitation programme (face to face and digitally) and she is the clinical lead developing the YourCovidRecovery website. She is also Chair of the American Thoracic Society Pulmonary Rehabilitation Assembly, clinical Lead of Accreditation Scheme for Pulmonary Rehabilitation Services since 2015 and clinical Lead (Pulmonary Rehabilitation) National Asthma and COPD Audit Programme for 4 years. Sally participated in the WHO *Clinical management of COVID-19: living guideline* (rehabilitation of people with post COVID-19 condition, 2022). See Annex 1.



Anthoni Siso

Anthoni Siso is Professor of Medicine, Department of Medicine, University of Barcelona and Head of the Research Unit. In 2015 he won the National Award for Research in Primary Care from the Spanish Society of Family and Community Medicine. Since 2017, he has been President of the Catalan Society of Family and Community Medicine and President of the Board of Trustees of the Primary Care Foundation. He is also a member of the Advisory Council of the Catalan Agency for Quality and Health Assessment, the Advisory Council for Health Research and Innovation of the Catalan Ministry of Health, and the Scientific Advisory Committee of the Government of Catalonia on COVID-19 (2021). Anthoni participated in the WHO *Clinical management of COVID-19: living guideline* (rehabilitation of people with post COVID-19 condition, 2022). No conflict of interest.



João Paulo Souza

João Paulo Souza is Professor of Public Health at the Department of Social Medicine, Ribeirão Preto Medical School, University of São Paulo, Brazil. With a clinical background in obstetrics and gynaecology and intensive care, Professor Souza worked for several years at WHO headquarters on global maternal and perinatal health issues. His current work focuses on the interface of health and social development, particularly on strategies for achieving an ecologically and socially sustainable healthier future. Joao participated in the WHO *Clinical management of COVID-19: living guideline* (May 2020, January 2021) and the WHO *Therapeutics and COVID-19: living guideline* (remdesivir, hydroxychloroquine, lopinavir, ivermectin). He no longer serves as GDG members since joining WHO as consultant. No conflict of interest.



Miriam Songa Stegemann

Miriam Songa Stegemann is a specialist in Internal Medicine and Infectious Diseases and received the Diploma in Tropical Medicine and Hygiene (Gorgas, Lima, Peru). She works as a Senior Attending Physician and Scientist at the Department for Infectious Diseases and Respiratory Medicine, Charité Universitätsmedizin, Berlin, Germany. She is head of the antimicrobial stewardship programme at Charité. She is involved in international projects focusing on antimicrobial resistance in low- and middle-income countries. Recently, she was selected for funding through the Berlin Institute of Health (BIH) Clinical Fellows Programme.

Since the beginning of the outbreak of COVID-19 she became a clinical expert in the management of COVID-19 patients. She conducts projects, which are inspired by her clinical engagement and generate added value for her individual medical activities as a senior physician as well as for national and international networks with a focus on pandemic preparedness. Miriam participated in the WHO *Clinical management of COVID-19: living guideline* (January 2021), the WHO *Therapeutics and COVID-19: living guideline* (lopinavir, ivermectin, casirivimab and imdevimab, IL-6 RB, JAK inhibitors, molnupiravir, fluvoxamine, colchicine, nirmatrelvir, remdesivir) and *Drugs to prevent COVID-19: living guideline* (hydroxychloroquine and tixagevimab-cilgavimab). No conflict of interest.



Ronald Swanstrom

Ronald Swanstrom is a Distinguished Professor of Biochemistry at the Department of Biochemistry & Biophysics of the University of North Carolina – Microbiology and Immunology, a Diversity Committee member and the Director of the UNC Center for AIDS Research. In 2020, he received the Hyman L Battle Distinguished Cancer Research Award. Ronald participated in the WHO *Therapeutics and COVID-19: living guideline* (sotrovimab, molnupiravir, nirmatrelvir, remdesivir). See Annex 1.



Laura Tabacof

Laura Tabacof is a clinical researcher specializing in Rehabilitation Medicine. As Faculty Research Instructor at the Department of Rehabilitation and Human Performance at Mount Sinai Health System, New York, Tabacof has been developing novel rehabilitation approaches and spearheading research of Long COVID-19 biomarkers. Tabacof has also collaborated with WHO, the American Association of Physical Medicine and Rehabilitation, the National Academy of Sciences, Engineering and Medicine and the Social Security Administration to develop guidelines for Long COVID diagnosis and rehabilitation. Laura participated in the WHO *Clinical management of COVID-19: living guideline* (rehabilitation of people with post COVID-19 condition, 2022). No conflict of interest.



