# Global Health and Foreign Policy

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Health has long been intertwined with the foreign policies of states. In recent years, however, global health issues have risen to the highest levels of international politics and have become accepted as legitimate issues in foreign policy. This elevated political priority is in many ways a welcome development for proponents of global health, and it has resulted in increased funding for and attention to select global health issues. However, there has been less examination of the tensions that characterize the relationship between global health and foreign policy and of the potential effects of linking global health efforts with the foreign-policy interests of states. In this paper, the authors review the relationship between global health and foreign policy by examining the roles of health across 4 major components of foreign policy: aid, trade, diplomacy, and national security. For each of these aspects of foreign policy, the authors review current and historical issues and discuss how foreign-policy interests have aided or impeded global health efforts. The increasing relevance of global health to foreign policy holds both opportunities and dangers for global efforts to improve health.

commerce; disease outbreaks; economics; health policy; international cooperation; public health; security measures; world health

Abbreviations: AIDS, acquired immune deficiency syndrome; FCTC, Framework Convention on Tobacco Control; GATT, General Agreement on Tariffs and Trade; HIV, human immunodeficiency virus; IHRs, International Health Regulations; SARS, severe acute respiratory syndrome; TRIPS, Agreement on Trade-Related Intellectual Property Rights; WHO, World Health Organization.

## INTRODUCTION

Global health issues have long been a concern for foreign-policy-makers. From sanitary cordons instituted to prevent plague from entering Croatia's Dalmatian Coast to the international sanitary conventions, which began in 1851, to the victories over malaria and yellow fever that permitted the construction of the strategic Panama Canal, health and disease have been intertwined with the pursuit of foreign-policy interests. However, over the last 2 decades, globalization has made global health more relevant across multiple aspects of foreign policy than ever before. Fidler calls this a "revolution" in the political status of global health, noting that "nothing in the prior history of national and international efforts on public health compares to the political status public health has reached today" (1, p. 45).

While the global health community has welcomed this elevated political priority, there has been less examination of why states incorporate global health into their foreign-policy agendas or what interests states pursue when they engage on global health issues. These questions, and the broader issue of understanding the relationship between global health and foreign policy, are the subject of this review.

### Theoretical perspectives on global health and foreign policy

In an insightful examination of this subject, Fidler (2) suggests 3 possible interpretations of global health's rise onto foreign-policy agendas. The first interpretation argues that global health is an important objective of foreign policy in itself, and that "health has become a preeminent political value for 21st century humanity" (2, p. 183). This perspective concludes that global health can transform the state interests that have historically defined foreign policy. Echoing this position, Kickbusch et al. write that "foreign policy is now being driven substantially by health" (3, p. 971), and Horton suggests that health can move "foreign policy away from a debate about interests to one about global altruism" (4, p. 807).

Fidler's second perspective views global health as "merely a tool, an instrument of statecraft the value of which extends no farther than its utility in serving the

material interests and capabilities of the state'' (2, p. 185). Far from being transformational, global health is simply another issue that foreign-policy-makers weigh against other state interests. This perspective, based on the realist theory of international relations, explains the recent political prominence of global health as a result of the growing impact of disease upon traditional security concerns: ''When diseases threaten, or show the potential to threaten, national security, military capabilities, geopolitical or regional stability, national populations, economic power, and trade interests, foreign policy makers take notice'' (2, p. 184).

Fidler's final perspective sees the relationship between global health and foreign policy as an evolving dynamic between foreign-policy imperatives and the science of global health. This perspective does not discount that state interests drive foreign policy, but it recognizes that influence runs both ways, arguing: ''Scientific principles. . . channel action on health in specific directions that neither ideology nor power politics can alter'' (2, p. 186).

## Methods and limitations

In this article, we examine the available literature on global health and foreign policy for evidence supporting 1 or more of these theoretical perspectives. We review published articles organized around 4 key dimensions in the relationship between global health and foreign policy: aid, trade, diplomacy, and national security. Use of these 4 dimensions, modified from Fidler's hierarchy of foreign-policy governance functions (5), enables a detailed study of the relationship between global health and specific areas of foreign-policy practice.

