Advancing Infectious Disease Action through the G20

1. Background

With South Africa hosting the G20, Wellcome recognized the importance of understanding pan-African priorities and translating them into policy actions within the G20 forum. To achieve this, **Wellcome convened two cross-sectoral consultations, bringing together over fifty thought leaders working on the climate and health nexus and infectious diseases to identify their priorities and provide recommendations for policymakers.**

These consultations were co-designed with anchor partners, **who played a crucial role in shaping the agenda, selecting participants, and ensuring a diverse range of perspectives**—including academics, private sector leaders, policymakers, and civil society organizations (CSOs). The sessions began with an overview of anchor partners' work and a presentation of the current landscape, followed by breakout discussions where small groups highlighted key challenges and introduced policy recommendations for G20 policymakers. For the Infectious Disease consultation, **we are grateful to the Africa Health Research Institute (AHRI), Drugs for Neglected Diseases Initiative (DNDI) and Science For Africa Foundation (SFA Foundation), for their role as anchor partners.**

Recent political developments have placed health funding at greater risk than ever. The United States has withdrawn from key organizations, including the World Health Organization—which could result in an additional 15 million cases of malaria and 107,000 deaths this year alone, reversing 15 years of progress [1]. Meanwhile, the United Kingdom is reducing its aid budget from 0.5% of GNI in 2025 to reach 0.3% by 2027 to prioritize defence spending. In this context, it is crucial to understand how decision-makers can maximize the efficiency of existing funding while also ensuring that these challenges are factored into discussions at the upcoming G20 meetings. **While the recommendations outlined in this document were formulated before these shifts, they remain relevant. In fact, as political priorities shift, the challenge of securing sustainable funding for health becomes even more critical.**

This document summarizes the outcomes of the Infectious Disease consultation, aligning expert insights with some of the G20's priorities to ensure decision-makers are informed of key issues and thought leaders' perspectives. While this document reflects the outcomes of the consultation, it does not represent the full spectrum of expert priorities, or the individual priorities of any institution.

2. Context

Leaders must prioritise addressing infectious diseases, which remain a leading cause of death and morbidity in Africa. The five deadliest infectious killers in Africa—**HIV/AIDS**, **malaria, tuberculosis, acute respiratory infections and diarrhoea—account for nearly 80% of the total infectious disease burden, claiming over 6 million people per year[2].** This issue is particularly preponderant in Africa,

[1] Health Policy Watch. (2025). Grim Global Impacts of US Funds Withdrawal; WHO Mulls "Terrible Choices" https://healthpolicy-watch.news/grim-global-effects-of-us-funds-withdrawal/

[2] Antimicrobial Resistance Collaborators. Global mortality associated with 33 bacterial pathogens in 2019: a systematic analysis for the Global Burden of Disease Study 2019. Lancet. 2022 Dec 17;400(10369):2221-2248. doi: 10.1016/S0140-6736(22)02185-7. Epub 2022 Nov 21. PMID: 36423648; PMCID: PMC9763654.

home to 14 of the 20 countries most affected by outbreaks, underscoring the need for African-driven solutions[3].

Climate change accelerates the spread of infectious diseases by altering ecosystems and creating warmer and more humid conditions conducive to disease transmission. The impact is especially severe in areas with limited healthcare capacity by **disorganizing already fragile health systems, increasing difficulty in health service delivery in affected areas.** To mitigate these risks, it is essential to integrate climate considerations into health policies, specifically addressing strategies to manage and prevent the spread of infectious diseases.

Equity must be central to infectious disease strategies and discussions, which means leaders cannot overlook **neglected tropical diseases (NTDs). Today, NTDs affect over 1 billion of the world's poorest and most marginalized people, yet they often receive little attention.** The burden of NTDs is particularly severe in endemic regions, with NTDs accounting for over 6% of the total disease burden in several Sub-Saharan African countries. However, environmental changes and population movement are reshaping the geography of these diseases. Dengue is reemerging in high-income countries, while Chagas disease increasingly affects migrant populations across North America and Europe. Each year, NTDs result in 10 million disability-adjusted life years (DALYs) lost and impose economic costs in billions due to direct healthcare expenses, lost productivity and reduced socioeconomic and educational opportunities[4]. **To advance equitable health outcomes, leaders should scale up NTD prevention, treatment and research, to break the cycle of disease and poverty.**

Moreover, as the spread of infectious diseases increases, the risk of antimicrobial resistance (AMR) also grows. Particularly in recent decades, microbes have demonstrated their capacity to adapt, re-adapt, and survive. Furthermore, climate change has been shown to worsen AMR by changing the environmental conditions that impact the spread of infectious diseases[5]. AMR makes infectious diseases harder to treat and increases the risk of disease spread. In 2021 alone, AMR claimed 1.14 million lives[6]. This costs the global economy around $855 billion each year in rising healthcare costs and lost productivity[7]. **Addressing AMR is crucial to stop the spread of infectious diseases. However, this work must be done in parallel with health promotion and prevention. Ensuring equitable access to vaccines—reducing the need for antibiotics—helps to mitigate AMR and protect global health.**

