

## **PEN-Plus In Action**

*Launching a global partnership to fight type 1 diabetes, sickle cell disease, rheumatic and congenital heart disease, and other severe NCDs among the world's poorest children and young adults*

### **Background:**

Every year, more than 30,000 of the world's poorest children, adolescents, and young adults die of just three severe, chronic non-communicable diseases (NCDs) – rheumatic heart disease (RHD), type 1 diabetes (T1D), and sickle cell disease (SCD). Over 90 percent of these deaths are avoidable, if these young people only had access to highly cost-effective care and treatment routinely available to higher-income populations. But to date, this lifesaving care remains virtually unavailable in low- and lower-middle-income countries (LLMICs) outside of referral hospitals in large cities. In the rural areas that are home to an overwhelming majority of the world's poorest, people go undiagnosed and untreated.

On September 15, 2022, the [NCDI Poverty Network](#), alongside [UNICEF](#), the [Helmsley Charitable Trust](#), [WHO AFRO](#) and other partners, will introduce a major global initiative to address this problem by rapidly scaling up implementation of [PEN-Plus](#) – a proven strategy for delivering integrated chronic care services for RHD, T1D, SCD, and other severe NCDs at first-level hospitals in poor, rural areas of LLMICs.

PEN-Plus provides mid-level providers such as nurses and clinical officers with the specialized training, mentorship, equipment, and medicines needed to deliver integrated care for groups of related conditions. Over the past six months of dramatic growth and progress, with support from the NCDI Poverty Network, the WHO Regional Office for Africa (WHO AFRO), UNICEF, the Helmsley Charitable Trust, and the [Juvenile Diabetes Research Foundation \(JDRF\)](#), four countries that had initiated PEN-Plus pilot clinics and training sites between 2006 and 2018 (Rwanda, Malawi, Liberia, and Haiti) moved ahead with plans to scale up PEN-Plus nationwide, and 10 other countries (Ethiopia, Mozambique, Tanzania, Kenya, Uganda, Zambia, Zimbabwe, Sierra Leone, Nepal, and Chhattisgarh State in India) are implementing plans to open their first PEN-Plus clinics and training sites, and to develop operational plans for national scale-up.

On 23 August, 2022, the Member States of the WHO/AFRO region voted to adopt the [regional PEN-Plus strategy to address severe NCDs at first-level referral health facilities in the region](#). Thirty-three of the region's 47 Member States (70%) submitted **statements of support** in advance of the vote on the [resolution](#).

Thank you for joining us in New York (and via live stream [@UNICEFhealth](#)) for our celebratory event to capitalize on our growing movement to drive health system improvements and connect care efforts for severe and chronic NCDs amongst the world's most vulnerable.

**Agenda:**

Time	Segment & Speaker
10:00 AM - 10:05 AM ET	<b>Welcome</b> <b>Anatole Manzi</b> , Partners In Health
10:05 AM - 10:20 AM ET	<b>Opening Addresses</b> <ul style="list-style-type: none"> <li>• <b>Aboubacar Kampo</b>, UNICEF (<i>live</i>)</li> <li>• <b>Matshidiso Moeti</b>, WHO Africa (<i>video</i>)</li> <li>• <b>Juan Pablo Uribe</b>, World Bank (<i>video</i>)</li> </ul>
10:20 AM - 10:35 AM ET	<b>Presentation/Investment Case</b> <ul style="list-style-type: none"> <li>• <b>Gene Bukhman</b>, NCDI Poverty Network, Brigham &amp; Women's Hospital, Harvard Medical School, Partners In Health</li> <li>• <b>Ana Mocumbi</b>, NCDI Poverty Network, Universidade Eduardo Mondlane, Instituto Nacional de Saude</li> </ul>
10:35 AM - 10:40 AM ET	<b>PEN-Plus Video</b>
10:40 AM - 11:00 AM ET	<b>Panel Discussion</b> <u>Moderator:</u> <b>Anatole Manzi</b> , Partners In Health <u>Panelists:</u> <ul style="list-style-type: none"> <li>• <b>Emily Wroe</b>, NCDI Poverty Network, Brigham &amp; Women's Hospital, Harvard Medical School, Partners In Health</li> <li>• <b>Biraj Karmacharya</b>, Dhulikhel Hospital, Nepal National NCDI Poverty Commission</li> <li>• <b>Bright Mailosi</b>, Partners In Health, Malawi</li> <li>• <b>Raoul Bermejo</b>, UNICEF</li> </ul>
11:00 AM - 11:20 AM ET	<b>Panel Discussion</b> <u>Moderator:</u> <b>Anatole Manzi</b> , Partners In Health <u>Panelists:</u> <ul style="list-style-type: none"> <li>• <b>Isaac Odame</b>, Global Sickle Cell Disease Network, SickKids Institute</li> <li>• <b>Aaron Kowalski</b>, JDRF</li> <li>• <b>Paladie Matageko</b>, Voices of NCDI Poverty Fellow</li> <li>• <b>Ana Mocumbi</b>, NCDI Poverty Network, Universidade Eduardo Mondlane, Instituto Nacional de Saude</li> <li>• <b>Dhruv Kazi</b>, American Heart Association</li> </ul>
11:20 AM - 11:25 AM ET	<b>Pre-recorded Remarks</b> <b>Nancy Brown</b> , American Heart Association ( <i>video</i> )
11:25 AM - 11:30 AM ET	<b>Closing Remarks</b> <b>Gina Agiostratidou</b> , Helmsley Charitable Trust

