Assessment of Foodborne Illness Outbreak Response and Investigation Capacity in US Environmental Health Food Safety Regulatory Programs

National Environmental Health Association

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Acronyms

AFDO	Association of Food and Drug Officials
APHL	Association of Public Health Laboratories
ASTHO	Association of State and Territorial Health Officials
CDC	Centers for Disease Control and Prevention
CFSAN	Center for Food Safety and Applied Nutrition at FDA
CIFOR	Council to Improve Foodborne Outbreak Response
CSTE	Council of State and Territorial Epidemiologists
EH	Environmental Health
FDA	U.S. Food and Drug Administration
HD	Health Department
NACCHO	National Association of County and City Health Officials
NASDA	National Association of State Departments of Agriculture
NASPHV	National Association of State Public Health Veterinarians
NEHA	National Environmental Health Association
OFDCER	Office of Food Defense, Communication and Emergency Response at FDA
ORAU	Office of Regulatory Affairs University at FDA
PH	Public Health
RS	Registered Sanitarian
USDA	U.S. Department of Agriculture

Executive Summary

Introduction

The National Environmental Health Association (NEHA) was asked by members of the Council to Improve Foodborne Outbreak Response (CIFOR) to conduct an assessment of the capacity of local and state agencies to undertake foodborne illness outbreak investigation and response. Of concern were the potential impacts of ongoing budget reductions on staffing, training, outbreak response, control, and prevention activities, as well as the current status of inter-agency cooperation to share resources.

NEHA conducted this project with support from the U.S. Food and Drug Administration/Center for Food Safety and Applied Nutrition/Office of Food Defense, Communication and Emergency Response (FDA/CFSAN/OFDCER) through a contract with the Association of Public Health Laboratories (APHL). The contents are solely the responsibility of the authors and do not necessarily represent the official views of FDA or APHL.

Background

As reported by the Center for Disease Control and Prevention (CDC), annually one in six Americans is affected by foodborne illness. Of the estimated 48 million who become sick from a foodborne illness each year, 128,000 people are hospitalized and 3,000 individuals die. (CDC, 2013) Many organizations are involved in efforts to mitigate the effects of foodborne illnesses on public health. Outbreak identification and investigation is one of the key areas where multidisciplinary public health professionals must work in partnership. CIFOR was created to reduce the burden of foodborne illness in the United States by increasing collaboration across relevant areas of expertise.

Depending on its size (number of ill people) and complexity, a foodborne illness outbreak may be investigated solely by a single local agency or may involve the collaboration of a multi-jurisdictional team of local, state, and federal agencies. Agencies with responsibility for food safety—foodborne illness response, control, and prevention—will have a variety of available resources. These include personnel experience, training, and a system to share expertise and data with partner agencies. Outbreak detection, response, control measures, and prevention actions are impacted by budgets and staff capacity to manage both routine inspections and outbreak investigations. The purpose of this report is to evaluate the current status of resources available to local and state agencies to effectively respond to foodborne illness outbreaks.

With the Food Safety Modernization Act (FSMA) (FDA, 2011) emphasis on local, state, and federal partnerships, it is important to understand the workload of local and state agencies. In general, local agencies have oversight of retail facilities. The number of facilities is impressive—33% of local agencies report more than 1,000 retail operations and 10% indicate more than 50

manufacturing facilities in their jurisdictions. Nearly half of state agencies (49%) report more than 10,000 retail facilities in their jurisdictions.

Given the complexity of food production, the large number of retail food operations and manufacturing/processing facilities, and probable staffing decreases, CIFOR members were interested in learning the scope and impact of budget cuts over the last few years. How has the capacity of local and state regulatory food safety programs changed—specifically those programs that conduct environmental investigations during foodborne disease outbreaks?

Outbreak investigations typically involve epidemiology, laboratory, and environmental health (EH) staff—the three legs of the stool—as well as partners in risk communication, public health, industry, and other disciplines. Workforce capacity assessments have been done for epidemiology and public health laboratory staff (*2010 Food Safely Epidemiology Capacity Assessment* by the Council of State and Territorial Epidemiologists (CSTE, 2010) and *2007 APHL Workforce Survey Report* issued by APHL (APHL, 2007)); however, there remained a need to evaluate EH personnel training and responsibilities. Additionally, in the current economic climate with state and local EH programs experiencing substantial budget reductions, there was consensus about the urgency of determining current EH capacity.

