Maintaining food security to protect the public

JL Smither examines the efforts that need to be made to protect the population from food security risks and looks at some technological solutions that can keep us safe

KEEPING THE POPULATION SAFE from food security risks requires more than close monitoring of potential contamination and other risks.

Among other actions, local agencies must be prepared to keep contaminated products from being sold to consumers. In 2007, the US state of North Carolina faced a large recall effort owing to the possible contamination of several food products with *clostridium botulinum*, which can cause botulism. The company that produced the food launched a voluntary recall of nearly 50 products. The North Carolina Department of Agriculture and Consumer Services (NCDA & CS) activated a joint food emergency operations command centre and sent state health officials to various stores and warehouses for recall effectiveness checks. Alarmed at how many contaminated products remained on store shelves available to consumers, health officials launched a larger recall effort to protect the state's citizens.

■ Departments involved in food recall efforts should have a system in place to track recall effectiveness checks.

To help them handle this large, statewide recall effort, the NCDA & CS partnered with the North Carolina Department of Environment and National Resources (NCDENR), which provided county and district level environmental health specialists. The collaborative group of specialists soon realised the need for a system to track which stores had already been inspected and which products had been removed to increase the efficiency of the recall effort.

In some instances, officials from different agencies accidently inspected the same location, but still found products to remove. The departments needed a way to track inspections and re-visits from all officials in real time. To this end, the officials created a website to track all recall effectiveness checks. This online database allowed inspectors to log in and report which locations they visited and which products they removed from shelves.

The department created an online form for inspectors to submit data from inspected locations directly into the web-based system. It included information provided by the US Food and Drug Administration (FDA) during recall events. By making the form web-based, the department eliminated the need for inspectors to fax information that then had to be entered manually by joint food emergency operations command centre staff members.

In addition, inspectors could enter real-time updates while still in the field. Because of this access to better information, the command centre was able to improve its decision-making and planning processes, resulting in a more efficient recall effort.

■ Local departments should have an effective way to monitor frequent updates to a recall list.

In early 2009, the NCDA & CS faced a similar large-scale food recall effort. A peanut company in the US state of Georgia announced a voluntary, nationwide recall of over 3,000 food products that may have been contaminated with *salmonella typhimurium*. Once again, North Carolina state officials were dispatched to locations that received contaminated products to conduct recall effectiveness checks.

The FDA developed a complete list of recalled products, and the North Carolina department provided inspectors with a list of recalled products likely to be found within the state.

However, over the next several months, the FDA updated the recalled product list on a near hourly basis. This made it difficult for inspectors at the state and local levels to keep track of which products they should be removing from shelves.

Realising this challenge, the FDA created a widget—a web-based application that displays content on a web page—and a searchable online list to provide inspectors with resources to determine whether a product was on the recall list. The widget allowed other individuals, agencies, and organisations to place a list of recalled products on their own websites. This list was updated automatically by the FDA in real-time and required no maintenance from the websites' owners. The widget also had an advanced search function to allow inspectors to search the name of a product or to browse through different categories and sub-categories to locate a particular product.

The North Carolina department provided its inspectors with access to these two tools. In addition, a joint food emergency operations command centre staff member monitored the FDA lists and noted any changes. The department encouraged its inspectors not only to monitor the FDA lists, but also to call the command centre about items that did not appear on the lists. This provided the inspectors with an extra resource to ensure they had the most accurate and updated information available.

Without the North Carolina department's creative thinking and ability to run the recall events as quickly and smoothly as possible, many more state citizens could have been sickened by these contaminated products. However, because the department was able to remove contaminated food from store shelves before it reached consumers, only six state citizens were affected during both events.

By employing technological solutions, inspectors were able to maintain awareness of potentially contaminated products and track locations where they had completed recall effectiveness checks. CRJ

■ *For more information on how to keep populations safe during contaminated food recall events or other food security issues, please visit Lessons Learned Information Sharing at www.llis.dhs.gov*

AUTHOR

JL Smither *is the outreach and partnerships manager for Lessons Learned Information Sharing, the US Department of Homeland Security's network of lessons learned, best practices, and innovative ideas for the emergency response and homeland security communities. The projects in this article, and others, can be found on the Lessons Learned Information Sharing site: www.llis.gov*