

PREPAREDNESS RATHER THAN RESPONSE

A STRATEGY TO PREVENT THE NEXT EBOLA CRISIS

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Key Points

- The 2013 West African Ebola crisis exposed dual weaknesses: the inability of the international community to rapidly mobilize an effective response and a lack of adequate domestic health care systems for epidemic preparedness response. While a number of proposals put forward have addressed gaps in the international response, none have yet addressed the remaining issue of building adequate domestic health systems.
- Although the World Health Organization's (WHO's) 2005 International Health Regulations (IHR) require that all member countries develop and implement a core set of health system capacities, funding constraints have prevented many low-income countries from meeting these requirements.
- The World Bank, in collaboration with the WHO, should develop a Pandemic Prevention Program (P3) to assist low-income countries in building strong and robust health systems.
- The development of a P3 program would assist low-income countries in meeting their international obligations, while ensuring sustainable national ownership in order to prevent the next infectious disease epidemic.

Many of us have acknowledged that the international community was slow to react to Ebola. Let's show that we have learned this lesson by supporting an effective and sustainable recovery that also prepares these countries — and the rest of the world — for the next pandemic.

— Jim Yong Kim,
President of the World Bank Group (World Bank 2015a)

Introduction

Since the identification of the Ebola virus in 1976, no previous Ebola outbreak was as severe or persistent as the epidemic in West Africa that began in 2013. As of May 3, 2015, the epidemic led to the death of 10,980 people, 26,536 infections and an estimated US\$2.2 billion in expected economic losses for the three most affected countries: Liberia, Sierra Leone and Guinea (US Centre for Disease Control [CDC] n.d.; World Bank 2015b). The epidemic has demonstrated weaknesses in preparation and response to international health crises. A lack of domestic health system capacity in the low-income countries most severely affected by Ebola led to the failure to contain the initial outbreak, allowing it to increase in severity and necessitating an international emergency response. Ebola reinforced that domestic health systems in low-income countries require strengthening in order to prepare for future infectious disease outbreaks. This brief proposes the establishment of a P3 program, administered by the World Bank in collaboration with the WHO, to improve domestic health system capacity.



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Background

The weaknesses exposed by the Ebola crisis take two primary forms: the inability to rapidly mobilize a response at the international level and a lack of adequate capacity at the domestic level for preparedness and response. Had adequate domestic health systems been in place prior to the epidemic, a large-scale international response may not have been required.

First, the Ebola epidemic exposed limitations within the international health system in responding to health crises. The international response to Ebola was slow, fragmented and lacked leadership. While the first case of Ebola occurred in December 2013, it was not until August 8, 2014 that the WHO declared the epidemic a public health emergency of international concern (Editorial 2014b). By this time, 1,771 suspected and confirmed cases were reported, along with 961 deaths (WHO 2014). The international response did not gain traction until the fall of 2014, following a declaration by the United Nations Security Council that the epidemic was a threat to international security and peace, the creation of a UN Mission for Ebola Emergency Response and the September 16 commitment of US President Barack Obama to deploy a military contingent to West Africa (Editorial 2014a; 2014b). The limited response prior to September 16 contributed to the epidemic becoming more severe. By this date — less than six weeks after the WHO's declaration — the number of total cases almost tripled to 4,963 infections and 2,453 deaths (WHO n.d.).

While, ultimately, the initiatives positively contributed to ongoing efforts to contain Ebola, the international community has been criticized for allowing the epidemic to spiral out of control. Indeed, in September 2014, World Bank President Jim Yong Kim declared that unnecessary deaths were occurring from a “disastrously inadequate response” (quoted in Hussain 2014).

