

Putting the Pieces Together

An Analysis of State Response to Foodborne Illness



ASSOCIATION OF STATE AND
TERRITORIAL HEALTH OFFICIALS

The Association of State and Territorial Health Officials (ASTHO) is the national non-profit organization representing the state and territorial public health agencies of the United States, the U.S. Territories, and the District of Columbia. ASTHO's members, the chief health officials of these jurisdictions, are dedicated to formulating sound public health policy, and to assuring excellence in state-based public health practice.

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EXECUTIVE SUMMARY

According to the Centers for Disease Control and Prevention (CDC), approximately 76 million illnesses, 325,000 hospitalizations, and 5,000 deaths per year in the United States are associated with foodborne diseases. Preventing and responding to foodborne illness is a critical public health activity, and all states address the core prevention and outbreak response issues. However, because the organization of public health services varies from state to state, it is sometimes difficult to know where a particular food safety responsibility lies.

To obtain a more thorough understanding of the organization and coordination of state food safety responsibilities, the Association of State and Territorial Health Officials (ASTHO) studied fifteen different states. It is hoped that the results of this analysis will aid in understanding the breadth of responsibilities and agencies involved in food safety activities, and help local, state, and federal efforts to ensure the safety of the nation's food supply.

The following report is divided into two sections. The first section is an overall written analysis which outlines both differences and commonalities in how state public health agencies organize their response to food safety issues and highlights innovative state approaches. The second is a series of matrices that provides detailed information about foodborne outbreak investigation roles and responsibilities in each specific state.

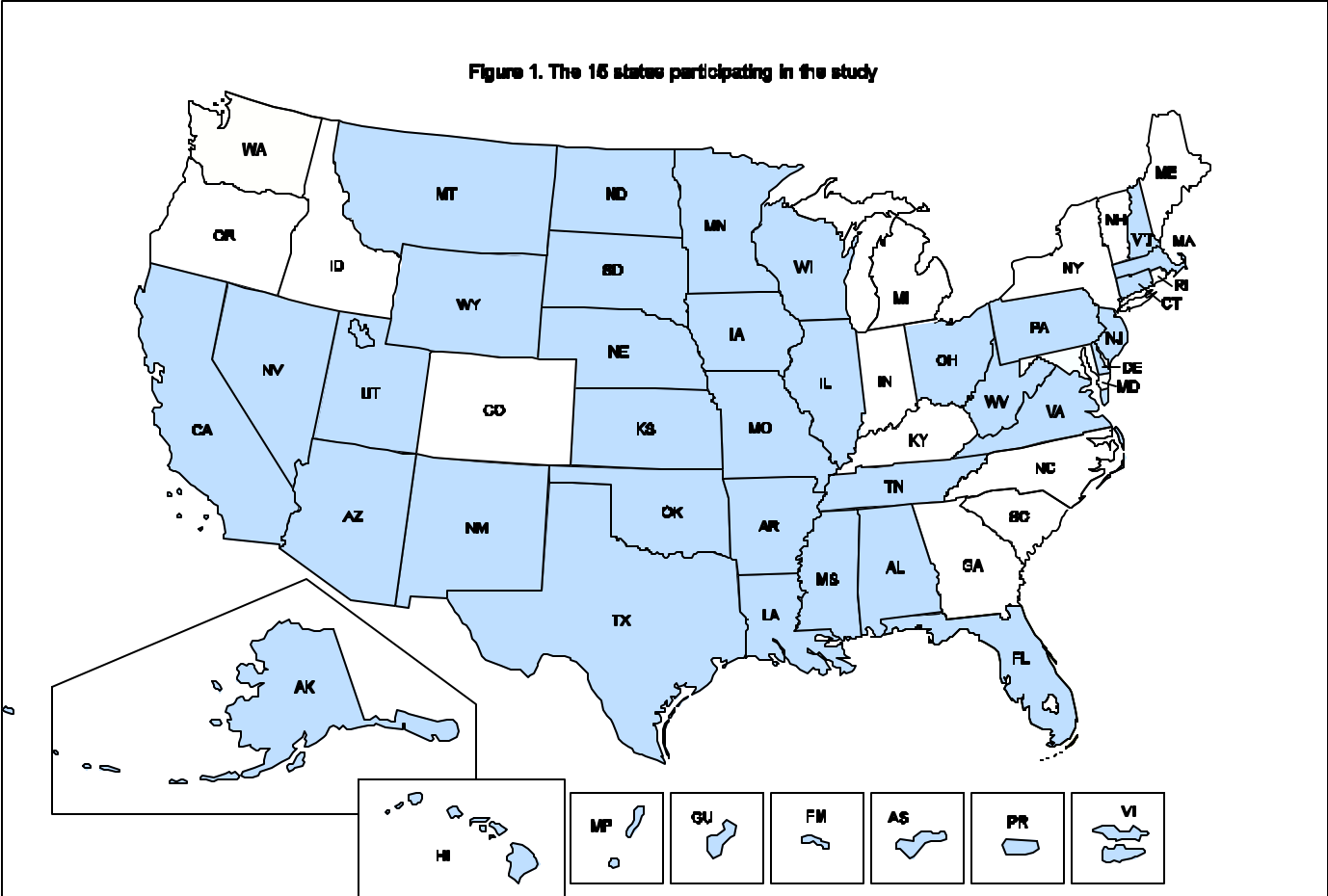
Although all interviewees thought their state systems provided an effective structure to respond to foodborne outbreaks, the following points emerged as areas state public health agencies may want to consider for continued focus.

Areas for Continued Focus:

1. **Communication and Coordination.** All states recognized the importance of continued communication among the responding agencies, and that communication breakdowns hinder an effective outbreak response. Due to the number of partners involved in all aspects of foodborne illness prevention and control, ongoing communication should be considered a priority and occur between the state public health agency and: (1) other relevant state agencies; (2) local public health agencies; (3) the clinical community; (4) other states; (5) federal agencies such as the CDC, FDA, USDA and FBI; (6) the media and public; and (7) governors, mayors, and state legislators.
2. **Dedicated Food Safety Workforce.** Many states specified that Emerging Infections Program and Epidemiology and Laboratory Capacity funds have allowed them to hire full-time public health professionals specifically for food safety activities. They stressed that a workforce dedicated to food safety issues is critical for effective prevention and control of foodborne outbreaks. Others indicated that workforce shortages have prevented their state from expanding the present level of food safety activities.

3. **Funding and Resources.** The public health food safety role is expanding in response to changes in food production and importation, concerns about the security of the nation's food supply, and emerging and re-emerging infectious diseases. Funding and resources for state food safety activities should take these expanding responsibilities into account to help shift the overall foodborne illness focus from "putting out fires" to "preventing them." The results of this analysis indicate that funding must be flexible and acknowledge the difference in state organization of public health services and existing food safety capacities.
4. **Reporting and Outbreak Documentation.** Continued attention to complete reporting and documentation of foodborne outbreaks is needed to gain an accurate picture of the burden of foodborne illness at the local, state, and national levels. Documenting outbreak response steps and outcomes will also help identify gaps and intervention/regulation needs.
5. **Coordinated Internet-based Site for State and Local Health Officials.** Currently, all state and local health officials do not have a mechanism to easily access real-time information on state, regional, and national foodborne outbreaks and responses. An Internet-based site that provides information about ongoing outbreaks in other locales may help prevent and control multi-jurisdictional foodborne outbreaks. CDC's secure Epidemic Information Exchange Service (Epi-X) is a critical communication resource for state health agencies, and may help address this issue.
6. **State – Local, Public Health – Agriculture, and Regional collaborations.** Areas for new or continued collaboration should be explored to ensure the efficient use of resources and to expand state and local food safety capacity.
7. **Local Training.** Local foodborne outbreak training programs that emphasize current strategies in foodborne surveillance, detection, and investigation will increase the capacity to respond to outbreaks and improve consistency in response across a state.
8. **Federal Guidance and Clarification of Roles.** States indicated that coordinating with three different federal agencies (CDC, FDA, USDA) on food safety issues sometimes presented a challenge. Clarification of federal roles and increased federal-state communication may improve coordination during an outbreak.
9. **Shared Practices and Training Materials.** Many states have developed innovative food safety approaches and training materials that, if shared, could be beneficial to and adapted by other states.

Figure 1. The 16 states participating in the study



SECTION A: INTRODUCTION

Changes in the area of food safety are presenting new challenges for the public health community. Increased importation of foods from other countries, greater reliance on commercial food service, new methods of food production, and emerging or reemerging infectious agents add complexity and expanding responsibilities to the public health food safety role. There is also heightened concern about the security of the food supply and whether it could be a potential vehicle for introducing biological and chemical agents into the population. Addressing these challenges requires a significant public health response and a coordinated effort among many partners at the federal, state, and local level.

Approximately 76 million illnesses, 325,000 hospitalizations, and 5,000 deaths per year in the United States are associated with foodborne diseases.¹ Many different pathogens, including bacteria, viruses, and parasites can contaminate foods and cause illness. Most of the over 300 recognized foodborne diseases are infectious in origin. However, toxins, poisonous chemicals, metals, and other harmful substances can also cause foodborne disease if they are present in consumed food products.

The Centers for Disease Control and Prevention (CDC) defines a foodborne outbreak as two or more cases of a similar illness resulting from the ingestion of a common food. Detecting, investigating, and controlling a foodborne outbreak requires a wide range of public health expertise and coordination across many different agencies, departments, and levels of government (federal, state, and local). Because the organization of public health services varies from state to state, it is sometimes difficult to know where a particular food safety responsibility lies.

To obtain a more thorough understanding of the coordination process within different states, the Association of State and Territorial Health Officials (ASTHO) studied fifteen states and the different responsibilities of their state agencies when responding to food safety issues. Understanding these nuances can 1) aid federal-state, inter-state, and intra-state coordination during foodborne outbreaks and efforts to secure the nation's food supply; 2) assist new state health officials in understanding their state public health agencies' roles and responsibilities relating to prevention and control of foodborne illness, and; 3) show how various state public health agencies organizationally approach food safety issues and highlight innovative programs and activities.

This report is divided into two sections. The first section is an overall analysis that outlines both differences and commonalities in how state public health agencies organize their response to food safety issues. The second is a series of matrices that provides detailed information about foodborne outbreak investigation roles and responsibilities in each specific state.

METHODOLOGY

State Selection

ASTHO identified a sub-set of fifteen states to include in this analysis: Colorado, Georgia, Idaho, Indiana, Kentucky, Maine, Maryland, Michigan, New Hampshire, New York, North Carolina, Oregon, Rhode Island, South Carolina, and Washington (Figure 1). In addition to geographic diversity, these states differ in their organization of public health services and programs.

¹ Mead PS, Slutsker L, Dietz V, et al. (1999). Food-related illness and death in the United States. *Emerging Infectious Diseases*, 5, 607-25.

States with different public health agency “organizational control methods” were selected. The following definitions were taken from the CDC publication, *Profile of State and Territorial Public Health Systems: United States, 1990*, and state public health agencies indicated which organizational category best described their organization and delivery of public health services:²

- **Centralized** organizational control: local health departments function directly under the state's authority and are operated by a state health agency or a board of health (ME, RI, SC);
- **Decentralized** organizational control: local governments directly operate local health departments with or without a board of health (CO, ID, IN, MI, NY, NC, OR, WA);
- **Mixed** organizational control: local health services may be provided by the state health agency, local governmental units, boards of health, or health departments in other jurisdictions (NH);
- **Shared** organizational control: local health departments are under the authority of the state health agency, as well as the local government and board of health (GA, KY, MD).

Varying public health intra-agency organization is also represented by the selected states. For example, two states have combined health and environmental protection agencies (CO, SC) while the remainder have separate agencies with various environmental health functions divided among state agencies. Additionally, some states have food safety or consumer protection divisions within the public health agency that help prevent and respond to foodborne outbreaks.

Five state public health agencies involved in this analysis participate in the Emerging Infections Program (EIP) network (CO, GA, NY, MD, OR). The EIP is a CDC funded initiative that allows state public health agencies to extend traditional public health activities and address the surveillance, prevention, and control of emerging infections. A core EIP component is a project called the Foodborne Diseases Active Surveillance Network (FoodNet). Through the FoodNet project and in collaboration with CDC, the Food and Drug Administration (FDA), and the United States Department of Agriculture (USDA), these states conduct active surveillance and other special studies designed to aid in understanding the epidemiology of foodborne diseases in the United States.

Questionnaire Development

ASTHO developed a questionnaire that addressed various aspects of the foodborne outbreak response process (Appendix 1). The questionnaire asked for detailed information about the organization of state foodborne outbreak response within the broad categories of detection and reporting, outbreak investigation, laboratory, communication, and outbreak control measures. It also addressed issues surrounding inspection, licensing, regulation, and ongoing education and training. Several public health food safety experts reviewed the questionnaire and it was modified according to the feedback received. The questionnaire was developed as a telephone interview tool, and was not intended to be administered as a formal, written survey.

Interviews

The state health official identified the appropriate representative(s) to interview in their state. One to two designated public health officials participated in the interview process and responded to the questionnaire. Each interview was conducted by telephone and lasted approximately 45 minutes.

² A senior public health official in each interviewed state was recently asked to classify their state's organizational control method as part of an ASTHO effort to update this information; some state classifications have changed since the 1990 CDC survey.

Written Analysis and Matrices

The information collected through the telephone interviews was organized into state-specific matrices that describe in detail how a state organizes its response to foodborne outbreaks, including partner agency roles and responsibilities (Section B). Each matrix was completed after the interview and returned to the states for final review. The broader, written analysis identifies overarching threads in the organization of state public health agency response to foodborne outbreaks and highlights unique or innovative approaches to food safety activities in the states (Section A).

Analysis Limitations

In most states, public health officials participated in the telephone interview and provided information about their state's food safety activities. The matrices and written analysis therefore focus on state public health activities, and views and activities from other agencies or divisions may be missing from this review. In addition, the analysis concentrates primarily on foodborne outbreak response, and does not provide an in-depth examination of other activities such as certification and inspections.

Information listed in the matrices is not intended for critical state comparisons. Although every attempt was made to use consistent language and phrasing when filling in the matrices, respondents were allowed to review the matrices and add or change information due to accuracy and security concerns. Additionally, because participants answered the questionnaire through a conversational telephone interview, different responsibilities or activities may have been highlighted across the states. Unique activities described in one state may also occur in other states, but were not mentioned in the brief interview. ASTHO requested no written documentation of the information provided in the interviews, and the following analysis reflects the knowledge, memory, experience, and understanding of the interviewees.

Finally, this report presents results from a study of fifteen state public health agencies and may not address important food safety issues and practices in states that were not included in the analysis. However, it is hoped that the diversity of selected states provides information on the range of expertise and agencies involved in a foodborne outbreak response and underscores the need for a coordinated effort among all partners.

DIVISION OF STATE RESPONSIBILITIES FOR FOODBORNE OUTBREAK INVESTIGATION, CONTROL AND PREVENTION

When responding to a foodborne outbreak, the same epidemiological outbreak investigation principles and steps guide all states.³ However, the agency that is responsible for the outbreak investigation components may vary across states. The following sections highlight the similarities and differences among the states' responses to foodborne outbreaks.

Foodborne Disease Surveillance, Reporting, and Detection

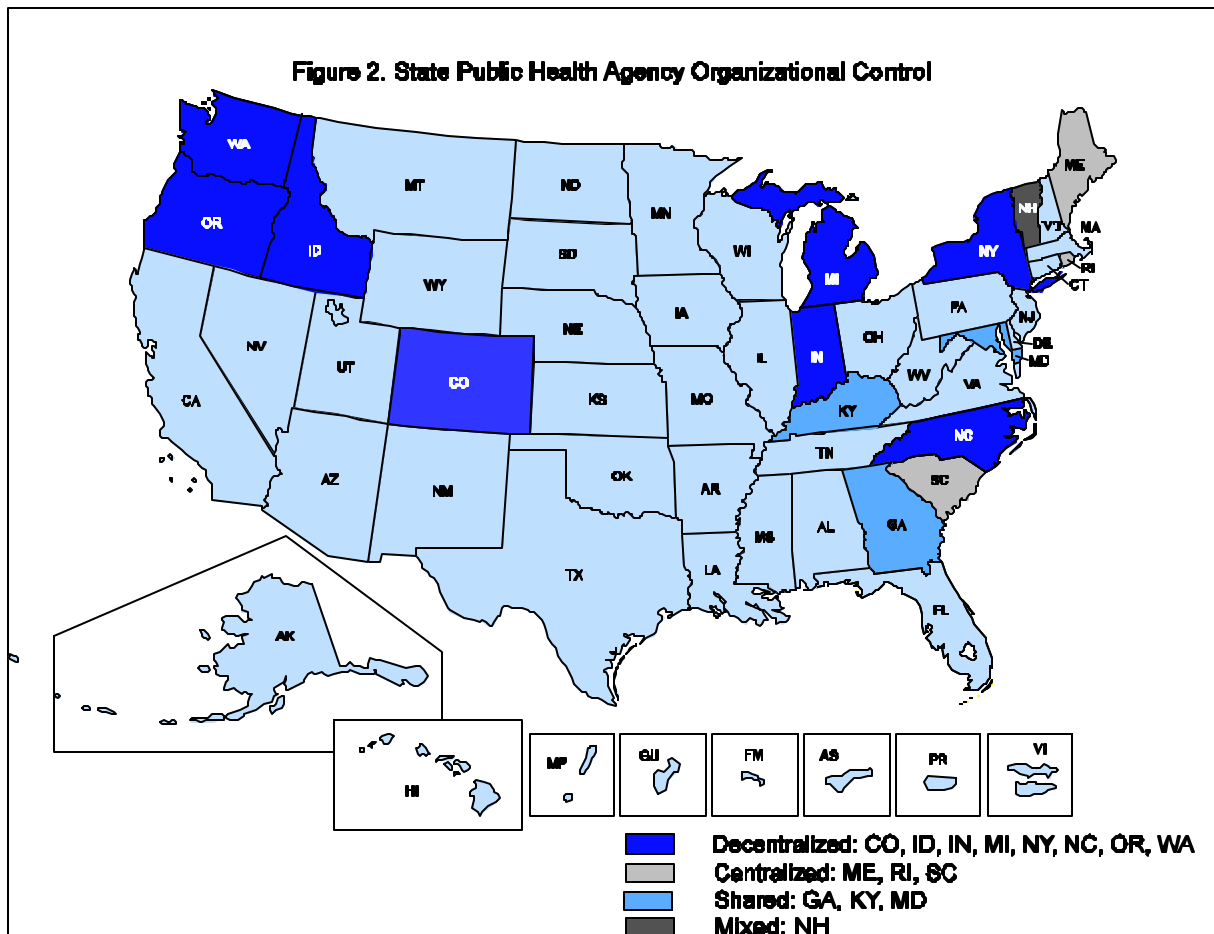
Certain foodborne enteric diseases are required by state laws and/or regulations to be reported to a public health agency. State laws or regulations also detail whom clinicians and laboratories should notify of a foodborne illness case or outbreak (e.g., local or state public health agency), as well as how (e.g., telephone, email, fax, postal mail), and in what time frame.

