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Editorial

The changing funding landscape for infectious disease research and control: implications for resource-limited countries

We now live in an interconnected world where global health has become a critical concern for governments, international organizations, civil society, and individuals. Many emerging and re-emerging infectious disease threats, efforts to manage them, must be addressed collaboratively. In recent years, the pressures on overseas aid budgets of higher income countries like United Kingdom (UK) and United States (US) have impacted support for infectious disease research and control. As disease agents do not respect borders, promoting international health security should be the key focus of overseas aid, encompassing initiatives to combat infectious diseases like COVID-19, Ebola, mpox, malaria and neglected tropical diseases (NTDs). The fight against infectious diseases can be achieved through direct partnerships with affected countries and via multilateral organisations like World Health Organization (WHO), Joint United Nations Programme on HIV/AIDS (UNAIDS), Africa CDC and the Global Fund to Fight AIDS, Tuberculosis, and Malaria (Global Fund).

The US has long been a global leader in public health initiatives, with its investments yielding significant successes through programs such as the President's Emergency Plan for AIDS Relief (PEPFAR), the President's Malaria Initiative (PMI), Global Fund, and the Global Health Security Agenda. These achievements have garnered strong bipartisan support and ensured relatively stable funding for global health over the past 24 years [1]. In January 2025 the US government implemented an executive order temporarily suspending all foreign aid for a minimum of 90 days [2]. This was accompanied by a stop-work order that effectively led to the dissolution of the US Agency for International Development (USAID) [3,4]. USAID plays a critical role in global health, particularly in infectious disease research, control and elimination. Cutting USAID funding would have far-reaching consequences, not only for low- and middle-income countries (LMICs) that rely on US aid but also for global health security, poverty alleviation, economic stability, and scientific progress [5,6]. These USAID cuts bear resemblance to the UK government's aid spending cuts in 2020 from 0.7% to 0.5% of gross national income (GNI) [7]. The deep cuts to the UK foreign aid in 2022 led to thousands of deaths in LMICs [8,9]. The UK funding cuts mostly affect the bottom billion exposed to NTDs, causing an estimated 72 million people to miss out on vital treatments and leading to a setback in progress towards elimination [10].

The overseas aid budget provided by the US government funds numerous global health programs that help detect and respond to emerging infectious diseases. These initiatives, such as PMI, and PEPFAR, provide vital support to countries with fragile health systems. Without USAID-supported laboratories and surveillance networks, early warning systems for diseases like Ebola, Zika, and COVID-19 would weaken, allowing outbreaks to spread unchecked and make it more likely that outbreaks will reach the US and other higher income nations. Foreign aid from higher income countries contribute to funding for disease control and elimination programs that distribute vaccines, medications, and preventive care to millions of people worldwide. PEPFAR has saved millions of lives by ensuring access to antiretroviral therapy for individuals living with HIV. However, funding cuts threaten to undo progress in HIV/AIDS control, leading to higher death rates. Reports indicate that health worker layoffs have occurred in East Africa following the freeze on U.S. aid [5]. Additionally, in Ukraine, the suspension of US funding has significantly disrupted HIV services [6]. There are increasing concerns about the sustainability of these initiatives, especially in LMICs, where HIV prevention programs are largely dependent on donor funding.

Global partnerships and collaborations facilitate scientific research and USAID partners with global health organizations, universities, and research institutions to advance infectious disease research. A funding cut would slow down vaccine and treatment development. Reduced collaboration will make it harder to share knowledge and coordinate responses to health crises. In August 2016, few months before President Trump started his first term as president of the US, the National Academies of Sciences, Engineering, and Medicine, in anticipation of changing government priorities, was charged with conducting a consensus study to provide recommendations to the US government and other stakeholders to increase responsiveness, coordination, and efficiency by establishing global health priorities and mobilizing resources. On the basis of a rigorous and evidence-based consensus process, the committee made some recommendations for a strong global health strategy and would allow US to maintain its role as a global health leader. The report recommended setting four main priorities: pursuing global health security, addressing continuous communicable threats, saving and improving the lives of women and children, and promoting cardiovascular health and preventing cancer [1].