A limitation of this paper is that stringent selection criteria for inclusion of published articles are not useful for addressing such interdisciplinary questions. An understanding of the relationship between global health and foreign policy benefits from examining papers across a broad range of public health, political science, and international relations literature and from incorporating case studies of interactions between global health and foreign policy that are difficult to target with search strategies. We conducted searches in numerous databases (PubMed, MEDLINE, Social Science Citation Index, JSTOR, EconLit, and Science Direct), selecting articles that either directly addressed the relationship between global health and foreign policy or were case studies of an interaction between global health and 1 or more of the 4 dimensions of foreign policy. Thus, this paper is not a comprehensive assessment of every published article related to this subject; rather, we seek to provide a review of key existing literature that illuminates the relationship and tensions between global health and the aid, trade, diplomacy, and national security aspects of foreign policy.

## AID AND HEALTH

States engage in development assistance (including development assistance for health) for multiple reasons and with differing levels of commitment, but there is typically an explicit or implicit recognition of the value of such assistance to countries' foreign-policy objectives (6, 7). In 1961, when US President John F. Kennedy created the US Agency for International Development, he explicitly acknowledged the US security interest in providing aid to ward off the collapse of developing-country governments, which ''would be disastrous to our national security, harmful to our comparative prosperity, and offensive to our conscience'' (8). The United States and other countries continue to frame development aid in a foreign-policy context by linking aid to national security and economic interests (9, 10).

The foreign-policy rationale for aid has been clearly reflected in historical trends in development assistance. Since the end of World War II, large donor states have tended to focus bilateral and multilateral aid to support countries judged to be strategically linked to national security and economic interests (11–18). The basic institutional architecture for multilateral development aid—the World Bank, the International Monetary Fund, and the United Nations, along with specialized United Nations agencies such as the World Health Organization (WHO)—were created after World War II with the immediate goal of rebuilding and modernizing war-damaged societies and safeguarding the security of Western powers (19). Between the 1960s and the 1980s, aid from the United States and other Western countries ''reflected anti-communist Cold War tensions'' and focused on ''containing Soviet influence in Latin America, Southeast Asia, and Africa'' (20, p. 2). Promises of substantial US aid packages to Egypt and Israel facilitated their signing of the 1978 Camp David peace agreement, and since 1978 these 2 countries have ranked at the top of the list of recipients of US foreign assistance (21, 22). The top 6 recipients of US aid in 2008 were (in descending order) Israel, Afghanistan, Egypt, Jordan, Pakistan, and Iraq, indicating a clear preference for aiding strategically important partners instead of the poorest states (20).

## Development assistance for health

Development assistance for health has generally followed the same trends as overall development assistance, but it is worthwhile to note 3 key, recent trends: the dramatic increase in funding, the growing number of actors and institutions, and the overwhelming focus on a single health condition, human immunodeficiency virus (HIV)/acquired immunodeficiency syndrome (AIDS) (23, 24).

According to 1 estimate, development assistance for health increased 4-fold from 1990 to 2007, from $5.6 billion to $21.8 billion per year, with more than half of this increase coming after 2000 (25). This represents a change from previous decades, which were characterized by low, stagnant levels of health assistance (26). This increasing volume of aid comes from and is funneled through an ever more complex set of actors: In a 2008 article, McColl (27) estimated that there are more than 40 bilateral donors, 26 United Nations agencies, 20 global and regional funding mechanisms, and 90 distinct initiatives involved in development assistance for health.