Second, Ebola has also demonstrated weaknesses in domestic health systems that prevented adequate preparation and timely response to the outbreak. Had adequate domestic health systems been in place prior to Ebola, a large-scale international response may not have been required. Traditional interventions that have halted outbreaks in the past — including surveillance and contact tracing — may have been successful. However, adequate health systems were not in place in Liberia, Sierra Leone or Guinea, and these countries lacked the capabilities to effectively undertake these interventions in response to the outbreak. The health systems lacked properly equipped hospitals, basic equipment such as protective gear and well-trained staff. Liberia had only 51 doctors to care for a population of more than 4.3 million prior to Ebola (Boozary, Farmer and Jha 2014). The epidemic exploited this lack of capacity, demonstrating that in order to successfully contain future outbreaks, adequate health systems need to be in place.

A number of proposals have been made to address the weaknesses highlighted by Ebola, including one by the World Bank for a Pandemic Emergency Facility (PEF). This facility is intended to immediately mobilize resources for emergency response to future pandemics. However, as currently envisioned, the PEF prioritizes response over preparedness, with the proposal stating it would not cover pandemic preparedness (World Bank n.d.). While the PEF offers a solution to weaknesses in the international system, it does not address the issue of weak domestic health systems, thereby leaving the problem of domestic preparedness for emerging and re-emerging infectious disease (ERID) epidemics unaddressed.

The Importance of the World Bank Group: The Role of the IDA

As part of the World Bank's larger focus on reducing poverty, the International Development Association (IDA) undertakes programs that boost economic growth, reduce inequalities and improve people's living conditions in the 77 lowest-income countries in the world. Partnering with the WHO to fund the capacity of national health systems for better ERID preparedness is an ideal fit with the mandate of the IDA.

Until adequate national capacities for containing ERID outbreaks are in place, the lowest-income countries are vulnerable to economic collapse, with citizens living in poverty disproportionately affected. Of the household heads working in Liberia at the start of the Ebola crisis, 48 percent became unemployed during the crisis. Job losses were concentrated in the working poor employed in agriculture and as non-agricultural wage labourers (Himelein 2015, 3-4). The approximate US\$2.2 billion in economic losses expected in the three most seriously Ebola-affected countries were not prompted by the immediate costs of caregiving, or the infection and morbidity rates associated with the Ebola epidemic (World Bank 2015a). Rather, fear of the disease and of inadequate health system capacity to provide care in case of an infection spread faster than the virus itself, leading to economic paralysis. The duration of the paralysis devastated long-term household welfare as dangerous economic coping strategies were employed, including the selling or consumption of productive assets, the depletion of savings and the unsustainable adoption of personal debt (Himelein 2015, 3-4).

Addressing the national health system capacity gap will require significant financial resources. Providing these resources to low-income countries is one of the primary missions of the IDA. While other actors — such as private foundations and foreign development agencies — have either similar missions or resources, the IDA's governance structure, which provides political representation to a global constituency, grants it superior

legitimacy. This is reflected in the IDA's growing integration into the global health development architecture.

The IDA's History in Health

The operational history of IDA's engagement with health system capacity development demonstrates a commitment to building national health care systems. The 2007 World Bank Strategy for Health, Nutrition and Populations underscores the comparative advantage of the World Bank in health system development. This strategy emphasizes development programs that focus on the primary care essentials to health systems: staff, community-oriented infrastructure, training and equipment (World Bank 2007, 151-53). This is in contrast to the dominant unsustainable donor strategies of vertical, disease-specific programs that can lead to fragmented health systems. From 2006 to 2012, the IDA invested US\$7.2 billion in health and nutrition programs, with health system strengthening accounting for more than 30 percent of this spending (World Bank 2013a). Of note is the IDA's ongoing financing of a multi-sector health program in Senegal, since 2002, to expand community level access to health services for underserved populations through supply-side interventions, demand-side interventions and capacity building for government health authorities (World Bank 2013b). The IDA's existing commitments to health system capacity building grant it a significant implementing advantage compared to other international actors.