**Moderator:**



**Dr. Anatole Manzi**

*Deputy Chief Medical Officer in charge of Clinical Quality and Health Systems Strengthening, Partners In Health*

In his current role, Dr. Manzi liaises with PIH-supported countries to develop and implement quality improvement and health systems strengthening strategies. His work involves engineering innovative solutions to integrate quality management with clinical practice. He manages relationships and engages with partners, including academic and non-academic global health organizations, to support the implementation, evaluation and dissemination of quality care delivery practices. He also serves as Director of Learning Collaborative aiming at strengthening COVID-19 contact tracing and expanded public health response through learning and exchange series targeted to expert implementers as part of the US Public Health Accompaniment Unit. Previously, he served as the Director of Clinical Practice and Quality Improvement and

Director of Global Learning and Training at PIH. In these roles, he oversaw the organization-wide education and training strategy, including the development and standardization of guidelines and tools essential for PIH-supported countries to deliver high quality care. Dr. Manzi is assistant professor at University of Global Health Equity, adjunct professor of global health at Tufts University, and lecturer in the Department of Global Health and Social Medicine, Harvard Medical School. He also co-directs the Equity Approach to Pandemic Preparedness and Response, an online self-learning course which brings together public health experts leading national and global efforts to analyze challenges and strategic interventions through practical, interdisciplinary and equity-driven approach to address COVID-19 and other pandemics. He is also the founder of Move Up Global, a Boston-based organization striving to improve access to better health and education in remote and resource-constrained communities. His research focuses on evaluating healthcare quality improvement and innovative interventions to eradicate Neglected Tropical Diseases (NTDs) in resource-limited settings. Dr. Manzi is an active member and advisor at various organizations and working groups including the World Health Organization and International Standards Organization. He is also a New Voices Senior Fellow at Aspen Institute.

**Speakers:**



**Dr. Aboubacar Kampo**

*Director of Health Programmes, UNICEF*

Dr. Aboubacar Kampo was appointed Director of Health Programmes at UNICEF Headquarters in New York on November 2020. Prior to his appointment, Dr. Kampo served as UNICEF Representative in Afghanistan and Cote d'Ivoire and has held senior leadership positions across various International NGOs and UN Agencies over the last 14 years. An expert in development aid and humanitarian assistance, Dr. Kampo has worked as a physician/surgeon in hospitals and clinics in rural and urban areas in Africa and Asia. In the recent tours as UNICEF Country Representative, he partnered with governments and industry leaders in taking innovative approaches to ensure access to education and health services for children

in complex settings. Dr. Kampo is a Medical Doctor and Public Health Specialist, passionate about using innovations to address real-life community challenges and bridge the gap between communities and stakeholders. He is a national of Mali.