Efforts to fight HIV/AIDS received most of the increased development assistance for health. International resources for HIV/AIDS grew from a relatively paltry $292 million in 1996 to over $10 billion in 2007, quadrupling from 2001 to

2007 alone (28, 29). While HIV/AIDS support drew just 5% of all development assistance for health in 1998, by 2007 it constituted 47% of all development assistance for health (30). This trend is likely to continue: The Obama administration's proposed global health budget dedicates fully 70% of US official development assistance for health to HIV/AIDS (31). It is worth noting that while the growth in US development assistance for health increased an impressive 208% between 2001 and 2007, it was eclipsed by the growth in aid for government/civil society/democratization efforts (often highly linked to foreign-policy objectives), which grew 260% during the same period (32).

### Foreign policy links to development assistance for health trends

Foreign-policy considerations underlie much of the remarkable growth in development assistance for health, from rising concerns about the national security and economic implications of health disparities to the perception of health assistance as an important "soft power" tool, to shifting domestic political perceptions of global health issues (33, 34). In some cases, development assistance for health has been clearly and directly linked to national security. Since 2001, many donors have supported "health security" aid to reduce the threat of natural and intentional outbreaks of infectious diseases (35–37). For example, aid for international influenza surveillance and pandemic planning and response programs was virtually nonexistent prior to the emergence the H5N1 avian influenza virus, but with the growing perception that an influenza pandemic presents a direct security threat (38), more than $2 billion was provided to combat the disease between 2004 and 2008 (39).

Other development assistance for health efforts is linked in a more indirect fashion to foreign policy and national security goals. Iraq, for example, received the greatest share of health-related development assistance of any country in the North Africa/Middle East region during 2002–2004, reflecting US and European interests in using health as part of its effort to foster a stable, pro-Western government there (40). Still other development assistance for health programs has been justified on the basis of the relatively intangible benefits it provides, such as increased goodwill or trust-building. For instance, the US President's Emergency Plan for AIDS Relief has been touted as promoting positive views of the United States on the African continent (41, 42).

Foreign-policy extensions of domestic political priorities have also shaped development assistance for health. Perlman and Roy observed that "the orientation of [development assistance for health] had been heavily influenced by political changes in the United States and Great Britain" (7, p. 14). For example, during the conservative Thatcher (United Kingdom) and Reagan (United States) administrations, funding for family planning and social services was cut sharply to reflect these governments' priorities. The President's Emergency Plan for AIDS Relief, the largest bilateral health aid program ever, had origins rooted in US domestic politics, as President George W. Bush proposed the program partly in response to lobbying from his political base (43).

### Foreign policy and development assistance for health

The character and amount of development assistance for health has major implications for the health of populations in poor countries, because external donor support can comprise a large percentage of their health spending (28, 44). This makes development assistance for health that is guided more by donor interests than by scientific evidence or the priorities of recipients a concern for global health proponents (45). While there is some evidence of increasing correlation between development assistance and recipient countries' overall burdens of disease (25), multiple studies demonstrate a continuing and significant disconnect between aid and the burden of health conditions, including maternal mortality (46) and malaria (47), and the disability-adjusted life years measure (48). However, even in cases where development assistance for health has been driven primarily by narrow foreign-policy concerns, health benefits can be realized; for example, US health aid for Egypt, an integral part of US Middle East policy, has helped the country achieve dramatic declines in child mortality (49). Thus, foreign policy's powerful influence on development assistance for health leaves many pressing global health battles underresourced but allows global health efforts that do align with foreign-policy interests to receive significant political support and funding.

## TRADE AND HEALTH

The relationship between trade and health forms part of a long history of commercial exchange between human societies, dating from the 19th century BC through the extension of trade to India and China along the Silk Road and the expansion of trade by sea from the 15th century onward (50, 51). As trade has evolved in geographic reach, scale, mode, and type of commodity, so too have the human health implications. Most directly, the coming together of human populations through trade can spread communicable diseases, and commodities exchanged also have the potential to harm (e.g., tobacco) or promote (e.g., fruits and vegetables) health.

