A successful UN High-Level Meeting on antimicrobial resistance must build on the 2023 UN High-Level Meeting on tuberculosis

In September, world leaders will meet at the UN High-Level Meeting (UNHLM) on Antimicrobial Resistance (AMR).[1] Drug-resistant tuberculosis is one of the major drivers of AMR-associated morbidity and mortality globally.[2] The emergence and spread of AMR has set the tuberculosis response back decades. Advancement in research and political leadership, including through two UNHLMs on tuberculosis, have developed new pathways for progress in addressing tuberculosis.[3] These efforts will be fatally undermined if governments fail to increase efforts to address AMR.

AMR, and drug-resistant tuberculosis in particular, are complex public health challenges.[4] Mutations leading to drug resistance are a natural occurrence, but their emergence is accelerated when pathogens are exposed to incorrect antibiotics or insufficient doses. Vulnerable populations exposed to increased risk factors for contracting infectious diseases also face the greatest barriers to accessing quality health care, and thus are at greater risk of AMR. An effective public health response relies on systems that work closely together across health systems, including public, private, and informal providers.

As scientists and health-care professionals working across more than 25 UN Member States, we are acutely aware of the interconnectedness of these two agendas. To set the foundation for an effective and equitable global response to major AMR threats, including drug-resistant tuberculosis, governments must ensure the 2024 UNHLM on AMR builds on the political commitments made on tuberculosis last year. There is no shortage of opportunities to do so.

First, reducing the number of people at risk of tuberculosis and other infectious diseases is crucial to minimising the need for antibiotic treatments and hence the selection for further drug resistance. Alongside the Sustainable Development Goal of ending poverty, tackling undernutrition, bolstering infection prevention and control measures in transmission hotspots, increasing access to vaccines, and strengthening water, sanitation, and hygiene services would drastically reduce infections, and therefore the amount of antibiotics prescribed.[5] Insufficient action on One Health remains a crucial gap in public health defence, not just against AMR.

Second, Member States must commit to developing and funding national diagnostic and surveillance strategies to ensure clinicians and public health leaders are no longer operating with insufficient data to inform sound decision making. These systems cannot be disease-specific if they are to meet the needs of the 4 billion people with little to no access to diagnostic services, including the 230 000 people with drug-resistant tuberculosis who go undiagnosed each year.[6] The speed at which the most novel antibiotics have been compromised by AMR underlines the importance of ensuring diagnostics for rapid detection of resistance are rolled out alongside any new antibiotics.[7]

Third, an equitable AMR agenda must include a commitment to universal access to quality antibiotic treatments for people who need them. In 2022, 3 million people with drug-sensitive tuberculosis did not access proper diagnosis and treatment, with many likely to have received inappropriate antibiotics.[8] Member States must set targets to increase access to effective, safe, narrow-spectrum antibiotics, while bolstering action to reduce inappropriate prescribing across the public, private, and informal health-care systems.[9] Such action must be accompanied by strengthened licensing, procurement, and quality assurance systems, to put an end to stock-outs and substandard antibiotics that worsen the AMR situation.

Fourth, innovation must keep pace with AMR. Key research gaps that cut across the whole AMR agenda, including tuberculosis, include improving understanding of the mechanisms and drivers of AMR, development of new vaccines, diagnostics and treatment regimens, and social science, economic, and implementation research. Having witnessed the market failure that slows research and development of tools to prevent, diagnose, and treat all AMR pathogens, and particularly for poverty-associated AMR pathogens, Member States must not only commit to plugging funding gaps with public resourcing, but also reaffirm their commitment to

upholding the right to enjoy the products of scientific innovation for all people.[10]

Finally, the AMR response will fail if not supported by robust, multisectoral, and accountable governance. The specific, time-bound targets agreed at the UNHLM on tuberculosis must not only be reaffirmed but backed by equally ambitious targets on the broader AMR agenda. To deliver on them, Member States must commit to bolstering AMR governance and financing mechanisms, enabling the AMR and tuberculosis communities to address their most complex and shared challenges together, including through increased engagement by civil society and affected communities, and the creation of a global independent scientific panel on AMR to ensure the global response keeps pace with scientific progress and the evolving AMR threat, including drug-resistant tuberculosis.[4]

No effort to end tuberculosis will be successful without a robust AMR response, and no AMR response will be completed without eliminating tuberculosis. With the UNHLM on AMR following similar summits on tuberculosis, universal health coverage, and pandemic prevention, preparedness, and response, UN Member States are in a unique position to ensure an aligned global public health agenda. The antibiotic emergency is too grave to miss this opportunity to mobilise a comprehensive, coordinated, and multisectoral response to AMR.