**Dr. Biraj Karmacharya**

*Director, Public Health and Community Programs, Kathmandu University School of Medical Sciences*

Dr. Biraj Karmacharya, MBBS, MSc, PhD, is Director, Public Health and Community Programs, and Associate Professor at the Department of Public Health at Dhulikhel Hospital, Kathmandu University School of Medical Sciences. He obtained MBBS from Kathmandu University and PhD degree from the University of Washington in Seattle (USA). Dr. Karmacharya was the founding member, and he has been leading the Department of Community Programs since 2006. He also leads the Nepal Technology Innovation Center at Kathmandu University, a platform for bringing academia and industries together for rural development. Dr. Karmacharya is engaged in developing and setting up innovative community-based health, integrated health and development programs in rural settings in Nepal.



**Dr. Matshidiso Moeti**

*Regional Director for Africa, WHO*

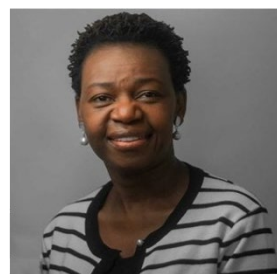
Dr. Matshidiso Rebecca Moeti is the World Health Organization (WHO) Regional Director for Africa and the first woman to occupy this position. She was recently confirmed by the WHO Executive Board after her resounding re-election for the second term. Over the past five years, Dr. Moeti has led a Transformation Agenda that is widely acknowledged to have improved the performance and effectiveness of the Organization. She made tremendous progress through the Transformation Agenda, which include improved response capacity to health emergencies as well as outbreak preparedness in the Region. The Transformation Agenda has since been adopted to inform WHO global reforms. Dr. Moeti is a medical doctor and public health expert, with more than 40 years of national and international experience. She has worked with the WHO Regional Office for Africa, where she has held several senior positions, since 1999. Dr. Moeti successfully led WHO's "3 by 5" Initiative in the African Region, which aimed to expand access to antiretroviral therapy in countries. Prior to joining WHO, Dr. Moeti worked with UNAIDS as the Team Leader of the Africa and Middle East Desk in Geneva, with UNICEF as a Regional Advisor, and with Botswana's Ministry of Health in various capacities. In recognition of her excellent service to humanity, Dr. Moeti has received many accolades including an Honorary Fellowship from London School of Hygiene & Tropical Medicine and an Honorary Doctorate of Science from the University of Health and Allied Sciences in Ghana. She is a great champion for women in leadership in global health.



**Dr. Juan Pablo Uribe**

*Global Director for Health Nutrition and Population Director of the Global Financing Facility for Women Children and Adolescents, World Bank*

Dr. Juan Pablo Uribe (MD), is the Global Director for Health Nutrition and Population at the World Bank and Director of the Global Financing Facility for Women Children and Adolescents (GFF). Previously, Dr. Uribe was the CEO of Healthcare Providers for United Healthcare/Banmédica for Chile and Peru and served from 2018 to 2019 as Minister of Health and Social Protection of Colombia. Prior to that, he was the Director General of the Fundación Santa Fe de Bogotá, a leading organization in Colombia working in health care, health education and public health. Between 2009 and 2011, he was the World Bank's Health Sector Manager for East Asia and the Pacific. In his career, first as a medical doctor specializing in public health and public administration, and later in both public and private sector organizations, Mr. Uribe has contributed significantly to the development of public health, health systems and public policies.



**Dr. Ana Olga Mocumbi**

*Head, Division of NCDs, Instituto Nacional de Saude, Mozambique;  
Associate Professor, Universidade Eduardo Mondlane, Mozambique  
Co-Chair, NCDI Poverty Network*