To address this urgency, an initial assessment was conducted in 2011 to obtain preliminary information on food safety program capacity. This was followed by a second, more extensive, assessment to address, more specifically, foodborne illness response and investigation capacity. Both assessments were directed to EH and regulatory food safety managers and directors within local, tribal, and state departments that conduct environmental investigations during foodborne disease outbreaks. This report details responses to the extensive assessment from local and state agencies.

Based on results of the initial assessment and continuing repercussions of the economy on local and state agencies, a decrease in the frequency of inspections, number of staff, and training/outreach provided to retail food facilities and the general public is expected. It is likely that the trend of decreases in both state and local foodborne illness response capacity found in the initial assessment will continue in this extensive assessment.

NEHA would like to emphasize that this report is a picture of the current situation. It hopes the information provided will be a valuable resource for future prioritizing, planning, and budgeting at the local, state, and federal level.

Methods

Preliminary data was gathered through an initial assessment on food safety program capacity. Based on information from the initial assessment, and with the assistance of focus groups from NEHA, the National Association of County and City Health Officials (NACCHO), the Association of Food and Drug Officials (AFDO), and the Association of State and Territorial Health Officials (ASTHO), a more extensive assessment was developed to specifically address foodborne illness outbreak capacity of local and state agencies. Although budget cuts have been ongoing for several years, it was felt the most accurate information would be obtained by asking for changes in the past two years.

The assessment was announced through e-mail to NEHA state and regional affiliates, Certified Professional in Food Safety credentialed list, NEHA's e-News electronic membership newsletter, and on its Web site, Facebook page, and through Twitter. Information was also distributed through CDC's EH listserv, and to AFDO, ASTHO, and NACCHO memberships.

This report is based on a total of 163 responses; 123 (75%) participants identify themselves as working at local agencies and 40 (25%) from state agencies. More detailed information on demographics is presented in the Results and Discussion and the Appendix of this report.

Jurisdiction size is asked in order to compare economic impacts and workforce capacity on smaller local agencies verses larger local and state agencies. Throughout the report, smaller local agencies refer to those indicating a jurisdiction of less than 250,000. Larger local agencies are those reporting a jurisdiction of more than 250,000.

Trends addressed in the Executive Summary are staff capacity, EH food safety training opportunities, outbreak detection and response capacity, capacity to implement control measures and prevention activities, interagency collaboration and cooperation, distribution and implementation of the *CIFOR: Guidelines for Foodborne Disease Outbreak Response* (*CIFOR Guidelines*), and budget impacts on staffing and food safety program funding.

Trends

Staff Capacity

Workforce numbers are declining and the loss of experienced EH professionals will be compounded by pending retirement, particularly at the local level.

- For smaller local jurisdictions, 16% report a decrease of more than 10% in their number of staff.
- More than 50% of local agencies expect 1–10% of their staff to retire within five years. Furthermore, nearly one-third (31%) of state agencies expect 11–25% of their staff to retire in that time period.

The retirement of experienced EH personnel will have a significant impact on the EH workforce. At the local level, 27% of local agencies currently employ 6–20 staff with more than ten years of experience—these are the people likely to retire. In contrast, state agencies have a more even distribution of staff experience and may not expect to have the same loss of institutional history and experience as that of local agencies.

Lack of opportunity and static salaries may impact the number of people entering the EH workforce in the future.

- **Local agencies have hired few entry-level staff in the last two years.**
  - Overall, 30% of local agencies do not have staff with less than two years of experience in foodborne illness outbreak investigation. This is a particular concern in smaller local agencies—37% report not having staff with less than two years of experience.
  - The situation is different in state agencies; 60% report at least one staff person with less than two years of outbreak experience.
- **Salaries are not increasing and often are decreasing.**
  - More than 60% of smaller local jurisdictions report no change or up to a 10% decrease in staff salaries in the past two years; 52% of larger local jurisdictions report no change or up to a 15% decrease in staff salaries. 58% of state agencies with jurisdictions over 1 million report no change or a 1–5% decrease in staff salaries.
  - While "no change" could be considered as neutral, in many agencies and departments, staff is now required to contribute a higher percentage of their salary to benefits and/or cost of living adjustment raises have been eliminated. Salaries may not have decreased, but net pay has.
  - Only 2% of all state agencies report an increase in salaries.