³ A collaborative CDC, Council of State and Territorial Epidemiologists (CSTE), and Association of Public Health Laboratories (APHL) report defined the general core outbreak response functions as: leadership and management, verification of diagnosis, case ascertainment, data collection and management, descriptive epidemiology, study design, data analysis, traceback, environmental investigation, prevention and control measures, and summary and outbreak report. More detailed information can be found in the document, *Essential Epidemiology and Laboratory Components of a State Foodborne Disease Prevention and Control Program*.

In centralized states,⁴ foodborne illnesses are reported directly to the state health agency. In states with decentralized or shared organizational control, clinicians and laboratorians report foodborne illnesses to their local public health agency, which then shares the case report with the state health agency. If the state health agency is notified first, they will relay the information to the appropriate local public health agency. New Hampshire operates under a mixed organizational control, and most regions of the state report directly to the state health agency. However, the regional health offices of Manchester and Nashua have the capacity to receive foodborne illness reports and initiate their own investigation.

If a foodborne outbreak is suspected, it is crucial that it be immediately reported to the appropriate public health agency to prevent further spread of the disease. An astute clinician, infection control officer, or laboratorian is often the first to notice an unusual number or cluster of foodborne illness cases and alert public health officials. Reports of a suspected outbreak may also come to the state health agency from a patient or family member, other states, the CDC, or regulatory agencies.

Because of the need to quickly inform public health officials of a suspected foodborne outbreak, most of the states participating in this analysis have a 24-hour, 7-days-a-week hotline or other mechanism to receive foodborne illness complaints or reports. In some states, the hotline includes a pager system that alerts a designated epidemiologist or other appropriate medical specialist who can respond to the call. Many of these hotlines are part of a larger infectious disease reporting system or public health emergency line, and are not specific to foodborne disease reporting.



⁴ See organizational control definitions on pg 3.

Foodborne Outbreak Investigation

Once it is determined that a foodborne outbreak has occurred and further investigation is warranted, the agency or division that has overall responsibility for investigating the outbreak, as well as responsibility for specific components of the investigation, may vary dramatically from state to state. The following overarching factors aid in understanding how states respond to a foodborne outbreak: the state's public health *inter-agency* organizational control (centralized, decentralized, shared, or mixed), the public health role and *intra-agency* organization of public health services (e.g., presence of a food protection division within the state public health agency), and the outbreak characteristics (e.g., size). These factors help determine who within the state has primary responsibility to investigate a foodborne outbreak and conduct the necessary follow-up activities.

Centralized, Decentralized, Shared, and Mixed Authority
In **centralized** states, local public health agencies function directly under the state public health agency. In reality, this may mean that the state does not have any local public health agencies. For example, because of Rhode Island's small geographic size, the state health agency has the capacity to respond to public health issues throughout the state. Maine's population size and rural landscape also allow the state health agency to be responsive to the state's public health needs, and with the exception of one health office in Portland, there are no local public health agencies in the state.⁵ Therefore, in centralized states, the state health agency has primary responsibility for all aspects of a foodborne outbreak investigation.

In **decentralized** states, local public health agencies have primary responsibility for a foodborne outbreak investigation, but state health agencies may have specific responsibilities. In Oregon, the local public health agencies conduct the "groundwork" activities, such as interviewing, facility inspection, and collection of samples, while the state Office of Disease Prevention and Epidemiology has primary responsibility for other aspects of the investigation. State health agencies with decentralized organizational control may take the investigative lead under specific circumstances; if an

⁵ Portland, Maine has the capacity to conduct all foodborne outbreak response activities except environmental and clinical specimen testing. When an outbreak occurs in Portland, the local public health agency coordinates activities with the Maine Department of Human Services, Bureau of Health. The local and state agencies jointly determine whether the state or local public health agency will lead the outbreak investigation.

Washington: Paralytic Shellfish Poison Creates Shellfish Illness Outbreak

In August of 2000, Paralytic Shellfish Poisoning (PSP) affected nine people who recreationally harvested and ate mussels from the waters of Carr Inlet in Puget Sound, Washington. The Washington State Department of Health (WA DOH) had closed Carr Inlet weeks earlier due to elevated levels of PSP toxin. PSP is caused by a neurotoxin found in the marine dinoflagellate, *Alexandrium cantenella*, and toxin levels usually increase during the warmer months of the year.

When word of the illnesses reached WA DOH, they enlisted support from agencies and organizations in the Puget Sound region. These organizations included the Tacoma-Pierce County Health Department, Washington State Department of Fish and Wildlife, the Indo-Chinese Cultural and Service Center (ICSC) and the Korean Women's Association (KWA). The KWA and ICSC collaborated to disseminate information to Pierce County Asian and Pacific Islander communities, including Korean, Samoan, Filipino, Vietnamese, Cambodian, and Laotian communities.

WA DOH also worked with the local newspaper, *The Tacoma News Tribune*, which ran a front-page story profiling PSP. The story included information about citizens exposed to PSP, history of the illness, and contact information for the public. At the same time, the Washington Department of Fish and Wildlife Enforcement Division was contacted and asked to patrol Carr Inlet and remind shellfishers of the closure and the health threat from eating shellfish in the area. The local Tacoma-Pierce County Health Department was also contacted and sent environmental health staff to public beaches to ensure that signs appropriately displayed the PSP closure.

Through strategic communications and working in partnership with existing public and private organizations, WA DOH contained the exposure to PSP to a handful of citizens and forged a greater bond with community groups and media. All nine of the outbreak victims that displayed symptoms were treated and recovered. However, without the collaborative response and an effective 911 emergency medical system, fatalities may have occurred.

For more information contact Wayne Clifford or Frank Cox, Washington State Department of Health, Office of Food Safety and Shellfish Programs, 360-236-3307 or 360-236-3309 respectively.

area of the state is not covered by a local public health agency, if the local public health agency asks the state agency for support, if the outbreak is particularly severe or due to an emerging infection, or if an outbreak crosses local public health agency jurisdictional boundaries.

However, there are still differences in the organization of the foodborne outbreak response among states that are classified as decentralized. For example, North Carolina employs a three-tiered approach, where local public health agencies have primary responsibility for the outbreak investigation, but regional surveillance teams provide assistance and guidance as needed. If the outbreak is particularly severe or widespread, the North Carolina state health agency may then lead the investigation and response.

In states with **mixed** organizational control, larger local public health agencies may have the capacity to investigate foodborne outbreaks within their jurisdiction, and the state health agency works with smaller local public health agencies to control an outbreak. The New Hampshire Department of Health and Human Services, Enteric Disease Epidemiology Program, leads the majority of foodborne outbreak investigations within the state, with the exception of Manchester and Nashua Counties. Aside from clinical and environmental specimen testing, these two counties have primary responsibility for all components of an outbreak investigation within their jurisdictions. Finally, states with **shared** organizational control distribute outbreak investigation responsibilities among the local and state public health agencies to varying degrees, depending on local resources and outbreak characteristics.

In all states, regardless of the organizational classification, the state public health laboratory plays a crucial role in testing clinical and environmental specimens. Two states involved in this analysis have local public health laboratory capacity for foodborne pathogen testing. Washington and Oregon's largest county and/or region have laboratory capacity to test environmental and clinical specimens, and may assist smaller counties or regions during a foodborne outbreak.⁶ In other states, such as Maine, clinical laboratories have the capacity to test clinical specimens and provide assistance to the state public health laboratory during large outbreaks.

Public Health Role and Intra-agency Organization

When a state health agency has primary responsibility for a foodborne outbreak investigation, activities are usually coordinated through the division of epidemiology, which may share these responsibilities with other state health agency divisions and with other state agencies. Generally, the division of outbreak investigation responsibilities is influenced by the role of the state department of agriculture and the "location" of state environmental health, food protection, and shellfish or marine services.

State public health agencies coordinate to varying degrees with state departments of agriculture. In the majority of states, the department of agriculture plays a large role in food product tracebacks, recalls, and inspections, but does not have primary responsibility for the outbreak investigation. In contrast, the Michigan Department of Agriculture coordinates closely with the Department of Community Health, and assists with certain outbreak investigation functions when the state is leading the outbreak response.

Food protection programs, environmental health services, and shellfish programs also assist in investigating outbreaks, and the degree to which they are involved may be determined by their agency "location." In states where these programs are part of the state public health agency, they tend to play a larger role in foodborne outbreak investigations than do programs that are located in other state agencies (e.g. department of natural resources or department of agriculture).

⁶ For more information about the public health laboratory role in the prevention and response to foodborne outbreaks see, APHL. (April 2003). A Recipe for Stronger Food Safety Testing Programs: Findings and Recommendations from the APHL Food Safety Laboratory Capacity Assessment Project. Washington, DC.

Washington's Office of Food Safety and Shellfish Programs is within the state public health agency, and works with the Office of Epidemiology to investigate foodborne outbreaks as needed. The state matrices in Section B of this report provide more detailed information about the organization of these services in each state.

Coordination among all involved parties is facilitated by forming an outbreak investigation team. During an outbreak, almost every state forms a formal or informal response team. Kentucky mobilizes pre-existing Rapid Response Teams, which are located across the state and consist of experienced epidemiologists and public health nurses from both the state and local level.

Communicating During a Foodborne Outbreak

Due to the number of different partners that may be involved in a foodborne outbreak investigation, ongoing communication is critical to keep all participating responders informed and coordinated. The nature, scope, and causative agent of the outbreak will help determine the need for and extent of communication. During an outbreak, communication flows between the state public health agency and: (1) other relevant state agencies, such as the Department of Agriculture; (2) local public health agencies; (3) the clinical community; (4) other states; (5) federal agencies such as the CDC, FDA, USDA and FBI; (6) the media and public; and (7) governors, mayors, and state legislators, as needed.

If an outbreak is widespread or severe, the state health agency notifies the CDC and other state health agencies. A state agency or division typically contacts its counterparts in other state or federal agencies (e.g., the state epidemiologist alerts other state epidemiologists and the CDC, while the food protection office alerts food protection counterparts in other states and federal agencies).⁷

States are increasing efforts to quickly and efficiently link to other states at the beginning of a foodborne outbreak. For example, Rhode Island works closely with surrounding states and provides immediate notification of an outbreak. As part of this process, steps have been taken to link states within the region through the Northeast Regional Program. While this program is in the nascent stages of development, it will provide an additional mechanism to increase overall awareness of and efficiency of response to foodborne outbreaks.

Most states participating in this analysis contact the governor when a foodborne outbreak is serious in magnitude or etiology. This decision and responsibility usually rests with the state health official or other senior public health official, such as the state epidemiologist. Some state health agencies also have a mechanism to routinely inform the governor about public health events, including foodborne outbreaks. For example, the Oregon Office of Emergency Management sends a weekly email alert to the governor, and the Washington state public health agency provides a "Monday Alert" to keep the Governor apprised of any significant public health events.

Each state discussed the challenge of responding quickly and openly to media inquiries about a foodborne outbreak while simultaneously protecting the privacy interests of patients and implicated establishments. If there is a significant public health threat involved, many states release the name of an implicated establishment. Respondents commented that this is only done after an outbreak is confirmed through epidemiologic and laboratory evidence.

⁷ At a state's request, CDC provides investigative support for foodborne outbreaks. CDC also plays a critical role in responding to multi-state outbreaks.

Foodborne Outbreak Control and Follow-up Activities

When an outbreak has been linked to a specific source or food item, the range of partners involved in controlling the outbreak expands to include other state and federal partners. In all states, if an outbreak is caused by imported foods, the state works with the Food and Drug Administration (FDA) and/or the United States Department of Agriculture (USDA) to investigate the outbreak and conduct product tracebacks. If it is linked to an act of bioterrorism or tampering, state law enforcement agencies and the Federal Bureau of Investigation are contacted. See adjacent *Foodborne Outbreak Investigation Support: Federal Agencies* textbox for more detail on the federal agency role.

Many states have divisions within the state public health agency or separate departments that respond to outbreaks linked to a specific food product. For example, the North Carolina Department of Agriculture and Consumer Services has primary responsibility for food product tracebacks and in-state recalls of contaminated food that was produced, sold, or warehoused in North Carolina, and shares responsibility for dairy and shellfish products with the Department of Environment and Natural Resources.

Outbreak Summary

Once control measures have been implemented and a foodborne outbreak is contained, public health agencies produce a formal or informal final report that summarizes the incident and findings. Final reports may be a brief listing of outbreak details in the case of small, unremarkable foodborne outbreaks, or more extensive and include recommendations and lessons learned in the case of widespread, unusual, or severe outbreaks. Like other aspects of foodborne illness prevention and control activities, the agency or department with primary responsibility for issuing and disseminating the final document varies among states.

For foodborne outbreaks in which the state health agency assumes primary investigation responsibility, the state office of epidemiology usually develops the final document with input from other divisions and agencies that participated in the response. If the outbreak investigation is conducted by a local public health agency, that agency produces the report and typically submits the final document to the state for review and approval. However, in some states, such as Colorado, the local public health agency report does not require clearance from the state office of epidemiology unless it is submitted for publication. States may make the report public, often after removing identifying information, while others only release the report upon request.

Foodborne Outbreak Investigation Support: Federal Agencies

During a foodborne outbreak, federal agencies often assist with the outbreak investigation. Some of these key agencies include:

The Centers for Disease Control and Prevention (CDC) works closely with state and local public health epidemiologists and laboratory officials to identify foodborne illnesses and clusters of illness; to conduct rapid epidemiologic investigations needed to implicate foods or other sources of infection; to determine risk factors for illness; and to develop prevention and control strategies.

The Environmental Protection Agency (EPA) maintains the capability to respond to waterborne disease outbreaks. Generally, these outbreaks are identified by either a state or county health department that contacts the state environmental protection agency and CDC. If the disease appears to be associated with drinking water, CDC, the state, or both will contact EPA to request assistance in identifying the causes of the outbreak.

The Federal Bureau of Investigations (FBI) will assist in any foodborne outbreak investigation if bio-terrorism or other criminal activity is suspected. The state health agencies will often continue to lead the outbreak investigation, but the FBI will provide law enforcement expertise, facilities, and personnel to trace the contaminated product and identify the establishment or persons involved in the outbreak origin.

The Food and Drug Administration's (FDA) has the regulatory authority to coordinate a voluntary recall of FDA-regulated products that are linked to outbreaks of foodborne disease. They have investigative responsibility if the cause of the outbreak involves imported foods or food recalls that cross state boundaries. The FDA helps verify the association of illness with a regulated product, and identifies the extent of the product distribution. Through product recalls and regulatory actions, FDA can help prevent further exposure to the contaminated product.

The USDA's Food Safety and Inspection Service (FSIS) has the regulatory authority to coordinate a voluntary recall of meat, poultry, and pasteurized processed egg products linked to foodborne outbreaks. FSIS epidemiology officers assist in tracing the origin and distribution of meat, poultry and egg products and provide laboratory assistance to identify any contaminants in the implicated product. FSIS' main objective is to remove from commerce any product that is known to be contaminated with harmful agents.

From "Multi-state Foodborne Outbreak Investigations," National Food Safety System Project, Outbreak Coordination and Investigation Workgroup, February 2001 http://www.fda.gov/ora/fed_state/NFSS/Outbreak_Coordination.pdf.

A few states are beginning to use on-line forms for submission of foodborne outbreak summary reports. In Washington, local public health agencies are required to fill out and submit an on-line Foodborne Outbreak Reporting Form to the state health agency. States report foodborne outbreaks to the CDC through the internet-based Electronic Foodborne Outbreak Reporting System (E-FORS). Local public health agencies in Idaho also use this system for electronic submission of outbreak reports to the state health agency.

Although summary documents are considered important records of a foodborne outbreak investigation, states indicated that a formal summary is not always produced, particularly for smaller outbreaks.⁸ In addition, states suggested more emphasis should be placed on sharing summary information among state and local health agencies and other responders involved in the outbreak investigation. A Maryland state health agency representative visits each local public health agency once a year to review foodborne outbreak report records and offer suggestions and feedback. This in-person contact also facilitates better communication during outbreak investigations.

Inspections, Certification, and Regulation

As with tracebacks and recalls, the agency or department responsible for food establishment inspections largely depends on the food product or type of facility to be inspected. The state or local agency with authority to conduct inspections in restaurants, warehouses, bakeries, or grocery stores, etc., varies across the states.

In centralized states, the areas of inspections, licensing, and regulations are a state responsibility. Local public health agencies in decentralized and shared states normally conduct routine inspections and provide licensure for food establishments in their jurisdiction, while state level agencies conduct wholesale and processed food inspections and have the authority to adopt new food safety regulations. New Hampshire, a mixed state, handles regulations and licensing at the state level while fourteen self-inspecting towns self-regulate their establishments and conduct inspections.

Ongoing Communication, Education, and Training

Targeted Education and Training

Two of the main targets for education and training on foodborne disease are clinicians and food handlers or managers. In the states that were involved in this analysis, the state office of epidemiology usually had the responsibility for educating clinicians, regardless of the state organizational control classification. Although local health departments in decentralized, mixed, and shared organizational control states generally assumed responsibility for educating food managers and handlers, this responsibility was often supplemented with education and training provided by the state food protection program, state department of agriculture, or environmental health services. Other groups targeted for education are industry, schools, the media, and the public.

Committees and Task Forces

Organized committees or task forces convene in certain states to discuss ongoing food safety issues and better prepare for future foodborne outbreaks. Examples include Colorado's Foodborne Illness Task Force, which meets throughout the year to discuss foodborne illness investigations. In Kentucky, Rapid Response Teams also meet regularly to discuss how to monitor and more effectively prevent future outbreaks. And in addition to quarterly meetings of their Outbreak Investigation Committee, the North Carolina State Department of Health and Human Services, along with the Department of Environment and Natural Resources, is initiating a Food Security Project to bring together federal and state agencies, academia, and

⁸ A recent CSTE survey of 48 states indicated that 79% of respondents produced formal reports of completed outbreak investigations. CSTE. (September 2002). National assessment of epidemiologic capacity in food safety: findings and recommendations. Atlanta, GA.

industry. This coalition aims to review existing regulations and protocols, identify gaps or overlaps in food safety coverage among the state's agencies, improve communication among all stakeholders, and develop educational programs designed to promote food safety and security.