Dr. Ana Olga Mocumbi (MD, PhD, FESC) is the Co-Chair of the NCDI Poverty Network. She is a cardiologist with a particular interest in neglected cardiovascular diseases, specifically rheumatic heart disease, cardiomyopathies, heart failure in young people, and women's cardiovascular health. She is Professor of Cardiology at the Eduardo Mondlane University (UEM), Mozambique and is Head of the Division of Non-Communicable Diseases at the National Public Health Institute (INS), at the Ministry of Health in Mozambique. Dr. Mocumbi obtained an MD in 1992 at UEM. She worked in several rural areas of Mozambique from 1992 - 1997 acting as a general practitioner and health manager, gaining experience on management of National Control Programs for major endemic diseases. Her post-graduate training in cardiology was done in Mozambique (Central Hospital of Maputo and Instituto do Coração) and France (Hospital Necker-Enfants Malades). She holds a Diploma in Pediatric Cardiology from the University René Descartes, Paris V - France. Dr. Mocumbi worked as a Research Assistant at the Imperial College London (from 2004 until 2008) where she obtained her PhD investigating the Epidemiology of Neglected Cardiovascular Diseases. Under this program she launched a research project on Endomyocardial Fibrosis, which included large-scale community-based studies and clinical research in a rural endemic area of Mozambique (Inharrime), involving collaboration with the Heart Science Centre and Magdi Yacoub Research Institute in the United Kingdom. Dr. Mocumbi is involved in several local and international research projects and partnerships including international registries and clinical trials. She is Editor of the Cardiovascular Diagnosis and Therapy Journal and has published original papers in peer-reviewed journals and didactic publications. She is currently Vice President of the Pan African Society of Cardiology (PASCAR) South Region (and Member of the PASCAR Taskforce on Hypertension), Co-Leader of the Pulmonary Vascular Research Institute for the Sub-Saharan Region and Member of the World Heart Federation's Scientific Policy and Advocacy Committee.





**Dr. Gina Agiostratidou**

*T1D Program Director, Helmsley Charitable Trust*

Dr. Gina Agiostratidou is the Program Director for the Helmsley Charitable Trust's Type 1 Diabetes (T1D) Program, which aims to advance research, treatments, technologies and services that improve the life of people with type 1 diabetes. Previously, Gina was the scientific program manager at the Children's Tumor Foundation, bringing scientists from around the globe to collaborate on research opportunities in the field of neurofibromatosis. She has completed two post-doctoral fellowships at Albert Einstein

College of Medicine and Mount Sinai School of Medicine, focusing primarily on molecular biology and biochemistry. Gina earned a PhD in Molecular Biology from the Medical School, National and Capodistrian University of Athens, Greece, and an MSc degree in Advanced Molecular Biology and Biotechnology at the University of London, UK. She recently earned her MBA from New York University, Stern Business School.



**Dr. Gene Bukhman**

*Director, Program in Global NCDs and Social Change (PGNCDSC), Associate Professor, Department of Global Health and Social Medicine, Harvard Medical School; Attending Physician, Division of Cardiovascular Medicine and Director, Center for Integration Science in Global Health Equity, Division of Global Health Equity, Brigham & Women's Hospital; and Director, NCD Synergies project, Senior Health and Policy Advisor on NCDs Partners In Health  
Co-Chair, NCDI Poverty Network*

Dr. Gene Bukhman is a cardiologist and medical anthropologist who directs the Center for Integration Science at Brigham and Women's Hospital. He is an Associate Professor of Medicine and an Associate Professor of Global Health and Social Medicine at Harvard Medical School. He is also the Senior Health and Policy Advisor on NCDs at Partners In Health (PIH) where he directs the NCD Synergies project. Between 2010 and 2015, he was the Senior Technical Advisor on NCDs to the Rwanda Ministry of Health. Over the past 15 years, Dr. Bukhman has argued that for those living in extreme poverty, NCDs are best understood as part of the "long tail" of global health equity that demands a new "science of integration." He has translated this critique into practical delivery strategies such as "PEN-Plus" that are now impacting patients' lives in more than a dozen countries. He is the author of more than 90 peer-reviewed publications and book chapters that apply a range of methodologies from ethnography and archival research to epidemiology and mathematical modelling to identify solutions to the problem of "NCDI Poverty." Dr. Bukhman was the lead-author and co-chair of the 1996-2020 *Lancet* Commission on Reframing NCDs and Injuries for the Poorest Billion, and is currently co-chair of the 24-country NCDI Poverty Network launched in December of 2020 to support implementation of the *Lancet* Commission's recommendations.



