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## Working Paper

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# Can Development Assistance for Health Mutually Benefit Donors and Recipient Countries?

# Abstract

Gavin Yamey (corresponding author), Ipchita Bharali and Osondu Ogbuoji\*

The year 2000 marked the start of a period of sustained growth in the amount of annual health aid, but that era is now over. This year, several donors made large cuts in their official development assistance (ODA) for health, accompanied by other shocks to the global health system. While the impact of these aid cuts on public health in recipient countries has received widespread political, advocacy, and media attention, much less attention has been paid to how these declines could affect donors. This lack of attention is probably because there has been surprisingly little empirical research on the benefits of health ODA to donors, so the benefits are poorly understood. In this paper, we therefore set out to examine the research evidence on the impact of health ODA on both recipients and donors. We use the term “mutual interest health ODA” to denote health ODA that has benefits for both recipients and donors. We found evidence that health ODA could mutually benefit recipients and donors and categorized these benefits into (i) health benefits and health-related economic benefits; (ii) economic benefits unrelated to health; and (iii) political benefits. While there is an important ongoing role for health ODA, the rapid changes in global health assistance – including the sharp decline in funding levels – is sparking important discussions about what this role should be and how health ODA should best be targeted. Our review of what the empirical evidence shows on mutual interest health ODA could help to inform these discussions, assisting donor governments in quantifying the value of their health aid investments and helping to shape health aid portfolios in an era of rising fiscal pressures.

**Keywords:** official development assistance; development assistance for health; health aid; mutual benefits; donor country benefits; recipient country benefits; aid effectiveness

**JELs:** F35, I10, I15, O19, H87, D64

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# 1. Introduction

The year 2000 marked the start of a period of sustained growth in the amount of annual health aid, also known as official development assistance (ODA) for health or development assistance for health (DAH). However, after peaking in 2021 during the COVID-19 pandemic, health ODA has seen a significant decline (Apeagyei et al. 2025). This year, the budget cuts announced by aid donors are expected to cause a particularly sharp fall—one analysis estimates that there will be a 40 percent drop in health aid in 2025 from a 2023 baseline (Tomassini 2025). Other changes in the global health architecture have accompanied these shifts in aid.

For example, the United States (U.S.) withdrew from the World Health Organization (WHO) (Yamey and Titanji 2025), ended its support to Gavi, the Vaccine Alliance (Gavi) (Sunny et al. 2025), closed down the U.S. Agency for International Development (USAID), and reduced its ODA for health (Kates 2025). However, the U.S. is not alone in reducing its commitments to global health. The Organisation for Economic Cooperation and Development (OECD) notes that “the largest providers among DAC [Development Assistance Committee] members who have announced ODA cuts in 2025-2027 accounted for 80 percent of bilateral ODA towards the health and population sector,” (OECD 2025) including France, Germany, the United Kingdom (UK), and the European Union (EU). In response to this changed financing environment, the WHO plans to cut its budget by 22 percent over the next two years (Keaton 2025).

These decreases in health ODA could have severe impacts on both recipients and donors. For instance, a modeling study estimated that U.S. government cuts to USAID funding could result in an additional 14 million preventable deaths globally by 2030 (Cavalcanti et al. 2025). A Lancet study estimated that donor funding cuts could lead to 0.8 million additional HIV infections and up to 2.9 million additional deaths by 2030 (Brink et al. 2025).

While the impact of the sharp declines in health ODA on population health in recipient countries has received widespread political, advocacy, and media attention, there has been much less attention paid to how these declines could harm donors. This lack of attention is probably because there has been surprisingly little empirical research on the benefits of health ODA to donors, and so the benefits remain poorly understood.

In this paper, we examine the research evidence on the impact of health ODA on recipients, on donors, and on both recipients and donors simultaneously. This paper is one in a series of

papers commissioned by the Kiel Institute for the World Economy (Kiel Institute) that examines mutual interest ODA, which Heidland and colleagues define as “development assistance that generates tangible benefits for both donors and recipients” (Heidland et al. 2025). Based on this same terminology, we use the term “mutual interest health ODA” to denote health ODA that has benefits for both recipients and donors. Understanding mutual interest health ODA is particularly important at this current time in which global health assistance is undergoing many changes and reforms. Such understanding could help donor governments quantify the value of their health aid investments in terms of the returns to both recipients and donors themselves and could help to shape health aid portfolios in an era of rising fiscal pressures. Our analysis aims to understand the different types of benefits of health aid investments. It is based on empirical evidence and is not intended to be an advocacy piece. Indeed, we recognize that health aid can also be associated with harms, such as donor dependency, aid conditionalities, and unsolicited geopolitical interference.

The paper is structured as follows. In Section 2, we argue that the current shocks to health ODA are best understood within a historical context, and so we give a brief overview of the history of international health assistance. In Section 3, we describe the methodological approaches that we used to inform our analysis. In Section 4, we propose a typology of health ODA and its benefits, categorizing health ODA in three ways: (i) health benefits and health-related economic benefits; (ii) economic benefits unrelated to health; and (iii) political benefits. Section 5 summarizes the empirical research evidence on the mutual benefits of health ODA. In Section 6, we lay out the key research gaps, and Section 7 presents our key conclusions.

## **2. A Brief History of International Health Assistance**

The major shifts happening in today’s health ODA landscape—including the sharp declines in aid flows, changes in the aid architecture and the growing calls to decolonize global health (McCoy et al. 2024)—are best understood within the historical context of international health assistance. While a detailed account of this history is beyond the scope of this paper, we give some of the key contours of this history, while recognizing that such a brief account will inevitably be a major oversimplification. For a more in-depth historical analysis, see Mary Augusta Brazelton’s paper, “Health for all?: Histories of international and global health” (Brazelton 2022). We briefly describe four important phases: the launch of international sanitary conferences in the mid-nineteenth century; the establishment of schools of tropical medicine in the late nineteenth and early twentieth

centuries; the post-World War Two era and the launch of the WHO; and globalization, the rise of private actors, and the mushrooming of new global health initiatives.