Louise Thwaites

Louise Thwaites is a clinical researcher and member of the Emerging Infections Group at the Oxford University Clinical Research Unit, Viet Nam. She is an Associate Professor in the Centre for Tropical Medicine and Global Health at the University of Oxford. Her research focuses on the care of critically ill patients in resource-restricted settings, and she has spent much of her career engaged in research into tetanus. Louise participated in the WHO *Living guidance of clinical management of COVID-19* (advanced respiratory support, March 2022). No conflict of interest.



Swagata Tripathy

Swagata Tripathy is Additional Professor at All India Institute of Medical Sciences, Bhubaneswar, India where she leads the Central Intensive care Unit (including the COVID-19 Critical Care Task Force) and is coordinator for critical care training and academics. In addition to her clinical responsibilities, she is a steering committee member of the Indian Registry of Intensive care (IRIS) and a key collaborator in the Wellcome funded Critical Care Asia Africa Consortium. She is an Associate Editor for *Critical Care Communications*, the official newsletter for the Indian Society of Critical Care Medicine, and a founder member of the Neurocritical Care Society India. Passionate about providing holistic, patient-centred care to economically deprived patients, her research focuses on gaining a better understanding of existing quality of care – specifically patient-centred outcomes for critically ill patients. Swagata participated in the WHO *Clinical management of COVID-19: living guideline* (advanced respiratory support, March 2022). See Annex 1.



Tshokey Tshokey

Tshokey Tshokey is a Clinical Microbiologist in Bhutan's JDW National Referral Hospital and an Assistant Professor of Microbiology in the Medical University. He received his medical education in Myanmar (MBBS) and Sri Lanka (MD Microbiology), followed by research training in Australia (PhD). He is a clinician, a researcher and an academician in laboratory medicine, public health, infectious diseases prevention and control. He has diverse research interests with around 35 publications. He also serves as a technical expert to several national programmes in the Ministry of Health including antimicrobial resistance, tuberculosis, immunization, polio, HIV/STI, infection control and medical waste management, antimicrobial resistances and zoonoses. During the COVID-19 pandemic, he served as the National Technical Advisor in the Technical Advisory Group (TAG), Ministry of Health. TAG was responsible for advising the government on technical matters relating to COVID-19 prevention, management, isolation, quarantine and restrictions including lockdowns. TAG developed several guidelines, protocols and manuals. In addition to TAG, he took the role of Clinical Team Lead for COVID-19 case management, supported by a group of doctors on special assignment for COVID-19 case management. Tshokey participated in *Drugs to prevent COVID-19: living guideline* (hydroxychloroquine and tixagevimab-cilgavimab) and *WHO Therapeutics and COVID-19: living guideline* (molnupiravir).



Sebastián Ugarte Ubiergo

Sebastián Ugarte Ubiergo is a Medical Doctor, Internist, Specialist in Critical Care Medicine who currently serves as ICU Director, INDISA Clinic, Universidad Andrés Bello, Santiago, Chile. His other positions include Director of the Postgraduate Program in Intensive Care Medicine, Faculty of Medicine, Andrés Bello University UNAB, Director Department Epidemic Response, Chilean Society of Critical Care and Emergency Medicine, Member of the expert advisory team of the Pan American Health Organization for the development of COVID-19 and influenza guidelines. He also served as Past President of the Comisión de Medicina Intensiva, Comisión Nacional de Certificación de Especialidades, council member WFSICM, Past President Federación Panamericana e Ibérica de Sociedades de Medicina Crítica y Terapia Intensiva, Chilean Society of Critical Care and Emergency Medicine, Past President, Chilean Society of Intensive Medicine, Director Chilean Network of Intensive Medicine. He has been the recipient of many grants, honours and awards and has published widely in many national and international journals. Sebastián participated in the WHO *Clinical management of COVID-19: living guideline* (January 2021) and the WHO *Therapeutics and COVID-19: living guideline* (remdesivir, hydroxychloroquine, lopinavir, ivermectin, casirivimab and imdevimab, IL-6 RB). No conflict of interest.



