

US Public Health Preparedness for Zika and Other Threats Remains Vulnerable

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ABSTRACT

The unanticipated global outbreak of Zika virus infection is the most current but certainly not the last emerging infectious disease challenge to confront the US public health system. Despite a number of such threats in recent years, significant gaps remain in core areas of public health system readiness. Stable, sustained investments are required to establish a solid foundation for achieving necessary national public health emergency preparedness and response capacity. (*Disaster Med Public Health Preparedness*. 2016;10:298-299)

Key Words: Zika, emergency preparedness, public health, foundational capacities, emerging infection

The eruption of Zika virus in the Americas is yet another illustration that deadly pathogens respect no borders and underscores vulnerabilities in our public health system resulting from a lack of strategic investment that hamper our ability to optimally prepare for and respond to both infectious disease outbreaks and other health threats. In addition to the recent unanticipated emergence of Zika, the 2009 influenza A (H1N1) pandemic, Middle East respiratory syndrome coronavirus (MERS), and the unprecedented 2014 Ebola outbreak have highlighted challenges faced by our public health system's preparedness and response capacity. On top of these emerging threats, established infectious diseases including HIV/AIDS, sexually transmitted diseases, hepatitis C virus, tuberculosis, seasonal influenza, foodborne illness outbreaks, and the spread of multi-drug resistant pathogens impact millions of Americans each year, leading to preventable illnesses, hospitalizations, deaths and staggering health care and societal costs.

If we are to be adequately prepared to respond to the current Zika outbreak as well as other emerging infections and the many already well-entrenched diseases, we need to resuscitate our weakening public health system. This will require dynamic and effective leadership at the national, state and local levels as well as robust, long-term and stable investments of resources. Strong local public health systems are the basis of community and national health security both during and between health emergencies. As was evident during the 2009 influenza A (H1N1) pandemic, the recent US Ebola response, and potentially now, the Zika outbreak, it is difficult, if not impossible, to develop needed systems, resources and response capacity in the midst of a crisis. That is a major reason why it is important to establish and maintain a solid foundation consisting of the core functions necessary for a strong public health emergency response before a crisis occurs.

These include:

- Robust surveillance (including for zoonotic and vector borne disease agents and certain non-infectious conditions), epidemiology and disease investigation capacity at the local level to promptly detect, investigate, report and carry out prevention and response measures on the front line;
- Strong collaborative systems such as regional health care coalitions linking local public health, first responders, and health care facilities and providers to provide an integrated and coordinated "cross-sector" health emergency response and ensure optimal use of limited health care system resources;
- Communications expertise and systems that ensure functional, two-way information exchange with the health care providers and facilities, ongoing, timely and culturally appropriate risk communication and disease prevention messaging to the public, and situational awareness for responders and governmental officials;
- Expertise in the use of incident management as a framework for effective health emergency response;
- Public health and clinical health care system surge capacity to meet response demands through the use of skilled, trained volunteers, resource sharing, and deployment of local health and medical responders;
- Proactive engagement of both governmental and nongovernmental stakeholders in health emergency preparedness and response planning; and,
- Ensure community resilience and effective community engagement in formulating and implementing health emergency response strategies.

To meet the challenge of major outbreaks and other health emergency responses as well as the many

ongoing health problems our country is facing, a robust “foundational public health capacity” is required in communities across the country. Such a foundation would address the functions above, as well as the need for trained public health professionals in public health nursing, environmental health, zoonotic diseases, toxicology, policy development, data management and informatics.

Unfortunately, the current bust and boom method of funding public health undermines our ability to achieve the critical foundational public health and health emergency response capacity our country deserves. Health emergency response at the state and local level is primarily dependent on unstable federal and discretionary local allocations that wax in response to the threat du jour and wane as each immediate threat recedes. Once an expert workforce has been diminished, it cannot be rebuilt in short order, especially during an emergency. Relationships, skills and preparedness and response capacity that atrophy during funding troughs can take years to rebuild. A solid foundation for the US public health system requires investments at the federal, state and local levels. At the federal level, the Centers for Disease Control and Prevention (CDC) leads large-scale outbreak responses by providing overall strategy and guidance, technical information and expertise, and laboratory capacity to assist state and local public health partners. But it is the nation’s many state and local public health departments that then must work on the front lines in their communities with hospitals, health care providers, schools, businesses, local emergency response and governmental agencies and officials, and the public, to prepare for and respond to health emergencies, and, afterwards, facilitate recovery.

As a nation, the proportion of total health spending allocated for public health has been falling steadily. A recent analysis found that public health’s share of total US health spending is expected to be 25% below its 2002 level by 2023.¹ Most state and local health departments rely heavily on CDC funding for core public health work, and the National Association of County and City Health Officials (NACCHO) reports that more than half of local health departments rely solely on federal funding for emergency preparedness activities,² yet CDC preparedness grants to states have been cut by 40% since 2006.^{3,4} NACCHO also estimates that as a result of shrinking budgets, 51,000 jobs have been lost at local and state health departments alone

since 2008.⁵ Annual funding for all of CDC’s preparedness activities is about \$1 billion lower in FY2015 than in FY2002, and the National Hospital Preparedness Program that supports local health care system preparedness and response was cut by \$100 million in 2014 alone.³

Everyone knows that individuals and families can’t afford to confront serious illnesses without adequate personal health insurance. It’s time to also recognize that providing communities with “population level health insurance” by investing in public health is equally important. Long-term, stable support is needed to create and maintain the type of public health system needed to counter inevitable future emerging infectious disease outbreaks, other health emergencies, and the many established, ongoing health threats impacting our communities every day.

About the Author

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