

# Doctors in Training Don't Recognize Botulism or Smallpox

By Steven Reinberg

MONDAY, Sept. 26 (HealthDay News) -- Most American doctors in training aren't prepared to diagnose and treat diseases likely to be unleashed by bioterrorists, including anthrax, botulism, plague or smallpox, a new study finds.

In fact, more than half of 631 residents surveyed were unable to correctly diagnose diseases most likely to be wielded by bioterrorists.

"We wanted to see if physicians could identify the clues that were provided, so that they could make the proper diagnosis," said lead researcher Dr. Stephen Sisson, an assistant professor of medicine at Johns Hopkins University.

"For example, we found that physicians really don't do a good job being able to distinguish the clinical markers of the rash for chickenpox and smallpox," Sisson said. "They also had problems with distinguishing a patient's presenting with an attack of botulism from other illnesses."

They did a better job identifying anthrax, Sisson said. "We think that's because the clinical marker, specifically the widening of the chest, is something we have all been attuned to since the anthrax attack of 2001."

The survey findings appear in the Sept. 26 issue of the *Archives of Internal Medicine*.

In their study, Sisson and his colleagues tested 631 physicians at 30 internal medicine residency programs in 16 states and Washington, D.C., between July 1, 2003, and June 10, 2004. The doctors were asked to recognize and treat bioterrorism-related diseases before and after taking an online course in bioterrorism disease.

Before the online review, 50.7 percent of the doctors correctly identified smallpox, 70.5 percent identified anthrax, 49.6 percent identified botulism, and 16.3 percent correctly identified plague. The overall average was 46.8 percent for correctly identifying all the diseases.

After the online review, the correct diagnosis averaged 79 percent, the researchers reported.

In addition, before the review, 14.6 percent of the doctors treated smallpox correctly, 17 percent treated anthrax correctly, 60.2 percent treated botulism correctly, and 9.7 percent treated plague correctly. The overall average for correctly treating a condition was 25.4 percent.

After the review, correct management averaged 79.1 percent, the researchers said.

"Physicians should familiarize themselves with certain clinical clues," Sisson said. "We are going to be part of the early warning system should there be a bioterrorism attack. In the event of an attack, isolation and quarantine are going to be the only chance we have."

One expert doesn't think all doctors need to be able to diagnose and treat specific diseases of bioterrorism, but they must know when to alert public health officials.

"I am not surprised clinicians have problems distinguishing one condition from another," said Dr. Luciana Borio, a senior fellow at the University of Pittsburgh's Center for Biosecurity. "It's very hard, especially if you don't see it every day."

Public health agencies are available to diagnose and make recommendations about these conditions, Borio said. "There is no reason on earth that physicians need to know the management of plague," she added.

What is important, according to Borio, is not the ability to recognize a specific condition, but to recognize that it is abnormal and to report it to public health officials. "The biggest enemy is complacency," she said. "But you see that in regular medicine."

But another expert thinks it is important for all doctors to diagnose and treat seldom seen diseases.

"Almost by definition, agents useful in bioterrorism are exotic," said Dr. David L. Katz, an associate professor of public health at Yale University School of Medicine. "That means they are seldom seen by physicians in practice. Whereas familiarity breeds competency, we are often much less adept at responding to the unfamiliar health threat."

"Preparing health-care providers to deal competently with threats they will see rarely, and perhaps never, is challenging," Katz said. "But it is a challenge that must be met in a post 9/11 world."

### **More information**

The U.S. Centers for Disease Control and Prevention can tell you more about [bioterrorism](#).