Annual Meetings

Many states use yearly forums and conferences to discuss important food safety activities and challenges. These are often coordinated through the state epidemiology office, food protection program, or state environmental health services, and involve a wide range of individuals from the state and local levels.

Frequent Informal Contact

To prevent coordination problems during a foodborne outbreak, states are prioritizing regular, informal communications between state and local health agencies. Georgia's Notifiable Disease Section holds monthly conference calls with the state's nineteen districts, and has found that the frequent contact improves coordination as state and local responders immediately know who to call in the event of an outbreak. Likewise, seven counties in the metropolitan Denver area participate in monthly foodborne disease surveillance and investigation meetings with the Colorado Division of Epidemiology; the meetings have similarly helped food safety coordination in the state.

Newsletters and Press Releases

Printed educational materials have assisted states to regularly update state and local health officials on food safety issues. Indiana's Food Protection Program produces a quarterly food safety newsletter with guidance for industry and local health departments. Many states also develop materials for the media and the public, such as advisories on seasonal food safety issues.

Other Partners

Other partners - such as state medical societies, community colleges, universities, and restaurant associations - assist state and local public health agencies in the education of clinicians, food handlers, and food managers by offering programs for certification and/or continuing education credits.

North Carolina: Team Epi Aid

In food safety investigations and outbreak response, the number of qualified experts in the field may influence how quickly and efficiently an outbreak is contained. However, states are challenged by limited resources, competing demands, and public health workforce shortages. North Carolina has found an innovative solution: Team Epi Aid.

Created in January, 2003 and based on the University of Minnesota's "Team Diarrhea," Team Epi Aid is a collaborative public health effort between the NC State Department of Health and Human Services, Department of Environment and Natural Resources, and the University of North Carolina-Chapel Hill School of Public Health. Through this program, graduate students become members of the outbreak response team. This initiative provides state and local public health agencies with workforce resources without requiring additional funding (all of the participants are volunteers), and it allows the students to gain invaluable hands-on outbreak response and investigation experience.

This program is a recent initiative, and public health officials see it as an opportunity to train eager and skilled students and provide them with formal professional experience. Team Epi Aid participants typically are asked to conduct a variety of duties during an investigation. Students survey patients, analyze and interpret data, and assist with both surveillance and follow-up responsibilities. They are trained in areas such as: proper patient interviewing techniques; writing a valid and effective questionnaire; and developing various outbreak detection and follow-up skills.

Currently, 60 students with backgrounds in environmental health, health policy, and epidemiology, participate in the program, and officials hope that the Team will develop into its own organization in the near future. Eventually, the program will be led by students who will mentor and train new members. Officials would also like for Team Epi Aid to develop into part of the public health students' curriculum, giving everyone the opportunity to learn outbreak response skills.

INNOVATIVE APPROACHES AND SPECIAL FUNDING SOURCES

To address existing and new food safety challenges, states are using innovative methods and enhancing foodborne illness surveillance, response, and education. These approaches often have to operate under budget and resource constraints, and state public health agencies have developed creative methods to strengthen their food safety activities.

The North Carolina state Epidemiology Section enlists public health graduate students from the University of North Carolina, Chapel Hill to help investigate foodborne outbreaks. Student volunteers, with oversight from a faculty advisor, participate in outbreak investigations and assist with patient interviews and data entry and analysis. The program was initiated in January 2003 and allows North Carolina public health officials to increase their outbreak response capacity while providing public health graduate students with hands-on outbreak investigation experience.

Michigan implemented an innovative training program to help address public health workforce needs. The Department of Community Health provides food safety training to public health officials within the department, as well as officials in the Department of Corrections, the Department of Consumer and Industry Service, and the Tribal Health Agencies. Once participants complete the training, they possess regulatory authority over their jurisdictions and can call upon the Department of Community Health for additional support or resources if needed. These interdepartmental relationships allow the Department of Community Health to focus resources on other food safety areas while remaining confident that qualified officials will effectively address food safety issues in establishments such as prisons, hospitals, and on reservations.

Other states have looked beyond their own borders and examined how interstate collaborations could benefit and improve the nation's response to food safety challenges. Some states, such as Rhode Island, are leading the charge to establish regional surveillance teams and reporting mechanisms. Pooled resources and efforts from multiple states could greatly increase the capacity of food safety investigation teams and laboratories, provide consistent reporting and monitoring techniques across a region, and streamline the coordination and response to a foodborne outbreak.

These innovative projects are helping states to effectively respond to food safety issues despite current financial, workforce, and technical constraints. By sharing these examples, it is hoped that public health officials may draw from other states' experiences and examine whether these types of approaches could benefit food safety activities in their own state.

The Role of Special Funding Sources

Recognizing the importance of resources to support expanding public health food safety responsibilities, CDC has partnered with states and provided additional resources and funding dedicated to improve food safety activities. CDC-state cooperative agreements have tremendously increased states' capacity in this area.

In 1994, four state public health agencies received funding from CDC for the establishment of an Emerging Infections Program (EIP). The goal was to extend traditional public health activities to address the surveillance, prevention, and control of emerging infections. The EIP network has since expanded to ten sites: California, Colorado, Connecticut, Georgia, Maryland, Minnesota, New York, New Mexico, Oregon, and Tennessee.

One of the core projects conducted at every EIP site is the **Foodborne Diseases Active Surveillance Network (FoodNet)**. FoodNet uses active surveillance to monitor foodborne diseases; public health staff visit or correspond with laboratories and other records facilities to ensure that collected data are accurate and complete, instead of relying solely on traditional "passive" physician and laboratory reports to the health agency.

Five states in this analysis are EIP sites (CO, GA, MD, NY, OR). EIP funding has allowed them to invest in public health personnel whose time is dedicated to food safety issues. For example, the Oregon Department of Human Services hired a full-time environmental health specialist. Although the position is within the

state health agency, the environmental health specialist provides food safety training and assistance to local public health agencies. This link has greatly benefited the relationship and coordination between the state and local level.

Another EIP state, Georgia, has used FoodNet funds to enhance the state's surveillance and laboratory testing capacity for foodborne pathogens. The Georgia Public Health Laboratory also provides local public health agencies with training and specimen collection kits to assist them in their response to foodborne outbreak investigations and facilitate specimen submission to the state laboratory.

Although FoodNet funds have increased food safety capacities in the specific EIP states, the collective information gathered from the ten sites is also important for the nation's response to food safety issues. Pooled data from the ten EIP states help paint a national picture of the burden of foodborne disease, including information on the incidence of specific foodborne illnesses, food – pathogen associations, susceptible populations, and emerging foodborne pathogens. Additionally, EIP findings may lead to new national recommendations or guidelines for the prevention and control of foodborne illness.

Almost all states receive **Epidemiology and Laboratory Capacity (ELC)** Cooperative Agreement Funds specifically for food safety activities. Through these cooperative agreements, state health agencies have improved the public health infrastructure needed to effectively respond to food safety issues. Because the priority areas and infrastructure needs of each state differs, ELC funds have been directed to support a variety of activities including hiring of foodborne outbreak investigation personnel, electronic reporting, collection and transport of specimens, laboratory personnel and equipment, and expanding infectious disease training efforts to physicians and institutions statewide.

In many states, ELC funds have enabled states to hire public health personnel specifically for food safety activities. For example, South Carolina hired two full-time epidemiologists and a public health nurse consultant to focus solely on foodborne disease prevention and detection. The Michigan Department of Community Health also used ELC funds to hire a full-time foodborne disease epidemiologist, as well as establish a Foodborne Illness Response Strategy for Michigan (F.I.R.ST.). F.I.R.ST. is a collaborative effort between the state public health agency and the Michigan Department of Agriculture, and provides two-day, foodborne illness outbreak investigation training programs for local health officials. Participants earn continuing education credits and learn about current strategies in foodborne surveillance, detection, and response techniques, as well as foodborne outbreak investigation roles and legal requirements. The training program is designed to promote teamwork and consistency during all foodborne outbreaks.

NARMS, the National Antimicrobial Resistance Monitoring System, was established in 1996 within the framework of the ELC Program with the goal of monitoring antimicrobial resistance among foodborne pathogens such as *Salmonella*, *Salmonella* serotype Typhi, *Escherichia coli* O157, and *Shigella*. 50 state and four local public health laboratories participate in CDC's National Antimicrobial Resistance Monitoring System, and funds are provided for shipment of every 20th human isolate to CDC for antimicrobial susceptibility testing.

Some states, such as Maine, Maryland, Michigan, New Hampshire, and New York monitor or are developing state public health laboratory capacity to monitor antimicrobial resistance in foodborne pathogens isolated from clinical specimens. It is thought that antimicrobial use in food-producing animals may result in transmission of resistant pathogens to humans through the food supply. Therefore, monitoring antimicrobial resistance is important when considering regulatory policies for antimicrobial use in food-producing animals.

State public health laboratories also participate in another ELC-funded program, PulseNet. PulseNet is a national network of public health laboratories that performs DNA “fingerprinting” on foodborne bacteria. By labeling each “fingerprint” pattern and comparing the patterns through a CDC electronic database, related bacterial strains can be quickly identified. This critical program allows public health laboratories across the United States to compare the fingerprint patterns of bacteria isolated from ill people and suspected food, identify pattern similarities, and rapidly determine whether an outbreak is occurring, even if the affected persons are in geographically distinct areas.

CONCLUSIONS

Overall, interviewees thought their state systems provided an effective structure to respond to foodborne outbreaks, but cited reasons were as diverse as the organization of food safety activities in the states. Some appreciated that their state public health agencies had primary responsibility for all aspects of the outbreak response, and felt this helped to avoid confusion and lack of coordination across agencies. Other interviewees from states that divided the outbreak responsibilities among several agencies mentioned that the structure provided additional resources and partners to assist in the response. Although all states address the core outbreak response functions, this analysis reveals that the division of these responsibilities differs among and within states.

States are in varying stages of expanding their food safety activities, and are focusing on state-specific priority issues. The following points emerged as areas state public health agencies may want to consider for continued focus.

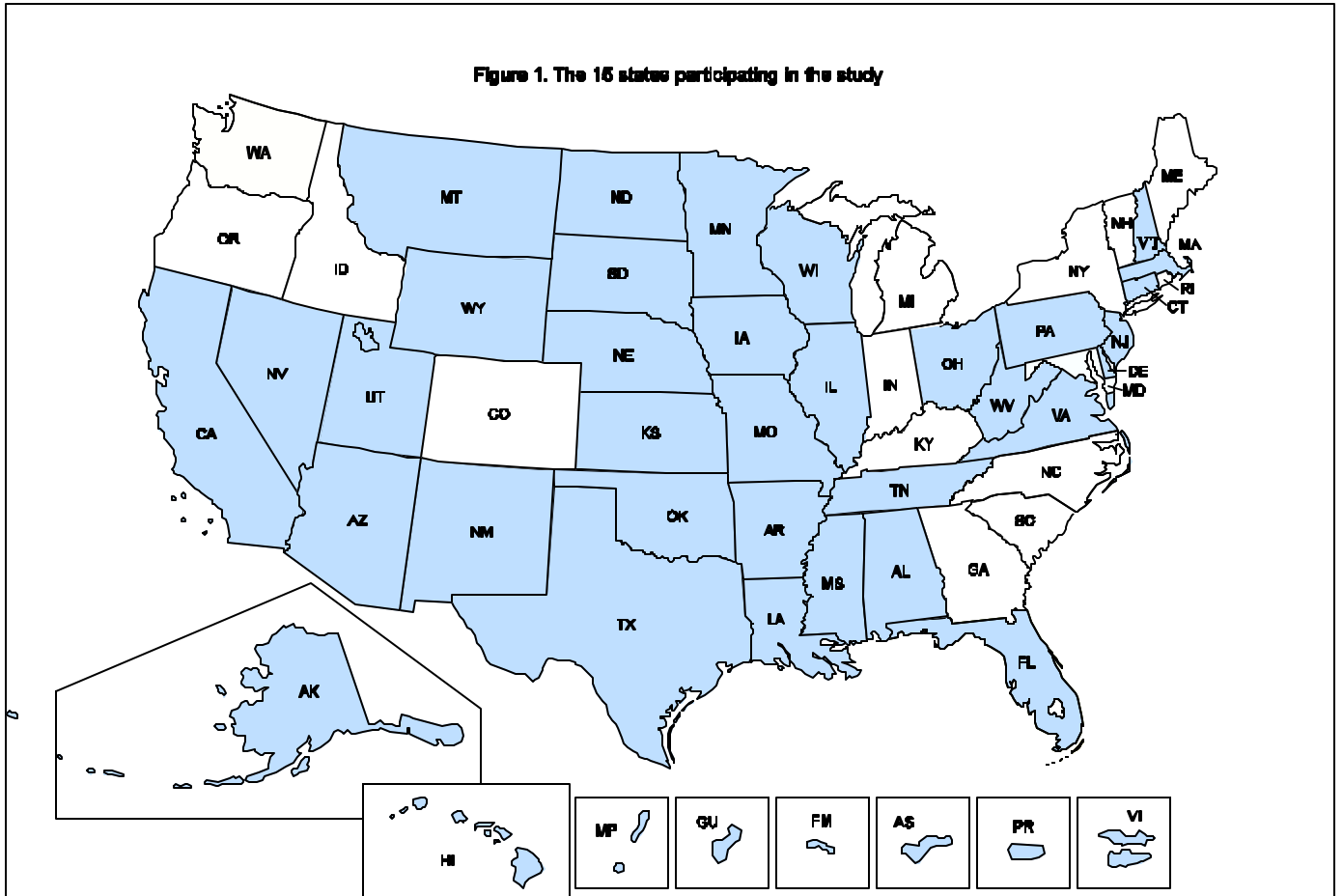
Areas for Continued Focus:

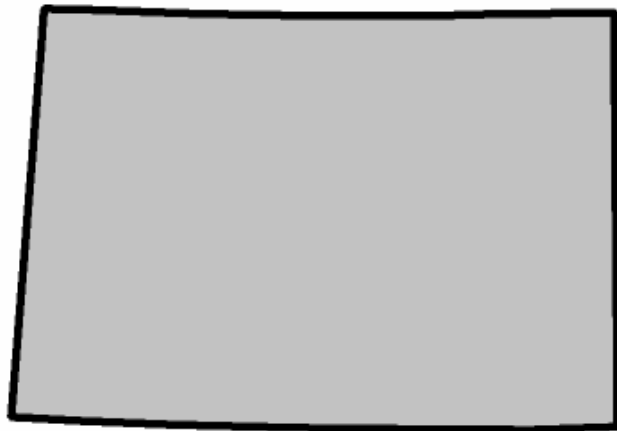
- 1. Communication and Coordination.** All states recognized the importance of continued communication among the responding agencies, and that communication breakdowns hinder an effective outbreak response. Due to the number of partners involved in all aspects of foodborne illness prevention and control, ongoing communication should be considered a priority and occur between the state public health agency and: (1) other relevant state agencies; (2) local public health agencies; (3) the clinical community; (4) other states; (5) federal agencies such as the CDC, FDA, USDA and FBI; (6) the media and public; and (7) governors, mayors, and state legislators.
- 2. Dedicated Food Safety Workforce.** Many states specified that EIP and ELC funds have allowed them to hire full-time public health professionals specifically for food safety activities. They stressed that a workforce dedicated to food safety issues is critical for effective prevention and control of foodborne outbreaks. Others indicated that workforce shortages have prevented their state from expanding the present level of food safety activities.
- 3. Funding and Resources.** The public health food safety role is expanding in response to changes in food production and importation, concerns about the security of the nation’s food supply, and emerging and re-emerging infectious diseases. Funding and resources for state food safety activities should take these expanding responsibilities into account to help shift the overall foodborne illness focus from “putting out fires” to “preventing them.” The results of this analysis indicate that funding must be flexible and acknowledge the difference in state organization of public health services and existing food safety capacities.

4. **Reporting and Outbreak Documentation.** Continued attention to complete reporting and documentation of foodborne outbreaks is needed to gain an accurate picture of the burden of foodborne illness at the local, state, and national levels. Documenting outbreak response steps and outcomes will also help identify gaps and intervention/regulation needs.
5. **Coordinated Internet-based Site for State and Local Health Officials.** Currently, all state and local health officials do not have a mechanism to easily access real-time information on state, regional, and national foodborne outbreaks and responses. An Internet-based site that provides information about ongoing outbreaks in other locales may help prevent and control multi-jurisdictional foodborne outbreaks. CDC's secure Epidemic Information Exchange Service (Epi-X) is a critical communication resource for state health agencies, and may help address this issue.
6. **State – Local, Public Health – Agriculture, and Regional collaborations.** Areas for new or continued collaboration should be explored to ensure the efficient use of resources and to expand state and local food safety capacity.
7. **Local Training.** Local foodborne outbreak training programs that emphasize current strategies in foodborne surveillance, detection, and investigation will increase the capacity to respond to outbreaks and improve consistency in response across a state.
8. **Federal Guidance and Clarification of Roles.** States indicated that coordinating with three different federal agencies (CDC, FDA, USDA) on food safety issues sometimes presented a challenge. Clarification of federal roles and increased federal-state communication may improve coordination during an outbreak.
9. **Shared Practices and Training Materials.** Many states have developed innovative food safety approaches and training materials that, if shared, could be beneficial to and adapted by other states.

Preventing and responding to foodborne outbreaks is a critical public health activity. In all states, the public health response is fluid and able to adapt to evolving food safety challenges by enlisting the help and resources of other state agencies, regional areas, and the federal government. It is hoped that the results of this analysis will aid in understanding the breadth of responsibilities and agencies involved in food safety activities, and help local, state, and federal efforts to ensure the safety of the nation's food supply.