Staff reductions and turnover in local agencies have had a detrimental impact on their ability to meet routine inspection requirements, as well as to conduct comprehensive outbreak response activities.

- Staff turnover rates of more than 10% per year are reported by 30% of local agencies; 35% of state agencies report an even higher turnover rate of 11–25%. (Staff turnover includes employees laid off, fired, or resigned.)
- For local agencies, 17% have seen a decrease in their ability to do routine inspections.
- Of the smaller local agencies with responsibility to investigate food manufacturer or processor facility outbreaks, 60% report they do not have capacity to meet that need.
- A decrease in their ability to conduct environmental assessments is reported by 22% of local agencies, and 8% of smaller local agencies report a decrease of more than 30% in their ability to conduct environmental assessments.

Mandated furlough days and other reductions in staff and budgets have led agencies to prioritize inspections and outbreak response activities.

- Furlough mandates are reported by 22% of smaller local agencies and 28% of larger agencies, as well as 18% of state agencies with jurisdictions of greater than 1 million. A

decrease in food safety budgets is reported by 30% of state and larger local agencies, as well as by 41% of smaller local agencies.

- A risk-based inspection policy is followed by 78% of local agencies to conduct inspections.
  - 28% of smaller local agencies and 25% of larger local agencies report a decrease of 6–10% in routine inspections.
  - 14% of smaller local agencies and 19% of larger local agencies report a reduction of up to 10% in time spent inspecting a facility.

Environmental Health Food Safety Training Opportunities

More training opportunities are available for state personnel than for local agency personnel, although local agencies report a greater need.

- Local agencies with responsibility for these tasks, report their staff is not trained in pathogen-specific surveillance, food manufacturer/processor facilities outbreak investigations, and laboratory tasks.
- Although average years of staff experience is decreasing, 50% of local agency staff have received eight hours or less of training in the past two years.
  - 15% of smaller agencies have seen a 16–30% decrease in average years of staff experience.
  - 22% of larger local agencies report up to a 10% decrease in average staff experience.
- Although state agencies have a higher percentage of staff with more than five years of experience, 44% of state agencies staff have received more than 12 hours of training.

State-agency sponsored training opportunities play an important role in ensuring foodborne illness outbreak response training.

- For local agencies of all jurisdiction sizes, state-sponsored foodborne illness-specific training accounts for 50–77% of training received in the past two years, followed by online computer training, and FDA-sponsored training.
  - In-house training is the commonly reported training source for larger local agencies (65%).
  - In-house and computer training are the most commonly reported training sources in the past two years for state agencies.

Training and professional development opportunities are impacted by reduced training travel budgets.

- A decrease in training travel budgets is reported by 40% of local agencies and 32% of state agencies. Only 4% of local agencies and 7% of state agencies report an increase in training travel budgets.
- For all agencies, participation in courses that are delivered locally or regionally, such as FDA training courses and Epi-Ready are noted.

Outbreak Detection and Response Capacity

There is a need for specialized training in foodborne illness response strategies.

- While 95% of local agencies report an environmental health specialist on staff, 41% of smaller local agencies do not have a food safety specialist position.
  - Staff trained in environmental assessments/investigations is lacking in 25% of smaller local agencies.
    - 25% do not have staff trained in food sampling.
    - 46% lack training in environmental swabs.

Both local and state agencies report discipline-specific staffing needs to meet outbreak response requirements.