Timothy M Uyeki

Tim Uyeki is the Chief Medical Officer for the Influenza Division, U.S. Centers for Disease Control and Prevention (CDC) and has worked on the clinical aspects, epidemiology, prevention, and control of seasonal, zoonotic and pandemic influenza since 1998. He has worked on the clinical aspects of COVID-19 since the first U.S. case-patient was identified in January 2020, and on the epidemiology and clinical management of SARS, MERS and Ebola virus disease for CDC and WHO. Tim participated in the WHO *Therapeutics and COVID-19: living guideline* (casirivimab and imdevimab, molnupiravir, fluvoxamine, colchicine, nirmatrelvir, remdesivir, VV116) and *Drugs to prevent COVID-19: living guideline* (hydroxychloroquine and tixagevimab-cilgavimab). No conflict of interest.



Evangelina Vazquez-Curiel

Evangelina Vazquez-Curiel is a Physics graduate of the Faculty of Science at the Autonomous University of Mexico. She has a master's in Materials Science and completed a PhD in Science. During the birth and postpartum of her first child in 1995 she suffered several adverse events; the latest related to HAI. In 1996, she began working on patient safety, promoting prevention of HAIs in Mexico City. In November 2005, she took part in the Patients for Patient Safety (PFPS) global workshop in the United Kingdom, which resulted in the London Declaration. She became a champion for and part of the founding of the PFPS team. Since 2006, she has participated in workshops, and global, regional and national events on patient safety. In 2008, she founded the Mexican PFPS Network, which she directs. In the same year the Pan American PFPS Network opened, for which she is General Coordinator. In 2009 she represented the patients' voice in the global launch of the campaign "Save Lives: Clean Your Hands". She has written articles on patient participation, patient safety and prevention of HAIs. She is co-author of *Nursing and patient safety and Handbook for the prevention and control of infections associated with health care*. In 2020 she was a member of the external review group peer reviewing the rapid advice guide: *Use of chest imaging in COVID-19* for WHO. She has been a member of WHO's Global Advisory Group of PFPS since 2014. Evangelina participated in the WHO *Therapeutics and COVID-19: living guideline* (molnupiravir). No conflict of interest.



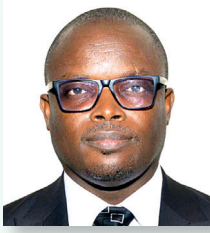
Sridhar Venkatapuram

Sridhar Venkatapuram is an academic-practitioner of global health ethics and justice. He is an Associate Professor at King's College London, and Director of Global Health Education and Training at the King's Global Health Institute. He brings together the natural and social sciences related to health with philosophy, particularly political philosophy, to address issues related health rights, equity and good governance for health at the local, national, and global levels. He has worked with organizations including Human Rights Watch, Doctors of the World, the Population Council, Open Societies Institute, Wellcome Trust, Health Foundation, UK Parliament Office of Science & Technology, and the WHO. His PhD – an argument for every human being's moral right to health – was the basis of his first book, *Health justice: an argument from the capability approach* (Polity Press). He is co-editor of *Vulnerable: the law, policy and ethics of COVID-19* (University of Ottawa Press). Sridhar participated in the WHO *Clinical management of COVID-19: living guideline* (January 2021, infectious period), the WHO *Therapeutics and COVID-19: living guideline* (lopinavir, ivermectin, casirivimab and imdevimab, IL-6 RB, JAK inhibitors, sotrovimab, molnupiravir, fluvoxamine, colchicine, nirmatrelvir, remdesivir, VV116) and *Drugs to prevent COVID-19: living guideline* (hydroxychloroquine and tixagevimab-cilgavimab). No conflict of interest.



Kathleen Vollman

Kathleen Vollman is a Critical Care Clinical Nurse Specialist and Consultant. She has published, lectured and consulted nationally and internationally on a variety of pulmonary, prone positioning, critical care, prevention of health care acquired injuries including pressure injury and CAUTI/CLABSI and other HAIs, work culture and sepsis recognition and management. She serves as a subject matter expert on these topics for the American Hospital Association and Michigan Hospital Association. From 1989 to 2003 she was Clinical Nurse Specialist for the Medical ICUs at Henry Ford Hospital in Detroit Michigan. She serves as adjunct faculty for the Clinical Nurse Specialist Program at Michigan State University. Her notable inductions and appointments include: College of Critical Care Medicine (2004), American Academy of Nurses (2009) and CNS Institute (2019). She was honorary ambassador to the World Federation of Critical Care Nurses and is currently its financial director (2012–present). Kathleen participated in the WHO *Clinical management of COVID-19: living guideline* (awake prone positioning). No conflict of interest.