Section B: State Matrices





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COLORADO* DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

RESPONSIBILITY AGENCY	OUTBREAK DETECTION	OUTBREAK INVESTIGATION	OUTBREAK COMMUNICATION
Colorado Department of Public Health and Environment			
<i>Disease Control and Environmental Epidemiology Division (Communicable Disease Epidemiology Program)</i>	<ul style="list-style-type: none"> Receives foodborne illness reports from local health departments, health care providers, and citizens Conducts communicable disease surveillance Maintains after-hours communicable disease on-call system 	<ul style="list-style-type: none"> Leads the outbreak investigation in counties without a local health department and for multi-county or multi-state outbreaks and provides outbreak support to local health departments when requested Establishes case definition Develops investigation survey Conducts patient interviews in counties without a local health department Coordinates submission of clinical and environmental specimens to state lab Reviews medical records Responsible for data entry Conducts active case finding in multi-county outbreaks 	<ul style="list-style-type: none"> Sends alerts to CDC and other states Sends Health Alert Notices to medical professionals, community hospitals and health systems, and local health agencies during outbreak State epidemiologist alerts the Governor and others during a large-scale foodborne outbreak
<i>Laboratory Services Division</i>	<ul style="list-style-type: none"> Routine serotyping of salmonella species and routine molecular typing (PFGE) of select bacterial foodborne pathogens 	<ul style="list-style-type: none"> Conducts clinical and environmental specimen testing Conducts molecular typing on outbreak specimens 	
<i>Consumer Protection Division</i>	<ul style="list-style-type: none"> Also receives foodborne illness reports Receives relevant food recall notices 	<ul style="list-style-type: none"> Investigates medical history of food handlers Inspects retail food establishment 	
Colorado Department of Agriculture			
Local Health Agencies			
	<ul style="list-style-type: none"> Receive foodborne illness reports from health care providers and citizens and notify state epidemiology division Conduct communicable disease surveillance 	<ul style="list-style-type: none"> Have primary responsibility for investigating outbreaks in their jurisdiction Conduct patient interviews Environmental health specialists and public health nurses collect clinical specimens Public health nurses assist in medical record review Assist with data entry Conduct active case finding in single county outbreaks Administer immune globulin for <i>Hepatitis A</i> PEP Environmental health officers assist investigation of food handler medical history 	<ul style="list-style-type: none"> Send Health Alert Notices to health care providers within their jurisdiction during outbreak

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, CONT'D

RESPONSIBILITY AGENCY	IDENTIFICATION OF PROBABLE OUTBREAK CAUSE	OUTBREAK INTERVENTION & FOLLOW-UP	INSPECTIONS, LICENSING & REGULATION	ONGOING FOOD SAFETY EDUCATION/ONGOING COMMUNICATION
Colorado Department of Public Health and Environment				
<i>Disease Control and Environmental Epidemiology Division</i>	<ul style="list-style-type: none"> Analyzes and interprets epidemiologic and laboratory data 	<ul style="list-style-type: none"> If leading an outbreak investigation, produces the final epidemiologic report 		<ul style="list-style-type: none"> Participates in the Foodborne Illness Task Force Holds monthly foodborne disease surveillance and investigation meetings for seven counties in metropolitan Denver Provides communicable disease electronic newsletter with updates on a weekly basis Educates public health students at the health sciences center
<i>Laboratory Services Division</i>	<ul style="list-style-type: none"> Conducts environmental specimen testing 			
<i>Consumer Protection Division</i>	<ul style="list-style-type: none"> Conducts food product tracebacks May collect environmental specimens 	<ul style="list-style-type: none"> Assists with food establishment closure Have primary responsibility for in-state recalls of contaminated food products Produces educational materials for media and public discussing outbreak results 	<ul style="list-style-type: none"> Assists with routine inspections for counties without a local health department Promulgates the rules and regulations for retail food establishments, food and dairy products Issues Certificates of Free Sale for exported products Board of Health Adopts regulations related to food and dairy products 	<ul style="list-style-type: none"> Provides food safety training materials for education/training sessions Coordinates Foodborne Illness Task Force, which meets at various times to discuss foodborne illness investigations Delivers annual press releases on specific food-related issues to media and public Participates in Foodborne Illness Task Force
Colorado Department of Agriculture				
	<ul style="list-style-type: none"> Assists in meat product tracebacks 			
Local Health Agencies				
	<ul style="list-style-type: none"> Collect environmental specimens Analyze and interpret outbreak data Have primary responsibility for food product tracebacks 	<ul style="list-style-type: none"> Have primary responsibility for food establishment closure Assist with in-state recalls of contaminated food products Produce autonomous summary report for outbreaks affecting their jurisdiction 	<ul style="list-style-type: none"> Have primary responsibility for routine inspections Conduct licensure for food establishments according to rules promulgated by Consumer Protection Division 	<ul style="list-style-type: none"> Provide education sessions for food managers and handlers Participate in Foodborne Illness Task Force Conduct post-outbreak seminars on lessons learned to food handlers and managers

*Colorado may be considered a decentralized state where the local health departments are autonomous in their investigation procedures. The Colorado Department of Public Health and Environment assists in foodborne outbreak investigations in counties that do not have a local health agency, or when requested by an established local health agency, or takes a lead role in multi-county outbreaks.



GEORGIA

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Notifiable Disease Section, Epidemiology Branch

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Georgia Public Health Laboratory

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Phone: (404) 327-7900
Fax: (404) 327-7919

Environmental Health Section

Environmental Health and Injury Prevention Branch

Phone: (404) 657-6534

Georgia Department of Agriculture

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Consumer Protection Field Forces

Phone: (404) 656-3627

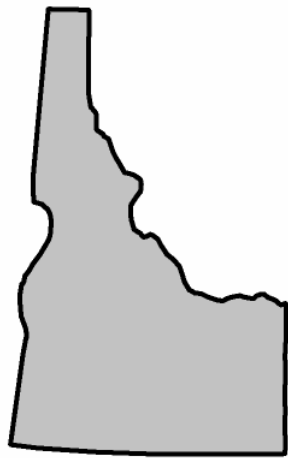
GEORGIA* DIVISION OF PUBLIC HEALTH

RESPONSIBILITY AGENCY	OUTBREAK DETECTION	OUTBREAK INVESTIGATION	OUTBREAK COMMUNICATION
Georgia Division of Public Health			
<i>Notifiable Disease Section, Epidemiology Branch</i>	<ul style="list-style-type: none"> Receives foodborne illness reports from citizens, clinicians, and laboratories Receives foodborne illness reports from local health departments, other states, CDC, and regulatory agencies Operates and receives foodborne illness reports through the 24-hour public health line 	<ul style="list-style-type: none"> Provides oversight of local foodborne outbreak investigations as necessary, and will lead the establishment of a case definition, clinical specimen collection, and data entry if districts or counties do not have the resources Develops investigation survey as needed Conducts patient interviews as needed Reviews medical records as needed Conducts active case finding as needed 	<ul style="list-style-type: none"> Forms an informal investigation team during large outbreaks Alerts CDC and other states as needed Assists in alerting local clinicians Assists in education of industry during an outbreak Send alerts to Governor as needed
<i>Georgia Public Health Laboratory</i>		<ul style="list-style-type: none"> Has primary responsibility for clinical specimen and food items testing Sends outbreak kits to districts to collect, , and transport selected pathogens (viruses, bacteria, parasites) Tests for antimicrobial resistance in foodborne pathogens (also referred to CDC lab) 	<ul style="list-style-type: none"> Participates in foodborne illness outbreak investigation team
<i>Environmental Health Section, Environmental Health and Injury Prevention Branch</i>	<ul style="list-style-type: none"> Supports the receipt of foodborne illness reports Receives foodborne illness reports from local health departments, private establishments, citizens and others 	<ul style="list-style-type: none"> Assists with survey development Collects environmental specimens 	<ul style="list-style-type: none"> Participates in foodborne illness outbreak investigation team
Georgia Department of Agriculture			
<i>Consumer Protection Field Forces</i>			
Nineteen Regional Public Health Districts			
	<ul style="list-style-type: none"> 157 counties and 19 districts receive foodborne illness reports from a variety of sources and then notify the state Epidemiology Branch 	<ul style="list-style-type: none"> Local districts or counties often have primary responsibility for foodborne outbreak investigations Establish case definition Conduct patient interviews Oversee immunoglobulin administration Collect clinical specimens Responsible for data entry Support active case finding Investigate medical history check of food handlers 	<ul style="list-style-type: none"> Participate in foodborne illness outbreak investigation team Send alerts to local clinicians District leading the investigation addresses the media Promote education before, during and after foodborne illness outbreak

GEORGIA DIVISION OF PUBLIC HEALTH, CONT'D

RESPONSIBILITY AGENCY	IDENTIFICATION OF PROBABLE OUTBREAK CAUSE	OUTBREAK INTERVENTION & FOLLOW-UP	INSPECTIONS, LICENSING & REGULATION	ONGOING FOOD SAFETY EDUCATION & COMMUNICATION
Georgia Division of Public Health				
<i>Notifiable Disease Section, Epidemiology Branch</i>	<ul style="list-style-type: none"> Personnel surveillance team analyzes and interprets outbreak data Supports food product tracebacks Responsible for database on foodborne related outbreaks in the State 	<ul style="list-style-type: none"> Clears/approves a general state outbreak report Implement appropriate control and prevention measures 	<ul style="list-style-type: none"> Supports and guides local authorities in routine inspections 	<ul style="list-style-type: none"> Provides educational sessions for medical professionals and food managers and handlers Assists in educating the media and public Discusses foodborne illness issues through: <ul style="list-style-type: none"> - regular meetings of the Metro Area Surveillance Task for district and state environmental and epidemiology officials - quarterly food safety meetings with regional agencies and CDC - monthly conference calls with the 19 districts
<i>Georgia Public Health Laboratory</i>	<ul style="list-style-type: none"> Conducts environmental specimen testing (or refer specimen to CDC lab or other research/reference lab depending on the test needed) 	<ul style="list-style-type: none"> Communicate findings regularly to state based professionals who will then notify the appropriate local health department in charge of the investigation. 		
<i>Environmental Health Section, Environmental Health and Injury Prevention Branch</i>	<ul style="list-style-type: none"> Conducts environmental specimen collection Inspections of establishments/food safety practices 		<ul style="list-style-type: none"> Supports local agencies in routine inspections Provides food establishment licensure Conducts food shipping inspections 	<ul style="list-style-type: none"> Assists in education of food handlers and managers Assists in education of industry
Georgia Department of Agriculture				
<i>Consumer Protection Field Forces</i>	<ul style="list-style-type: none"> Has primary responsibility for food product tracebacks Conduct food specimens testing 	<ul style="list-style-type: none"> Has primary responsibility for in-state recalls of contaminated food products 		
Nineteen Regional Public Health Districts				
	<ul style="list-style-type: none"> Collect clinical and environmental specimens Personnel surveillance team analyzes and interprets outbreak data Supports food product tracebacks 	<ul style="list-style-type: none"> Districts complete aggregate data document and submit to state offices 	<ul style="list-style-type: none"> Conduct routine inspections of food establishments Has primary responsibility for food establishment shutdowns 	<ul style="list-style-type: none"> Provide educational sessions for food handlers and managers Epidemiology offices assist in educating medical professionals Local Health Director educates media and public Local epidemiologists and environmental officials educate industry

*The organization of Georgia's state and local public health agencies may be characterized as shared organizational control. The Local Health Departments are under the authority of the state health agency as well as the local government and board of health.



IDAHO

Idaho Department of Health & Welfare

450 West State Street
Boise, Idaho 83720-0036
Phone: (208) 334-5500
Web site: <http://www.idahohealth.org/>

Office of Epidemiology
450 West State Street
P.O. Box 83720-0036
Boise, Idaho 83720

Bureau of Laboratories
Phone: (208) 334-5976

Food Protection Office
Phone: (208) 334-5936

Bureau of Emergency Medical Services
Phone: (208) 334-4000

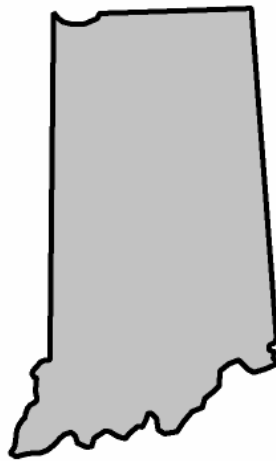
IDAHO* DEPARTMENT OF HEALTH AND WELFARE, DIVISION OF HEALTH

RESPONSIBILITY AGENCY	OUTBREAK DETECTION	OUTBREAK INVESTIGATION	OUTBREAK COMMUNICATION
Idaho Department of Health & Welfare			
<i>Office of Epidemiology</i>	<ul style="list-style-type: none"> Receives forwarded foodborne illness reports from the seven public health districts Receives foodborne illness reports from the 24 hour State Emergency Communications Center, a toll free disease reporting line, and sends a fax or hard copy disease report to alert the appropriate district health department 	<ul style="list-style-type: none"> Provides oversight to local investigations Provides support of case definition development, survey development, and data entry 	<ul style="list-style-type: none"> During an outbreak, forms an informal food safety team of state and local officials, and reviews any outbreak developments State Epidemiologist alerts CDC and other states of outbreak and may form epidemiology investigation response team Addresses media/public after epidemiological connection and lab confirmation are established State Epidemiologist may activate other state emergency responders if necessary
<i>Bureau of Laboratories</i>	<ul style="list-style-type: none"> Conducts clinical specimen testing and reports results to State Epidemiologist 	<ul style="list-style-type: none"> Conducts clinical specimen testing 	<ul style="list-style-type: none"> A participant in the state epidemiology response team to coordinate efforts of all participants in the outbreak response
<i>Food Protection Office</i>			<ul style="list-style-type: none"> A participant in the state epidemiology response team to coordinate efforts of all participants in the outbreak response
<i>Bureau of Emergency Medical Services</i>	<ul style="list-style-type: none"> Runs the 24 hour State Emergency Communications Center and forwards food safety calls to appropriate district health department(s) and Office of Epidemiology 		
Seven Public Health Districts			
	<ul style="list-style-type: none"> Receive foodborne reports from citizens, clinicians and laboratories 	<ul style="list-style-type: none"> Have jurisdiction over outbreak investigations Establish case definition Conduct Survey Development Conduct patient interviews Collect clinical specimens Review medical records Responsible for data entry Conduct active case finding Oversee immunoglobulin administration Investigate medical history of food handlers 	<ul style="list-style-type: none"> Send alerts to area clinicians Develop press releases

IDAHO DEPARTMENT OF HEALTH AND WELFARE, DIVISION OF HEALTH, CONT'D

RESPONSIBILITY AGENCY	IDENTIFICATION OF PROBABLE OUTBREAK CAUSE	OUTBREAK INTERVENTION & FOLLOW-UP	INSPECTIONS, LICENSING & REGULATION	ONGOING FOOD SAFETY EDUCATION & COMMUNICATION
Idaho Department of Health & Welfare				
<i>Office of Epidemiology</i>	<ul style="list-style-type: none"> Provides support for data entry, analysis and interpretation 	<ul style="list-style-type: none"> Reviews and approves outbreak documentation Submits E-FORS reports to CDC (Electronic Foodborne Outbreak Reporting System) 		<ul style="list-style-type: none"> Conducts two epidemiology conferences a year for state and local officials Uses CDC information packages and provides continuing medical education seminars to health professionals
<i>Bureau of Laboratories</i>	<ul style="list-style-type: none"> Conducts environmental specimen testing 			
<i>Food Protection Office</i>	<ul style="list-style-type: none"> Provides oversight to food product tracebacks 	<ul style="list-style-type: none"> Has primary responsibility for in-state recalls of contaminated food products Supports food establishment shut down 	<ul style="list-style-type: none"> Adopts food safety regulations Supports routine establishment inspections 	<ul style="list-style-type: none"> Provides oversight to the education of food managers and handlers
<i>Bureau of Emergency Medical Services</i>				
Seven Public Health Districts				
	<ul style="list-style-type: none"> Collect environmental specimens Have primary responsibility for food product traceback investigations 	<ul style="list-style-type: none"> Have primary responsibility for food establishment shut down Support in-state recalls of contaminated foods Compose E-FORS report to be submitted to CDC 	<ul style="list-style-type: none"> License food establishments Have primary responsibility for routine inspections to ensure regulatory compliance 	<ul style="list-style-type: none"> Have primary responsibility for educational sessions for food managers and handlers Educate food handlers and managers and industry as part of licensing exam

* The organization of Idaho's state and local public health agencies may be characterized as decentralized. Each regional, multi-county health agency is autonomously governed by a local board of health. The state contracts with the district health departments for performance of epidemiology and food inspections.



INDIANA

Indiana State Department of Health

2 North Meridian Street
Indianapolis, Indiana 46204

Web site: <http://www.state.in.us/isdh/index.htm>

Indiana Epidemiology Resources Program

Phone: (317) 233-7807

Fax: (317) 233-7378

Indiana Public Health Laboratory

635 North Barnhill Drive
Indianapolis, Indiana 46202-5120

Indiana Food Protection Program

2 North Meridian Street
Indianapolis, Indiana 46204

Phone: (317) 233-7360

Fax: (317) 233-7334

Indiana Office of Public Affairs

Phone: (317) 233-7254

Indiana Board of Animal Health

805 Beachway Drive, Suite 50
Indianapolis, Indiana 46224-7785

Phone: (317) 227-0300

Fax: (317) 227-0330

INDIANA* DEPARTMENT OF HEALTH

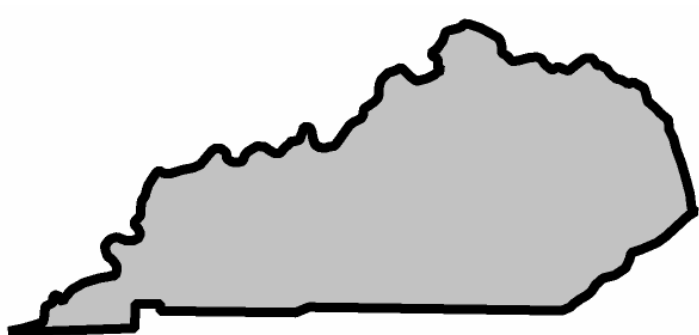
RESPONSIBILITY AGENCY	OUTBREAK DETECTION	OUTBREAK INVESTIGATION	OUTBREAK COMMUNICATION
Indiana Department of Health			
<i>Epidemiology Resources Program</i>	<ul style="list-style-type: none"> Assists in the receipt of foodborne illness reports 	<ul style="list-style-type: none"> Conducts active case finding Establishes case definition Develops investigation survey Assists with patient interviews Assists with medical records review Share data entry responsibilities Oversees immunoglobulin administration Analyzes patient interview information Assists local health departments with collection of clinical specimens 	<ul style="list-style-type: none"> Assists with the informal investigation team Assists in alerting clinicians Alerts CDC and other states of outbreaks Works with Commissioner's Office in determining notification of Governor
<i>Public Health Laboratory</i>		<ul style="list-style-type: none"> Conducts clinical specimen testing 	
<i>Food Protection Program</i>	<ul style="list-style-type: none"> Assists in the receipt of foodborne illness reports 	<ul style="list-style-type: none"> Assists with patient interviews Assists in medical records review Investigates medical history of food handlers 	<ul style="list-style-type: none"> Leads an informal investigation team during large scale outbreaks Provides information to media during and following an outbreak Informs the Governor during an emergency outbreak situation Works with Commissioner's Office in determining notification of Governor
<i>Office of Public Affairs</i>			
Indiana Board of Animal Health			
Local Health Agencies			
	<ul style="list-style-type: none"> Receive foodborne illness reports from citizens, clinicians and laboratories 	<ul style="list-style-type: none"> Local nurses assist with patient interviews Collect clinical specimens Have primary responsibility for medical records review Share data entry responsibilities Assists with immunoglobulin administration Has primary responsibility for investigating the medical history of food handlers Conducts environmental assessments (except on state property) May collect clinical specimens 	

INDIANA DEPARTMENT OF HEALTH , CONT'D

RESPONSIBILITY AGENCY	IDENTIFICATION OF PROBABLE OUTBREAK CAUSE	OUTBREAK INTERVENTION & FOLLOW-UP
Indiana Department of Health		
<i>Epidemiology Resources Program</i>	<ul style="list-style-type: none"> Collects environmental specimens Analyzes and interprets clinical data 	<ul style="list-style-type: none"> Produces final outbreak report
<i>Public Health Laboratory</i>	<ul style="list-style-type: none"> Tests environmental specimens 	
<i>Food Protection Program</i>	<ul style="list-style-type: none"> Supports food product tracebacks Field staff help with environmental specimen collection Analyzes and interprets data on food samples 	<ul style="list-style-type: none"> Has primary responsibility for in-state recalls of contaminated food products Has primary responsibility for shut down of food establishments located on state property
<i>Office of Public Affairs</i>		
Indiana Board of Animal Health		
		<ul style="list-style-type: none"> Assists with in-state recalls of contaminated meat, poultry, and dairy products
Local Health Agencies		
	<ul style="list-style-type: none"> Environmental officials collect environmental specimens 	<ul style="list-style-type: none"> Have primary responsibility for food establishment shutdown, except those on state property

INSPECTIONS, LICENSING & REGULATION	ONGOING FOOD SAFETY EDUCATION & COMMUNICATION
<ul style="list-style-type: none"> Adopts new food safety regulations 	<ul style="list-style-type: none"> Provides foodborne illness education and training to medical professionals
<ul style="list-style-type: none"> Assists with routine inspections on wholesale products Conducts routine inspections of food establishments located on state property Adopts new or amended food safety regulations 	<ul style="list-style-type: none"> Supports educational sessions for food managers and handlers Holds a food safety workshop for health officials every other year Produces a quarterly food safety newsletter with guidance for local health departments and industry
	<ul style="list-style-type: none"> Provides information and education to the media and public
<ul style="list-style-type: none"> Has primary responsibility for routine inspections on meat, dairy, and poultry products Assists with investigation of implicated licensed facilities 	
<ul style="list-style-type: none"> Conduct the majority of routine inspections to ensure regulatory compliance Have primary responsibility for food establishment licensing 	<ul style="list-style-type: none"> Provide educational sessions to food handlers and managers Provide resource information to schools and local consumer groups

*The organization of Indiana's state and local public health agencies may be characterized as decentralized. The State Department of Health responds as needed to support 94 local Health Districts.