Today's international health cooperation can be traced back to the international sanitary conferences that started in 1851. These meetings of states, usually led by representatives of European empires (Brazelton 2022), allowed states to discuss cooperation on controlling infectious diseases, beginning with cholera, plague, and yellow fever (Fidler 2001). A major focus of these conferences was on preventing epidemics from spreading across national borders, usually by imposing quarantine. As Brazelton notes, the power dynamics in today's international health assistance have their roots in these early international sanitary conferences (Brazelton 2022). European imperial hegemonic power was exerted, she argues, when the conveners of these conferences pressurized non-Western states to adopt quarantine, enforced regulations that the conveners formulated, and in "imperial ideas about the health and habits of tropical populations that suggested the need for such interventions" (Brazelton 2022). Olusoji Adeyi argues that there was a similar kind of imperialism in the United States in the investments made by the Rockefeller Foundation to create an International Health Commission in 1913, which evolved into the International Health Board and then the International Health Division (Adeyi 2022). This international body went on to operate in 80 countries, tackling tropical diseases, and to fund schools of tropical medicine and public health. "The goals of sanitizing the world," writes Adeyi, "and advancing western civilization were intertwined" (Adeyi 2022). These schools were closely tied to the transatlantic slave trade and the colonial enterprise. As McCoy and colleagues say, these schools "were established to protect colonial personnel, maintain the productivity of native workers and aid imperial expansion" (McCoy et al. 2024).

The post-World War Two era is most notable for the 1948 establishment of the WHO; the first World Health Assembly ratified its constitution that year (Brown et al. 2006). Brown and colleagues note that "the idea of a permanent institution for international health can be traced to the organization in 1902 of the International Sanitary Office of the American Republics" (Brown et al. 2006). This office would become the Pan American Sanitary Bureau and then the Pan American Health Organization (the WHO's regional office for the Americas). Other international health agencies operating in the early twentieth century that were important in the formation of the WHO were the Rockefeller Foundation's International Health Division, the Office Internationale d'Hygiène Publique in Paris, and the League of Nations Health Organization in Geneva. Throughout its history, the WHO has grappled with tensions between adopting a narrow disease-

specific or technology-focused approach (exemplified by its Global Malaria Eradication Programme, launched in 1955) versus a broader approach focused on social determinants of health and population health (exemplified by its 1978 Alma Ata Declaration, which had the goal of Health for All with primary health care as the key pathway) (Brown et al. 2006).

The 1980s and 1990s saw several major shifts in the global health enterprise. The WHO narrowed its vision of primary care for all, adopting a more restrictive approach called “selective primary care.” Private actors and interests gained prominence—for example, the World Bank and the International Monetary Fund imposed structural adjustment policies on recipient countries, while private foundations, such as the Gates Foundation, became important and influential global health funders (Brazelton 2022). In two articles in the *American Journal of Public Health*, the WHO’s Derek Yach and Douglas Bettcher examined the threats and opportunities for global health posed by globalization—threats such as accelerating the spread of tobacco and infectious diseases, and opportunities such as the diffusion of new health technologies (Yach and Bettcher 1998). To the best of our knowledge, Yach and Bettcher were the first to use the terminology of “mutual benefits” of global health cooperation. In their second article, called “The Convergence of Self-Interest and Altruism,” they wrote: “in a world of shared global problems, the moral imperatives of addressing these problems also bring mutual benefits” (Yach and Bettcher 1998).

From the turn of the century, there was a mushrooming of new global health initiatives, especially from 2000-2010, the so-called “golden decade” of global health, characterized by an almost tripling of annual DAH from USD 10.8 billion in 2001 to USD 28.2 billion in 2010 (Murray et al. 2013). These initiatives, such as the Global Fund to Fight AIDS, Tuberculosis and Malaria (the Global Fund), the U.S. President’s Emergency Plan for AIDS Relief (PEPFAR), and Gavi, mostly targeted specific diseases. Indeed, an analysis of how DAH was spent during the “golden decade” found that funding for HIV/AIDS, tuberculosis, and malaria accounted for much of the increase (Piva and Dodd 2009). Although the rate of rise in DAH slowed after 2010, annual amounts continued to rise into the 2020s, peaking at USD 80.3 billion in 2021 during the COVID-19 pandemic (Apeagyei et al. 2025). It fell to USD 49.6 billion in 2024 and is expected to fall further still in 2025 due to the sharp health aid cuts discussed earlier.

### 3. Methods

We used two methodological approaches to inform our analysis. First, we conducted a narrative review of the literature, defined by Greenhalgh and colleagues as a “scholarly summary along with interpretation and critique”(Greenhalgh et al. 2018). The search terms included “foreign aid,” “official development assistance,” “development assistance for health,” “foreign assistance,” “international health,” “global health,” “donors,” “recipients,” “benefits,” “harms,” “effectiveness,” and “impact.” The aim of this literature review was to identify empirical research studies that examined the impact of health ODA on donors and on recipients. As mentioned earlier, and as discussed further later in this report, while there are many commentaries, viewpoint articles, and opinion pieces in the literature on this topic, it is striking how little empirical research has been conducted.

We supplemented the literature review by conducting informational interviews with nine experts in the field, including from Latin America, sub-Saharan Africa, Asia, Europe, and the U.S. Four interviewees are researchers at universities or think tanks who have published multiple studies on health aid effectiveness, one is in a leadership position at a foundation, one is at a global health non-profit organization, and three were formerly in leadership positions at multilateral funders of global health. This was not a formal qualitative study—we did not transcribe and code the interviews to identify emerging themes. Instead, the aim of conducting these interviews was:

- To gather expert views on what the research literature shows about the impact of health ODA on donors and recipients;
- To identify any key studies that we may have missed in our literature review; and
- To hear expert views on the main research gaps when it comes to studying the benefits and harms of health ODA to both recipients and donors.

### 4. Framework: Typology of Health ODA and Its Benefits

The Kiel Institute examined ODA more broadly and categorized mutual benefits from ODA under three domains: economic, geopolitical, and security-related. In their paper, health is viewed from a global public good perspective and categorized under the security-related benefits highlighting the mutual benefits from tackling cross-border pandemic threats (Heidland et al. 2025). As our paper is specifically focused on the mutual benefits of health aid, we propose a slightly modified

typology of health ODA and its benefits, categorizing the benefits in three domains to examine the mutual benefits of health aid to donors and recipients: health benefits and health-related economic benefits, economic benefits unrelated to improved health, and political benefits. Health aid clearly delivers direct health gains, with a large body of literature discussed below showing how ODA for health has reduced mortality and morbidity and improved global health security. Health ODA can also generate health-related economic benefits—for example, investments to fight diseases can boost the economy since healthier populations are more productive (Ogbuoji et al. 2020), and ODA to prevent pandemics can avert and mitigate economic losses for both donors and recipients. Beyond these direct health gains and health-related economic benefits, studies have also empirically shown how health aid investments help improve economic growth and labor productivity, such as through enhanced trade and creating job opportunities. We categorize these as economic benefits unrelated to improved health. When donors invest in improving health outcomes across the globe, it creates opportunities for political and diplomatic engagements that advance strategic interests. We categorize these as the political benefits.