The opportunity for harnessing the IDA's interest in health system capacity development is growing as senior World Bank leadership — including the president, the vice president for global practices, the vice president for Africa and the senior director for health, nutrition and population global practice — increasingly recognize that one of the most crucial lessons of the Ebola crisis is the importance of having well-funded, well-developed national health systems to respond to early cases, and that this capacity influenced Nigeria's and Senegal's success in containing the spread of the epidemic and becoming Ebola free.

How Does Better Preparedness Contribute to Better Containment?

Strengthening domestic health capacity of low- to middle-income states, through a P3 directed jointly by the IDA and the WHO, will reinforce the ability of states to respond to infectious disease outbreaks. Focusing on preparedness as a form of prevention will fortify the material, human, financial and professional capabilities that were deficient during the Ebola epidemic. The crisis highlighted that domestic public health systems were underdeveloped, underfunded, understaffed and ultimately unable to adequately respond to the initial outbreak.

Case Study: Nigeria's Response to Ebola

Nigeria's health capacities were relatively more capable than the other West African states impacted by the Ebola crisis. Nigeria contained Ebola comparatively quickly through contact tracing, surveillance and readily available medical services. Accordingly, the country can be considered an example of the significance of having a robust health system in place prior to an outbreak. Before the Ebola crisis, Nigeria had a higher doctor-to-patient and hospital-to-patient ratio than most African countries (*The Economist* 2014). In 2012, an emergency command centre was established by the Bill and Melinda Gates Foundation for managing Nigeria's endemic polio crisis, and the CDC had teams in place training approximately 100 Nigerian doctors in epidemiology (*ibid.*). The country was also a member of the African Field Epidemiology Network (AFENET), which provides field and laboratory training, mentorship, management and research experience in epidemiology (Nachega et al. 2012, 1833). While Nigeria had access to these resources, other affected countries did not; Sierra Leone, also a member, has yet to receive any training or access to in-country programs (AFENET 2015).

As a result, Nigeria was comparatively well prepared when Nigerian Diplomat Patrick Sawyer, who had contracted the virus in Liberia, arrived in Lagos, Nigeria on July 20, 2014 (*The Economist* 2014). Once identified, the country was able to redirect the resources outlined above toward containing Ebola, leading to a swift and adequate response. While luck was undeniably a significant determining factor in supporting Nigeria's quick and effective response — Sawyer happened to be a diplomat without barriers to health access — it was the relative strength of the domestic health system that ultimately led to the successful containment of the outbreak. Therefore, Nigeria is an example of the importance of having strong and well-prepared domestic health systems in place prior to an outbreak.

The Ebola epidemic has further affected the ability of these states to respond to the growing crisis, as the already limited numbers of health professionals and resources have been further reduced as a result of the severity of the epidemic.

Additionally, the lack of epidemiological training for medical staff, scarcity of basic and advanced biomedical technologies, congested hospitals and clinical facilities, and a lack of proper communication systems also contributed to the inadequate and slow domestic response. Together, these factors indicate that the three most affected countries were not sufficiently prepared to respond to an epidemic. Accordingly, the domestic response of these countries to Ebola was inadequate and unable to contain the initial outbreak. The development of a P3 by the IDA and WHO will better prepare low-income states, such as those most affected by Ebola, to adequately respond to future outbreaks.

Why Are Adequate Health System Capacities Not Already in Place?

The development of domestic health systems capacity is required under the IHR 2005. The IHR 2005, administered by the WHO, is the primary legal framework for the management of infectious disease events and public health risks and emergencies. Its purpose is to “prevent, protect against, control and provide a public health response to the international spread of disease in ways that are commensurate with and restricted to public health risks, and which avoid unnecessary interference with international traffic and trade” (WHO 2008). The IHR 2005 establishes practices and procedures for

member states regarding the notification of global health risks to the WHO, including the establishment of National Focal Points for communication, meeting core capacity requirements, and informing and responding to the WHO about potential international health crises.

