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Cooperation and Tension in Regional and Global Infectious Disease Surveillance

Summary

- Globalization of infectious disease transmission has led to international and regional initiatives to improve surveillance and response. The World Health Organization's revised International Health Regulations provide a more robust legal framework for outbreak investigations. New regional networks are strengthening collaborative approaches to prevention of pandemics even in parts of the world where political tensions usually run high.
- To fulfill the promise of these new mechanisms, the United States should integrate capacity development for disease surveillance into its global health strategy, including providing greater investment in laboratories, training and technical assistance for low-income countries.
- Effective international cooperation has not extended to creating a system for equitable distribution of vaccines, resulting in vast disparities in availability of vaccines between richer and poorer countries. As a result, political tensions between wealthy and low-income countries have increased. Unless inequity is addressed, global health security will not advance.

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The emergence of novel infectious diseases, including HIV/AIDS, SARS, and influenza A (H5N1), has led states to appreciate that protection of their citizens from pathogens depends in part upon successful international cooperation on infectious disease surveillance and response. The World Health Organization's revisions to its International Health Regulations, adopted in 2005 and signed by 194 countries, along with the creation of regional networks, represent major advances in cooperation on global infectious disease surveillance and response. These governmental commitments to cooperation entail yielding elements of national sovereignty and demonstrate a willingness to endure potential economic hardship as a result of disclosure of domestic outbreak. They can be understood as enlightened self-interest: in order to protect their own populations, states have to collaborate to protect the populations of other states, even where political tensions otherwise run high. Yet national security interests are not always in harmony with global cooperation, particularly in the realm of sharing of vaccines.

On March 30, 2010, USIP's Peacebuilding and Health Working Group convened to discuss the ramifications of international cooperation on infectious disease surveillance for reducing or sowing tension, and implications for U.S. policy. USIP Jennings Randolph Senior Fellow William D. Long and Dr. Harley Feldbaum, director of the Global Health and Foreign Policy Initiative at the Johns Hopkins School of Advanced International Studies, shared findings of their research.

Leonard Rubenstein, coordinator of USIP's Peacebuilding and Health Working Group, moderated the discussion.

A Long History and Growing Needs

Recognition of a need to reduce cross-border spread of infectious disease dates to the mid-19th century. In 1851, concerns about threats of cholera, plague and yellow fever to states' populations led to adoption of the International Sanitation Convention, which was designed to coordinate responses to infectious diseases that could spread globally without interfering in international trade. Achieving a balance between disease prevention and commerce has been challenging from the start, as states' desire for protection against the spread of disease has been accompanied by resistance to actions that could hurt their economies. As a result, cooperation among states emerged slowly and enforcement mechanisms remained weak.

The reluctance to enact a strong regulatory scheme continued even as knowledge about infectious disease grew. In the post-World War II period, advances in vaccine development, decreases in military deployments to Africa and Asia as a result of decolonization, and Cold War politics led to a lack of interest from powerful states in infectious diseases. In 1969, the World Health Organization (WHO) adopted International Health Regulations on the control of infectious disease but the regulations required states to notify WHO only about outbreaks of cholera, plague and yellow fever. The regulations also provided for reporting outbreaks to WHO by affected states, not third parties.

As globalization accelerated in the 1990s, however, and new and virulent infectious agents emerged and spread rapidly, states sought a more effective system of international disease surveillance. The seminal event was the SARS outbreak in 2003. China attempted to restrict release of information about the disease for fear of the impact on its economy. But as the disease spread across borders, WHO, acting without formal authority, gathered reports from third parties and issued travel advisories to affected countries—actions that helped bring quickly halt the outbreak. The incident generated the political will to revise the outdated regulations. The revised regulations apply to all public health emergencies, encourage reporting of outbreaks by entities other than affected states, and grant WHO the authority to investigate and act to stop the spread of disease. The regulations also require states to develop, strengthen and maintain core public health capacities for surveillance and response by 2012 (which can be extended to 2014). Considerations of national sovereignty were not entirely eliminated: WHO lacks enforcement power or the ability to penalize states that do not cooperate. Nevertheless, the regulations are generally considered a major step forward in mutual protection from infectious disease, a triumph of global health governance over national sovereignty.¹

How to Make Regional Cooperation Work

The forces of globalization and technological advancement, combined with financial support from developed countries, have also created incentives for cooperation on infectious disease detection and response on a regional level. The most successful of these regional arrangements are the Mekong Basin Disease Surveillance Network (MBDS), consisting of Cambodia, China, Lao, Burma, Thailand and Vietnam, and the Middle East Consortium on Infectious Disease (MECIDS), a partnership between Israel, the Palestinian Authority and Jordan, with Egypt as an observer. Despite operating in regions where political tension has been endemic, and where technical capacity varies greatly among the participating states, these cooperative entities have succeeded in establishing systems for regional information sharing, disease response and long-term capacity-building. They have had some notable successes. As a reaction to the outbreak of swine flu in 2009, MECIDS members gathered within hours and began implementation of their plan for outbreak response.

The success of regional efforts can be attributed to shared interests in preventing a pandemic, a tight geographical mix of states that increases the likelihood that all participants benefit from cooperation, and the ability of health professionals to build trust by regular and productive contact. These elements are reinforced where congruence exists between regional approaches and international norms and organizations, where cooperation strengthens core capacities of members individually and collectively, where network members can play to their organizational strengths, where operating arrangements balance formal roles and responsibilities and flexibility in practice, and where sources of funding are secure. Democratic, inclusive and transparent procedures within networks also promote success. In Southeast Asia and the Middle East, the networks manage to overcome both political tensions and vastly differing technical capacity and resources. States participating in regional networks can gain international political benefits. Burma, for example, has insular political leadership, a very weak and underfunded health system even taking into account its available resources, and grossly inadequate responses to HIV/AIDS and malaria among its population. As an active participant in MECIDS, however, it gains stature and political benefits.