**Mr. Bright Mailosi**

*Clinician, Partners In Health*

Bright Mailosi is a clinician who has worked with Abwenzi Pa Za Umoyo, a Partners In Health (PIH) sister organization in Malawi, for the past ten years implementing non-communicable diseases programs. He has transitioned from leading an integrated chronic care clinic and PEN-Plus clinic in Neno to training PEN-Plus clinicians and nurses and overseeing the rollout of PEN-Plus clinics in two districts in Malawi. PEN-Plus work began in Neno – where PIH is an implementing partner, in 2018 and has since enrolled over 500 patients. Bright is currently studying for a Master of Medical Science in Global

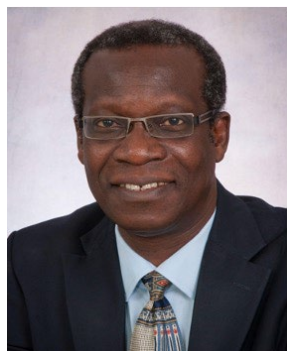
Health Delivery at Harvard Medical School, class of 2024. He is preparing his research to understand the impact and effectiveness of PEN-Plus in settings mainly operated by local ministries.



**Dr. Emily Wroe**

*Director of Programs, Center for Integration Science in Global Health Equity and Core Faculty, Division of Global Health Equity, Brigham and Women's Hospital; Instructor in Medicine and Affiliate, Department of Global Health and Social Medicine, Harvard Medical School; NCD Synergies, Partners In Health  
Director of Programs, NCDI Poverty Network*

Dr. Emily Wroe (MD, MPH) is an internist and expert in global health, serving as the Director of Programs for the NCDI Poverty Network and the Center for Integration Science. In this role she supports the implementation and expansion of PEN-Plus programs. Dr. Wroe's expertise in health systems for chronic diseases stems from several years working as Partners In Health's Chief Medical Officer in Malawi, where she worked closely with the Ministry of Health to strengthen health care in the rural district of Neno. In Malawi she led the team to integrate HIV and NCD clinics, spearheaded a stepped-wedge study of a community health worker program, and helped launch two clinics for patients with severe NCDs, which was the beginning of the PEN-Plus programming in Malawi. Her role expanded to support southern Africa as NCD Synergies' Associate Director of Policy & Implementation and as the co-chair to the Ministry of Health for Malawi's National NCDs & Injuries of Poverty Commission. Dr. Wroe is also deeply experienced in pandemic response and acts as a Senior Advisor for PIH's COVID-19 response. She graduated from Harvard Medical School and Harvard School of Public Health and completed her residency at Brigham & Women's Hospital. She is an Instructor in Medicine at Harvard Medical School and Associate Physician in the Division of Global Health Equity at BWH.



**Dr. Isaac Odame**

*Haematology Section Head in the Division of Haematology/Oncology and the Medical Director of the Global Sickle Cell Disease Network*

Dr. Isaac Odame is the Haematology Section Head in the Division of Haematology/Oncology and the Medical Director of the Global Sickle Cell Disease Network at the Centre for Global Child Health at The Hospital for Sick Children (SickKids). He is a Professor and Director of the Division of Adult and Paediatric Haematology in the Departments of Medicine and Paediatrics at the University of Toronto (U of T). He holds the Alexandra Yeo Chair in Hematology in the University of Toronto. His work with the Centre for Global Child Health is building enduring collaborations between

clinicians/scientists worldwide to further research and advance care of patients, particularly in low-income countries with heaviest disease burden.



**Dr. Raoul III Bermejo**

*Health Specialist - Child Development, Disabilities, Injuries and NCDs Health Section, Programme Division at UNICEF NY Headquarters*

Dr. Raoul III Bermejo, is a medical doctor with extensive experience on health policy and financing, health systems research, and programming for maternal and child health. He is in the Health Team at UNICEF NY Headquarters where he leads new programme areas on Childhood NCDs, Child Injury Prevention and Disability Inclusion in the Health System. Outside work, he enjoys gardening, farming, cooking, swimming, diving and reading on history. He is also enthusiastic about ancient healing traditions, and cultural and biodiversity conservation.