Ablo Prudence Wachinou

Ablo Prudence Wachinou is a Consultant Pulmonologist with extensive expertise in tuberculosis and HIV/TB co-infection in both clinical care and programmatic management. He works at the National Hospital for Tuberculosis and Pulmonary Diseases, Benin, and has been a member of the coordination team for the National TB Programme of Benin for the last 15 years. He also holds an MSc in Epidemiology from the London School for Hygiene and Tropical Medicine. He is an Associate Professor of Pulmonology at the School of Health Sciences, University of Abomey-Calavi, Benin. His research interests encompass TB and comorbidities such as HIV infection, diabetes, mental depression, COVID-19, and also TB social determinants. He has strong research interests in sleep medicine and is involved in clinical care as well as pioneering research on sleep-disordered breathing in African populations. Ablo Prudence participated in *Drugs to prevent COVID-19: living guideline* (hydroxychloroquine and tixagevimab-cilgavimab).



Simon Wessely

Simon Wessely FRS is Regius Professor of Psychiatry and Interim Dean at the Institute of Psychiatry, Psychology and Neuroscience at King's College London. He is a Consultant Psychiatrist at King's College Hospital and the Maudsley Hospital. He is an active clinical academic psychiatrist and was elected to the Academy of Medical Sciences in 1999 and became a Fellow of the Royal Society in 2021. Starting his research career in unexplained symptoms and syndromes, he established the Chronic Fatigue Syndrome Research Unit in 1991 and was a founder member of the Cochrane Depression and Anxiety Group. In 1996 he established the Gulf War Illness Research Unit which, in 2003, subsequently became the King's Centre for Military Health Research. Sir Simon chaired the government's Independent Review of the Mental Health Act between 2017 and 2019. He is also Director of the PHE NIHR Health Protection Research Unit for Emergency Preparedness and Response, which has been very active during the COVID-19 crisis. Simon participated in the WHO *Clinical management of COVID-19: living guideline* (rehabilitation of people with post COVID-19 condition, 2022). See Annex 1.



Ananda Wijewickrama

Ananda graduated in 1991 from the Faculty of Medicine, University of Colombo. He obtained his MD (Sri Lanka) from the Post Graduate Institute of Medicine, University of Colombo in 1998, and his MRCP (UK) from the Royal College of Physicians, London, in 2000. Currently he is a Consultant Physician at the National Institute of Infectious Diseases (formerly IDH), Colombo, and, since 2003, an external lecture/examiner in the Faculty of Medicines and a member of the National Medicines Regulatory Authority of Sri Lanka. He has postgraduate training in infectious diseases including dengue, SARS, avian flu and other emerging infections and HIV. His research interests include clinical management of dengue, HIV and chicken pox. He is a member of the editorial board of the Guidelines for the Management of Dengue Fever and DHF in adults in Sri Lanka. He has several publications in peer-reviewed journals and has delivered many guest lectures both in local and foreign medical forums on dengue. He won the ProMED award for emerging infectious diseases in ICID 2016. Ananda also served as the President of the Ceylon College of Physicians for 2020. Ananda participated in the WHO *Clinical management of COVID-19: living guideline* (January 2021), the WHO *Therapeutics and COVID-19: living guideline* (remdesivir, lopinavir, ivermectin, casirivimab and imdevimab, IL-6 RB, JAK inhibitors, molnupiravir) and *Drugs to prevent COVID-19: living guideline* (hydroxychloroquine and tixagevimab-cilgavimab). No conflict of interest.



Wenguang Xia

Wenguang Xia is the Director of Hubei Rehabilitation Hospital, Chief Physician and Academic Leader of the Rehabilitation Center, Director of the National Regional TCM Rehabilitation Center (COVID-19 Rehabilitation) and Director of the Clinical Medicine Research Center of Rehabilitation of Integrated Traditional Chinese and Western Medicine in Hubei Province. Xia is also Chairman of the Rehabilitation Medical Education Committee of Hubei Rehabilitation Medical Association and Member of the Physical Medicine and Rehabilitation Committee of Chinese Medical Association. Wenguang participated in the WHO *Clinical management of COVID-19: living guideline* (rehabilitation of people with post COVID-19 condition, 2022). See Annex 1.