Regional arrangements warrant encouragement and support, and may have spillover impacts in generating a diplomatic basis for further cooperation, e.g., in regional disaster response. At the same time, larger impacts of the networks on political tensions may be minimal as a result of the emphasis on cooperation at the technical, professional level and among health ministries.

The Growing Importance of Vaccine Sharing

In a pandemic, national security concerns are most acute, and international cooperation for mutual protection is most needed. These two interests collide, however, in the distribution of vaccines, as wealthy states prioritize vaccine availability for their own populations rather than distributing vaccines equitably throughout the world. This problem is well illustrated in the case of Avian flu (H5N1), where Indonesia shared key samples with WHO, which passed them to the pharmaceutical industry to create vaccines. Indonesia got little in return, as the vaccines were too expensive for Indonesia to purchase. Indonesian health officials also discovered that studies on the virus samples they had provided had been published without their consent. As a result, Indonesia withdrew from the Global Influenza Surveillance Network and shut down a U.S. Navy laboratory operated since the 1970s that provided training and technical capacity to Indonesian scientists and assisted in local disease surveillance as well as meeting the needs of the U.S. military. The dispute remains unresolved and vaccine development has continued without the Indonesian samples.

The problem of access to vaccinations arose as well in the context of H1N1, when developed countries purchased most of the global capacity, leaving insufficient supplies for poorer states. The U.S. and other developed countries agreed to contribute 10 percent of their supplies to developing countries, but did so only after it was apparent that they did not need all the doses they purchased and the pandemic proved to be milder than predicted. Even then, the U.S. and other countries did not meet their obligations. As of December 2009, WHO reported that the pledges had not been met and that among less developed countries affected, only Afghanistan, Azerbaijan and Mongolia had sufficient vaccine supplies.

There are no simple solutions to the problem, as many states resist subordination of the protection of their populations for the aim of greater global vaccine availability. But without resolution, the problem of inequitable distribution of vaccines will remain a major global health concern, a source political tension, and a potential threat to the successful implementation of the revised International Health Regulations. If a severe epidemic strikes, the lack of resolution has the potential to lead to high and disproportionate deaths in low-income countries, and to undermine

the benefits of cooperative surveillance and response. WHO has initiated a process to seek resolution of the competing concerns.²

U.S. Policy Should Favor Capacity-Building and Vaccine Sharing with Developing Countries

The full implementation of the International Health Regulations, the expansion of regional cooperation, and the tensions over vaccine sharing are happening even as the Obama administration's Global Health Initiative is taking shape. The United States could take three key steps to address concerns arising in the current regime.

First, as part of its effort to strengthen health systems, the U.S. could show more explicit support for national and regional efforts at capacity development, especially in fulfilling the International Health Regulations' call for supporting capacity development. The president's Global Health Initiative—though referencing the goal to strengthen health systems—could be revised to address the need to enhance disease surveillance capacity globally. In connection with a more explicit policy, the U.S. should significantly increase its regular investment in capacity development for disease surveillance and response. Although the U.S. provided more than \$1.5 billion to help low-income countries address avian and pandemic influenza pandemics, the combined ongoing funding by the Centers for Disease Control and Prevention, the Department of Defense, and USAID for increased capacity for disease surveillance is only \$100 million a year.³

Second, technology transfer and building vaccine manufacturing capacity in developing countries needs to move forward.

Third, the United States and other developed countries should address the tensions between domestic and international needs openly, and develop a policy on vaccine affordability and sharing through international negotiation. Such an effort will only be possible by strengthening mechanisms within the State Department to address global health diplomacy.

Conclusions and Recommendations

Disease surveillance and response is in every state's national security interests. The International Health Regulations and regional initiatives show the potential for cross-border cooperation in disease surveillance, but will only succeed if existing tensions stemming from inequities in response capacity and vaccine availability between rich and poor countries are addressed. Less developed states argue, not without justification, that developed countries' approaches to global health security do little to address health threats to their populations. To further this goal:

- The president's Global Health Initiative should include support for effective disease surveillance as a priority, and appropriations should be increased to meet the needs for laboratory and surveillance capacity in low-income countries.
- The U.S. should collaborate internationally to develop mechanisms for equitable distribution of vaccines in the event of an outbreak.

Endnotes

1. Fidler DP (2004) SARS: governance and the globalization of disease. New York: Palgrave Macmillan.
2. Report of the Secretariat, Pandemic influenza preparedness: sharing of influenza viruses and access to vaccines and other benefits; Outcome of the process to finalize remaining elements

ABOUT THIS BRIEF

Cooperation on regional and global infectious disease response is increasing as a result of strengthened International Health Regulations and regional arrangements, even in areas of significant political tensions. At the same time, the enhanced regime has highlighted the failure of global health policy to address inequities in availability of vaccines, which in turn may undermine both international collaboration and global health security. Leonard S. Rubenstein, the author, is coordinator of USIP's Peacebuilding and Health Working Group.

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3. United States General Accountability Office, Global Health: U.S. Agencies Support Programs to Build Overseas Capacity for Infectious Disease Surveillance, Statement by David Gootnik, Director International Affairs and Trade, October 4, 2007. Available at, <http://www.gao.gov/new.items/d08138t.pdf>; Kaiser Family Foundation, U.S. Global Health Policy, The U.S. Government's Global Health Policy Architecture: Structure Programs, and Funding, April 2009. Available at <http://www.kff.org/globalhealth/7881.cfm>; Centers for Disease Control, Division of Emerging Infections and Surveillance Services (DEISS) home page, <http://www.cdc.gov/ncpdcid/deiss/index.html>.



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