Since 1945, the world trading system has expanded rapidly. Built on the General Agreement on Tariffs and Trade (GATT) signed in 1947 and expanded through the creation of the World Trade Organization in 1995, the world trading system has grown from 23 member states to 153. Today, the World Trade Organization oversees the implementation of more than 20 trade agreements covering a vast range of trade matters, including agriculture, trade in services, and trade-related intellectual property rights. There is also a growing number of regional and bilateral trade agreements (52). With this growth has come tensions in the trade-and-health relationship due to frequent conflict between economic interests and global health goals (53). Here, we examine these tensions by reviewing trends in trade in health-related goods and services and the broader effects that traded goods and services can have on health and disease.

## Trade of health-related goods and services

Trade in health-related goods, such as pharmaceutical agents, medicinal products, biologic agents, and medical or surgical equipment and appliances, has grown rapidly since the 1990s, notably in the Americas (54). While the GATT sets out rules to facilitate the trade of health-related goods, notably through tariff reductions and nondiscriminatory treatment, health-related goods are recognized as requiring specific provisions given the need for stringent quality standards. Insufficient regulation of blood products, for example, led to the inadvertent trade-facilitated transmission of HIV/AIDS and hepatitis C (55).

Another key issue in the trade of health-related goods is the health impact of standardizing patent rights under the Agreement on Trade-Related Intellectual Property Rights (TRIPS). Given concerns that patent-protected drugs would be too expensive for the world's poor, the Declaration on the TRIPS Agreement and Public Health (known as the Doha Declaration) affirmed in 2001 the right of World Trade Organization member states to interpret and implement TRIPS in a manner that supports public health and, in particular, access to medicines (as permitted under GATT Article XX[b]) (56). A clarification in 2003 specified when countries can import drugs produced elsewhere under a mechanism known as "compulsory licensing" (57). Despite the World Trade Organization's claim that the Doha Declaration removed the "final patent obstacle to cheap drug imports" (58, p. 1), the limited capacity of developing states to actually implement the available flexibilities, especially given the stricter protections found in many bilateral and regional trade agreements (known as "TRIPS+" measures), demonstrates the power of economic interests over public health considerations (59). The WHO has convened an Intergovernmental Working Group on Public Health, Innovation and Intellectual Property Rights to seek an international agreement to balance innovation and access to medicines, but agreement has remained elusive and negotiations continue (60, 61).

Public health advocates argue that trade in goods with the potential to harm, such as arms, tobacco, and toxic and hazardous waste (known as "public bads"), should be restricted and that such goods should not be included in trade liberalization efforts (62, 63). However, such arguments have been successfully opposed by the industries behind such trade, often with the support of major governments, in order to protect their economic interests.

Countries also increasingly trade in health services, traditionally regarded as nontradable, as a result of advances in information and communication technologies, increased international mobility of service providers and patients, and growing participation by the private sector in health care (64). Under the World Trade Organization's General Agreement on Trade in Services, trade of health services is categorized under 4 modes: cross-border delivery of samples or services, consumption of health services abroad, establishment of health facilities by a foreign-based concern, and movement of health personnel across borders (65, 66). While the extent to which trade occurs varies across these modes, there is a general trend towards increased trade in health services (67, 68). There are potential opportunities arising from such trade, including efficiency, specialization and quality gains, public sector cost savings, expansion of service provision, export revenues and remittances, transfer of technology and skills, and increased patient choice. The risks concern distributive consequences for domestic patients and the possible "brain drain" of health professionals from resource-scarce countries (69).

## Health impact of trade policies

There is a broad body of literature on the health effects of trade in non-health-related goods and services. Trade of food has received particular attention, especially with regard to issues such as access to an appropriate quantity (under- and overnutrition) and quality of food, factors that influence eating habits, and broader environmental issues (70). The regulatory framework for trade of food is focused on the World Trade Organization's Agreement on the Application of Sanitary and Phytosanitary Measures and the Codex Alimentarius Commission. Both, along with GATT Article XX(b), are concerned with preventing the spread of food-borne diseases while minimizing the required restrictions on trade, but application of restrictions is often controversial (71). For example, the appropriateness of trade restrictions on beef from countries affected by bovine spongiform encephalopathy, such as the United Kingdom, Canada, and the United States, on the grounds of protecting public health has been subject to ongoing dispute (72). Similar disputes over the public health risks of trade in poultry products (H5N1), apples (due to fire blight), and genetically modified organisms have highlighted the ongoing tensions between promoting trade and protecting health (73).