- Over 70% of local agencies state a need for additional environmental health specialists, 38% report a need for additional laboratory professionals, and 34% for additional epidemiologists to meet full capacity for outbreak response.
- Of larger local agencies, 28% report they do not have a food safety specialist and 53% do not have laboratory professionals.
- Both local (40%) and state agencies (35%) express a need for public health nurses.
- More than 50% of all local agencies and 60% of state agencies with a jurisdiction of greater than 1 million do not have a risk communication specialist in their agency.
- For state agencies, 59% report a need for additional environmental health specialists; 40% for additional management; and 47% for additional laboratory professionals and epidemiologists.

Overall local agencies report a lack of staff time to investigate foodborne illness outbreaks with little or no overtime available. This would lead to the need to assign additional workloads during foodborne illness outbreaks.

- A quarter (25%) of larger local agencies report 30% or less of their staff time is available for foodborne illness outbreak investigations.
- Overall, 42% of local agencies report their staff did not work overtime in the past two years.
  - Only 20% of smaller local and 30% of larger local agencies report 6–25 hours of weekend investigations in the last two years.
- Nearly 40% of state agencies report greater than 10 hours of overtime on foodborne illness outbreaks with 29% reporting investigations occurring on weekends.

Capacity to Implement Control Measures

Both local and state agencies with responsibility in that area are able to handle facility closures adequately, however, there is a lack of capacity to implement other, more long-term control measures, such as tracebacks, recalls, and embargos.

- 39% of smaller local agencies and 24% of larger local agencies report they do not have capacity to undertake outbreak control measures effectively.

- For state agencies with jurisdictions greater than 1 million, 59% report capacity to handle environmental assessments/investigations, yet 42% do not have the capacity to sample foods and 60% do not have the capacity to collect and process environmental swabs.
- The information below only includes responses from agencies with oversight responsibility for the stated tasks.
  - For tracebacks, 80% of local agencies and 70% of state agencies report they do not have written operating procedures to address the traceback of foods implicated in a foodborne illness outbreak.
    - 73% of smaller local agencies and 50% of larger local agencies report they do not have the capacity to handle tracebacks.
  - On food recalls, 76% of local agencies and 43% of state agencies report they do not currently have written operating procedures to address the recall implicated foods.
    - 42% of smaller local agencies do not have the capacity to manage recalls.
    - 53% of smaller local agencies and 42% of larger local agencies do not have the capacity to handle recall effectiveness checks.
  - Regarding embargos, 38% of smaller local agencies do not have the capacity to undertake embargos.
- For an important prevention action, training retail food facility and food manufacturer or processor personnel on foodborne outbreak investigation response, 41% of smaller local agencies and 53% of larger local agencies report they do not have that capacity.

Local agencies, with responsibilities in the following areas, indicated a broad range of training needs for staff not currently trained in foodborne illness outbreak response tasks and control measures.

- For local agencies, 21% do not have staff trained in undertaking environmental assessments/investigations.
- Also for local agencies, 32% do not have staff trained in outbreak control measures.
  - 33% do not have staff trained in recalls and 48% lack trained staff in handling recall effectiveness checks.
  - 59% of local agency staff is not trained in undertaking tracebacks.

Capacity to Implement Prevention Activities

Local and state agencies do not have the capacity to adequately address several types of activities relevant to foodborne illness prevention.

- For smaller local agencies, 22% do not have capacity to record and respond to foodborne illness complaints and 41% do not have capacity for pathogen-specific surveillance.
- Less than 40% of local and state agencies report regularly conducting a review of the data in the complaint log or database and foodborne outbreak investigations to identify trends and possible contributing factors.
- A method to retrieve and utilize the institutional record of the complaint resolution provides an opportunity to identify contributing factors and reduce future outbreaks.
  - 26% of smaller local agencies and 50% of state agencies do not currently have a procedure to manage final resolution of recorded complaints for retrieval purposes.

Inter-Agency Collaborations and Cooperation

Local agencies are less able to handle outbreaks, have less staff time available for investigation, and may require more assistance from state and federal partners on larger outbreaks.

