FDA Unit Mobilizes for Emergency Response

To track down the source of the *Salmonella* Bareilly outbreak, FDA assembled more than 30 experts from FDA offices across the agency in the Emergency Operations Center at headquarters in Silver Spring, Md.

In early March 2012, federal officials learned of infections from *Salmonella* Bareilly, bacteria that can cause diarrhea, fever and abdominal cramps if eaten in contaminated food. Left untreated, the illness can lead to death in high-risk populations, such as infants, older adults, and pregnant women.

Since then, about 250 people have been infected in 24 states and the District of Columbia, according to the Centers for Disease Control and Prevention (CDC).

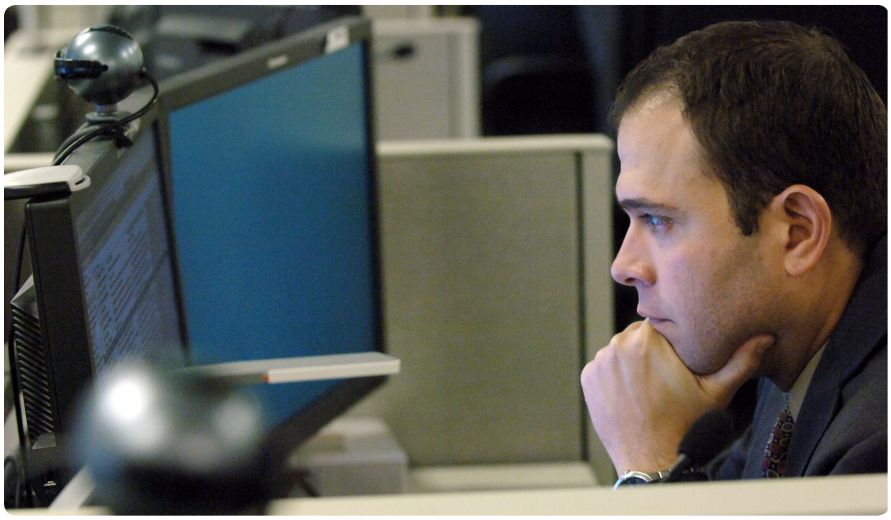
The source of this outbreak is no longer a mystery, thanks in part to the efforts of the Food and Drug Administration's (FDA) special urgent-response unit—the Incident Management Group (IMG). "The IMG serves as the agency's focal point for coordinating emergency response activities," says Ellen Morrison, director of the agency's Office of Crisis Management.

The IMG operates out of the high-tech Emergency Operations Center (EOC) at FDA headquarters in Silver Spring, Maryland, and shifts into high gear when an emergency arises. The group's composition varies according to the type of emergency, which could be an outbreak or a different kind of crisis.

"For the *Salmonella* outbreak, we assembled more than 30 agency experts in the EOC from offices across the agency to investigate the outbreak and track down its source," says Mark Russo, director of FDA's Office of Emergency Operations, a component of the crisis-management office directed by Morrison.

Prime Suspect

In the end, the prime suspect was a frozen raw yellowfin tuna product, called Nakaochi Scrape, imported from India. This tuna is used to make sushi, and many of the people who became ill reported eating sushi, with spicy tuna a common ingredient.



The road to that conclusion was long and winding.

And the journey actually started with FDA's Coordinated Outbreak Response and Evaluation Network (CORE). This branch of FDA—on the frontlines of response to outbreaks of foodborne illness—evaluated and monitored the initial reports.

When the size, scope, severity and complexity of an outbreak require more staff and greater coordination, CORE may elevate the response to the IMG level and work from the EOC with colleagues from other parts of the agency and CDC.

Beginning on April 2, 2012, and for the next three weeks, Russo says, FDA experts on such subjects as outbreak investigation coordination, epidemiology, public and environmental health, food safety, seafood, imported products, legal issues, and cartography scrutinized thousands of pages of invoices, shipping records and bills of lading.

"There were probably hundreds of dedicated people from the FDA and other federal, state, and local agencies trying to pinpoint the outbreak's cause," Russo says. CDC worked with state and local public health officials to coordinate the epidemiologic aspects of the investigation, analyzing data that includes information on the cases, their distribution, and risk factors.

Meanwhile, local and state health agencies continued to interview people who had become ill. "But you'd be surprised," Morrison says, "Not everyone has accurate recall when it comes to exactly what they ate on a certain date and where."

By early April, CDC had identified six clusters of cases around restaurants or grocery stores in five states. Interviews suggested that the common food consumed and likely source of infection was sushi made with raw tuna—and specifically, spicy tuna.

This was just the beginning. "We needed to keep narrowing the focus down," Morrison explains. "These groceries and restaurants may have used the same supplier or distributor. They may have used the same packager or manufacturer."

After analyzing reams of data, the IMG selected and mapped four of the clusters of illnesses in Connecticut, Rhode Island, Texas, and Wisconsin as the investigation's focus. Further analysis verified that all four had received the same imported, frozen raw Nakaochi Scrape tuna product from a single tuna processing facility in India.

With the source identified, FDA quickly alerted consumers and health agencies to the potential dangers of eating the recalled product. FDA provided information on symptoms of illness, at-risk populations, and precautions consumers can take in the future.

The company that imported the tuna from India—Moon Marine USA Corporation of Cupertino, California—voluntarily recalled the product.

What Activates the EOC

Outbreaks like this are only one kind of crisis that sends EOC into action. Morrison or her designee may activate it during incidents or events that require more complex levels of response than would ordinarily be provided. That includes:

- life-threatening outbreaks of illness
- man-made emergencies
- National Special Security Events—high profile meetings, ceremonies or other events that terrorists could target
- national level exercises designed to test preparedness for an emergency

In 2011, the EOC was activated three times to

- coordinate agency response to a magnitude 8.9 earthquake in Japan that, triggered a 30-foot tsunami off the Pacific coast
- investigate the possible link between SimplyThick—a thickening agent used to aid people with difficulty swallowing—and necrotizing enterocolitis, a potentially fatal infection in premature infants.
- participate in a nationwide test of emergency response systems to help prepare for response to man-made and natural disasters.

"I've worked in emergency operations for more than 15 years," Morrison says. But I still find it impressive to walk into the EOC and watch the experts in action. They are the core of a massive team effort." FDA

Find this and other Consumer Updates at *www.fda.gov/ForConsumers/ConsumerUpdates*

Sign up for free e-mail subscriptions at *www.fda.gov/consumer/consumerenews.html*