More broadly, unfair terms of trade and their contribution to health inequalities within and across countries has been the subject of scrutiny. The persistence of trade protectionism by many countries—in the form of agricultural subsidies, for instance—disadvantages low-income countries seeking economic growth through exports (74). Economic pressure and the desire to attract foreign direct investment sometimes engender poor occupational and environmental health regulations (75).

In summary, there has historically been friction between trade and health concerns, implying a need for greater coherence between trade and health policy (76–79). While countries have sometimes restricted trade to prevent the spread of disease, interactions between trade and health have generally been dominated by support for economic interests over health concerns and by a desire to minimize the impact of disease upon trade (80).

## DIPLOMACY AND HEALTH

Diplomacy is the art and practice of conducting international relations, and it "provides one instrument that international actors use to implement their foreign policy" (81, p. 318). Diplomacy has traditionally focused on dialogue and negotiating alliances, treaties, and other agreements. However, recent usage of the term "health diplomacy" has encompassed not only international agreements on

health but also efforts to promote the role of global health in foreign policy, as well as the use of health interventions to support foreign-policy objectives.

## International agreements and treaty-making

The origins of modern health diplomacy can be traced to 1851, when the first International Sanitary Conference met to discuss cooperation on cholera, plague, and yellow fever (82). Countries sought to meet after recognizing that the faster movement of people by rail and ship was facilitating the spread of disease and that uncoordinated, sometimes ineffectual, national quarantine policies interrupted trade and were causing discontent among merchants (82). With the founding of the WHO after World War II, prior sanitary agreements were folded into 1 set of regulations, the International Sanitary Conventions (later renamed the International Health Regulations (IHRs)). The new Conventions maintained the spirit of the previous negotiations in attempting to coordinate disease control measures while ensuring the least amount of interference with international trade.

During the final decades of the 20th century, it became clear to many member states that the IHRs were inadequate: The regulations covered only 3 diseases, countries were often noncompliant, and the WHO had limited flexibility to conduct outbreak surveillance and response (83, 84). Even with recognition of these weaknesses, attempted revisions of the IHRs stalled until the 2002–2003 epidemic of severe acute respiratory syndrome (SARS) (83). SARS demonstrated the direct and continuing threat that transnational disease epidemics pose to health and economic interests (85) and generated the political momentum necessary to complete the IHR revision process. In this case, a threat to state foreign-policy interests was critical to advancing diplomacy on global health.

However, in adopting the revised IHRs, countries gave the WHO a novel ability to intrude upon state interests, "privileg[ing] global health governance over state sovereignty" by allowing the use of surveillance reports from nongovernmental organizations and electronic surveillance systems (83, p. 90). Actions taken by certain countries during the SARS epidemic, especially China's attempts to conceal disease information, precipitated these new WHO powers to overcome selfish state interests. Despite this apparent victory of global health over narrow state interests, a number of countries and commentators have argued that the IHRs actually undervalue "equity between developed and developing nations" (86, p. 482) and risk fragmentation of poor countries' health systems and "national health priorities set up by developing countries" (87, p. 13). These objections center on the IHRs' primary focus on disease surveillance, which some argue may be of greater importance to wealthy countries seeking protection from new epidemics than for poor countries with large existing disease burdens (87). Thus, "the WHO's authority in infectious disease control has been strengthened partly because it suited the interests of Western states to allow this to happen" (88, p. 308). Whether the IHRs primarily benefit wealthy states seeking to avoid epidemics or can also address burdens of disease in poorer countries will depend upon the

nature of future efforts to build surveillance and response capacity in support of the IHRs.