The ability to conduct high-quality scientific research in US has been significantly disrupted, with global repercussions. In February 2025, for the first time in 60 years, publication of the Morbidity and Mortality Weekly Report (MMWR) was suspended following stop-work orders at the US Centers for Disease Control and Prevention (CDC). With an impact factor of 25.4 in 2023, the MMWR had long been a crucial source of timely and authoritative public

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health information. Additionally, restrictions have been imposed on the use of specific terms in manuscripts submitted by US scientists to scientific journals, including 'gender', 'transgender', 'LGBT, and 'non-binary'. In response to these constraints, an increasing number of US scientists are declining to review manuscripts submitted to journals outside the country [4], further exacerbating the impact on global scientific collaboration and knowledge dissemination. On Friday 7 February 2025, National Institutes of Health (NIH) announced that it would immediately impose a dramatic cut in funding for indirect costs for research institutions [11]. Indirect costs or overheads are funds allocated to cover administrative, infrastructural, and operational expenses that are not directly related to specific research activities. These include facility maintenance, utilities, research management, compliance costs, and institutional support services.

Funding from the US government has been instrumental in the establishment of research centres of excellence in Africa. In Mali, for example, researchers started collaborating with NIH researchers in the late 1980s. To strengthen and expand this partnership, NIH stationed staff in the country, working closely with the Faculty of Pharmacy at the University of Sciences, Techniques, and Technologies of Bamako (USTTB). This collaboration has led to several key milestones, including the launch of malaria research activities in 1989; establishment of the Malaria Research and Training Center (MRTC) in 1991, and the creation of the first African Center of Excellence in Bioinformatics and Data-Intensive Sciences (ACE) in 2015 [12]. Similarly, in India, The International Center for Excellence in Research (ICER) is a collaborative effort between National Institute of Allergy and Infectious Diseases (NIAID) and the Indian Ministry of Health and Family Welfare [13]. These initiatives are now at risk.

While external funding is critical in supporting health programmes in LMICs, the current happenings dictate that these countries take proactive steps to reduce their reliance on foreign aid. In a recent editorial published on January 30, 2025, to mark World NTD Day [14], we highlighted the risks associated with depending on donor funding for combating infectious diseases in LMICs, as it leaves them vulnerable to fluctuations in international aid. To mitigate this, governments and national stakeholders, including local philanthropies and the private sector, must prioritize domestic health funding and explore innovative financing mechanisms. The Higherlife Foundation (www.higherlifefoundation.com) and The Aliko Dangote Foundation (www.dangote.com/) are a couple of examples enhancing health systems and community based interventions in Zimbabwe and Nigeria respectively. Rwanda also offers a valuable example of reducing dependency on donor funding through increased domestic investment [14]. In 2019, the Rwandan government took full responsibility for financing the operational costs of mass treatment campaigns, resulting in a significant decrease in schistosomiasis transmission intensity. Building on this momentum, the 2022 Kigali Summit on Malaria and NTDs, hosted by Rwanda, saw global leaders reaffirm their commitment to ending NTDs [14]. During the summit, the Kigali Declaration on Neglected Tropical Diseases was launched, aiming to mobilize political will and secure regional commitments to address sustainability in the fight against infectious diseases.

Global health is a shared responsibility that requires collective action. In today's interconnected world, health crises can spread rapidly across borders, threatening not only individual lives but also global stability and economic prosperity. However, in a world that is becoming increasingly polarized, heavy reliance on donor funding from external governments is not a viable long-term solution. As the international community faces challenges related to funding suspensions, LMICs must prioritize self-sustainability in their health programs. Given the funding challenges from USAID, now is the crucial time for LMICs to have greater political will and financial commitment to prioritize and adopt measures that promote self-sufficiency in addressing the health needs of their citizens.

Declaration of competing interest

All authors declare that they have no conflicts of interest. The opinions expressed in this article are those of the authors and do not reflect the official position of any of their affiliating organisations.

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