The G20 must take decisive action to address infectious diseases and drive transformative change. The Brazil **G20 Health Ministerial Declaration emphasised the importance of combating** Antimicrobial Resistance (AMR) and reaffirmed commitments to ending epidemics of AIDS, tuberculosis, malaria, and polio eradication. Considering the Mpox outbreak, the G20 also called for greater action to measure and

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[3] Consultation outcome

[4] Major Infectious Diseases, 3rd Edition. World Bank. https://www.ncbi.nlm.nih.gov/books/NBK525199/

[5] Magnano San Lio R, Favara G, Maugeri A, Barchitta M, Agodi A. How Antimicrobial Resistance Is Linked to Climate Change: An Overview of Two Intertwined Global Challenges. Int J Environ Res Public Health. 2023 Jan 17;20(3):1681. doi: 10.3390/ijerph20031681. PMID: 36767043; PMCID: PMC9914631.

[6] University of Oxford, (2024) Antibiotic resistance has claimed at least one million lives each year since 1990.https://www.ox.ac.uk/news/2024-09-17-antibiotic-resistance-has-claimed-least-one-million-lives-each-year-1990

[7] PAHO, Antimicrobial resistance, One health, and climate change top of the agenda at G20 event in Brazil. (2024)https://www.paho.org/en/news/4-9-2024-antimicrobial-resistance-one-health-and-climate-change-top-agenda-g20-event-brazil

address the social determinants of health to make the world better prepared for future pandemics[8]. **The Brazil G20 Presidency created a coalition focused on local and regional production, innovation and equitable access to health tools which would facilitate better access to vaccines, therapeutics and diagnostics for neglected diseases and persons in vulnerable situations globally, especially in LMICs and other developing countries.**

South Africa's G20 presidency, guided by the theme "Solidarity, Equality, and Sustainability," offers a unique opportunity to prioritise infectious disease. Wellcome and African thought leaders urge the Health Working Group (HWG) to take decisive action on this critical issue. Specifically, thought leaders commend the HWG's priority on **strengthening primary health care (PHC) as a foundation pathway to achieving universal health coverage** (UHC). A PHC approach adopts a whole-society perspective on health, systematically addressing the broader determinants of health, including the rising threat of infectious diseases because of climate change. Thought leaders also commend the group's integration of climate and health considerations within the HWG **"pandemic prevention, preparedness, and response" priority, as well as fostering science-based innovation.** To be effective, these discussions must explicitly incorporate action on infectious diseases. While thought leaders commend the G20 focus on non-communicable diseases, this policy paper advocates for equal attention to infectious diseases, which continue to have devastating impacts, particularly in the world's most vulnerable regions.

3. Cross-sectoral Challenges

Building on this issue, thought leaders provided insights into the challenges they encounter and areas where improvements are needed. Key cross-sector challenges identified by thought leaders during the consultations **included the need for increased financing,** with a focus on improving investment flows fostering innovation, encouraging efforts to promote increased domestic health financing commitments, and developing sustainable financing mechanisms. Thought leaders also highlighted the importance of engaging the private sector by fostering partnerships and creating incentives for private investment. Such collaboration can accelerate the development and implementation of innovative solutions.

Health workforce capacity was identified as a critical area of concern, especially in many African countries, where limited capacity often relegates them to secondary recipients of international health funding, technical assistance and no decision-making authority. Rather than being primary implementers of health initiatives, countries depend on partnerships with Global North partners. This structural and financial dependency was noted as a significant contributor to delays in addressing health challenges.

Thought leaders also stressed the importance of **including affected communities in research, agenda-setting and policy development** to ensure local challenges and solutions are effectively co-developed and integrated. Without direct engagement, policies risk being misaligned with on-the-ground realities. Furthermore, **the lack of research on health and the climate-health nexus in the Global South, combined with limited access to reliable data, remains a major obstacle for teams working on these issues.**

The consultations highlighted the critical need for greater collaboration among governments, policymakers, scientists and local communities. The current tendency to work in silos hampers

[8] European Parliament, Environmental determinants of health, including those caused by climate change.https://www.europarl.europa.eu/RegData/etudes/STUD/2024/754209/IPOL_STU(2024)754209_EN.pdf

progress and weakens the overall effectiveness of health initiatives. A more coordinated, inclusive approach is essential to address global health challenges. Collaboration should also be seen between sectors such as social science and humanities, as the impact of infectious diseases extends far beyond health, posing a challenge to development. They affect education, income, social status, productivity, economic growth and other direct and indirect components of human development, requiring coordinated action across sectors[9].