The second critical diplomatic agreement on health was the Framework Convention on Tobacco Control (FCTC). Approved by the World Health Assembly in 2003, the FCTC represents the WHO's first-ever use of its authority to create a global health treaty to "reduce the growth and spread of the global tobacco epidemic" (89, p. 936). Unlike the IHRs, negotiation of the FCTC could not rely on the high political priority of such efforts. The WHO's Tobacco Free Initiative group gathered the extensive evidence that linked smoking to lung cancer, as well as studies on the negative economic impact caused by tobacco, which framed the treaty in terms of the economic self-interests of states (90). The WHO also highlighted proven interventions that reduce tobacco consumption and formed a fruitful partnership with an effective coalition of nongovernmental organizations called the Framework Convention Alliance (91).

While promoters of the treaty had ambitious goals and abundant scientific evidence to support stronger tobacco reduction policies, the treaty faced opposition from the governments of the United States, Japan, China, and Germany, all significant tobacco or tobacco-product producers, who succeeded in weakening the final text with flexibilities and optional language. Assunta and Chapman conclude that the "flexibility in the FCTC language offers an ostensible excuse for… parties to the Convention to avoid development of robust comprehensive tobacco control policies" (92, p. 755). There is also significant evidence that transnational tobacco companies sought to undermine the negotiations leading to the FCTC (93). Finally ratified in 2005, the FCTC sets out broad obligations for reducing both tobacco demand and tobacco production, but the weakened language of the treaty, continuing opposition from transnational tobacco companies (94), and different levels of commitment mean that enactment of FCTC measures is still highly variable across signatory countries.

As both the IHR and FCTC cases indicate, diplomatic health negotiations—even those viewed as triumphs of global health over foreign policy—are driven by state interests which can either facilitate or undermine global health objectives.

## Foreign policy for global health

Spurred by the passage of the IHRs and the FCTC and the increasing political relevance of global health, a number of global health practitioners have advocated for and enacted policies seeking to apply diplomacy in the service of global health aims. The Oslo Ministerial Declaration, advanced by the ministers of foreign affairs of Brazil, France, Indonesia, Norway, Senegal, South Africa, and Thailand in 2006, declares that "health as a foreign policy issue needs a stronger strategic focus on the international agenda" and that these countries have agreed "to make health a point of departure and a defining lens that each of our countries will use to examine key elements of foreign policy and development strategies" (95, p. 1373; 96). Supporting this effort, the Director General of the WHO writes that "we need to embed the use of the health lens in foreign policy while we have

this chance'' but warns that this relationship requires ''careful management for mutual benefit'' (97, p. 498). The United Kingdom and Switzerland have enacted national strategies attempting to establish ''policy coherence'' between their global health and foreign policies (3, p. 971). A number of middle-income countries, including Brazil (98), Thailand (99), and Indonesia (86), also highlight global health in their diplomacy. Finally, Kaufmann and Feldbaum (100) note how diplomacy can be an essential tool for resolving global health crises of political origins, such as the 2003–2004 Nigerian boycott of poliomyelitis vaccine.

### The instrumental use of health for foreign policy

Not all diplomacy on health seeks to achieve global health goals, and states are increasingly using health interventions to support ulterior foreign-policy objectives in efforts often termed ''health diplomacy.'' One prominent example is the hospital ship tours of the US Naval Ships *Mercy* and *Comfort*, in which these US military assets deliver health, disaster, and humanitarian assistance to underserved countries. These missions work to improve health but are also driven by training needs and the intent to ''win hearts and minds through the use of health interventions'' (101, p. 3). Broader US investments in global health are also justified by foreign-policy interests; as a former US Senator stated, ''You do not go to war with someone who has saved the life of your child'' (42, p. 219). The United States is not alone in using health interventions to serve foreign-policy objectives; the Cuban health diplomacy program (102) and Chinese health cooperation in Africa (103) are other relevant examples. Other related attempts that utilize health as diplomatic outreach have been termed vaccine (104), science (105, 106), and disaster (107, 108) diplomacy. Such efforts have not been without criticism. Ingram observes that such efforts may ultimately be ''self-defeating,'' as ''it is precisely the fact that health professionals are not associated with the policies of states that gives them wider credibility'' (109, p. 534).

