

Outbreak Investigation – Part 3

Week #1 Materials

By Stephanie Perniciaro, PhD, MPH



Case Closed

After discovering the suspicious container, CTDPH notifies law enforcement of the situation. A local HAZMAT team is sent to the venue to collect the container and run field tests. One test indicates ricin may be present. Health officials issue an order ceasing all food operations. The venue is evacuated, and the HVAC systems are shut down. Local law enforcement elevates the issue and contacts the FBI. CTDPH notifies the FDA, CDC, and USDA of the incident.

Authorities discuss the situation with the event organizers and will have to make a decision about whether to cancel the event entirely. They are awaiting laboratory confirmation from samples collected at the venue and from patients. Approximately two hours after the initial Emergency Medical Services' reports of numerous calls from hotels around the venue and the additional cases begin arriving at the hospital, local Emergency Departments are reporting higher than usual number of patients displaying similar symptoms. Six young children arrived with evidence of multisystem organ failure. Due to the overwhelming surge of patients, the main hospital is unable to accept new patients. An Incident Command System is established at the hospital in order to pool all available medical resources in the region.

At this time clinical samples have been transported to the state lab and the CDC for analysis. Interviews with management of Clean Pizza Restaurant identify the source of the contaminated parmesan as the Safe Food Distribution Company. This firm is

headquartered in another county in Connecticut. Safe Food Distribution Company has three additional locations in the state as well as distribution sites in three surrounding states. A coordinated effort, involving RRTs and law enforcement in the involved states and other agencies, is quickly organized to determine the source and extent of the contamination. The FDA District Offices in which the firm's headquarters and distribution sites are located established Incident Management Teams to coordinate inspectional activities with state and local partners. FDA's Office of Crisis Management has established an Incident Management Group, located in the agency's Emergency Operations Center at FDA headquarters, for the purpose of coordinating the activities.

A joint call is conducted between CDC, FDA, FBI, and CTDPH. A team of CDC epidemiologists has been requested to deploy to the New Haven. Their role is to assist CTDPH officials to set up surveillance and help estimate how many people may be at risk. FDA discusses the trace back and trace forward efforts being conducted to determine the extent to which the suspected product may be in interstate commerce. FDA's Office of Criminal Investigations is working to determine how and when the product may have been adulterated.

The CDC lab confirms the presence of ricinine in multiple patients' urine samples. CDC notifies local, State, and Federal authorities about the results. FDA issues a mandatory recall of the product. An alert is issued through

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the Health Alert Network (HAN) to notify all states about the potential for additional cases. Information for clinicians is made available via the CDC website. During the next day,

investigators are able to determine basic information about the source and spread of contaminated parmesan cheese.

Regulatory Agencies

1. What actions would the incident command take once the laboratory made a confirmed identification of ricinine in the patient specimens? What would the risk assessment rating be at this point?
2. How would the incident command interact with Safe Food Distribution Company?
3. What agency would generate a disposal plan? How would this plan be implemented?
4. What actions would law enforcement take before and after the confirmed identification of ricinine was made?
5. Would the venue disseminate information about the illnesses before or after the preliminary identification of ricinine was made? How broadly would the information be disseminated?

Laboratory Group

1. Are you readily able to do screenings for ricinine? If not, what would you need to do these screenings and where would you get these resources?
2. What is a good estimate for the time needed to screen the patient samples described here for ricinine?
3. Who would you notify after making the confirmatory identification of ricinine?
4. What kind of laboratory screening resources do you think would be necessary in the investigation to determine the source and spread of ricin in products at the Safe Food Distribution Company locations?
5. What are your resources looking like at this point in the investigation?

Rapid Response Team

1. What role could you play in the investigation of Safe Food Distribution Company?
2. How would you prepare for participation in the incident response?
3. How quickly could you get to a company facility in the nearby county (216 miles from the city)?
4. How are the results or activities occurring in the other states in this region being coordinated? What agencies are involved in this effort?