- For the most part, jurisdiction size is an indicator of the number of cases an agency is able to handle, i.e., smaller jurisdictions are able to manage response to smaller foodborne outbreaks.
- Overall, 26% of all agencies report their agency had the capacity to handle an outbreak of 2–10 cases.
  - 35% of smaller local agencies report their agency has the capacity to manage outbreaks with 20 or fewer cases.
  - 47% of local agencies would have less than 50% of their staff time available for foodborne illness response and investigation.
- State agencies have more staff available to handle outbreaks: 23% of state agencies have 100% of staff time available for outbreaks; and 73% of state agencies, with jurisdictions of greater than 1 million, report the capacity to manage foodborne illness outbreaks of greater than100 cases.

Most local and state agencies have either a written or informal memorandum of understanding (MOU) with other agencies to provide information and expertise during an outbreak; however 23% of local agencies have no partnering agreements.

- 47% of local agencies and 67% of state agencies report they have written operating procedures or an MOU that clearly identifies the roles, duties, and responsibilities of those staff who participate in foodborne illness investigations and report findings.
  - 42% of smaller agencies and 33% of larger local agencies have an informal agreement.
- Local agencies most frequently have MOUs with counties, state departments of agriculture, and state departments of health. Larger local agencies have agreements to share data and expertise with FDA as well.
- State agencies are likely to also have agreements with the U.S. Department of Agriculture and CDC.

Distribution and Implementation of CIFOR Guidelines

Distribution and training in implementing the *CIFOR Guidelines* is needed particularly in smaller local agencies.

- Smaller local agencies are less likely than larger local agencies to have the *CIFOR Guidelines* or *Toolkit* or to have implemented the EH Investigation component or parts of it.
  - *Only 17% of smaller and 35% of larger local agencies have the CIFOR Toolkit*.
- Approximately half of larger state agencies report implementing all or part of the EH Investigation component.
- A majority of state agencies with jurisdictions greater than 1 million (91%) report having the *CIFOR Guidelines*, but of those, only approximately half (40%) also have the *Toolkit*.

Budget Impacts on Staffing and Food Safety Program Funding

Local agency programs are supported by license fees and general county funds, and both funding sources are static or decreasing.

- 70% of local agencies report receiving greater than 20% of their funding through license fees.
  - 17% of smaller agencies and 19% of larger agencies report up to 20% decrease in retail license and inspections.
- General county funds account for more than 20% of funding for 27% of local agencies.
  - 62% of local agencies report no change or up to a 10% decrease in food safety program budgets. Only 6% of smaller local agencies report an increase in their food safety budget. Outlook is somewhat better for larger local jurisdictions—25% report an increase.
- 53% of state agencies with jurisdictions over 1 million report no change or a decrease of up to 15% in food safety program budgets.
  - For most state agencies, 50% or more of funding is through the state. Only 36% of state agencies report significant funding through license fees.

Few local agencies are recipients of grant opportunities to fund food safety programs.

- 33% of smaller local agencies and 20% of larger local agencies report grant funding is not applicable to their agency.
- When asked for funding sources of food safety programs, only 8% of local agencies report greater than 20% of their budget from federal funds.

Local agency foodborne illness response responsibilities and capacity are rarely used in budget planning.

The majority of local agencies report outbreak response responsibilities and capacity is not part of budget planning. In contrast, state agencies are more likely to cite past foodborne outbreak incidents as justification for funding, additional staff positions, training, etc.

Policy Implications and Recommendations

Outbreaks of foodborne illness can have severe and even deadly consequences. Therefore, it is critical for public health to have the capacity to detect, respond, and control exposure to foodborne pathogens to prevent or minimize the occurrence of disease and its economic consequences.

Foodborne illness outbreaks occur “unexpectedly” and are often variable with respect to type of pathogen, mode of transmission, and extent of exposure. Therefore, they can be challenging to adequately plan for, requiring flexibility and a mechanism for “surge capacity” in response. Unfortunately, this can be problematic when sufficient numbers of adequately experienced and trained staff are reportedly not available at the local, state, or federal levels and when other duties, for example routine inspections, generate revenue for a departmental budget.

State and local food safety programs and the professionals that staff these agencies are an integral and essential part of the nation's food safety and foodborne illness response capability. With the passage of FSMA the systemic importance of state and local programs has never been more apparent. As FSMA moves us toward the critically important goal of building a truly integrated national food safety system, the assessment of state and local capacity becomes a strategic necessity.