KENTUCKY

Kentucky Department for Public Health

275 East Main St.

Frankfort, Kentucky 40621

Web site: <http://publichealth.state.ky.us/>

Division of Epidemiology and Health Planning

Phone: (502) 564-7243

Fax: (502) 564-0542

Division of Laboratory Services

100 Sower Boulevard

Frankfort, Kentucky 40601

Phone: (502) 564-4446

Fax: (502) 564-7019

Food Safety Branch,

Division of Public Health Protection and Safety

Phone: (502) 564-7181

Fax: (502) 564-6533

KENTUCKY* CABINET FOR HEALTH SERVICES, DEPARTMENT FOR PUBLIC HEALTH

RESPONSIBILITY AGENCY	OUTBREAK DETECTION	OUTBREAK INVESTIGATION	OUTBREAK COMMUNICATION
Kentucky Department for Public Health			
<i>Division of Epidemiology & Health Planning</i>	<ul style="list-style-type: none"> Receives foodborne illness reports from citizens, clinicians, laboratories, and local health departments Manages and receives foodborne illness reports through an Illness Hotline which is manned eight hours a day with 24 hour voicemail Kentucky Regional Poison Center receives hotline calls and forwards foodborne illness reports to the Division of Epidemiology 	<ul style="list-style-type: none"> Establishes case definition Develops investigation survey Provides guidance to local health departments during patient interviews Reviews medical records Assists and provides guidance for data entry Conducts active case finding Oversees the decision to administer immunoglobulin Holds shared responsibility for investigating medical history of food handlers 	<ul style="list-style-type: none"> Alerts clinicians, CDC and other states Mobilizes Rapid Response Team during a foodborne outbreak (Rapid Response Teams are located across the state, and are in place to respond to outbreaks) State Health Official is informed of foodborne outbreaks through regular distribution list E-mails, and alerts the Governor as needed
<i>Division of Laboratory Services</i>		<ul style="list-style-type: none"> Conducts clinical specimen testing 	
<i>Food Safety Branch, Division of Public Health Protection and Safety</i>	<ul style="list-style-type: none"> Supports the receipt of foodborne illness reports 	<ul style="list-style-type: none"> Assists with investigating the medical history of food handlers 	<ul style="list-style-type: none"> Educates the media and public about outbreak developments as needed
Local Health Departments			
	<ul style="list-style-type: none"> Receive foodborne illness reports from citizens, clinicians, laboratories, or through inspections and forward them to the KY Division of Epidemiology & Health Planning 	<ul style="list-style-type: none"> Conduct patient interviews Collect clinical specimens Have primary responsibility for data entry Administer immunoglobulin Have shared responsibility for investigating the medical histories of foodhandlers 	<ul style="list-style-type: none"> Local nurses and epidemiologists participate on Rapid Response Team

KENTUCKY CABINET FOR HEALTH SERVICES, DEPARTMENT FOR PUBLIC HEALTH, CONT'D

RESPONSIBILITY AGENCY	IDENTIFICATION OF PROBABLE OUTBREAK CAUSE	OUTBREAK INTERVENTION & FOLLOW-UP	INSPECTIONS, LICENSING & REGULATION	ONGOING FOOD SAFETY EDUCATION & COMMUNICATION
Kentucky Department for Public Health				
<i>Division of Epidemiology & Health Planning</i>	<ul style="list-style-type: none"> Analyzes and interprets outbreak data Supports food product tracebacks 	<ul style="list-style-type: none"> Assists with in-state recalls of contaminated food products Reviews and finalizes outbreak documentation report 		<ul style="list-style-type: none"> Provides guidance and templates for local health department educational sessions Provides information to medical professionals Educates the media and public
<i>Kentucky Laboratory Services</i>	<ul style="list-style-type: none"> Tests environmental specimens 			
<i>Food Safety Branch, Division of Public Health Protection and Safety</i>	<ul style="list-style-type: none"> Assists with analysis and interpretation of outbreak data Has primary responsibility for food product tracebacks Food Manufacturing Inspectors collect environmental specimens for incidents caused by processed foods 	<ul style="list-style-type: none"> Assists in food establishment shutdown Has primary responsibility for in-state recalls of contaminated food products Notifies laboratory and epidemiology divisions of in-state recalls of contaminated food products 	<ul style="list-style-type: none"> Provides guidance to local health departments for routine inspections, and has primary responsibility for inspections involving processed food Has the authority to adopt new food safety regulations Food Manufacturing Inspectors inspect warehouses at the pick-up and delivery stages of shipping and inspect all food wholesale processors 	<ul style="list-style-type: none"> Discuss outbreak response scenarios at regularly held professional associations meetings, e.g. Kentucky Association of Milk, Food and Environmental Sanitarians Conducts an annual retail food seminar and training which addresses food safety issues Provides information to medical professionals Assists in educating food handlers and managers Provides education to industry representatives
Local Health Departments				
	<ul style="list-style-type: none"> Collect environmental specimens from restaurants, grocery stores, and home products Support food product tracebacks 	<ul style="list-style-type: none"> Assist in food establishment shutdown Assist with in-state recalls of contaminated food products Issue epidemiologic report summarizing outbreak 	<ul style="list-style-type: none"> Conduct routine inspections of retail facilities Provides food establishment licensure 	<ul style="list-style-type: none"> Have primary responsibility for education of food handlers and managers Provide information to local medical professionals Provide education to local media and the public

*The organization of Kentucky's state and local public health agencies may be characterized as shared. The local health departments are under the authority of the state health agency as well as the local government and board of health.



MAINE

Maine Department of Human Services, Bureau of Health

11 State House Station

Augusta, Maine 04333

Phone: (207) 287-8016

Web site: <http://www.state.me.us/dhs/boh/index.htm>

Infectious Disease Epidemiology Program, Division of Disease Control

11 State House Station

Augusta, Maine 04333

Phone: (207) 287-3960

Health & Environmental Testing Laboratory

12 State House Station

Augusta, Maine 04333-0010

Phone: 207-287-2727

Web site: http://www.state.me.us/dhs/welcome_to_dhs.htm

Communications Department

11 State House Station

Augusta, Maine 04333

Phone: (207) 287-8016

Division of Health Engineering

11 State House Station

Augusta, Maine 04333-0011

Phone: (207) 287-5338

Maine State Department of Agriculture

Food and Rural Resources

28 State House Station, Deering Building

Augusta, Maine 04333

Division of Quality Assurance & Regulations

Phone: (207) 287-2161

Department of Marine Resources

21 State House Station

Augusta, ME 04333

Phone: (207) 624-6550

Fax: (207) 624-6024

MAINE* DEPARTMENT OF HUMAN SERVICES, BUREAU OF HEALTH

RESPONSIBILITY AGENCY	OUTBREAK DETECTION	OUTBREAK INVESTIGATION	OUTBREAK COMMUNICATION
Maine Department of Human Services, Bureau of Health			
<i>Infectious Disease Epidemiology Program, Division of Disease Control</i>	<ul style="list-style-type: none"> Receives foodborne illness reports from citizens, clinicians, and laboratories Manages and receives foodborne illness reports through the 24 hour Disease Reporting Hotline 	<ul style="list-style-type: none"> State offices lead outbreak investigations Establishes case definition Develops investigation survey Conducts patient interviews Assists in clinical specimen collection Reviews medical records Responsible for data entry Conducts active case finding Investigates medical history of food handlers Regional epidemiologists are stationed in six different areas of the state and provide on-site capacity to address food safety issues 	<ul style="list-style-type: none"> Leads Food Safety Team in emergency outbreak situations Sends alerts to clinicians, CDC, and other states via the Health Alert Net work Releases information to media after confirming outbreak Informs Governor in emergency situations
<i>Health and Environmental Testing Laboratory</i>		<ul style="list-style-type: none"> Conducts clinical specimen testing Capable of some testing for antimicrobial resistance in foodborne pathogens 	
<i>Communications Department</i>			<ul style="list-style-type: none"> Provides updates to media and public during and after outbreaks
<i>Division of Health Engineering</i>			
Maine Department of Agriculture, Food & Rural Resources			
<i>Division of Quality Assurance and Regulations</i>			
Department of Marine Resources			
Clinic, Hospital, Private Laboratory			
		<ul style="list-style-type: none"> Collects clinical specimens Administers immunoglobulin Conducts active case finding Hospital labs assist in clinical specimen testing 	

MAINE DEPARTMENT OF HUMAN SERVICES, BUREAU OF HEALTH, CONT'D

RESPONSIBILITY AGENCY	IDENTIFICATION OF PROBABLE OUTBREAK CAUSE	OUTBREAK INTERVENTION & FOLLOW-UP	INSPECTIONS, LICENSING & REGULATION	ONGOING FOOD SAFETY EDUCATION & COMMUNICATION
Maine Department of Human Services, Bureau of Health				
<i>Infectious Disease Epidemiology Program, Division of Disease Control</i>	<ul style="list-style-type: none"> Analyzes and interprets outbreak data Supports food product tracebacks 	<ul style="list-style-type: none"> Produces an analytical outbreak report Assists with in-state recalls of contaminated food products 		<ul style="list-style-type: none"> Provides educational sessions for medical professionals Releases seasonal pamphlets to media and public State and regional epidemiologists meet once a month to discuss foodborne reports Meets regularly with Portland health officials
<i>Health and Environmental Testing Laboratory</i>	<ul style="list-style-type: none"> Conducts environmental specimen testing 			
<i>Communications Department</i>				
<i>Division of Health Engineering</i>	<ul style="list-style-type: none"> Collect environmental specimens Inspects suspected sites 	<ul style="list-style-type: none"> Have primary responsibility for food establishment shutdown 	<ul style="list-style-type: none"> Perform routine inspections Adopts new regulations Conducts routine inspections to ensure regulatory compliance Provides food establishment licensure for restaurants 	<ul style="list-style-type: none"> Participates in Food Safety Team Participate in Food Safety Team Has primary responsibility for educating food managers and handlers Provides information updates to industry
Maine Department of Agriculture, Food & Rural Resources				
<i>Division of Quality Assurance and Regulations</i>	<ul style="list-style-type: none"> Supports food product tracebacks 	<ul style="list-style-type: none"> Has primary responsibility for in-state recalls of contaminated food products 	<ul style="list-style-type: none"> Adopts new regulations Conducts routine inspections to ensure regulatory compliance Portland conducts inspections of establishments within the city Provides food establishment licensure for bakeries and grocery stores Has primary responsibility for food shipping inspections for bakeries, grocery stores, meat, poultry, etc. 	<ul style="list-style-type: none"> Provides educational sessions for food handlers and managers within their jurisdictions Provides education sessions to industry
Department of Marine Resources				
			<ul style="list-style-type: none"> Adopts shellfish regulations Has primary responsibility for shellfish food shipping inspections 	<ul style="list-style-type: none"> Educates shellfish industry
Clinic, Hospital, Private Laboratory				
	<ul style="list-style-type: none"> Assists with environmental specimen testing 			

*The organization of Maine’s state and local public health agencies may be characterized as centralized, except for Portland which possesses its own local health office and investigation capabilities.



MARYLAND

Maryland Department of Health & Mental Hygiene

201 W. Preston Street
Baltimore, Maryland 21201
Phone: (410) 767-6505
Fax: (410) 767-6489
Web site: <http://www.dhmh.state.md.us/>

Office of Epidemiology and Disease Control Program

201 West Preston Street, Third Floor
Baltimore, MD 21201
Phone: (410) 767-6700
Fax (410) 669-4215

Laboratories Administration

Phone: (410) 767-6100
Fax: (410) 333-5403

Information Resource Management Administration

201 West Preston Street
Baltimore, Maryland 21201

Office of Food Protection & Consumer Health Services

6 S. Paul Street
Baltimore, Maryland 21202
Phone: (410) 767-8440
Fax: (410) 333-8931

Maryland Department of Agriculture

50 Harry S. Truman Parkway
Annapolis, Maryland 21401-7080
Phone: (410) 841-5880
Fax: (410) 841-5914

MARYLAND* DEPARTMENT OF HEALTH AND MENTAL HYGIENE

RESPONSIBILITY AGENCY	OUTBREAK DETECTION	OUTBREAK INVESTIGATION	OUTBREAK COMMUNICATION
Maryland Department of Health and Mental Hygiene			
<i>Office of Epidemiology and Disease Control Programs</i>	<ul style="list-style-type: none"> Receives foodborne illness reports from citizens, clinicians, and laboratories and routes the reports to the appropriate local health agency Manages a 24 hour response capacity and forwards foodborne illness reports to the epidemiologist on call 	<ul style="list-style-type: none"> Provides leadership for and/or oversight of local foodborne outbreak investigations during multi-county outbreaks or on an as needed basis Takes responsibility for or collaborates on all outbreak investigation responsibilities in state-led investigations 	<ul style="list-style-type: none"> During state-led outbreak investigations, the Division of Outbreak Investigation convenes a formal team Sends alerts to clinicians, CDC, state Emergency Response System (ERS) and other states Informs the Governor of an outbreak if it involves interstate, large numbers of cases, or massive recalls Educates food handlers and managers during an outbreak
<i>Laboratories Administration</i>		<ul style="list-style-type: none"> State lab, along with three regional labs, conduct clinical specimen testing Tests for antimicrobial resistance in foodborne pathogens Receives assistance from University of MD to help with antimicrobial resistance testing in foodborne pathogens 	
<i>Information Resource Management Administration</i>			<ul style="list-style-type: none"> Provides technical support for automated alerting and blast fax systems to assure continuous availability
<i>Office of Food Protection and Consumer Health Services</i>			
Maryland Department of Agriculture			
Local Health Departments			
	<ul style="list-style-type: none"> Receives foodborne illness reports from citizens, clinicians, and laboratories Enters reports into Maryland Electronic Reporting System (MERS) Notifies State Health Department of outbreak 	<ul style="list-style-type: none"> Have primary responsibility for most investigations Notify state epidemiology program during an investigation and keep them apprised of developments Establish case definition in collaboration with state epidemiology program Develop investigation survey Conduct patient interviews Collect clinical specimens Review medical records Responsible for data entry Conduct active case finding Oversee immunoglobulin administration Local public health nurses investigate medical history of food handlers 	<ul style="list-style-type: none"> Participate on and contribute resources to state-led investigation teams

MARYLAND DEPARTMENT OF HEALTH AND MENTAL HYGIENE, CONT'D

RESPONSIBILITY AGENCY	IDENTIFICATION OF PROBABLE OUTBREAK CAUSE	OUTBREAK INTERVENTION & FOLLOW-UP	INSPECTIONS, LICENSING & REGULATION	ONGOING FOOD SAFETY EDUCATION & COMMUNICATION
Maryland Department of Health and Mental Hygiene				
<i>Office of Epidemiology and Disease Control Programs</i>	<ul style="list-style-type: none"> Has primary responsibility for data analysis and interpretation if outbreak is multi-county Reviews and approves local outbreak response reports 	<ul style="list-style-type: none"> If leading an outbreak investigation, develops the final report 		<ul style="list-style-type: none"> Coordinates annual meeting on communicable diseases, including foodborne illness topics Develops scripts for public "Hot Topics" call line
<i>Laboratories Administration</i>		<ul style="list-style-type: none"> Conducts environmental specimen testing 		
<i>Information Resource Management Administration</i>				
<i>Public Information Office</i>				<ul style="list-style-type: none"> Issues press releases, arranges press conferences, develops public informational materials in partnership with content experts
<i>Office of Food Protection and Consumer Health Services</i>	<ul style="list-style-type: none"> Has primary responsibility for food product tracebacks 	<ul style="list-style-type: none"> Has primary responsibility for in-state recalls of contaminated food products 	<ul style="list-style-type: none"> Promulgates regulations governing licensing of food processing and food service facilities Has primary responsibility for routine food processing establishment inspections Conducts food shipping inspections 	<ul style="list-style-type: none"> Educates food industry partners
Maryland Department of Agriculture				
	<ul style="list-style-type: none"> Conducts egg-related food product tracebacks 	<ul style="list-style-type: none"> Supports in-state recalls of eggs 	<ul style="list-style-type: none"> Performs routine inspections of egg facilities 	
Local Health Departments				
	<ul style="list-style-type: none"> Manage food establishment shut down Collect environmental specimens Analyze and interpret data for outbreaks affecting their jurisdiction 	<ul style="list-style-type: none"> Support in-state recalls of contaminated food products Develop final report for outbreaks affecting their jurisdiction 	<ul style="list-style-type: none"> Sanitarians provide establishment inspections for investigation teams Provide inspection and licensure for retail food establishments and food service facilities 	<ul style="list-style-type: none"> Community colleges in each locale provide required training for food managers and handlers Maryland State Medical Society educates medical professionals Educate consortium of dairy farming cooperatives, who ask for assistance

*The organization of Maryland's state and local public health agencies may be characterized as having centralized policy and procedure development with local implementation. Local health officials function as Deputy State Health Officers, and local health departments are units of the state health department. The Local Health Department will lead investigations in which they have the resources to manage while notifying the State Health Department of the situation and providing continuous updates.