In summary, diplomacy has been used to craft international agreements to improve global health, but state interests have been critical to either the success or obstruction of such agreements. The increasing use of health interventions by states in service of foreign-policy interests also confirms the strong role of such interests in diplomacy on global health, and will present the global health community with ethical and policy challenges.

### NATIONAL SECURITY AND HEALTH

While a number of countries have integrated human security (with its focus on the safety and protection of individuals rather than states) into their foreign policies (110, 111), issues of national security remain atop the foreign-policy hierarchy (112). National security is a ''contested concept'' (113, p. 254) and has been defined both narrowly as ''the study of the threat, use, and control of military force'' (114, p. 212) and more broadly as an action or event that ''threatens drastically to degrade the quality of

life for the inhabitants of a state, or. . . threatens significantly to narrow the range of policy choices available to the government'' (115, p. 133). Resistance to broadening the definition of national security to include public health or environmental issues has also been apparent. Deudney argues that ''if everything that causes a decline in human well-being is labeled a 'security' threat, the term loses any analytical usefulness and becomes a loose synonym of 'bad' '' (116, p. 448).

King writes that ''although often characterized as an humanitarian activity, modern public health as practiced in the United States and other Western industrialized nations has long been associated with the needs of national security and international commerce'' (117, p. 763). For example, the founding of the London School of Hygiene and Tropical Medicine by Sir Patrick Manson, medical advisor to the Colonial Office (118), was driven by the need to better understand tropical diseases to assure ''the health of European soldiers, traders and settlers in hostile climates'' (117, p. 765). Similarly, the US successes against malaria and yellow fever, which enabled the building of the Panama Canal, were driven by the desire to control this strategic and economically valuable passage (119, 120).

The close association between public health and national security was broken in the 20th century by decolonization, improved sanitation, and the introduction of vaccines and antibiotics, which together reduced the threat of disease to powerful countries and their interests (121), and by the specter of nuclear weapons, which came to dominate national security studies (114). However, by the 1990s, perceptions of increased vulnerability to infectious disease threats because of increased global interdependence brought infectious diseases back onto national security agendas. This was prominently expressed by the US Institute of Medicine: ''[I]n the context of infectious diseases, there is nowhere in the world from which we are remote and no one from whom we are disconnected'' (122, p. V).

### Acute infectious disease threats and bioterrorism

Acute outbreaks of infectious diseases and the threat of bioterrorism have dominated recent national security discussions of global health, suggesting that global health issues gain political priority when they threaten state interests (33, 123). The SARS and H1N1 influenza A epidemics, the threat of H5N1 influenza A, and, to a lesser extent, the spread of extensively drug-resistant tuberculosis have threatened the citizens and economic interests of powerful countries and have been accepted as national security threats (124). Similarly, increasing knowledge about the extent of existing biological weapons programs (125), the rise of non-state terrorist actors, and the global dissemination of advances in biology (126) have driven many wealthy states to address bioterrorism as a serious threat to national security. The benefits of designating a global health issue a threat to national security include high levels of both political attention and funding (34).

However, the benefits of linking global health to national security have not come without criticism or costs. McInnes and Lee argue that the national security agenda on health

has been narrowly framed and "dominated by the concerns of foreign and security policy, not of global public health" (33, p. 22), while Feldbaum et al. caution that the "global and humanitarian objectives of the health field do not fit readily into the state-centered perspective of national security" (127, p. 196). The costs of framing international cooperation on epidemic diseases in security terms are also becoming apparent. "Developing countries are increasingly suspicious of global health initiatives justified on the grounds of 'global health security' " (128, p. 372) because "the harvest of outbreak intelligence overseas is essentially geared to benefit wealthy nations" (87, p. 19). Controversy over sharing of H5N1 influenza A viral samples (86, 129) and within negotiations over the IHRs (87) are examples of developing countries' resistance to the concept of global health security.

