

**National Foodborne
Epidemiologists Meeting
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Foodborne Outbreak Investigations

Four reasons for doing a foodborne outbreak investigation

- Stop the exposures/illnesses/outbreak
- Identify the food item/items associated with illness and summarize/document the epi investigation
- Identify the how/what/when/where/why of product contamination so that preventive measures can be implemented to prevent future occurrences.
Summarize/document the environmental investigation.
- Utilize data above in analyzing/monitoring efforts to determine the need for public advisories and/or increased regulatory efforts.

Foodborne Outbreak Investigations Room for Improvement?

In general, current investigations appear to be fragmented, slow, and are done differently by each agency or jurisdiction.

Foodborne Outbreak Investigations

- **No single agency has the expertise, resources, or authority to complete a foodborne outbreak investigation from beginning to end.**
- **Within the last 3-4 years, we have seen some efforts and some incremental improvement in areas.**

Foodborne Outbreak Investigations

Phases of a foodborne outbreak investigation

- Surveillance
- Epidemiological
- Environmental/Traceback

Foodborne Outbreak Investigations

Room for improvement with epi investigations

- Infrequent and inconsistent “heads up” given to regulators.
- Infrequent, inconsistent, and incomplete written epi/lab summaries and updates provided to regulators.
- Lack of awareness of what is involved in an environmental investigation.
- Lack of awareness of regulators need to establish legal/statutory basis before taking regulatory actions.
- Lack of awareness of ramifications of initiating environmental investigations or “quick calls” to food firms.
- Superficial attention often given to ruling out food worker contamination at the POS. Rare/infrequent stool testing of foodworkers. “Automatic” assumption that foodworker interviews and stool testing are not worthwhile.
- Hypothesis generating questionnaires have not been updated to reflect FDA food testing results.

Foodborne Outbreak Investigations

Room for improvement with environmental investigations

- Poor understanding of epidemiology and lab diagnostics and strengths and weaknesses of each.
- Most environmental investigations at retail are inspections/check lists.
- Individuals assigned to do environmental investigations often have no training in this area.
- Different individuals assigned to each investigation (short straw – least seniority).
- Infrequent sharing of draft and final reports between agencies.

Foodborne Outbreak Investigations

Room for improvement with laboratory diagnostics/testing

- Low volume, low throughput, low capacity for testing food for bacteria, viruses, and parasites.
- No catalog of local, state, federal labs capabilities.
- No laboratorians in field investigations/field sampling efforts.

Foodborne Outbreak Investigations

Suggestions for Improving Foodborne Outbreak Investigations at the State Level

- Each state should establish a multiagency, multidisciplinary foodborne outbreak investigation team with specific written protocols/procedures, identification of specific individuals and their roles and responsibility, and provide training as a group (not a paper team). This team should also serve as the nucleus for a foodborne bioterrorism response team.
- States should consider the implementation of active/direct notification systems (e-mail, fax, pager, phone) to regulated food facilities instead of relying solely upon press releases.
- States should consider implementing statewide web-based food complaint systems to capture likely foodborne illnesses and injuries and to possibly serve as an early warning system for food-related bioterrorism events.

Foodborne Outbreak Investigations

Suggestions for Improving Epi Investigations at the National Level

- Improve the standardization of foodborne epi investigations
- Improve communications between agencies in multi-state outbreaks
- Encourage methods to decrease the time required to complete an initial epi investigation
- Encourage standardization of sharing of reports of epi investigations.

Foodborne Outbreak Investigations

Suggestions for Improving Environmental/Traceback Investigations at the National Level

- **Develop on-line training courses for environmental investigations at retail and at wholesale food facilities and for traceback investigations**
- **Encourage the development of and participation in multiagency foodborne outbreak response teams**
- **Support ways to decrease the time required to complete an environmental/traceback investigation**
- **Encourage standardization of reports of environmental and traceback investigations**
- **Develop a web-based national food complaint system to capture likely foodborne illnesses and injuries and to possibly serve as an early warning system for food-related bioterrorism events.**

Foodborne Outbreak Investigations

Suggestions

- Improve the awareness of the “NIFSS Multistate Foodborne Outbreak Investigations – Guidelines for Improving Coordination and Communication” (2000) document as a starting point.
- CDC, FDA, and Homeland Security should collectively address the lack of funding for prevention of, response to, and recovery from food-related bioterrorism events.
- Don't create a short term group (FORCE-G, NIFSS) to address a long term issue.