MICHIGAN

Michigan Department of Community Health

320 South Walnut Street
Lewis Cass Building
Lansing, Michigan 48913
Phone: (517) 335-0267

Web site: <http://www.michigan.gov/mdch>

Communicable Disease and Immunization Division, Bureau of Epidemiology

3423 N. Martin Luther King Blvd
Lansing, Michigan 48909
Phone: (517) 335-8900

Bureau of Laboratories

3350 N. Martin Luther King Blvd
Lansing, Michigan 48906
Phone: (517) 335-8063

Michigan Department of Agriculture

525 West Allegan
P. O. Box 30017
Lansing, Michigan 48909
Phone: (517) 373-1052

Food & Dairy Division

Phone: (517) 373-1060

Laboratory Division

Phone: (517) 337-5040

Michigan Department of Consumer & Industry Services

611 West Ottawa Street
P. O. Box 30670
Lansing, Michigan 48909-8170
Phone: (517) 373-1870

Michigan Department of Corrections

206 E. Michigan Avenue
Grandview Plaza
P.O. Box 30003
Lansing, Michigan 48909

MICHIGAN* DEPARTMENT OF COMMUNITY HEALTH

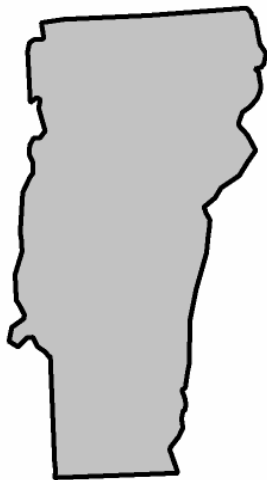
RESPONSIBILITY AGENCY	OUTBREAK DETECTION	OUTBREAK INVESTIGATION	OUTBREAK COMMUNICATION
Michigan Department of Community Health			
<i>Communicable Disease and Immunization Division, Bureau of Epidemiology</i>	<ul style="list-style-type: none"> Receives foodborne illness reports from local health departments Operates a 24 hour emergency line that can address food safety questions and issues 	<ul style="list-style-type: none"> Leads, multi-county foodborne outbreak investigations Supports outbreak investigations on reservations Assists with establishing case definition Provides guidance for survey development Assists with patient interviews in multi-county outbreaks Supports data entry in large, multi-county outbreaks 	<ul style="list-style-type: none"> Alerts CDC and other states Coordinates and leads a foodborne outbreak investigation team during a large outbreak Communicable disease specialist participates in foodborne outbreak investigation team Director of Community Health informs the Governor of a foodborne outbreak, as needed
<i>Bureau of Laboratories</i>		<ul style="list-style-type: none"> Has primary responsibility for clinical specimen testing Monitors for antimicrobial resistance in <i>Salmonella DT 104</i> and <i>Salmonella Newport</i> 	<ul style="list-style-type: none"> Lab technician participates in foodborne outbreak investigation team
Michigan Department of Agriculture			
<i>Food and Dairy Division</i>	<ul style="list-style-type: none"> Operates a 24 hour emergency line that can address food safety questions and issues 	<ul style="list-style-type: none"> Assists with patient interviews (as requested) Conducts assessments of food establishments under MDA jurisdiction (food processors, distributors, retail grocery stores) implicated by outbreak investigations 	<ul style="list-style-type: none"> Food Safety Response Unit staff and Deputy Division Director participate in foodborne outbreak investigation team Director of the Department of Agriculture informs the Governor of a foodborne outbreak, as needed
<i>Laboratory Division</i>			<ul style="list-style-type: none"> Lab technician participates in foodborne outbreak investigation team
Michigan Department of Consumer and Industry Services			
Michigan Department of Corrections			
Tribal Health Centers			
<ul style="list-style-type: none"> Investigate all foodborne outbreaks on reservations 			
45 Local Health Departments			
	<ul style="list-style-type: none"> Receive foodborne illness reports from citizens, clinicians, and laboratories Alerts MDA and MDCH staff 	<ul style="list-style-type: none"> Have primary responsibility for foodborne outbreak investigations in their jurisdiction Establish case definition Develop investigation survey Conduct patient interviews Collect clinical specimens Responsible for data entry Conduct active case finding Oversee immunoglobulin administration Investigate medical history of food handlers Regional laboratories test for <i>Salmonella</i>, <i>Shigella</i>, <i>E. coli</i>, and <i>Campylobacter</i> Conducts assessments of food establishments under LHD jurisdiction (food service) implicated by outbreak investigations 	<ul style="list-style-type: none"> Alert clinicians within jurisdiction Involved with foodborne outbreak investigation team for outbreaks in their jurisdiction

MICHIGAN DEPARTMENT OF COMMUNITY HEALTH, CONT'D

RESPONSIBILITY AGENCY	IDENTIFICATION OF PROBABLE OUTBREAK CAUSE	OUTBREAK INTERVENTION & FOLLOW-UP
Michigan Department of Community Health		
<i>Bureau of Epidemiology</i>	<ul style="list-style-type: none"> Supports analysis and interpretation of outbreak data 	
<i>Bureau of Laboratories</i>	<ul style="list-style-type: none"> Shares responsibility for environmental specimen testing 	
Michigan Department of Agriculture		
<i>Food and Dairy Division</i>	<ul style="list-style-type: none"> Supports analysis and interpretation of outbreak data Conducts food product tracebacks to suppliers 	<ul style="list-style-type: none"> Has primary responsibility for grocery store and processing plant shut down Provides guidance to industry during in-state recalls of contaminated food products Requires local health departments to submit a written report detailing the epidemiology and laboratory methodology, and outbreak investigation results
<i>Laboratory Division</i>	<ul style="list-style-type: none"> Tests environmental specimens 	
Michigan Department of Consumer and Industry Services		
Michigan Department of Corrections		
Tribal Health Centers		
45 Local Health Departments		
	<ul style="list-style-type: none"> Collect environmental specimens Analyze and interpret outbreak data Conduct food product tracebacks to food establishments 	<ul style="list-style-type: none"> Have primary responsibility for food establishment shut down in their jurisdiction Issue the written summary outbreak report

INSPECTIONS, LICENSING & REGULATION	ONGOING FOOD SAFETY EDUCATION & COMMUNICATION
	<ul style="list-style-type: none"> Conducts monthly food safety and outbreak response meetings for Southeast Michigan Epidemiology Committees Meets biannually with the Department of Agriculture to discuss food safety issues Conducts food safety educational sessions for medical professionals Develops seasonal food safety pamphlets for the media and public
	<ul style="list-style-type: none"> Participates in ongoing meetings with Bureau of Epidemiology to discuss outbreak response
<ul style="list-style-type: none"> Conducts routine inspections of grocery stores, processing plants, bakeries, food distributors, and retail establishments Leads legislative process for updating food safety regulations 	<ul style="list-style-type: none"> Provides food safety training to inspectors and regulatory officials Meets twice a year with Department of Community Health to discuss food safety response Assists with the development of seasonal food safety information for the media and public
<ul style="list-style-type: none"> Defines roles and responsibility for environmental specimen collection 	
<ul style="list-style-type: none"> Promulgates food safety regulations and conducts foodborne outbreak investigations in nursing homes and hospitals 	
<ul style="list-style-type: none"> Possesses regulatory authority for food safety in prisons 	
<ul style="list-style-type: none"> Conduct routine inspections for food services establishments Three jurisdictions currently require certification of food services establishment managers 	<ul style="list-style-type: none"> Provide food safety training for food services establishments Provide food safety educational sessions to medical professionals in their jurisdiction Assist in developing press releases on food safety issues for the media and public

*Michigan may be considered a decentralized state, with the 45 local health departments having primary responsibility for investigating foodborne outbreaks in their jurisdiction. The Department of Community Health and the Michigan Department of Agriculture provide guidance and support when requested, and may lead multi-county investigations.



NEW HAMPSHIRE

New Hampshire Department of Health and Human Services

129 Pleasant Street
Concord, New Hampshire 03301-6527
Phone: (603) 271-4688

Enteric Disease Epidemiology Program

6 Hazen Drive
Concord, New Hampshire 03301
Phone: (603) 271-4477
Toll Free: (800) 852-3345 x4477

Public Health Laboratory

6 Hazen Drive
Concord, New Hampshire 03301
Phone: (603) 271-4661
Fax: (603) 271-4783

Bureau of Food Protection

29 Pleasant Street
Concord, New Hampshire 03301-3857
Phone: (603) 271-4589
Fax: (603) 271-4859

New Hampshire Department of Agriculture, Markets & Food

25 Capitol St. State House Annex, P.O. Box 2042
Concord, New Hampshire 03302-2042
Phone: (603) 271-3551
Fax: (603) 271-1109

New Hampshire Department of Environmental Services

Hazen Drive, P.O. Box 95
Concord, New Hampshire 03302-0095
Phone: (603) 271-3503
Fax: (603) 271-2867

NEW HAMPSHIRE* DEPARTMENT OF HEALTH AND HUMAN SERVICES

RESPONSIBILITY AGENCY	OUTBREAK DETECTION	OUTBREAK INVESTIGATION	OUTBREAK COMMUNICATION
New Hampshire Department of Health and Human Services			
<i>Enteric Disease Epidemiology Program</i>	<ul style="list-style-type: none"> Receives foodborne illness reports from citizens, clinicians, laboratories, restaurants, and Bureau of Food Protection 	<ul style="list-style-type: none"> Leads all outbreak investigations and has oversight of investigations in Manchester and Nashua Establishes case definition Develops investigation survey Interviews patients Collects clinical specimen Reviews medical records Responsible for data entry Conducts active case finding Administers immunoglobulin (assisted by private clinicians) Investigates medical history of food handlers 	<ul style="list-style-type: none"> Establishes a formal investigation team Alerts other states and CDC Notifies public of outbreak as needed Informs Governor of serious, large-scale outbreaks
<i>Public Health Laboratory</i>		<ul style="list-style-type: none"> Conducts clinical specimen testing (private labs may assist) Monitors for antimicrobial resistance in <i>Salmonella Newport</i>, <i>DT 104</i>, and <i>Campylobacter</i> 	
<i>Bureau of Food Protection</i>			
New Hampshire Department of Agriculture, Markets & Food			
New Hampshire Department of Environmental Services			
Local Health Agencies			
	<ul style="list-style-type: none"> Manchester and Nashua local health agencies receive foodborne illness reports 	<ul style="list-style-type: none"> Manchester and Nashua: <ul style="list-style-type: none"> lead their own investigation team during outbreak develop investigation survey review medical records conduct active case finding administer immunoglobulin conduct patient interviews collect clinical specimens responsible for data entry investigate the medical history of food handlers 	<ul style="list-style-type: none"> Alert local clinicians to outbreak

NEW HAMPSHIRE DEPARTMENT OF HEALTH AND HUMAN SERVICES, CONT'D

RESPONSIBILITY AGENCY	IDENTIFICATION OF PROBABLE OUTBREAK CAUSE	OUTBREAK INTERVENTION & FOLLOW-UP	INSPECTIONS, LICENSING & REGULATION	ONGOING FOOD SAFETY EDUCATION & COMMUNICATION
New Hampshire Department of Health and Human Services				
<i>Enteric Disease Epidemiology Program</i>	<ul style="list-style-type: none"> Conducts food product tracebacks Analyzes and interprets outbreak data 	<ul style="list-style-type: none"> Produces or approves summary outbreak report Conducts in-state recall of contaminated food products Oversees food establishment shut down 	<ul style="list-style-type: none"> Conducts routine inspections to ensure regulatory compliance Adopts new regulations 	<ul style="list-style-type: none"> Conducts educational sessions for medical professionals Educates the media and public Educates state legislators on foodborne outbreak issues Coordinates semi-annual meetings for senior state and local public health officials
<i>Public Health Laboratory</i>	<ul style="list-style-type: none"> Tests environmental specimens 			
<i>Bureau of Food Protection</i>	<ul style="list-style-type: none"> Collects environmental specimens Conducts tracebacks Conducts spot food safety inspections Provides facility education 	<ul style="list-style-type: none"> Assures compliance with outbreak recommendations 	<ul style="list-style-type: none"> Provides licensure for food establishments Conducts food shipping inspections 	<ul style="list-style-type: none"> Sponsors educational session for food managers and handlers Educates interested industry partners Organizes and manages the NH Safe Food Coalition
New Hampshire Department of Agriculture, Markets & Food				
			<ul style="list-style-type: none"> Performs routine inspections ensuring regulatory compliance for meat Adopts new regulations 	
New Hampshire Department of Environmental Services				
			<ul style="list-style-type: none"> Conducts inspections and recall for bottled water and summer camp outbreaks 	
Local Health Agencies				
	<ul style="list-style-type: none"> Collect environmental specimens Analyze and interpret outbreak data 	<ul style="list-style-type: none"> May produce a summary report for outbreaks within their jurisdiction and forward this to the state division of epidemiology for approval Fourteen self-inspecting towns have authority to shut down food establishments 	<ul style="list-style-type: none"> Fourteen self-inspecting towns self-regulate establishments and conduct routine inspections 	<ul style="list-style-type: none"> Fourteen self-inspecting towns: <ul style="list-style-type: none"> Educate local food handlers and managers educate industry

*The organization of New Hampshire's state and local public health agencies may be characterized as mixed where local health departments are under the authority of the state health agency, as well as the local government and board of health. There are fourteen self-inspecting towns which have regulatory and inspection capabilities.



NEW YORK

New York State Department of Health

Tower Building
Empire State Plaza
Albany, New York 122737-0001
Web site: <http://www.health.state.ny.us>

*Bureau of Communicable Disease Control,
Division of Epidemiology
651 Corning Towner, ESP
Albany, NY 12237-0627
Phone: (518) 473-4436
Fax: (518) 474-7381*

*Bureau of Community Sanitation and Food Protection,
Center for Environmental Health
547 River Street, Room 515
Troy, New York 12180-2216
Phone: (518) 402-7510
Fax: (518) 402-7609*

*Wadsworth Center Laboratories
Empire State Plaza, Box 509
Albany, New York 12201-0509
Phone: (518) 474-2160*

New York State Department of Environmental Conservation

625 Broadway
Albany, NY 12233
Phone: (518) 402-8540
Fax: (518) 402-9016

New York State Department of Agriculture and Markets

1 Winners Circle
Albany, NY 12235
Phone: 1-800-554-4501

NEW YORK* STATE DEPARTMENT OF HEALTH

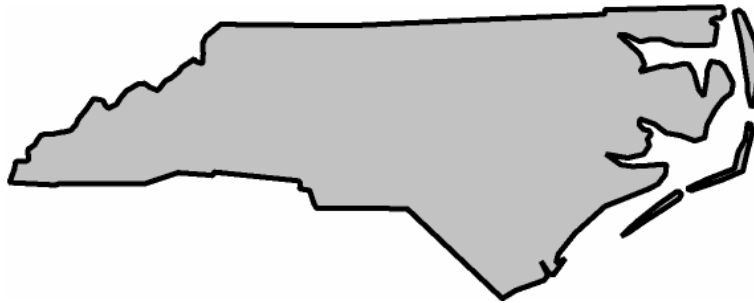
RESPONSIBILITY AGENCY	OUTBREAK DETECTION	OUTBREAK INVESTIGATION	OUTBREAK COMMUNICATION
New York State Department of Health			
<i>Bureau of Communicable Disease Control, Division of Epidemiology</i>		<ul style="list-style-type: none"> • Shares investigation lead during multi-county or multi-state foodborne outbreaks, particularly with assisting patients 	<ul style="list-style-type: none"> • Alerts clinicians, CDC, and other states • Participates in food safety outbreak conference call sessions during incident • During a multi-county foodborne outbreak, informs the Office of Public Affairs so that it might alert the public
<i>Bureau of Community Sanitation and Food Protection, Center for Environmental Health</i>	<ul style="list-style-type: none"> • Notified of an outbreak by regional offices or local health departments 	<ul style="list-style-type: none"> • Shares investigation lead during multi-county or multi-state foodborne outbreaks, particular when communicating with other agencies 	<ul style="list-style-type: none"> • Participates on foodborne outbreak conference calls • Provides outbreak recommendations to be submitted to the Office for Public Affairs
<i>Wadsworth Center Laboratories</i>	<ul style="list-style-type: none"> • Monitors isolate submissions for unusual patterns and alerts center for environmental health and the bureau of communicable disease control 	<ul style="list-style-type: none"> • Conducts clinical specimen testing for specific foodborne pathogens, such as botulism (hospitals and private labs conduct routine enteric testing) 	<ul style="list-style-type: none"> • Participates on foodborne outbreak conference calls
<i>Five Regional Offices</i>	<ul style="list-style-type: none"> • Receive notification of outbreaks from local health departments and relay this information to other state Department of Health offices 		<ul style="list-style-type: none"> • Participates on foodborne outbreak conference calls
New York State Department of Environmental Conservation			
			<ul style="list-style-type: none"> • Participates on foodborne outbreak conference calls
New York State Department of Agriculture and Markets			
			<ul style="list-style-type: none"> • Participates on foodborne outbreak conference calls
Local Health Departments			
	<ul style="list-style-type: none"> • Receive foodborne illness reports from citizens, clinicians, and laboratories 	<ul style="list-style-type: none"> • Establish case definition • Local environmental officials or epidemiologists develop investigation survey • Interview patient • Collect clinical specimens • Review medical records • Responsible for data entry • Conduct active case finding • Public health nurses administer immunoglobulin • Investigate the medical history of food handlers 	<ul style="list-style-type: none"> • Participate on foodborne outbreak conference calls

NEW YORK STATE DEPARTMENT OF HEALTH , CONT'D

RESPONSIBILITY	IDENTIFICATION OF PROBABLE OUTBREAK CAUSE	OUTBREAK INTERVENTION & FOLLOW-UP
AGENCY		
New York State Department of Health		
<i>Bureau of Communicable Disease Control, Division of Epidemiology</i>		
<i>Bureau of Community Sanitation and Food Protection, Center for Environmental Health</i>		<ul style="list-style-type: none"> Clears local health department foodborne outbreak report and sends the report to CDC
<i>Wadsworth Center Laboratories</i>	<ul style="list-style-type: none"> Conducts environmental specimen testing 	
<i>Five Regional Offices</i>		
New York State Department of Environmental Conservation		
		<ul style="list-style-type: none"> Conducts tracebacks for shellfish
New York State Department of Agriculture and Markets		
	<ul style="list-style-type: none"> Has primary responsibility for food product tracebacks 	<ul style="list-style-type: none"> Conducts in -state recalls of contaminated processed foods
Local Health Departments		
	<ul style="list-style-type: none"> Collect environmental specimens Four to five counties conduct environmental specimen testing at local laboratories Analyze and interpret outbreak data Assist with food product tracebacks 	<ul style="list-style-type: none"> Develop final outbreak summary document Have primary responsibility for food establishment shutdown

INSPECTIONS, LICENSING & REGULATION	ONGOING FOOD SAFETY EDUCATION & COMMUNICATION
	<ul style="list-style-type: none"> Provides seasonal information media advisory on safe food preparation and other food safety issues
<ul style="list-style-type: none"> Proposes new food safety regulations to state legislature Leads food safety code revision process 	<ul style="list-style-type: none"> Travel to each county once a year to discuss public health issues, including food safety and outbreak response Provides seasonal information media advisory on safe food preparation and other food safety issues
<ul style="list-style-type: none"> Regulates shellfish products 	
<ul style="list-style-type: none"> Regulates processed and manufactured foods, as well as grocery stores Conducts routine inspections of market and grocery facilities Has primary responsibility for food shipping inspections 	
<ul style="list-style-type: none"> Conduct routine inspections of food establishments Provide licensure for food establishments within jurisdiction 	<ul style="list-style-type: none"> Provide educational sessions for food handlers and managers

*New York may be characterized as a decentralized state where local health departments and regional health offices have primary responsibility for investigating foodborne outbreaks within their jurisdiction. The State Department of Health leads multi-county or multi-state foodborne outbreak investigations.