The framing of the HIV/AIDS pandemic as a threat to national security, predominantly between 2000 and 2005, also provides insights into the costs and benefits of linking health issues to national security agendas. This linkage, which generated attention from the United Nations Security Council and the United Nations General Assembly, raised the political priority of HIV/AIDS, which contributed to efforts to establish the Global Fund to Fight AIDS, Tuberculosis and Malaria and increased the amount of development assistance for health on global AIDS, particularly in the United States (130, 131). However, much of the evidence used to frame the disease as a national security threat, including evidence on the prevalence of HIV among African militaries (132, 133) and its potential to cause instability in "next wave" states (134, p. 4; 135), has been shown to be inaccurate (136–140). Furthermore, linkage of the disease to national security agendas may have contributed to the possibly disproportionate focus on the pandemic in national aid budgets (141) and has been criticized (142) for its potential to push response to the disease "away from civil society toward state institutions such as the military and the intelligence community" (143, p. 122) or to push funding towards countries of strategic importance, rather than those most in need (127).

### Health in conflicts

Health interventions are being used in complex and contradictory ways in conflict situations. The public health community has sought to implement "health as a bridge to peace," claiming that health interventions in "post-conflict societies can be specifically designed in such a way as to simultaneously have a positive effect upon the health of the population and contribute to the creation of a stable and lasting peace" (144, p. 96). Other practitioners have noted that cease-fires arranged for vaccine delivery (145, 146) and cooperative health projects between previously conflicting parties can provide beneficial and neutral forums for conflict resolution (147–150). However, critics say such efforts have "never yielded a tangible peace benefit" (151, p. 222) and have been driven more by "ideology" than evidence of effectiveness (152, p. 1020).

Militaries and nonstate actors alike are using health interventions to serve their political aims in conflict situations. In Iraq and Afghanistan, medical and veterinary civil-assistance programs are run by the US military "for supporting pacification, gathering local intelligence, or rewarding locals for their cooperation" (153, p. 69). On the other side, Burkle reports that the Iraqi insurgents fighting the US military "made controlling hospitals a priority because by owning the health and social services, the control of the people soon followed" (154, p. 31). In these cases, health interventions are not neutral or designed as a bridge to peace but are used to gain the support of, or control over, local populations through the offering or denial of health services.

Tension exists between public health and national security in part because "the landscape of political insecurity is not fully congruent with the landscape of need" (109, p. 539). Prioritization of health issues as national security threats can generate political attention and funding but can also result in actions directed toward addressing national security interests that may or may not coincide with public health needs.

### DISCUSSION

Evidence on the linkages between global health, aid, trade, diplomacy, and national security indicates that state action on health is often motivated by foreign-policy interests rather than a desire to promote health equity or achieve humanitarian benefits. These ulterior interests can be economic (protecting trade), diplomatic (preventing epidemics), strategic (preventing bioterrorism), or (often) combinations of these interests and are salient even in this new era of rising development aid for health and groundbreaking global health treaties. Conversely, little evidence supports the notion that "foreign policy is now being substantially driven by health" (3, p. 971). However, global health has affected the practice of foreign policy on occasions when global health and foreign-policy interests align, as the cases of SARS and the IHRs demonstrate.

While foreign-policy interests are likely to continue to determine state engagement on global health issues, self-serving motives for state action on health do not have to lead to poor outcomes, as evidenced by US aid for Egypt's leading to improved child health or the provision of medical relief by the US Naval Ship *Comfort* and Cuban medical professionals after the earthquake in Haiti. Whether we achieve further successes in global health or our efforts are undermined by the pursuit of traditional foreign-policy interests will depend upon the ability of public health practitioners to understand foreign-policy perspectives on health and promote global health interests in the world of high politics.

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