Annex 1: Conflicts declared in Declaration of Interests forms

| Names | Conflicts declared |
|-------------------------------|--|
| Martin Brodsky | Since March 2020, I have presented at multiple conferences and received honoraria from academic and commercial groups on the topic of swallowing and swallowing disorders and rehabilitation during the COVID-19 epidemic. Decision: no action needed. |
| Darren Brown | I am the lead author on World Physiotherapy briefing paper 9 <i>Safe rehabilitation approaches for people living with Long COVID: physical activity and exercise</i> . This is a consensus opinion statement based on the experience of experts. Decision: no action needed. |
| Carolyn Calfee | 1b. I have served as a consultant or advisor to a variety of companies about therapeutics for ARDS (not specifically related to COVID-19 but disclosing out of an abundance of caution): Bayer, Roche-Genentech, Quark, Prometic, CSL Behring, Vasomune, Gen1e Life Sciences. Funds were paid to me. Current consultancies: Vasomune, Gen1e Life Sciences. 2a. I have had research support to my institution from several companies for observational studies related to ARDS (disclosing out of an abundance of caution): GSK (funding ended 2017); Bayer (funding ended 2019); Roche-Genentech (funding to 2022). I am not including funding from governmental sources or non-profits here. Funds were paid to my institution. Roche-GNE research contract to identify treatable traits in ARDS is active. Decision: no action needed. |
| Edith Cup | Our research group has received funding to study allied health care following COVID-19 from March 2021 until March 2022 (Radboud University Medical Center Nijmegen, Department of Rehabilitation). Decision: no action needed. |
| Pamela Enderby | I am a speech and language therapist and have been involved in promoting, developing and teaching in the area of rehabilitation associated with multidisciplinary care, communication disorders, outcome measures. I have received grants and published books and articles on these topics. I have provided advice to NHS UK working groups and associated professional groups. Decision: no action needed. |
| Simon Gane | I am a founding trustee of AbScent, a charity for supporting people with smell loss. The charity raises money in part by selling smell training kits for olfactory rehabilitation ("smell training"). I receive no remuneration for this role. I do not think that this is a conflict of interest but declare it in good faith. Decision: no action needed. |
| Matthias Gotte | I received research funding and license fees from Gilead Sciences Inc. License fees refer to assays that we have developed in my laboratory. Research funding was provided to my laboratory. The one-time license fee of US\$ 50 000 was paid to the University of Alberta and I received ~US\$ 15 000. Research funding is ongoing, no more license fees. Decision: Dr Gotte will not be a panellist in recommendations concerning remdesivir. |
| David S Hui | An open label RCT comparing 5 vs 10 days of remdesivir for patients with severe and moderate COVID-19 (Gilead). Amount of income or value of interest: HK\$ 1.2 million to the Department of Medicine and Therapeutics. No personal income involved. Study was completed on 29 May 2020. Decision: Dr Hui was not a panellist for recommendation on remdesivir. |
| Michael Jacobs | Funding for phase 1b/2a trial of molnupiravir in UK national trial platform (AGILE) for which I am currently co-investigator (Ridgeback Therapeutics). Amount of income or value of interest: significant (£500 000). Decision: Sir Michael Jacobs was not a panellist for recommendations about molnupiravir. |
| Leticia Kawano-Dourado | I took part on an advisory board (Lilly) on June 2021 with Brazilian rheumatologists treating rheumatoid arthritis on baricitinib's effects on COVID-19: where we had a presentation of the RCT data. It is worth mentioning that one of my lines of research before COVID-19 is rheumatoid-arthritis-associated interstitial lung disease, and that is the main reason why I have a relationship with rheumatoid arthritis drug companies. Amount of income or value of interest: 900 euros. Decision: Dr Kawano-Dourado was not a panellist for recommendations about baricitinib. |

