Infectious disease preparedness, response tool draws on lessons learned from U.S. Ebola cases

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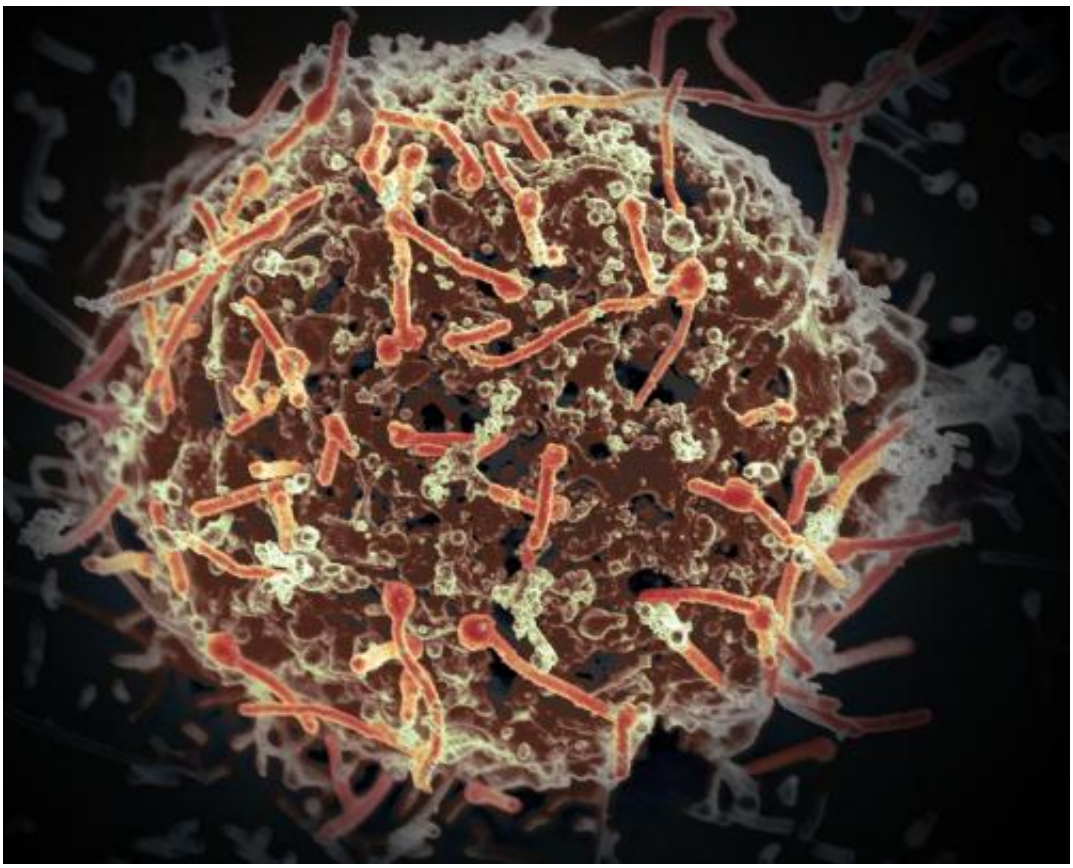

The Ebola virus, isolated in November 2014 from patient blood samples obtained in Mali. The virus was isolated on Vero cells in a BSL-4 suite at Rocky Mountain Laboratories. Credit: NIAID

Researchers from the Johns Hopkins Center for Health Security and the U.S. Centers for Disease Control and Prevention have developed a checklist that outlines action steps for medical and public health officials to assess and strengthen the resilience of their community's health sector to high-consequence infectious disease, or HCID, events.

The checklist offers comprehensive guidance on recommended improvements to the interconnected preparedness and response capabilities of the public, private, and community organizations that comprise local health sectors.

"One of the key findings of our research is the diversity of people who end up being involved in a response and how interrelated they are, including many who never expected to be involved," said Eric Toner, senior associate at the center and the project's principal investigator. "Therefore, many more stakeholders must participate in planning, and they are eager for firsthand information from others who have experienced an HCID event."

The team's full report, "Health Sector Resilience Checklist for High-Consequence Infectious Diseases—Informed by the Domestic US Ebola Response," analyzes the firsthand experience of handling confirmed cases of Ebola virus disease in four U.S. cities—Atlanta; Dallas; New York; and Omaha, Nebraska. It identifies challenges and solutions to both common and unique problems faced by these cities, in particular highlighting unanticipated issues.

The checklist is derived from these salient lessons learned and broadened to cover similar high-consequence infectious disease events, which the authors define as:

- Novel in the affected community
- Moderately to highly contagious

- Not easily controllable by medical countermeasures or non-pharmaceutical interventions
- Moderately to highly lethal
- A cause of significant public concern.

Smallpox, SARS, MERS, and H5N1 influenza A are examples of other HCIDs.

Health sector resilience requires the collective commitment of individuals and organizations responsible for HCID preparedness and response at the state and local level. The checklist makes recommendations of value to all of these stakeholders, including health care systems and facilities, public health departments, emergency medical services, public and private diagnostic laboratories, elected officials, law enforcement, academia, and community-based organizations that represent affected populations.

"Our goal is to provide clear direction for leaders so they can take a proactive approach to building and maintaining health sector resilience in advance of an HCID event in their community," Toner said.

Overarching resilience actions are grouped in the following checklist categories:

- Planning and preparedness
- Leadership
- Creative flexibility/adaptability
- Command structure
- Public trust
- Managing uncertainty
- Crisis and emergency risk communication

The report also includes specific checklists for public health agencies,

health care organizations, emergency medical services, and elected officials. It is a companion project to a previously published health sector resilience checklist for natural disasters based on New York's experience with Hurricane Sandy.

More information: Health Sector Resilience Checklist for HighConsequence Infectious Diseases—Informed by the Domestic US Ebola Response: www.centerforhealthsecurity.or … eport_05.23.2017.pdf

Provided by Johns Hopkins University

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