

Revisiting the anthrax attacks

January 22 2009

When anthrax was sent through the U.S. Postal Service in 2001, an overwhelming majority of postal workers elected not to be inoculated with the available vaccine because of confusion and distrust, according to a University of Pittsburgh Graduate School of Public Health study. Although the FBI officially closed the case on the attacks this year, lingering suspicion and uncertainty remain, say study authors, which could influence the public's reactions to future emergencies.

According to the report, reactions from postal workers were shaped partially by fears of being experimental "guinea pigs," disagreements among public health agencies about whether the vaccine should be recommended, physician advice, low perceived risk of infection and conflicting reports from national media organizations.

The study was based on interviews and focus groups conducted with 65 postal workers in Trenton, N.J., New York and Washington, and published in the December 2008 issue of *Biosecurity and Bioterrorism: Biodefense Strategy, Practice, and Science*.

"The reaction of postal workers demonstrates the essential need to build trust and educate the public before the uncertainty, confusion and time pressures of a bioterrorism or pandemic emergency create major barriers for clear communication," said study author, Sandra Quinn, Ph.D., associate dean for Student Affairs and Education and associate professor at the University of Pittsburgh's Graduate School of Public Health. These concerns may be particularly relevant given that, in October 2008, the Department of Health and Human Services declared

anthrax as a continuing bioterrorism threat through the end of 2015, she said.

During the 2001 anthrax attacks, which resulted in five deaths, 10,000 postal workers and others who were suspected or confirmed to have been exposed received a two-month dose of antibiotics. The Centers for Disease Control and Prevention (CDC) then recommended people who failed to complete the regimen or who were at high risk for exposure take antibiotics for an additional 40 days with or without a supplemental anthrax vaccine. Only 11.5 percent of postal workers who took the additional 40-day dose of antibiotics agreed to take the anthrax vaccine as a precautionary measure.

"Scientific knowledge about the effectiveness of the vaccine after exposure to anthrax was uncertain at the time, making it an almost impossible task to communicate precise and proper health information to postal workers and other affected groups, including Senate staff," said Dr. Quinn. "Given the evolving nature of the crisis, postal workers were unsure whose advice they should trust and as a result, many decided to do without the recommended vaccination," she said.

In 2004, with the passage of legislation to establish Project Bioshield, the federal government created a mechanism for declaring public health emergencies. This authority also allows the Food and Drug Administration to authorize the use of experimental or "off label" drugs to address bioterrorism or public health emergencies. According to Dr. Quinn, communication about the use of these counter measures will present significant challenges for public health authorities in the future.

To address these challenges, she suggests public health experts openly acknowledge disagreements between health agencies, develop partnerships with trusted community agencies and work with media partners to address inaccuracies, misconceptions or other issues that may

arise in news reports.

"We need to engage and educate the public before an emergency occurs to prevent unnecessary risk, disease and even death. Only by doing this can individuals make informed decisions about accepting or rejecting counter measures," she said.

Source: University of Pittsburgh Schools of the Health Sciences

Citation: Revisiting the anthrax attacks (2009, January 22) retrieved 11 May 2024 from <https://phys.org/news/2009-01-revisiting-anthrax.html>

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