Table 1 below provides examples of the types of mutual benefits that fall under these three categories. These benefits can be short-term (e.g., emergency relief, epidemic response, humanitarian response) or long-term (e.g., health systems strengthening, institution building, research and innovation). They may also be directly related to health (e.g., improved health, improved worker productivity due to better health) or indirectly related (e.g., collateral economic benefits, political benefits).

**Table 1: Categorization of mutual benefits of health ODA**

Health benefits and health-related economic benefits	Economic benefits unrelated to improved health	Political benefits
<b>Examples:</b> Improved health outcomes, disease eradication, reduced cross-border threats, addressing anti-microbial resistance, improved health infrastructure and institutional capacity, better access to medicines, health workforce development	<b>Examples:</b> Economic spillovers, job creation, cost savings, expanded market for health products and technologies through procurement, improved trade ties, remittances from skilled labor migration	<b>Examples:</b> Soft power gains, geopolitical influence, political stability through defense collaborations

## 5. Evidence on Mutual Benefits of Health ODA from Empirical Studies

### 5.1 Health benefits and health-related economic benefits

#### Improved health outcomes through disease control

**Summary:** *Health aid generates mutual health-specific benefits for both recipients and donors. Several studies have captured the high returns of health aid investments by donors in low- and middle-income countries (LMICs). In recipient countries, these returns are in the form of disease reduction, reduction in infant and child mortality, improved life expectancy, strengthened health systems, and spillover positive impacts in other non-health sectors. Such positive impacts in turn help to boost soft power and reputational gains for donor countries. Donors benefit from reduced cross-border threats, including pandemics and antimicrobial resistance.*

Below, we briefly summarize empirical research on the benefits of ODA that targeted HIV/AIDS and vaccine-preventable diseases, and on the impact of health ODA in improving life expectancy, infant mortality, and under-5 mortality.

A study by Bendavid and Bhattacharya assessed PEPFAR's impact in Africa (Bendavid and Bhattacharya 2009). The study compared trends in HIV-related deaths, the number of people living with HIV, and HIV prevalence across 12 African focus countries receiving PEPFAR funding versus 29 matched control countries over 1997–2007. It found that between 2004–2007, PEPFAR focus countries experienced a 10.5 percent greater annual reduction in HIV-related deaths compared to non-PEPFAR control countries. During 1997–2002, the annual growth in people living with HIV was 3.7 percent slower in PEPFAR focus countries, although there was no significant impact of PEPFAR on HIV prevalence rates.

Mishra and Newhouse examined the relationship between health aid and infant mortality using data from 118 countries between 1973 and 2004 (Mishra and Newhouse 2009). Health aid had a beneficial and statistically significant effect on infant mortality: A doubling per capita of health aid was associated with a 2 percent reduction in the infant mortality rate. A USD 1.60 increase in DAH per capita resulted in 1.5 fewer infant deaths per 1,000 births. Another study, by Lu et al., examined whether receiving immunization services support (ISS) from Gavi affected coverage of diphtheria, tetanus toxoid, and pertussis vaccine (DTP3) in 66 countries from 1995 to 2004.

Countries that received Gavi ISS support saw significantly faster increases in DTP3 coverage, especially among the worst-performing countries with DTP3 coverage of 65 percent or less at baseline (Lu et al. 2006).

Several studies have shown that health aid is associated with reduced infant mortality and under-5 mortality and with increased life expectancy (Bendavid and Bhattacharya 2014; Negeri 2023; Leunig et al. 2024). For example, a recent study using data from the OECD’s Creditor Reporting System database examined the relationship between health ODA and health outcomes in 100 recipient countries between 2002 and 2020. It found that health aid was associated with increased life expectancy and reductions in infant mortality (Leunig et al. 2024).

### Epidemic and pandemic prevention and improved global health security

**Summary:** *Spending health ODA on preventing epidemics and pandemics averts sickness, deaths, and social, political, and economic harms in both recipient and donor countries. The cost of prevention activities is much smaller than the economic losses from potential outbreaks—one estimate is that prevention would cost only USD 4.5 billion annually compared to expected annual losses of about USD 60 billion from a future pandemic. During a pandemic, ensuring equitable access to pandemic control vaccines brings strong mutual economic returns.*

Of all the potential benefits to both recipients and donors of investing in health ODA, boosting global health security through preventing epidemics and pandemics—thus averting illness, deaths, and social, political, and economic harms (Table 2)—is arguably the most tangible and easy to quantify. For example, an analysis led by Cutler and Summers (2020) estimated the total costs of the COVID-19 pandemic to the U.S. in terms of mortality, morbidity, anxiety, and direct economic losses. These losses were found to exceed those associated with conventional recessions and the Iraq War and are comparable to losses resulting from global climate change. The returns to donors of investing in pandemic preparedness can be substantial, through averting these negative impacts. Managing an epidemic or pandemic is much more costly than investing in prevention; a relatively small amount of investment can go a long way to preventing future loss of life and money, and every dollar invested in pandemic prevention and response is estimated to yield health and economic returns of USD 14 (WHO and World Bank 2022).

There is a high probability of another COVID-like pandemic—experts predict a greater than 50 percent chance within the next 25 years (Smithem and Glassman 2021), a risk exacerbated by other challenges such as migration and climate change. Studies have also tried to quantify the economic cost savings from health aid investments. These economic cost savings are in the form of averted losses in gross domestic product (GDP), averted disruptions to trade and tourism, and productivity gains resulting from health aid investments. Estimates of the likely economic losses from future pandemics range from annual losses of about USD 60 billion, estimated by Peter Sands et al. from the Commission on a Global Health Risk Framework for the Future (which was instituted soon after the Ebola epidemic) (Sands et al. 2016), to the USD 700 billion estimate from Glennerster et al. (2022).