The IHR 2005 requires that member states develop and maintain core capacities at local, intermediate and national levels. These requirements include the ability to detect and report public health threats, and the development of certain public health capacities. These requirements include the ability to: provide support through specialized staff, laboratory analysis and logistical assistance, including equipment and supplies; rapidly determine control measures required to prevent spread; establish, operate and maintain a national public health emergency response plan, including capabilities to create and deploy multidisciplinary and multi-sectoral response teams; and maintain all requirements on a 24-hour basis (*ibid.*).

All member countries were required to develop and implement the minimum capacity requirements by June 2012. However, many countries were unable to meet this deadline and requested a two-year extension (Ijaz et al. 2012). Currently, the deadline has been extended to 2016, although it remains uncertain if all countries will be able to meet their requirements by this time. According to a 2011 independent review commissioned for the WHO, of 128 countries, only 58 percent had developed national plans to meet the capacity requirements, and as few as 10 percent had fully met the requirements, resulting in “fundamental gaps” (WHO Review Committee 2011). The countries most affected by the Ebola virus did not have these

capacities in place. Accordingly, the Ebola crisis has reaffirmed that for many states — particularly low-income countries — meeting these requirements remains difficult due to a lack of financial and technical resources.

Although the WHO is obligated to assist state parties in meeting their requirements, there are currently no financing mechanisms in place to achieve this, leaving states to be primarily responsible for funding these initiatives. Additionally, the regulations do not provide incentives or sanctions for meeting requirements, countries are left to self-report and no proper accountability mechanisms exist (Editorial 2014a; 2014b). Whereas many high-income countries have the capacity to implement the IHR 2005 without support mechanisms, for low- and middle-income countries, meeting these requirements without assistance can be extremely difficult — as Ebola has aptly demonstrated. As a result, countries such as Sierra Leone, Guinea and Liberia are likely to continue to lack adequate domestic health capacity to prepare for future epidemics unless financing mechanisms and technical guidance are provided through initiatives such as the P3.

Policy Recommendations

The World Bank Group, in collaboration with the WHO, should develop a P3 program. The P3 would provide funding from the IDA and technical expertise from the WHO to assist low-income countries in building strong and robust health systems that fulfill the IHR 2005 requirements. Strong domestic health systems in low-income countries will mostly preclude the need for large-scale international responses if health systems are properly prepared to mount effective and timely responses to future infectious disease outbreaks.

The P3 should integrate accountability and oversight mechanisms into the broader program framework in order to ensure that programs are meeting their goals, IHR requirements are met and to better inform future program design. Current limitations to the IHR 2005 include a lack of accountability and oversight mechanisms. As a result, the P3 should integrate these mechanisms into the broader program framework. The mechanisms should be developed jointly by the World Bank and the WHO in order to share knowledge and reduce duplication. The organizations should employ their respective comparative advantages in data gathering, monitoring and evaluation, and public health expertise in order to improve domestic monitoring data and information. Using this information, annual reviews of program performance in partner countries should be undertaken and be made publicly available.

The P3 should include support for the development of nationally driven training programs to provide mentorship to medical staff — including, but not limited to, doctors, nurses and community health providers — in order to strengthen community health networks, the domestic health workforce and health staff retention. Community health networks add resiliency and robustness to understaffed health systems in times of crises. For the national training programs to be sustainable, IDA funding and WHO technical expertise must be combined with the relevant national ministries to account for country-specific social and cultural determinants of health. Incentives should be included in the training programs to improve workforce retention and promote work in understaffed rural areas.

Conclusion

The Ebola crisis has demonstrated the need for a P3 to strengthen health systems in low-income states. The World Bank, in collaboration with the WHO, is the ideal partnership to address this need. Ensuring the preparedness of domestic health systems will save lives, prevent short- and long-term socio-economic costs associated with epidemics and limit the need for emergency international responses.

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Acronyms

AFENET	African Field Epidemiology Network
CDC	US Centre for Disease Control
IHR	International Health Regulations
P3	Pandemic Prevention Program
WHO	World Health Organization

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