Thought leaders further underscored that South Africa's G20 presidency should leverage the expertise of Africa CDC, encouraging it to convene and prioritise locally driven solutions. Additionally, G20 discussions should urge member countries to integrate broader climate and health considerations into their national plans and NDCs **and integrate the co-benefits of climate policies on health.**

4. Health Working Group Recommendations

Based on the infectious disease expert consultation and reflecting South Africa's priorities for the G20 Health Working Group (HWG), thought leaders urge G20 leaders to take the following action on infectious disease:

Accelerating Universal Health Coverage through a Primary Health Care Approach HWG Priority

- The HWG **should focus on health system strengthening, as outbreaks stem from deeper systemic failures, not just reporting gaps. In many African countries, primary healthcare is critical but strained by doctor and nurse shortages, leading to greater reliance on community health workers** (CHWs). While CHWs have improved health outcomes, sustainable progress requires more than workforce shifts- **it demands better electronic clinical records and improved diagnostics that can be both implemented in facility and community settings. G20 leaders should push for research on how outbreak reporting, workforce capacity, CHW task shifting and PHC expansion can together enhance health system resilience through a coordinated approach.**
- Thought leaders have highlighted the importance of mapping human **resources, infrastructure and gaps. The WHO established a Country Assessment Tools and countries should be encouraged to follow the WHO Global Strategy on Human Resources for Health.**

Pandemic Prevention, Preparedness and Response HWG Priority

- **The G20 Health Leaders' declaration should endorse the commitment to reduce deaths associated with bacterial AMR by 10% by 2030 as agreed during the 79th United Nations General Assembly High-Level Meeting on AMR.**
- **The Health Working Group should discuss climate-resilient health systems**, through healthcare workforce trained to respond to climate emergencies, infrastructure that can withstand extreme weather events, tools that can detect, prevent, test and treat climate-sensitive diseases, robust supply chains and early warning systems. **G20 countries need to have Vulnerability and Adaptation Assessments** to help identify the extent and

[9] https://pmc.ncbi.nlm.nih.gov/articles/PMC7120372/

magnitude of likely health risks due to climate change and suggest targeted priority policies and programmes to mitigate these risks.

- **To address the knowledge gaps, the HWG should help develop a framework for robust health information systems that integrate climate, health and environmental data to support decision-making.** Climate change requires that routine health data collection integrate data from other sectors to forecast and plan for disease outbreaks. Establishing data and knowledge-sharing platforms enabling different sectors to share information to inform planning, forecasting and procurement is a solution.
- **The HWG should encourage African countries to leverage their strengths in disease surveillance and community engagement** to enhance infectious disease prevention. These local capabilities enable the rapid identification of diseases and proactive measures to prevent their spread and potential outbreaks.
- **The HWG should support investment in local pharmaceutical and vaccine research, development and manufacturing in Africa.** The G20 can support efforts to strengthen regulatory frameworks for drug and vaccine production; facilitate technology transfer agreements between G20 countries and African manufacturers; and promote financing mechanisms (e.g., G20-backed investment funds) for scaling up production.
- **The HWG should consider and acknowledge Neglected Tropical Diseases, including zoonosis** inflections, which disproportionately impact vulnerable populations and remain underfunded and underreported. As part of this effort, the G20 Coalition for Local and Regional Production, Innovation and Equitable Access should be reinforced by operationalizing the Coalition with 2-3 pilot projects focusing on the development of health tools, one of which could be the development of health tools for addressing dengue.

<u>Science and Innovation for Health and Economic Growth HWG Priority</u>

- The HWG should apply an equity lens throughout its discussions and should **emphasize the need to co-create regional and national research agendas with decision-makers and local communities to ensure local relevance. This can also include driving additional local capacity for health research.**
- **The HWG should explore the potential of data linkage and optimisation of intersectoral data collection systems in global health.** Data linkage offers significant potential but relies on establishing robust health data systems within healthcare services rather than approaching data collection as a separate research activity with data extracted for external use. Additionally, the HWG should explore opportunities to optimise data science and AI tools for improving data aggregation and collection processes.
- **Thought leaders have emphasized the need for increased R&D that taps into African innovation and resources.** There is a clear demand for locally developed diagnostics, therapeutics and vaccines that can be scaled to meet both regional and global needs. **R&D efforts should prioritise diseases that are neglected by the global market and disproportionately affect vulnerable populations.**
- New diseases and emerging conditions are being treated with outdated therapies and treatments. **Thought leaders recommend that the Health Working Group prioritise science-based innovation** by advocating for increased investment and urging G20 countries to commit resources toward the research and development of new, cutting-edge drugs and therapies based on clinical trials conducted in Africa and later manufactured on the continent.

5. Annex 1: Participant Organizations

Addis Ababa University, Ethiopia	Human Sciences Research Council	South African Medical Research Council (SAMRC)
Africa CDC	IMA World Health	The Southern African Development Community
Africa Parliament Committee	Imperial's Institute of Infection, Imperial College London	Uganda Institute of Public Health
Africa TB Caucus	Institut Pasteur Senegal	Uniting to Combat NTDs
AMDHC Tunisia	Kwame Nkrumah University of Science and Technology	University of Cape Town
CLIMADE & University of Kwa-Zulu Natal	Medical Research Council (MRC)	University of Kinshasa
DELTAS Africa II Principal Investigators	PLOS - Neglected Tropical Diseases	University of Yaounde
Gawani Africa	Reach Trust	WHO Regional Office for Africa
Harvard University	Sokoto Noma Children's Hospital	
HSRC Human Sciences Research Council	South Africa Ministry of Health	