The cost of prevention activities is much smaller than the economic losses from potential outbreaks. For example, implementing the recommendations of the Commission on a Global Health Risk Framework for the Future—such as enhancing public health systems in LMICs and investing in research and development (R&D) aimed at preventing such pandemics—would cost only USD 4.5 billion annually compared to expected annual losses of about USD 60 billion (Sands et al. 2016).

The world lost trillions of dollars due to COVID-19; in contrast, an analysis by the WHO and World Bank estimates that getting LMICs “to the right level of preparedness requires an additional USD 10.5 billion in international financing annually, over the next five years, coupled with twice as much in domestic financing” (Pandemic Fund 2024). Mobilizing such additional international financing is the rationale behind the Pandemic Fund.

For donors, investing in pandemic preparedness and response has a very high return. In July 2021, at an event hosted by the Center for Global Development in Washington, DC, modelers Patrick Doohan and Katharina Hauck from Imperial College London presented their work estimating that investments in pandemic preparedness could prevent 49 to 124 deaths per 100,000 population across countries. They also showed that: “Should a COVID-like pandemic strike the U.S. in the next decade...for every dollar spent on pandemic preparedness, the expected health gain in averted deaths would be \$1,703 and the expected economic gain in averted GDP loss [per capita] would be \$1,102” (Doohan and Hauck 2021).

There are also likely to be benefits to donors from stopping infectious disease outbreaks at their source, although we found no empirical research studies examining or quantifying such

benefits. In an article in the *Foreign Service Journal* entitled “Putting America First By Stopping Outbreaks At Their Source,” Nidhi Bouri, former Assistant Deputy Administrator for Global Health at USAID, who led the U.S. response to several epidemics and pandemics, gives examples of the costs to U.S. hospitals of treating Ebola cases (Bouri 2023). For example, during the 2013–2016 Ebola epidemic in West Africa, it cost a hospital in Dallas, Texas USD 500,000 to treat a single case of Ebola in a patient who traveled from Liberia to the U.S. (not including costs to the overall health system) and the patient ultimately died. “Around the same time,” says Bouri, “an American physician treating Ebola patients in West Africa returned to New York, where he was diagnosed with and treated for Ebola. It cost the New York City Health Department US\$ 4.3 million in response measures” (Bouri 2023).

During a pandemic, there are mutual economic returns to ensuring that pandemic control vaccines are globally distributed. A study commissioned by the Gates Foundation discussed the benefits to both donors and recipients from the establishment of the Access to COVID-19 Tools (ACT) Accelerator, which ensured equitable access to vaccines, diagnostics, and therapeutics (WHO 2020). The study found that ensuring equitable access to COVID-19 vaccines in low- and lower-middle-income countries would generate economic benefits to the top ten major donor countries (Canada, France, Germany, Japan, Qatar, South Korea, Sweden, UAE, UK, U.S.) to the tune of USD 153 billion in economic benefits in 2020–21, rising to USD 466 billion by 2025. This is 12 times the cost of establishing the ACT Accelerator, which was USD 38 billion. The study concluded that vaccine equity offers a strong mutual economic return—accelerating global growth, restoring trade, and preventing further losses in both donor and recipient countries.

**Table 2. Examples of the health, economic, social, and political impact of epidemics and pandemics over the last fifty years**

Starting year	Event	Geographic extent	Estimated direct morbidity or mortality	Estimated economic, social, or political impact
1981	HIV /AIDS pandemic	Global	More than 70 million infections, 36.7 million deaths (WHO Global Health Observatory data, <a href="http://www.who.int/gho/hiv/en/">http://www.who.int/gho/hiv/en/</a> )	2–4 percent annual loss of GDP growth in Africa (studies of the effects of HIV/AIDS on per capita gross national product have found smaller effects)  (Dixon et al. 2001)

2003	SARS pandemic	4 continents, 37 countries	8,098 possible cases, 744 deaths (Wang and Jolly 2004)	GDP loss of USD 4 billion in Hong Kong Special Administrative Region, China; USD 3 billion-USD 6 billion in Canada; and USD 5 billion in Singapore (Keogh-Brown and Smith 2008)
2009	Swine flu influenza pandemic	Global	151,700-575,500 deaths (0.2-0.8 per 10,000 persons) (Dawood et al. 2012)	GDP loss of USD 1 billion in the Republic of Korea (Kim et al. 2013)
2012	MERS epidemic	22 countries	1,879 symptomatic cases, 659 deaths (Arabi et al. 2017)	USD 2 billion loss in the Republic of Korea, triggering USD 14 billion in government stimulus spending (Jun 2015; Park and Kim 2015)
2013-2016a	Ebola virus epidemic, West Africa	10 countries	28,646 cases, 11,323 deaths (WHO 2016)	USD 30-50 billion loss (Obeng-Kusi et al. 2024)
2015	Zika virus pandemic	76 countries	2,656 reported cases of microcephaly or central nervous system malformation (WHO 2017)	USD 7 billion-USD 18 billion loss in Latin America and the Caribbean (UNDP 2017)
2020	COVID-19 pandemic	Global	The COVID-19 Excess Mortality Collaborators estimated 18.2 million deaths in 2020-2021 (Wang et al. 2022)	The World Bank estimates that global gross output fell by 3.4 percent in 2020 (World Bank 2022)

Notes: Table adapted from Table 17.1 in Madhav N, Oppenheim B, Gallivan M, Mulembakani P, Rubin E, Wolfe N. Pandemics: risks, impacts, and mitigation. In: *Disease Control Priorities*, Third Edition, Volume 9, Chapter 17. <https://www.dcp-3.org/chapter/2601/pandemics-risks-mitigation-and-costs>. U.S. dollar amounts are rounded to nearest billion. HIV/AIDS: human immunodeficiency virus/acquired immunodeficiency syndrome; GDP: gross domestic product; MERS = Middle East respiratory syndrome; SARS = severe acute respiratory syndrome.

a. The West Africa Ebola virus outbreak occurred from 2013 to 2016, but the peak and international response efforts began in 2014.