NORTH CAROLINA

North Carolina State Department of Health and Human Services

101 Blair Drive, 2001 Mail Service Center
Raleigh, North Carolina 27699-2001
Phone: (919) 733-4534

General Communicable Disease Control Branch, Epidemiology Section

1902 Mail Service Center
Raleigh, North Carolina 27699-1902
Phone: (919) 733-3421

Office of Public Health Preparedness and Response

Seven Regional Surveillance Teams
Phone: (919) 715-6734

State Laboratory of Public Health

306 N. Wilmington Street, P. O. Box 28047
Raleigh, North Carolina 27601-8047
Phone: (919) 733-7834

North Carolina State Department of Environment and Natural Resources

1601 Mail Service Center
Raleigh, North Carolina 27699-1601
Phone: (919) 733-4984

North Carolina State Department of Agriculture and Consumer Services

1 West Edenton Street, P. O. Box 27647
Raleigh, North Carolina 27601
Phone: (919) 733-7125
Fax: (919) 733-1141

Food and Drug Protection Division

4000 Reedy Creek Road
Raleigh, North Carolina 27607
Phone: (919) 733-7366
Fax: (919) 733-6801

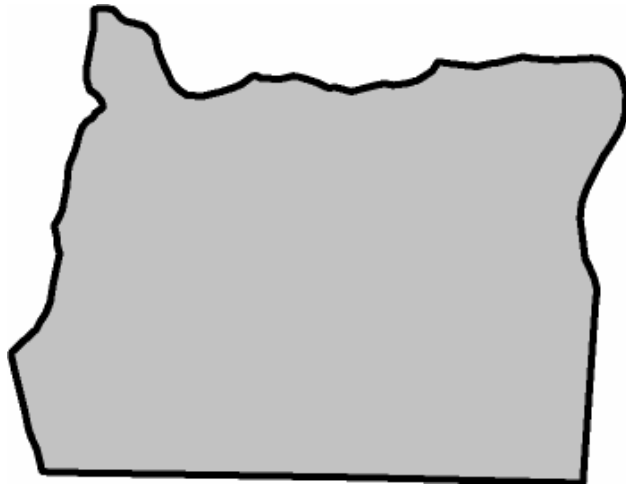
NORTH CAROLINA* DEPARTMENT OF HEALTH AND HUMAN SERVICES

RESPONSIBILITY AGENCY	OUTBREAK DETECTION	OUTBREAK INVESTIGATION	OUTBREAK COMMUNICATION
North Carolina Department of Health and Human Services			
<i>General Communicable Disease Control Branch, Epidemiology Section</i>	<ul style="list-style-type: none"> Receives foodborne illness reports from citizens, clinicians, and laboratories 24/7 coverage for foodborne illness reports or outbreaks 	<ul style="list-style-type: none"> Provides leadership and oversight of multi-county foodborne outbreaks, and provides outbreak investigation support to regional surveillance teams and/or local health departments as requested Works with University of North Carolina SPH volunteers as needed Requests CDC outbreak investigation assistance (EpiAid) as needed 	<ul style="list-style-type: none"> During a large or multi-county outbreak, mobilizes an outbreak investigation team including representatives from DENR, the state lab, and local communicable disease nurses State epidemiologist alerts CDC and other states as needed State Health Official will alert the Governor in the event of a large, widespread outbreak
<i>Seven Regional Surveillance Teams, Office of Public Health Preparedness and Response</i>		<ul style="list-style-type: none"> Seven public health regional surveillance teams provide outbreak support to local health departments as needed 	
<i>State Laboratory of Public Health</i>	<ul style="list-style-type: none"> PulseNet participant 	<ul style="list-style-type: none"> Conducts clinical specimen testing (private labs may assist with clinical specimen testing) May send specimens to regional labs in other states for antimicrobial resistance testing 	
Department of Environment and Natural Resources (DENR)			
<i>Dairy and Food Protection Branch</i>		<ul style="list-style-type: none"> Eight regional food safety specialists provide staff and consultation to local health departments as needed 	<ul style="list-style-type: none"> Food safety health educator provides fact sheets, posters, brochures and other materials as needed
North Carolina Department of Agriculture and Consumer Services			
<i>Food and Drug Protection Division</i>			
Local Health Agencies			
	<ul style="list-style-type: none"> Use "home rule" method and encourage doctors to notify their local health agencies of an outbreak Are required to send notification of an outbreak to the state epidemiology section (per NCGS 130A) 	<ul style="list-style-type: none"> Have primary responsibility for most investigations Establish case definition Develop investigation survey Conduct patient interviews Collect clinical specimens Review medical records Responsible for data entry Conduct active case finding through media contacts Oversee immunoglobulin administration Local Environmental Health Department conducts medical history of food handlers 	<ul style="list-style-type: none"> Alert clinicians Provide outbreak information to local media, public and food handlers and managers as needed

NORTH CAROLINA DEPARTMENT OF HEALTH AND HUMAN SERVICES, CONT'D

RESPONSIBILITY AGENCY	IDENTIFICATION OF PROBABLE OUTBREAK CAUSE	OUTBREAK INTERVENTION & FOLLOW-UP	INSPECTIONS, LICENSING & REGULATION	ONGOING FOOD SAFETY EDUCATION & COMMUNICATION
North Carolina Department of Health and Human Services				
<i>General Communicable Disease Control Branch, Epidemiology Section</i>	<ul style="list-style-type: none"> Leads or assists with outbreak data analysis and interpretation as needed 	<ul style="list-style-type: none"> Submits outbreak report to CDC through E-FORS (Electronic Foodborne Outbreak Reporting System) 	<ul style="list-style-type: none"> Adopts regulations on emerging diseases 	<ul style="list-style-type: none"> New Food Security Project, a (projected to soon be) legislatively-funded food safety and emergency operations program will: review all regulations, identify gaps and overlaps in coverage, and coordinate activity between all agencies Outbreak Investigation Committee holds quarterly meetings to discuss procedures and resources
<i>Seven Regional Surveillance Teams, Office of Public Health Preparedness and Response</i>	<ul style="list-style-type: none"> Assists with outbreak data analysis and interpretation as needed 			
<i>State Laboratory of Public Health</i>	<ul style="list-style-type: none"> Tests environmental specimens Tests human specimens 	<ul style="list-style-type: none"> Rules out carriers (i.e., <i>Typhoid</i>) 		<ul style="list-style-type: none"> Participates in Outbreak Investigation Committee quarterly meetings
Department of Environment and Natural Resources (DENR)				
	<ul style="list-style-type: none"> Assists with environmental specimen collection 	<ul style="list-style-type: none"> Has primary responsibility for recalls of dairy products Has primary responsibility for recalls of shellfish products 	<ul style="list-style-type: none"> Inspects restaurants Performs food shipping inspections for beef Performs food shipping inspections for shellfish Adopts regulations for restaurants 	<ul style="list-style-type: none"> Participates in Outbreak Investigation Committee quarterly meetings Chairs Outbreak Investigation Committee Team Trains restaurants in shellfish and other food safety areas
North Carolina Department of Agriculture and Consumer Services				
<i>Food and Drug Protection Division</i>	<ul style="list-style-type: none"> Has primary responsibility for food product tracebacks 	<ul style="list-style-type: none"> Has primary responsibility for in-state recalls of most contaminated packaged and processed food products 	<ul style="list-style-type: none"> Provides routine inspections for groceries and specialty food establishments 	
Local Health Agencies				
	<ul style="list-style-type: none"> Environmental health specialists collect environmental specimens Analyze and interpret outbreak data 	<ul style="list-style-type: none"> Produce outbreak summary report and forwards to state epidemiology section Notify state agencies of potential recalls Local Health Director conducts food establishment shut down 	<ul style="list-style-type: none"> Local environmental health officials provide licensure for food establishments Environmental health officials conduct routine inspections of food establishments 	<ul style="list-style-type: none"> Local environmental health officials provide educational sessions for food handlers and managers Train medical professionals, media/public and food handlers and managers Train restaurants within their jurisdiction Participate in Outbreak Investigation Committee quarterly meetings

* The organization of North Carolina's state and local public health agencies may be characterized as decentralized. Local health agencies have primary responsibility for foodborne outbreak investigations confined to their jurisdiction, and the state Department of Health and Human Services provides support and oversight as needed.



OREGON

Oregon State Department of Human Services

500 Summer Street, N.E. (E15)

Salem, Oregon 97310

Phone: (503) 945-5944

Web site: <http://www.ohd.hr.state.or.us/>

Oregon Acute and Communicable Disease Prevention (ACDP).

Office of Disease Prevention and Epidemiology

Phone: (503) 731-4023

Fax: (503) 731-4082

Oregon State Public Health Laboratory

Portland State University

1717 SW 10th Avenue Science II Building

Portland, Oregon 97201

Phone: (503) 229-5882

Fax: (503) 229-5682

Food Protection Program, Environmental Services and Consultation

Phone: (503) 731-4012

Oregon Department of Agriculture

Agriculture Building

635 Capitol Street, N.E.

Salem, Oregon 97301-2532

Phone: (503) 986-4552

Fax: (503) 986-4750

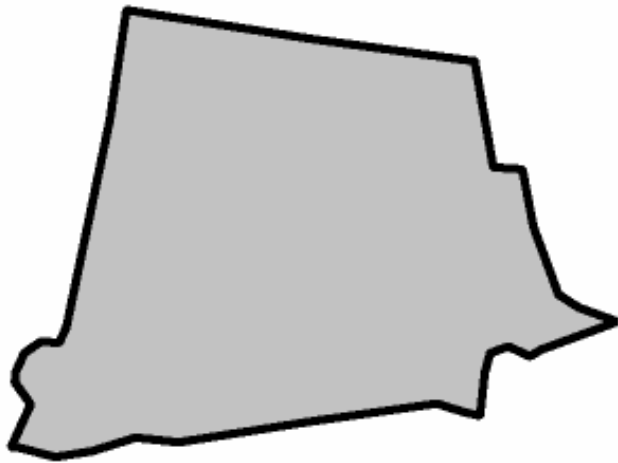
OREGON* DEPARTMENT OF HUMAN SERVICES

RESPONSIBILITY AGENCY	OUTBREAK DETECTION	OUTBREAK INVESTIGATION	OUTBREAK COMMUNICATION
Oregon Department of Human Services			
<i>Acute and Communicable Disease Prevention (ACDP), Office of Disease Prevention and Epidemiology</i>	<ul style="list-style-type: none"> Receives foodborne illness reports from citizens, clinicians, and laboratories On-call epidemiologist receives any outbreak reports 	<ul style="list-style-type: none"> Leads and guides foodborne outbreak investigations Establishes case definition Designs investigation questionnaire Conducts patient interviews Reviews medical records Responsible for data entry Conducts active case finding 	<ul style="list-style-type: none"> Establishes and leads outbreak investigation team Alerts clinicians, CDC, and other states State Health Official will determine need to inform the Governor in case of emergency outbreak
<i>Oregon State Public Health Laboratory</i>		<ul style="list-style-type: none"> Tests clinical specimens (Multnomah County also has this capability) Participates in CDC's NARMS program and monitors for antimicrobial resistance in foodborne pathogens 	
<i>Food Protection Program, Environmental Services and Consultation</i>		<ul style="list-style-type: none"> Conducts patient interviews 	<ul style="list-style-type: none"> Participates in outbreak team
Oregon Department of Agriculture			
			<ul style="list-style-type: none"> Participates in outbreak team
County Health Agencies			
	<ul style="list-style-type: none"> Receive foodborne illness reports from citizens, clinicians, and laboratories and reports to state epidemiology program 	<ul style="list-style-type: none"> Assist in patient interviews Lead clinical specimen collection Assist active case finding Oversee immunoglobulin administration Investigate medical history of food handlers 	<ul style="list-style-type: none"> Participate in outbreak team

OREGON DEPARTMENT OF HUMAN SERVICES, CONT'D

RESPONSIBILITY AGENCY	IDENTIFICATION OF PROBABLE OUTBREAK CAUSE	OUTBREAK INTERVENTION & FOLLOW-UP	INSPECTIONS, LICENSING & REGULATION	ONGOING FOOD SAFETY EDUCATION & COMMUNICATION
Oregon Department of Human Services				
<i>Acute and Communicable Disease Prevention (ACDP), Office of Disease Prevention and Epidemiology</i>	<ul style="list-style-type: none"> Analyzes and interprets outbreak data 	<ul style="list-style-type: none"> Develops and delivers a formal summary report as needed 	<ul style="list-style-type: none"> Develops communicable disease regulations 	<ul style="list-style-type: none"> Provides training to medical professionals, media, and public Sponsors annual meeting of public health officials, which includes sessions on foodborne illness
<i>Oregon State Public Health Laboratory</i>	<ul style="list-style-type: none"> Conducts environmental specimen testing 			
<i>Food Protection Program, Environmental Services and Consultation</i>			<ul style="list-style-type: none"> Conducts routine inspections in ten counties Provide licensure for food establishments in ten counties Develops food safety regulations 	<ul style="list-style-type: none"> Educates and trains food handlers, managers, and industry Participates in annual meeting of public health officials
Oregon Department of Agriculture				
	<ul style="list-style-type: none"> Has primary responsibility for food product tracebacks 	<ul style="list-style-type: none"> Has primary responsibility for in-state recalls of wholesale products 	<ul style="list-style-type: none"> Conducts routine inspections of grocery stores and wholesalers Provides statewide licensure for grocery stores, wholesalers, and bakeries Develops food safety regulations 	
County Health Agencies				
	<ul style="list-style-type: none"> Collect environmental specimens 	<ul style="list-style-type: none"> Have primary responsibility for food establishment shut down 	<ul style="list-style-type: none"> Conduct routine inspections of food establishments within jurisdiction Provide licensure for food establishments within jurisdiction 	<ul style="list-style-type: none"> Train medical professionals, media, public, food handlers and managers, and industry (State Restaurant Association also trains food handlers and managers) Participate in annual meeting of public health officials

*The organization of Oregon's state and local public health agencies may be characterized as decentralized. County health agencies conduct most of the physical groundwork of the outbreak investigation and response under the lead of the state epidemiology program. ACDP also employs environmental health specialists that assist with a foodborne outbreak response and act as liaisons between the state and county health agencies.



RHODE ISLAND

Rhode Island State Department of Public Health

3 Capitol Hill

Providence, Rhode Island 02908-5097

Phone: (401) 222-2231

Fax: (401) 222-6548

Web site: <http://www.health.state.ri.us/>

Office of Communicable Diseases

Division of Disease Prevention and Control

3 Capitol Hill

Providence, Rhode Island 02908-5097

Phone: (401) 222-2577

Fax: (401) 222-2488

State Health Laboratory

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Office of Food Protection

Division of Environmental Health

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RHODE ISLAND* DEPARTMENT OF HEALTH

RESPONSIBILITY AGENCY	OUTBREAK DETECTION	OUTBREAK INVESTIGATION	OUTBREAK COMMUNICATION
Rhode Island Department of Public Health			
<i>Office of Communicable Diseases, Division of Disease Prevention and Control</i>	<ul style="list-style-type: none"> Receives foodborne illness reports from citizens, clinicians, and laboratories 	<ul style="list-style-type: none"> Establishes case definition Develops investigation survey Interviews patients Reviews medical records Responsible for data entry Conducts active case finding Administers immunoglobulin (assisted by private health care providers) 	<ul style="list-style-type: none"> Leads informal outbreak investigation team Sends alerts to area clinicians, CDC, and epidemiology offices in other states Office of the Director may inform the Governor of a foodborne outbreak through regularly scheduled, weekly updates
<i>State Health Laboratory</i>		<ul style="list-style-type: none"> Conducts clinical specimen testing 	<ul style="list-style-type: none"> Participates in outbreak investigation team
<i>Office of Food Protection, Division of Environmental Health</i>	<ul style="list-style-type: none"> Supports the receipt of foodborne illness reports Receives and investigates complaints associated with food products and food establishments Manages a 24 hour emergency hotline with a member of the office on call at all times 	<ul style="list-style-type: none"> Assists with survey development Conducts environmental investigation Assists with patient interviews as needed Collects clinical specimens as needed Assists in active case finding Interviews food handlers 	<ul style="list-style-type: none"> Assists in outbreak investigation team Sends alerts to food regulatory officials in other states, and notifies federal food regulatory agencies as appropriate

RHODE ISLAND DEPARTMENT OF HEALTH, CONT'D

RESPONSIBILITY AGENCY	IDENTIFICATION OF PROBABLE OUTBREAK CAUSE	OUTBREAK INTERVENTION & FOLLOW-UP	INSPECTIONS, LICENSING & REGULATION	ONGOING FOOD SAFETY EDUCATION & COMMUNICATION
Rhode Island Department of Health				
<i>Office of Communicable Diseases, Division of Disease Prevention and Control</i>	<ul style="list-style-type: none"> Analyzes and interprets outbreak data 	<ul style="list-style-type: none"> Develops and produces outbreak summary document 		<ul style="list-style-type: none"> Educates medical professionals on foodborne illness issues on an as needed basis
<i>State Health Laboratory</i>	<ul style="list-style-type: none"> Conducts environmental specimen testing 			
<i>Office of Food Protection, Division of Environmental Health</i>	<ul style="list-style-type: none"> Collects environmental specimens from tentative diagnosis, environmental investigation, and epidemiologic data investigates cause (time/temperature, ill employee, contaminated commercial product, etc.) Has primary responsibility for food product tracebacks 	<ul style="list-style-type: none"> Contributes to outbreak summary document Has primary responsibility for in-state recalls of contaminated food products Has primary responsibility for food establishment shut down, embargo of potentially contaminated food, and other control measures in food establishments 	<ul style="list-style-type: none"> Conducts routine inspections of food establishments Provides licensure for food establishments Supports inspections of food establishments shipping interstate Adopts food safety regulations 	<ul style="list-style-type: none"> Provides educational sessions for food handlers and managers (assisted by local universities, industry associations, and contractors) Leads the development of the Epidemiology Resource Manual, which will consolidate food safety investigation approaches Distributes seasonal food safety press releases to media and public Provides foodborne illness education to industry partners Participates in the Model School Food Safety Program with the state Department of Education

* Rhode Island's public health services are centralized; there are no local health departments. The State Offices of Food Protection and Communicable Diseases work closely with one another to investigate and respond to food safety incidents.