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*Daniela Cirillo, Richard Anthony, Sebastien Gagneux, C Robert Horsburgh Jr, Rumina Hasan, Saffiatou Darboe, Rafael Laniado-Laborin, Ari Probandari, Nestani Tukvadze, Ricardo A Arcêncio, John S Bimba, Susanna Brighenti, Dumitru Chesov, Chen-Yuan Chiang, Gulmira Kalmambetova, Gwenan Knight, Olha Konstantynovska, Alexandra Kruse, Christoph Lange, Harriet Mayanja-Kizza, Emma McBryde, Jinsoo Min, Adrian Sanchez-Montalva, Giorgia Sulis, Bazarragchaa Tsogt, Martie Van Der Walt, Dorothy Yeboah-Manu, *Janika Hauser*
janika@cghproject.org

IRCCS San Raffaele Scientific Institute, Milan, Italy (DCi); RIVM National Institute for Public Health and the Environment, Bilthoven, Netherlands (RA); Swiss Tropical and Public Health Institute, Basel, Switzerland (SG); Department of Global Health, School of Public Health, Boston University, Boston, MA, USA (CRH); Department of Pathology and Laboratory Medicine, Aga Khan University of Karachi, Karachi, Pakistan (RH); MRC Unit The Gambia, London School of Hygiene and Tropical Medicine, Fajara, The Gambia (SD); Faculty of Medicine and Psychology, Universidad Autónoma de Baja California, Tijuana, Mexico (RL-L); Universitas Sebelas Maret, Surakarta, Indonesia (AP); National Centre for Tuberculosis and Lung Diseases, Tbilisi, Georgia (NT); Ribeirão School of Nursing, University of São Paulo, São Paulo, Brazil (RAA); Brazilian Tuberculosis Research Network, REDE-TB, São Paulo, Brazil (RAA);Department of Community Medicine and Primary Health Care, Bingham University, Abuja, Nigeria (JSB); Department of Medicine, Huddinge, Karolinska Institutet, Stockholm, Sweden (SB); Department of Pulmonology and Allergology, Nicolae Testemitanu State University of Medicine and Pharmacy, Chişinău, Moldova (DCh); International Union Against Tuberculosis and Lung Disease, Paris, France (C-YC); National Tuberculosis Centre, Bishkek, Kyrgyzstan (GKa); Department of Infectious Disease Epidemiology and Dynamics, London School of Hygiene and Tropical Medicine, London, UK (GKn); School of Medicine, V N Kharazin Kharkiv National University, Kharkiv, Ukraine (OK); Department of Clinical Medicine, Copenhagen University Hospital, Copenhagen, Denmark (AK); German Center for Infection Research, Hamburg–Lübeck–Borstel–Riems, Germany (CL); Clinical Infectious Diseases, Research Center Borstel, Germany (CL); Respiratory Medicine & International Health, University of Lübeck, Lübeck, Germany (CL); Baylor College of Medicine, Houston, Texas, USA (CL); Texas Childrens' Hospital, Houston, Texas, USA (CL); Infectious DIseases Institute, Makerere University College of Health Sciences, Kampala, Uganda (HM-K); Australian Institute of Tropical Health and Medicine, James Cook University, Townsville, QLD, Australia (EM); Division of Pulmonology and Critical Care Medicine, Department of Internal Medicine, Seoul St Mary's Hospital, College of Medicine, The Catholic University of Korea, Seoul, South Korea (JM); Department of Infectious Diseases, Vall D'Hebron University Hospital, Barcelona, Spain (AS-M); School of Epidemiology and Public Health, University of Ottawa, Ottawa, ON, Canada (GS); Mongolian Anti-TB Coalition, Ulaanbaatar, Mongolia (BT); South African Medical Research Council, Pretoria, South Africa (MVDW); Noguchi Memorial Institute for Medical Research, University of Ghana, Accra, Ghana (DY-M); Campaigns in Global Health, London, UK (JH)

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