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| Francois Lamontagne | <p>I am a clinician scientist, and, in this role, I have supervised the conduct of clinical trials evaluating interventions for COVID-19 at my institution. Those trials did NOT evaluate molnupiravir, JAK inhibitors, sotrovimab, fluvoxamine and PF 73213332, but one trial (ATTACC) evaluated anticoagulants. The trial was funded by the CIHR (public, peer-reviewed funding) and the funds (about US\$ 20 000–40 000) that were paid to my institution were used to cover a fraction of the salary of the local research team. I have never received any salary/honorarium/reimbursement for this or any other research work. Recruitment in the anticoagulation domain ceased but the platform trial continues for other interventions. I have not been invited to present about the present work, I have been invited in the past to talk about guidelines in general including those created by WHO.</p> <p>Decision: Dr Lamontagne was not a panellist for recommendations about convalescent plasma and will not participate in anticoagulation recommendations.</p> |
| Amina Muazzam | <p>I am working as a member of the Research Innovation and Institutional Research Ethics boards without any payment. I remain Chair of Department for the British Council's Active Citizens programme community action projects, offering my expertise/services on a voluntary basis – supervising projects and training facilitators. No financial aspect involved.</p> <p>Decision: no action needed.</p> |
| Clare Rayner | <p>I am a patient representative on a research project looking at Long Covid rehabilitation and assessment (National Institute of Healthcare Research, UK). I will be paid an occasional fee for attending meetings.</p> <p>Decision: no action needed.</p> |
| Louise Rose | <p>1b. Consulting – this likely has no bearing on this work but I have received consulting or speaking fees from Philips Medical and Draeger Medical as well as served on a DSMB for Hamilton Medical for a total of less than £3000 until December 2021.</p> <p>Decision: no action needed.</p> |
| Saniya Sabzwari | <p>Consultancy on primary care model for health care service delivery based on a family practice approach for WHO in 2018. Amount of income or value of interest: US\$ 480.</p> <p>Decision: no action needed.</p> |
| Manu Shankar-Hari | <p>I would like to highlight that I am an investigator in the REMAP-CAP trial.</p> <p>Decision: Dr Shankar-Hari did not participate as a panellist in the tocilizumab guideline.</p> |
| Sally Singh | <p>Co-chaired the ERS/ATS consensus statement on COVID rehabilitation guidance Spruit MA, Holland AE, Singh SJ, Tonia T, Wilson KC, Troosters T (2020). COVID-19: Interim guidance on rehabilitation in the hospital and post-hospital phase from a European Respiratory Society and American Thoracic Society-coordinated International Task Force. <i>Eur Respir J</i>. 56(6):2002197 (https://doi.org/10.1183/13993003.02197-2020).</p> <p>Lead author on Delivering rehabilitation to patients surviving COVID-19 using an adapted pulmonary rehabilitation approach. <i>British Thoracic Society guidance</i>. 2020.</p> <p>Member of the NHS England Long Covid Taskforce (additional member of the research subgroup and the rehabilitation subgroup).</p> <p>Decision: no action needed.</p> |
| Ron Swanstrom | <p>Research support for NIH, USA. Grant to my employer UNC Chapel Hill.</p> <p>Amount of income or value of interest: approximately US\$ 100 000/year to support research.</p> <p>In my lab we study anti-SARS-CoV-2 inhibitors and broad acting antivirals including NHC/molnupiravir.</p> <p>Decision: no action taken as research limited to basic science aspects of the medicine; not clinical trials. Funding source is not a manufacturer.</p> |
| Swagata Tripathy | <p>In charge of the COVID-19 ICU at AIIMS Bhubaneswar, I am PI for a non-funded research project investigating the role of epidural morphine to reduce respiratory drive in COVID-19 patients on NIV.</p> <p>Decision: no action needed.</p> |
| Kathleen Vollman | <p>Awake prone article/as international expert – PhD student: no income.</p> <p>Email response to questions from multiple hospitals on the process, current: no income.</p> <p>Webinar: Prone positioning for mechanically ventilated patients (Stryker Sage), 2022: US\$ 800.</p> <p>Owner of a prone positioning device “Vollman Prone Positioner” – no longer in the market. Expired in 2007.</p> <p>Decision: no action needed.</p> |
| Simon Wessely | <p>I am the Honorary Consultant Advisor in Psychiatry to the British Army, which has an interest in stress-related disorders, and was a trustee of Combat Stress, a charity providing support for veterans. I have also received a speaker's fees from Swiss Re for a talk about general mental issues and COVID-19, which included references to traumatic stress. My unit receives grant support from the Medical Research Council and other charities to investigate the mental health of the NHS workforce during the COVID-19 pandemic.</p> <p>Decision: no action needed.</p> |
| Wenguang Xia | <p>Research support in the Hubei Health Committee, Science and Technology Department of Hubei Province (2021–current).</p> <p>Decision: no action needed.</p> |