**Dr. Dhruv S. Kazi, MD, MSc, MS**

*International Board Committee Chair, American Heart Association  
Associate Professor, Harvard Medical School; Director, Cardiac Critical Care at Beth Israel Deaconess Medical Center*

Dr. Dhruv Kazi is the International Board Committee Chair for the American Heart Association. He is also an Associate Professor at Harvard Medical School and Director of Cardiac Critical Care at Beth Israel Deaconess Medical Center, where his clinical practice focuses on critically ill adults with advanced cardiovascular disease. He is the Associate Director of the Richard A. and Susan F. Smith Center for Outcomes Research in Cardiology, and serves as the Section Head of Health Economics. Dr. Kazi's research examines the clinical and economic burden of cardiovascular disease, particularly in underserved populations in the US and overseas. His team uses real-world data to examine the effectiveness and cost effectiveness of clinical and policy interventions. Dr. Kazi has evaluated the long-term impact of prevention strategies when deployed at scale – across a health system, region, or nationwide. His work, which uses observational data, contemporary causal inference techniques, and mathematical modeling, has influenced national clinical guidelines and helped improve access to novel cardiovascular therapies. Dr. Kazi's research has been funded by the National Institutes of Health, the Agency for Healthcare Research and Quality, the Centers for Disease Control and Prevention, and the American Heart Association, and has been published in numerous high-impact medical journals.



**Ms. Paladie Kampuhwe Mategeko**

*Voices of NCDI Poverty Fellow*

Paladie Kampuhwe Mategeko is a Type 1 Diabetes Champion with a Bachelor's degree in Healthcare Management with a concentration in Global Perspectives. After being diagnosed with Type 1 Diabetes and facing a lot of challenges like stigma, she decided to help other people living with Non-Communicable Diseases (PLWNCDs) to overcome some of those challenges. As a person who lives with an NCD, she knows how these conditions affect someone's life which is why she chooses to be an advocate so as to



help other vulnerable people who are not able to speak for themselves and are facing a lot of challenges, especially poverty. She has worked with the Rwanda NCD Alliance in helping PLWNCDs share their stories and the challenges they are facing so as to amplify their voices. That is why she is also very excited to be part of the Voices of NCDI Poverty Advocacy Fellowship so as to bring her unmatched interests and dedication to make its mission a success.



**Dr. Aaron Kowalski**  
*President and CEO of JDRF*

Aaron J. Kowalski, Ph.D. was appointed as President and C.E.O. of JDRF, the global leader in type 1 diabetes (T1D) research and advocacy, in April of 2019. He joined JDRF in 2004 and most recently served as Chief Mission Officer, leading research and advocacy strategy.

Aaron is an internationally recognized scientific expert in the area of T1D research. He was pivotal in the transformation of JDRF's role as the leading global organization funding T1D research, from an organization funding primarily academic research to a highly engaged strategic funder influencing all stages of the research and development pipeline. Under his leadership, JDRF is well known for its collaboration across the global T1D community – working closely with senior industry executives and leaders in academia, clinical care and government.

Aaron has authored numerous articles on T1D research that are improving standards of care, including his artificial pancreas roadmap that was adopted by the diabetes industry to significantly accelerate the delivery of the first commercial systems, and the landmark JDRF CGM Trial in the New England Journal of Medicine, which opened up access to continuous glucose monitoring through insurance coverage.

Aaron's scientific expertise, his personal experience of living with T1D for over 35 years, and his ability to engage the T1D community enable him to advance JDRF's mission to cure, prevent, and treat T1D and its complications. He earned his doctorate in microbiology and molecular genetics from Rutgers University.



**Ms. Nancy Brown**  
*CEO of American Heart Association (AHA)*

Nancy Brown is Chief Executive Officer of the American Heart Association (AHA), a 97-year-old organization guided by an unwavering mission: To be a relentless force for a world of longer, healthier lives.

Under Nancy's leadership as CEO since 2008, the AHA has become a global authority on cardiovascular and brain health as well as overall health and well-being. Forging powerful partnerships – together with 40 million volunteers, supporters, and staff – Nancy champions equitable health for all and is committed to innovation at the intersection of science, technology, and public health on behalf of patients everywhere.