SOUTH CAROLINA

South Carolina Department of Health and Environmental Control

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Web site: <http://www.scdhec.net/>

*Division of Acute Epidemiology,
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Phone: (803) 898-0861

Bureau of Laboratories
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Fax: (803) 896-0983

*Division of Food Protection
Bureau of Environmental Health*
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South Carolina Department of Agriculture

Wade Hampton State Office Building
P. O. Box 11280
Columbia, South Carolina 29211
Phone: (803) 734-2190
Fax: (803) 734-2192

South Carolina Meat and Poultry Inspection Service

Phone: (803) 788-8747

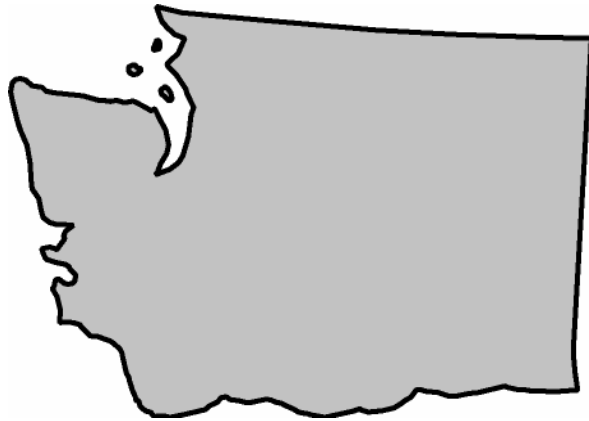
SOUTH CAROLINA* DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

RESPONSIBILITY AGENCY	OUTBREAK DETECTION	OUTBREAK INVESTIGATION	OUTBREAK COMMUNICATION
South Carolina Department of Health and Environmental Control			
<i>Division of Acute Epidemiology, Bureau of Disease Control</i>	<ul style="list-style-type: none"> Receives outbreak reports from local doctors and nurses 	<ul style="list-style-type: none"> Shares responsibility for establishing a case definition Assists with patient interviews Investigates medical history of food handlers 	<ul style="list-style-type: none"> Alerts CDC, other states, and clinicians Participates in the food safety investigation team
<i>Bureau of Laboratories</i>		<ul style="list-style-type: none"> Microbiology lab conducts clinical specimen testing 	<ul style="list-style-type: none"> Participates in the food safety investigation team
<i>Division of Food Protection, Bureau of Environmental Health</i>	<ul style="list-style-type: none"> Receives foodborne illness reports from citizens, clinicians, and laboratories Shares outbreak information with Division of Acute Epidemiology 	<ul style="list-style-type: none"> Serve as middle agency during investigation process 	<ul style="list-style-type: none"> Alerts counterpart offices in other states Leads a food safety investigation team during large scale outbreaks Participates in the food safety investigation team
<i>Twelve Regional Health Districts</i>	<ul style="list-style-type: none"> Receive foodborne illness calls from citizens and forward to state Division of Food Protection 	<ul style="list-style-type: none"> Share responsibility for establishing a case definition Conduct patient interviews Develop investigation survey Collect clinical specimens Responsible for data entry Conduct active case finding Oversee immunoglobulin administration Assist with investigating the medical history of food handlers 	<ul style="list-style-type: none"> Participate in the food safety investigation team
South Carolina Department of Agriculture			
South Carolina Meat and Poultry Inspection Service			

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL, CONT'D

RESPONSIBILITY AGENCY	IDENTIFICATION OF PROBABLE OUTBREAK CAUSE	OUTBREAK INTERVENTION & FOLLOW-UP	INSPECTIONS, LICENSING & REGULATION	ONGOING FOOD SAFETY EDUCATION & COMMUNICATION
South Carolina Department of Health and Environmental Control				
<i>Division of Acute Epidemiology</i>	<ul style="list-style-type: none"> Shares responsibility for analysis and interpretation of outbreak data 	<ul style="list-style-type: none"> Reviews outbreak summary document 		<ul style="list-style-type: none"> Provides food safety information to medical professionals
<i>Bureau of Laboratories</i>	<ul style="list-style-type: none"> Conducts environmental specimen testing 			
<i>Division of Food Protection, Bureau of Environmental Health</i>	<ul style="list-style-type: none"> Shares responsibility for analysis and interpretation of outbreak data 	<ul style="list-style-type: none"> Reviews and modifies, if necessary, outbreak summary document Supports and guides regional districts in food establishment shut down 	<ul style="list-style-type: none"> Supports routine inspections of retail and grocery stores, and restaurants Shares food establishment licensure responsibility Recommends food safety regulations to the General Assembly Shares food establishment licensure responsibility 	<ul style="list-style-type: none"> Conducts food safety training for food handlers and managers Coordinates the District Food Supervisor meetings Provides food safety information to medical professionals Provides food safety information and updates to the media and public Conducts food safety education sessions for the South Carolina Hospitality Association, detailing its food safety responsibilities Conducts food safety training for food handlers and managers
<i>Twelve Regional Health Districts</i>	Share responsibility for analysis and interpretation of outbreak data	<ul style="list-style-type: none"> Have primary responsibility for food establishment shut down Develop post-outbreak summary report 	<ul style="list-style-type: none"> Conduct routine inspections of food establishments Certify and regulate food establishments, with Division of Food Protection guidance 	<ul style="list-style-type: none"> District Food Supervisors meet twice a year to discuss foodborne outbreak response procedure
South Carolina Department of Agriculture				
		<ul style="list-style-type: none"> Has primary responsibility for in-state recalls of contaminated food for wholesale non-meat products 	<ul style="list-style-type: none"> Conducts routine inspections for all non-meat, wholesale establishments 	
South Carolina Meat and Poultry Inspection Service				
		<ul style="list-style-type: none"> Conducts wholesale meat product recalls 	<ul style="list-style-type: none"> Conducts wholesale meat product inspections 	

*South Carolina may be considered a centralized state, with the State Department of Health and Environmental Control having primary responsibility for investigating foodborne outbreaks. Twelve regional offices, supported and guided by the state health department, conduct investigation processes.



WASHINGTON

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Communicable Disease Epidemiology,

Office of Epidemiology
1610 NE 150th Street
Shoreline, Washington 98155-9701
Phone: (360) 236-4250
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Public Health Laboratories

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Fax: (206) 361-2904

Office of Food Safety & Shellfish Programs, Environmental Health

P.O. Box 47824
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Office of Communications

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Washington State Department of Agriculture

1111 Washington Street
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Food Safety Program

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WASHINGTON* STATE DEPARTMENT OF HEALTH

RESPONSIBILITY AGENCY	OUTBREAK DETECTION	OUTBREAK INVESTIGATION	OUTBREAK COMMUNICATION
Washington State Department of Health			
<i>Communicable Disease Epidemiology, Office of Epidemiology</i>	<ul style="list-style-type: none"> Receives foodborne illness reports from citizens, clinicians, local health agencies, and laboratories Manages a 24-hour communicable disease hotline for medical service providers to report incidents or outbreaks Conducts routine surveillance for diseases and potential outbreaks 	<ul style="list-style-type: none"> Provides leadership for and/or oversight of local foodborne outbreak investigations during multi-county outbreaks or on an as needed basis When the state assumes the investigative lead on an outbreak, takes responsibility for or collaborates on all outbreak investigation activities 	<ul style="list-style-type: none"> Approves information to be released to the media and public Alerts CDC and other states as needed Notifies local health jurisdictions and other involved state agencies Sends a weekly, one-page "Monday Alert" to the Governor, which may include foodborne outbreak updates
<i>Public Health Laboratories</i>	<ul style="list-style-type: none"> Notifies increase in tests for specific agent Conducts tests to detect genetic cluster of specific agent 	<ul style="list-style-type: none"> Conducts clinical specimen testing (King County also has some capability for clinical specimen testing) 	<ul style="list-style-type: none"> Coordinates testing with other agencies as needed
<i>Office of Food Safety & Shellfish Programs, Environmental Health</i>	<ul style="list-style-type: none"> Receives foodborne illness reports concerning retail food safety issues and reports from state agencies Receives foodborne illness reports related to shellfish from state agencies 	<ul style="list-style-type: none"> Works with state Office of Communicable Disease Epidemiology to investigate foodborne outbreaks when state level leadership or coordination is needed Assists local health agencies with outbreak investigations as requested 	<ul style="list-style-type: none"> Approves information to be released to the media and public Sends a weekly, one-page "Monday Alert" to the Governor, which may include foodborne outbreak updates
<i>Office of Communications</i>			<ul style="list-style-type: none"> Produces informational and prevention messages for the public during an outbreak
Washington State Department of Agriculture			
<i>Food Safety Program</i>	<ul style="list-style-type: none"> Receives foodborne illness reports related to wholesale food products manufactured in Washington state 	<ul style="list-style-type: none"> Assists in investigation of outbreaks related to wholesale establishments 	<ul style="list-style-type: none"> Communicates with state DOH and federal agencies as needed
Local Health Agencies			
	<ul style="list-style-type: none"> Citizens are encouraged to report foodborne illnesses directly to their local health agencies. Outbreak information is forwarded to the state Communicable Diseases Epidemiology office 	<ul style="list-style-type: none"> Have primary responsibility for investigating most outbreaks confined to their jurisdiction Establish case definition Develop investigation survey Interview cases and comparison group Collect clinical specimens Review medical records Arrange data entry Conduct active case finding Administer immunoglobulin (assisted by private clinicians) Conduct appropriate intervention (inspection, work or school restriction, treatment) 	<ul style="list-style-type: none"> Produce informational and prevention messages for the public during an outbreak

WASHINGTON STATE DEPARTMENT OF HEALTH, CONT'D

RESPONSIBILITY AGENCY	IDENTIFICATION OF PROBABLE OUTBREAK CAUSE	OUTBREAK INTERVENTION & FOLLOW-UP
Washington State Department of Health		
<i>Communicable Disease Epidemiology, Office of Epidemiology</i>	<ul style="list-style-type: none"> Has primary responsibility for data analysis and interpretation of outbreak data if state is leading the investigation Assists local health jurisdictions on an as needed basis 	<ul style="list-style-type: none"> Produces or approves summary outbreak report
<i>Public Health Laboratories</i>	<ul style="list-style-type: none"> Tests environmental specimens 	
<i>Office of Food Safety & Shellfish Programs, Environmental Health</i>	<ul style="list-style-type: none"> Assists with analysis and interpretation of outbreak data Collects environmental specimens for shellfish-related outbreaks Conducts food product tracebacks for public institutions Conducts tracebacks for shellfish and retail food products 	<ul style="list-style-type: none"> Communicates in-state recall of contaminated food products to all affected parties
<i>Office of Communications</i>		
Washington State Department of Agriculture		
<i>Food Safety Program</i>	<ul style="list-style-type: none"> Assists with environmental specimen collection Conducts tracebacks for wholesale food establishments 	<ul style="list-style-type: none"> Communicates in-state recall of contaminated food products to all affected parties
Local Health Agencies		
	<ul style="list-style-type: none"> Collect environmental specimens Have primary responsibility for tracebacks on contaminated food products within their jurisdiction 	<ul style="list-style-type: none"> Develop final report for outbreaks affecting their jurisdiction

ROUTINE INSPECTIONS, LICENSING & REGULATION	ONGOING FOOD SAFETY EDUCATION & COMMUNICATION
<ul style="list-style-type: none"> Facility Services and Licensing Office has primary responsibility for inspections of public institutions 	<ul style="list-style-type: none"> Facilitates meetings at various times during the year for local and state epidemiologists
<ul style="list-style-type: none"> Has primary responsibility for shellfish inspections Issues licenses to Washington state commercial shellfish operations and certifies harvest sites 	<ul style="list-style-type: none"> Leads semi-annual Partners in Food Safety Committee for local/state/federal food professionals at the retail level Trains food safety employees of local health agencies Trains food industry partners
<ul style="list-style-type: none"> Has primary responsibility for inspecting wholesale establishments, including wholesale food shipping inspections Provides licensure for wholesale food establishments 	<ul style="list-style-type: none"> Provides training for wholesale food industry Leads Advisory Committee for food safety professionals at the wholesale level
<ul style="list-style-type: none"> Conducts routine inspections of retail establishments within their jurisdiction Provides licensure for retail foodservice establishments 	<ul style="list-style-type: none"> Trains foodservice workers Trains food industry partners Trains foodservice managers Develops brochures and newsletters for retail industry

* The organization of Washington's state and local public health agencies may be characterized as decentralized, with local health agencies having the primary responsibility for investigating foodborne outbreaks that are confined to their jurisdictions

Appendix 1: Food Safety Questionnaire

Reporting and Detection

1. When a foodborne illness occurs, how do you learn about it?
2. Is there a food safety hotline? Who manages this hotline and is it a 24X7 operation? What is the process when a call is received and it is determined that an outbreak has occurred?

Outbreak Investigation

3. In your state, are county or local jurisdictions typically involved in investigating foodborne outbreaks, or are foodborne outbreaks handled centrally?
4. If there is a foodborne outbreak due to food handling/preparation, which of the following are responsibilities of the local level vs. the state level, both, or depends? In which department and division? If both or depends, please explain. (For the purpose of this question, please define a foodborne outbreak as a similar illness in two or more households resulting from the ingestion of a common food).
 - a. Receipt of new cases
 - b. Survey development
 - c. Patient interviews
 - d. Clinical specimen collection
 - e. Clinical specimen testing
 - f. Medical records review
 - g. Case definition
 - h. Environmental specimen collection
 - i. Environmental specimen testing
 - j. Data entry
 - k. Active case finding
 - l. Alerts to clinicians, CDC, other states
 - m. Immunoglobulin administration
 - n. Data analysis and interpretation
 - o. Routine inspections
 - p. Medical history of food handlers
 - q. Food establishment shut down
6. Are there other agencies not mentioned above that would become involved if it was determined the outbreak was due to one of the following?
 - a. Imported foods
 - b. Tampering/bioterrorism
 - c. Processing or packaging
 - d. Seafood handling

7. Are there any additional follow up responsibilities associated with an outbreak related to the following factors? In addition, are there other agencies not mentioned below that would become involved?
- a. Imported foods
 - b. Tampering/bioterrorism
 - c. Processing or packaging
 - d. Seafood handling

Regulation / Prevention Measures

8. List state agencies that are involved in each of the following areas, including the lead agency, and name the role each agency plays:

- a. In-state recalls of contaminated food products
- b. Routine inspections to ensure regulatory compliance
- c. Food product tracebacks
- d. Educational sessions for food managers and handlers
- e. Food establishment licensing
- f. Food shipping inspections

9. Are there other steps of foodborne outbreak investigation that are not mentioned above?

10. Who has responsibility for these?

11. Aside from agencies mentioned above, are there other agencies the state coordinates and works with during a food safety incident?

12. During a large scale outbreak, does the state convene a formal team in response to a food safety incident? Who is included? Local officials?

14. For a small incident (2-3 persons), does the state become involved in the response?

15. Under what circumstances would the state become involved?

16. During or after the incident, is any type of document produced summarizing the investigation and findings?

17. Who writes this document?

18. Who clears the documents?

19. Is the document made publicly available?

Laboratory

20. Do local public health agencies have capabilities for foodborne illness testing?

21. Does your state public health laboratory monitor for antimicrobial resistance in foodborne pathogens?

22. Are other state agencies or private labs involved in testing for antimicrobial resistance in foodborne pathogens?

Communication

23. Do state and local public health professionals meet regularly to discuss outbreak response?

24. Who coordinates these meetings?

25. If public health authorities do not meet regularly, what forms of communication are used to ensure adequate communication flow at the state and local levels?

26. Who is responsible for educating (pre-event, during an event, and post-event) the following groups about foodborne illness?

- a. Medical professionals
- b. Media/public
- c. Food handlers and managers
- d. Industry
- e. Other interested parties

27. When do you inform the governor and state legislators about a foodborne outbreak?

28. What information is needed before a state public health representative can address the media and public about an outbreak?

29. May or must the state release the name of an implicated establishment?

30. What state agency has the authority to adopt new regulations, (e.g. the Model Food Code)?

31. Has the state used a Model Food Code to adopt its food safety legislations?

Overarching / Analysis Questions

32. What works well about the way your state divides responsibilities during a foodborne outbreak?

33. What is challenging about this division of responsibilities?

34. Is the process of responding to foodborne illnesses regulated by state law?

35. Have there been disagreements on interpreting these regulations?

36. How does this impact the response?

37. If the process is not regulated, how was it defined?

38. Within the state food safety response system, is there a legal advisor focused on health safety issues?

39. What are the key issues for which they are relied upon?
40. Do you receive CDC Epidemiology and Laboratory Capacity (ELC) cooperative agreement funds for food safety activity? Are you an Emerging Infections Program (EIP) site?
41. How has this (ELC or EIP funds) affected your ability to detect or respond to foodborne outbreaks?