## Preventing antimicrobial resistance (AMR)

**Summary:** *Health aid targeted towards reducing AMR benefits both recipient and donor countries by slowing down the spread of drug-resistant infections. Such pathogens do not respect national boundaries and can cross borders into donor countries and cause illness, death, and economic losses. Analogous to epidemic and pandemic prevention, donors directly benefit when there is strong stewardship of antimicrobials in LMICs and when the emergence of antimicrobial-resistant pathogens is averted.*

The Global Burden of Disease (GBD) 2021 Antimicrobial Resistance Collaborators estimate that over 4.7 million deaths were associated with AMR in 2021 and project that by 2050, over 10.1 million annual deaths will be associated with AMR (GBD 2021 Antimicrobial Resistance Collaborators 2024). Noteworthy among their findings is that AMR deaths disproportionately affect people older than 70 years, a segment of the population highly represented in high-income countries.

The World Bank has estimated potential future economic losses under different AMR scenarios (Berthe 2017). Even under an optimistic “low AMR” scenario, simulated losses of global output would exceed USD 1 trillion annually after 2030 and reach USD 2 trillion a year by 2050. In a pessimistic “high AMR” scenario, the economic losses are tripled—they reach USD 3.4 trillion annually by 2030 and rise further to USD 6.1 trillion annually by 2050. A recent analysis funded by the UK Department of Health and Social Care and conducted by the EcoAMR consortium—which was led by the World Organisation for Animal Health and included the Institute for Health Metrics and Evaluation, RAND Europe, Animal Industry Data, and the World Bank—estimated the returns to donors investing in universal access to treatment plus accelerated antibiotic innovation (World Organisation for Animal Health 2024). This policy would reduce health costs by USD 97 billion annually, add USD 960 billion to the world GDP, boost the labor force by 23 million workers, and increase the rates of tourism by 1.2 percent and hospitality by 0.6 percent. The policy would cost about USD 64 billion a year, “achieving a return on investment of 28:1 by 2050.”

## 5.2 Economic benefits unrelated to improved health

### GDP growth, enhanced trade, investment returns, and job creation

**Summary:** *In addition to generating economic benefits that result from improved health and thus greater worker productivity (which we call health-related economic benefits), health aid also generates economic benefits that are unrelated to improved health. Health ODA can bring economic benefits by stimulating job creation and boosting international trade, with mutual benefits to both donors and recipients.*

Investing in health “is not just about improved health outcomes,” notes the World Bank, “it is a catalyst for broader economic and employment benefits, particularly for women” (World Bank 2025). Indeed, this was the central message of the WHO’s 2001 Commission on Macroeconomics and Health: If you invest substantially enough in health, economic development will follow (WHO 2002).

How does this message relate to donors investing in health aid? Certainly, health ODA can help support economic growth and development in recipient countries (Bendavid et al. 2017), but it could also bring economic benefits to the donor through mechanisms such as increased exports from donor country institutions.

For example, in 2019, the UK’s Foreign, Commonwealth and Development Office (FCDO) launched the Global Better Health Programme—which planned to invest GBP 79.3 million in health ODA over three years to tackle non-communicable diseases (NCDs) in eight middle-income countries: Brazil, Mexico, South Africa, Malaysia, Myanmar, Philippines, Thailand, and Vietnam (U.K. Govt 2023). The idea was to boost business opportunities for the UK; the investments were aimed at reducing morbidity and expanding life expectancy, leading to “increased labour productivity for men and women,” and “an increase in UK exports as a result of new opportunities for international businesses.” These UK export opportunities included “UK institutions providing clinical guidelines, training, and education on NCDs, or primary healthcare training and data analytics to healthcare workers.” The FCDO estimated that the primary benefit-cost ratio, i.e., the returns to improvements in population health in the recipient country, was 1.3:1. In other words, for every GBP 1 invested in the program, there was an expected return of GBP 1.3 in terms of improved population health outcomes (this cost-benefit ratio reflected the valuation of a disability-adjusted life year [DALY] at 1.5x per capita income). The FCDO also estimated that the secondary

benefit-cost ratio, i.e., the returns to the UK as a donor through export opportunities, was 1.1:1, i.e., for each GBP 1 invested in the program there was an expected return of GBP 1.1 in terms of UK healthcare education and training exports.

In the end, because of the COVID-19 pandemic, which led to a reduction in ODA from the UK, there were major changes within the three-year Global Better Health Programme, leading to early program closures in Mexico (November 2021) and Brazil (July 2022). The program also closed early in Myanmar (February 2021) due to the coup. Instead of GBP 79.3m being invested, the final spend was GBP 36.5m; the returns to the UK were nevertheless substantial. Through collaboration with the UK Department of International Trade (DIT), the program “aimed to maximise opportunities for mutually beneficial economic relationships in the health sector for the UK and international businesses and demonstrates an impact value of £403 million (as attributed by DIT) pointing to extremely strong cost-benefit returns” (U.K. Govt 2023).

One study estimated the economic returns of ending the HIV/AIDS pandemic, comparing the costs of “Fast Track” intensified interventions with the economic gains from reducing the HIV burden (Lamontagne et al. 2019). The study used the UNAIDS Fast Track scenario, which aimed to reduce new HIV cases and AIDS-related deaths by 90 percent between 2020 and 2030, and assumed constant coverage levels of HIV services at 2015 levels. The study found that for every USD 1 invested under the Fast-Track approach, economic benefits are generated to the tune of USD 6.44. The full income social benefits per incremental dollar cost by region ranged between USD 0.05 in Eastern Europe and Central Asia to USD 6.58 in the Asia Pacific. The global benefits would also be enjoyed by donor countries like the U.S. in the form of enhanced trade, reduced global disease burden, and improved systems.

Increased exports from donor countries also result from the commonly used practice of tied aid, where donor countries require recipient countries to purchase products (e.g., grain, equipment, motor vehicles, and airline tickets) produced by institutions in the donor country. As Porter McConnell states in his review of tied U.S. aid, “When aid is tied, it makes a ‘round trip’: US aid overseas is implemented by US companies using US consultants and US goods. Most of the value flows right back to the US instead of promoting growth abroad” (McConnell 2009).

## Returns from global health research and development (R&D)

**Summary:** *Investing health ODA to support global health R&D, including R&D to tackle neglected diseases and improve child and maternal health, does not just lead to improved health from new health technologies—it also generates mutual economic returns. Such R&D generates jobs worldwide and enhances global security, trade stability, and domestic innovation.*

Impact Global Health, formerly named Policy Cures Research, estimated that investments in neglected disease R&D from 1990 to 2023 saved 8.3 million lives and 598 million DALYs (Policy Cures Research 2024). Modeling the new medicines, vaccines, diagnostics, and vector control products that are projected to be launched by 2040 for neglected diseases—based on current candidates in the pipeline—they estimate that 40.7 million lives and 2.83 billion DALYs will be saved between 2000 and 2040. Averting 2.83 billion DALYs would generate USD 49.7 trillion in net societal benefits. The study found that every USD 1 invested in neglected diseases R&D generates an estimated USD 405 in social and health returns. These gains are global, where donors benefit economically through enhanced global security, trade stability, and domestic innovation.

Their research included just six disease areas: bacterial pneumonia and meningitis, diarrheal diseases, HIV/AIDS, malaria, Salmonella infections, and TB. The health and economic benefits are likely to be even greater if other health areas, such as maternal and newborn health conditions, and new and emerging types of research are included. For example, given the association between maternal gut microbiome conditions and adverse maternal and neonatal outcomes (Lauer et al. 2018; Di Simone et al. 2020), an emerging and active area of R&D is the development of maternal gut microbiome interventions. The first analysis of the current pipeline of candidate maternal gut microbiome interventions has recently been published (Mills et al. 2025). It found 38 candidates in the pipeline (from 2000–2023) and noted that “few candidates reached late-phase research, highlighting the need for efficacy trials.”

A related study conducted by our policy lab estimated that investments to improve efficiency in product development for neglected diseases from 2023–2044 would lead to new product launches in 94 neglected diseases product portfolios (vaccines, therapeutics, and diagnostics) that would not have occurred otherwise (Ogbuoji et al. 2024). It would also reduce average costs-per-launch of new products by up to USD 100 million and yield net monetary benefits to society of up to USD 48.7 trillion.

A recent study by the Global Health Technologies Coalition examined and quantified the returns of U.S. investments in global health R&D, both at the global and domestic levels (Auwal et al. 2025). The study examined trends in global health R&D financing by U.S. government agencies such as the National Institutes of Health, Biomedical Advanced Research and Development Authority, USAID, and the U.S. Centers for Disease Control and Prevention from 2008–2022 across three main areas: (i) neglected diseases; (ii) emerging infectious diseases, including COVID-19; and (iii) sexual and reproductive health. The study also looked at the economic returns to the U.S. and found significant returns in the form of enhanced returns to the U.S. industry and job creation domestically. Public spending of USD 46 billion on global health R&D in the period 2007–2022 yielded a six-fold return on investment for the U.S., amounting to USD 255 billion. This return included the creation of 600,000 new jobs in the U.S., USD 104 billion in economic activity, and an additional USD 102 billion in industry investments resulting from future global health research endeavors.

### Returns channeled through global health procurement

**Summary:** *When donors invest health ODA into disease control programs that benefit LMICs, such as the Global Fund and PEPFAR, they reap economic benefits domestically from the procurement of health technologies. A significant share of procurement through such programs originates from manufacturers and businesses located within high-income economies, which helps to boost their domestic jobs, revenues, and research innovation.*

One other key form of direct economic benefit to donor countries is through the procurement of health products such as medicines, diagnostics, vaccines, and other health technologies from their domestic manufacturers. A significant share of procurement through global health programs like the Global Fund, Gavi, and PEPFAR originates from manufacturers and businesses located within high-income economies, which helps to boost their domestic jobs, revenues, and research innovation. The U.S. Global Health Strategy 2025 (U.S. Govt 2025) noted that, since 2010, the Global Fund has procured USD 3.5 billion worth of health products and technologies from U.S. companies. Other multilateral health agencies procured an estimated USD 12.5 billion from U.S. manufacturers between 2010 and 2023. In FY 2024 alone, the U.S. government procured around USD 120 million in diagnostics tests from U.S. companies like Abbott, Cepheid, and Hologic. Additionally, American companies supplied 50 percent of malaria diagnostics tests and 70 percent of HIV rapid diagnostic tests amounting to USD 350 million.

## 5.3 Political benefits

### Reputational benefits that enhance donors' soft power

**Summary:** *Investments in health ODA generate global goodwill, bringing reputational and diplomatic benefits to donors and boosting their “soft power.” In recipient countries, attitudes towards a donor country improve when the public finds out that the donor has funded a health project. Research on the long-term impact of PEPFAR and the U.S. President’s Malaria Initiative found that the public in recipient countries had a more favorable opinion of the U.S. after the introduction of these programs than before.*

In 2017, a consensus study conducted by the National Academies of Sciences, Engineering, and Medicine on the future role of the U.S. in global health concluded that the U.S. should continue to be the world’s largest investor in global health to maintain its “status and influence” (Dzau et al. 2017). Investing in health ODA is a way to invest in global goodwill, which could bring reputational and diplomatic benefits to donors and potentially boost a donor’s “soft power.” However, while there are many opinion pieces and commentaries expressing this view (Gupta and Kerry 2017; Fauci and Eisinger 2018), there have been very few attempts to try and measure such benefits through empirical research.

An experimental study in Bangladesh about a U.S.-funded health project, published in 2018, by Dietrich and colleagues, was embedded in a nationwide survey (Dietrich et al. 2018). The researchers found that “explicit information about U.S. funding slightly improves general perceptions of the United States.”

To the best of our knowledge, the largest study on soft power benefits of health ODA was by Jakubowski and colleagues, who analyzed the impact of the launch of PEPFAR and the U.S. President’s Malaria Initiative (PMI) on public opinion of the U.S. in 45 countries from 2002–2016 (Jakubowski et al. 2019). The researchers used “258 nationally representative Global Attitudes Surveys, based on interviews with more than 260,000 respondents, conducted by the Pew Research Center in 45 LMICs between 2002 and 2016” and tested whether attitudes towards the U.S. changed after the introduction of PEPFAR or PMI in these 45 countries. They found that favorability ratings of the U.S. were significantly higher after implementation of PEPFAR and PMI, and “higher health aid investments were associated with greater improvements in favorability.” The size of the effect was substantial: For every additional hundred million dollars in health aid given to a recipient country, there was a roughly 6 percentage point increase in highly favorable opinions of the U.S.

By contrast, aid given to other sectors did not influence public opinion. “Our study,” concluded the authors, “provides new evidence to support the notion that health diplomacy is a net win for the United States and recipient countries alike.”

The only other similar study that we identified, by Goldsmith and colleagues, looked at the short-term impact of PEPFAR funding in 79 countries during the first three years of disbursement (2004–2006) on public opinion of the U.S. in 2007–2010 (Goldsmith et al. 2014). Public opinion was assessed by the percentage of respondents answering “approve” or “disapprove” to the following question asked in Gallup World Polls (a multinational survey with nearly universal coverage in LMICs): “Do you approve or disapprove of the job performance of the leadership of the United States?” The study found that PEPFAR funding did indeed improve public opinion of the U.S. and the effect size was large: Doubling the per capita amount of PEPFAR funds was associated with a 20 percent to 23 percent higher global approval of the U.S. President between 2007 and 2010.

### Political stability and security benefits

**Summary:** *Health ODA can improve political stability in recipient countries and can strengthen security and defense ties between donor and recipient countries. Research on ODA has found that it can reduce terrorism, especially if the aid is targeted towards areas such as education, health, civil society, and conflict prevention. Dissatisfaction with public services, including health services, is a stronger predictor of migration than household wealth and ODA targeting improved services, especially health and education, reduces short- to medium-term regular migration flows. Health ODA is also associated with reduced emigration of physicians and nurses.*

The U.S. Global Health Strategy 2025 (U.S. Govt 2025) noted that “returns from U.S. health foreign assistance have extended far beyond improvements in health outcomes, generating stability and economic development in many recipient countries.” It quoted (but did not cite) a study that found that PEPFAR recipient countries saw 2.1 percent higher GDP growth than non-PEPFAR countries and a 40 percent drop in political instability compared to only a 3 percent drop in non-PEPFAR countries. This has been possible, argues the strategy, due to the reduction of crises and instability that could have resulted from the absence of U.S. health aid. The strategy also noted that PEPFAR has helped to strengthen security and defense ties with recipient countries. In Sub-Saharan Africa, for example, 19 military-to-military collaborations were established in PEPFAR recipient countries that faced extremist threats. A study by Young and Findley of the impact of ODA on

transnational terrorism found that ODA “decreases terrorism especially when targeted toward sectors, such as education, health, civil society, and conflict prevention” (Young and Findley 2011).

Deteriorating living conditions in LMICs, including weakened public health systems, have caused mass cross-border migration—for example, Colombia hosts over 3 million people from the Venezuelan diaspora, who fled because of food insecurity, poverty, the collapse of the health system, and other risk factors (Agarwal-Harding et al. 2024). Research by Dustmann and Okatenko showed that satisfaction with local public amenities, such as public services including health services, plays an important role in migration decisions and is a stronger predictor of migration than household wealth (Dustmann and Okatenko 2014). Two studies by Lanati and Thiele find that ODA that targets the improvement of local public amenities, especially health and education, reduces short- to medium-term regular migration flows (Lanati and Thiele 2018a; 2018b). Two empirical studies have shown that health ODA is associated with reduced emigration of physicians and nurses (Lanati and Thiele 2021; Moullan 2013).

Infectious disease outbreaks can cause large scale migration to escape the disease risk, more often involving internal displacement than cross-border migration (although both can occur), which in turn can lead to political instability. For example, in 1995, 500,000 people fled the city of Surat in India in response to an outbreak of plague, in 2003 up to one million people left Beijing due to the SARS outbreak, and in 2008–2009 an estimated 38,000 Zimbabweans fled to South Africa after Zimbabwe experienced one of the largest ever cholera outbreaks (Edelstein et al. 2014). It is theoretically possible that ODA investments in preventing outbreaks reduce such migration, but we did not find any empirical research addressing this question.

## 6. Research Gaps

Our review identified several gaps in the evidence base on mutual interest health ODA. These include the lack of robust studies providing causal evidence of mutual benefits, a predominance of studies focusing on recipient benefits versus donor benefits, the short-term bias of most studies, and an overreliance on studying direct effects at the expense of studying indirect effects that might be potentially more significant in the long run.

Although many articles discuss the benefits of health aid for donor and recipient countries, very few are original research studies—most are anecdotal or opinion pieces. Of the limited original

research that exists, only a few used rigorous causal inference methods, such as quasi-experimental designs, or used long-term longitudinal data capable of capturing long-run effects.

We found more studies exploring benefits to recipient countries and only a few on benefits to donor countries. This probably stems from the idea that recipient countries gain more from aid. However, as our review has shown, donor countries also benefit and face the risks of negative outcomes from unplanned discontinuation of health aid.

Another possible explanation for fewer donor-focused studies might be the complexity of the causal pathway. Unlike recipient-focused studies that only need to trace the link between health aid investments and benefits in the recipient country, donor-focused studies need to address a complex pathway that starts with the investment from donor countries to recipient countries and then the benefits of such investments that return to the donor country. For example, several studies document the impact of health aid on health worker training, conditions of service, and health infrastructure in recipient countries. In contrast, others describe how donor countries benefit from health worker brain drain from the recipient countries, but we found only two high-quality studies that explicitly linked health aid to brain drain or brain gain (Lanati and Thiele 2021; Moullan 2013).

Finally, most studies focus on the direct impact of aid, often overlooking the indirect but equally important effects on country systems. For example, providing food aid might address malnutrition in the short term but could harm agricultural markets over the long run. Similarly, vertical disease programs can reduce cause-specific mortality but might indirectly weaken the health system's ability to respond to other health threats. Not addressing both questions makes it hard to comprehensively evaluate the overall net benefits or costs of health aid to donor or recipient countries.

## 7. Conclusions

From the turn of the century to the early 2020s was a “transformative era” for global health, say Derek Yach and colleagues, “a period marked by multilateral cooperation, historic funding increases, and major institutional innovations” (Yach et al. 2025). But in 2025, that era came to an end, and there is likely no going back. Health ODA is now falling precipitously, multilateral health agencies have not met their funding targets, USAID has been shuttered, and the United Nations Secretary General has proposed closing UNAIDS next year (Cox 2025). The sharp and rapid reduction in health aid is projected to cause large increases in morbidity and mortality—to give just

one example, in a new modeling study, Menzies et al. estimate that, compared to pre-2025 funding levels, recent and proposed cuts to U.S. bilateral health aid could result in an additional 2.5 million pediatric TB cases and 340,000 pediatric TB deaths in LMICs from 2025–2034 (Menzies et al. 2025).

On top of falling health ODA, the global health system is facing a complex set of interconnected and cascading shocks, including geopolitical fragmentation, a retreat from multilateralism, climate-driven health crises, and massive human displacement from conflicts. Global health governance is being tested and will need to evolve to match the new realities. One of the most important realities is that LMICs are calling for national sovereignty over their own health systems. For example, the August 2025 African Health Sovereignty Summit saw the launch of the SUSTAIN initiative, under the patronage of Ghanaian president John Dramani Mahama, which aims to “promote country-led and investment-driven health systems, powered by domestic resources, private sector engagement, philanthropic partnerships, and technical expertise” (Ofosu 2025). Some donors have announced reforms aimed at responding to this changed environment. For example, Gavi’s reform program, called “the Gavi Leap,” is based on four principles: (i) country-centricity, (ii) country sovereignty (“supporting countries to fully transition out of donor support”), (iii) focused mandates, and (iv) clear end dates for engagement (Gavi 2025).

It is upon this backdrop that we set out to examine the research evidence on mutual interest health ODA, which we believed would be valuable to document at this current time of changes and reforms in global health assistance. There is clearly an important ongoing role for health ODA, but the sharp decline in funding levels is sparking important discussions about what this role should be and how health ODA should best be targeted. These discussions include questions such as: What type of partnerships do LMICs want with donors? For those LMICs facing debt crises that limit their domestic health investments, what kinds of support can and should donors provide? Should health ODA eventually shift entirely away from direct country support towards funding global public goods such as setting norms and standards, pandemic prevention, tackling AMR and the health impacts of climate change, market shaping, and pooled procurement? Knowing what the empirical evidence shows on mutual interest health ODA could, we believe, help to inform these discussions. It could assist donor governments in quantifying the value of their health aid investments in terms of the returns to both recipients and donors themselves and it could help to shape health aid portfolios in an era of rising fiscal pressures.

We found surprisingly little robust empirical research on the mutual benefits of health aid. Nevertheless, we did find evidence to show that health aid can have benefits that we categorized into three types: health benefits and health-related economic benefits; economic benefits unrelated to improved health; and political benefits.

Empirical research has shown large improvements in health, as well as impressive health-related economic returns, from health ODA. Countries that have received PEPFAR funding have seen a greater annual reduction in HIV-related deaths and a slower annual growth in people living with HIV than those that did not receive such funding (Bendavid and Bhattacharya 2009). Countries with Gavi support have seen significantly faster increases in DTP3 coverage than non-Gavi countries (Lu et al. 2006). Health aid has beneficial and statistically significant effects on infant mortality (Mishra and Newhouse 2009; Leunig et al. 2024), life expectancy, and under-5 mortality rates (Bendavid and Bhattacharya 2014; Leunig et al. 2024). There are health and economic benefits to donor and recipient countries from investing health ODA into pandemic preparedness and response (e.g., see Doohan and Hauck (2021)) and into preventing AMR, slowing down the spread of drug-resistant infections, and developing new antibiotics (e.g., see World Organisation for Animal Health (2024)).

The mutual economic benefits of health ODA do not arise only from improved health, but through other pathways, such as enhanced exports and job creation (Lamontagne et al. 2019; U.K. Govt 2023). Investments in global health R&D do not just lead to new health technologies that improve health outcomes in LMICs but also bring large returns to donors, for example, in the form of enhanced returns to the U.S. industry and job creation domestically (Auwal et al. 2025; Policy Cures Research 2024). Another form of direct economic benefit to donor countries is through the procurement of global health products, such as medicines, diagnostics, and vaccines, from their domestic manufacturers—for example, since 2010, the Global Fund has procured USD 3.5 billion worth of health products and technologies from U.S. companies (U.S. Govt 2025).

Health ODA also has documented political benefits, such as boosting donors' soft power. We identified three empirical studies that found that U.S. health ODA, including through PEPFAR and PMI, was associated with improved perceptions of the U.S. in recipient countries (Dietrich et al. 2018; Jakubowski et al. 2019; Goldsmith et al. 2014). These studies suggest that cuts to PEPFAR and PMI will not just have direct negative impacts on recipient countries, but they will probably also hurt the reputation of the U.S. worldwide. This, in turn, argue Jakubowski and colleagues, could “offset the gains to the United States' image that its leadership and generosity have

cultivated” (Jakubowski et al. 2019). Health ODA may also be associated with reduced political instability in recipient countries (U.S. Govt 2025) and ODA has been shown to reduce transnational terrorism, especially when targeted towards sectors including education, health, and civil society (Young and Findley 2011). There is research evidence showing that health ODA reduces short- to medium-term regular migration flows (Lanati and Thiele 2018a; 2018b) and the emigration of health workers (Lanati and Thiele 2021; Moullan 2013).

Given the new realities in global health, including the decolonization movement and the commitments made by many LMICs towards national sovereignty over their own health systems, there have been recent appraisals of the limitations and harms of health ODA. Aid dependence and volatility can leave LMICs vulnerable to health shocks and disease resurgence (Hecht et al. 2018; Simms 2025; Auwal et al. 2025) and aid sanctions can cause sharp increases in child and maternal mortality (Gibson et al. 2025). Such disruptions also impact donor credibility, weaken soft power, and threaten scientific and policy collaborations (Simms 2025; Auwal et al. 2025). Health ODA can also lead to health system fragmentation and inefficiency when it is allocated to vertical programs or siloed projects with parallel management and operational systems (e.g., see Lee and Park (2024)). The presence of donors in recipient countries can disrupt the flow of skilled health workers, causing internal brain drain away from the public sector to better-paying positions in donor agencies or NGOs run with donor agency support (e.g., see Sherr et al. (2012)). Another limitation of health ODA is misaligned priorities: Empirical research has shown that distribution of health ODA does not strongly match the actual disease burden in recipient countries (Shiffman 2006). The experts who we interviewed for this paper, as well as discussions in the literature, point to the importance of addressing these harms as a key to making health ODA more sustainable and equitable.

We end our paper with a call for more and better evidence on the mutual benefits of health ODA. We have identified many key research gaps. Most studies on the impacts of health ODA focus on recipient countries and there have been very few studies on the potential benefits to donors. There has been a lack of robust studies providing causal evidence of mutual benefits. The existing research has looked mostly at short-term effects. And most studies have focused on the direct impact of aid, often overlooking the indirect but equally important effects on country systems. Generating more knowledge—and more robust knowledge—on the value of health ODA to donors and recipients would be highly valuable in improving global health assistance.

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