Estimates place the number of retail food establishments in the U.S. at a minimum of at least one million outlets. Clearly, the various federal agencies tasked with food safety responsibilities are unprepared to provide regulatory oversight over this vast number of establishments. Moreover, as regulatory models stress the need for risk-based inspections that are founded on scientifically accepted consensus standards; the need for state and local involvement becomes even more apparent. Without a robust state and local program capacity, there is simply no practical way to assess, regulate, provide surveillance, or implement any effective prevention model.

It is from this framework that NEHA began this assessment of the state and local food safety workforce, such an essential part of the national food safety capability. It is imperative to examine and document the impact the national economic recession has had on this segment of the environmental/public health workforce. The results of this study should be of concern to anyone seeking to understand the disproportional impact the economy has had on the food safety workforce and the resulting implications for the national food safety system.

The assessment findings reveal a significant overall reduction in foodborne illness program capacity. The major areas of concern are as follows:

Staffing Capacity

A loss of 30% of staffing capacity is documented. This reflects factors such as staff turnover, furlough days, and pending retirements.

With the magnitude of the loss, many of the new expectations of state and local programs to integrate into the larger national system are effectively unachievable. In addition, the sustainability of state and local programs to meet current needs and to respond to outbreaks may well be compromised.

Required actions:

- Utilization of new technology will maximize existing staff resources. Technology can be deployed to perform more routine inspection activities thereby freeing the professional staff for higher priority compliance activities and to educate operators concerning preventative measures.

- Standardization of routine inspection procedures will improve the efficiency of inspections enabling programs to maintain the appropriate number of inspections in the face of losses in staff capacity. The state/local program role and responsibilities outlined in the *CIFOR: Guidelines* should be utilized.

- Adoption of a risk-based inspection system will enable state and local jurisdictions to allocate sparse staff resources to high priority inspections. Risk-based inspections utilize an aggressive prevention strategy when current staff resources will not support a broad-based inspection effort.

Prioritization of recruitment programs will ensure that staff losses can be replaced. Loss of staff capacity is not solely a function of reduced budgets. The declining number of EH professionals in these programs is also a result of a demographic reality that the workforce is aging with large numbers of retirements. Programs should also implement mentoring programs to foster a greater capability to pass institutional memory and experience to replacement workers.

Environmental Health Food Safety Education and Training

Food safety regulatory program requirements are becoming increasingly complex. Additionally, there is a critical need to have well-trained EH professionals in place at the local and state level to coordinate and communicate with their counterparts in other jurisdictions and federal agencies. There is also a need for education and training to ensure a well-developed capacity at the state and local level for outbreak detection and rapid outbreak response.

The complexity of interactions required between partners and a lack of understanding of the roles and responsibilities of the responding partners can hamper outbreak investigations. This happens through omission of "investigative steps," duplication of efforts, and promoting delays in identification of the pathogen and its source, therefore putting the public at risk. Additionally, the economic viability of retail food operations, manufacturing/processing facilities, and food producers can be affected by inaccurate or delayed conclusions and inappropriate recall or condemnation of their products or services.

<u>Required actions:</u>

- Federal agencies should devote resources to evaluate, catalog, and improve access to the vast array of food safety training programs. Sponsoring these programs and making them readily available is key to meeting the contemporary training needs of this workforce.

- Distance-based training technologies should be utilized to a greater degree. This would facilitate training delivery with less staff travel and reduce the loss of capacity from having key program staff away at a training event.

- State and local programs should designate and support in-house staff trainers. A "train-the-trainer" capability, improving the teaching skills of existing staff, would provide another cost-effective method to increase training opportunities.

- Programs should renew their commitment to increasing the number of staff with professional credentials and certifications. Professional credentials create a benchmark standard for staff education and training. A professionally obtained credential allows agencies to ensure their food safety staff has demonstrated a set of core capabilities. Standardized training provides EH professionals with enhanced credibility and effectiveness in performing their regulatory duties. Because professional credential standards are frequently evaluated, having credentialed personnel ensures those individuals have a contemporary and relevant skill set to meet changing program needs.

- Programs should increase the number of staff and outbreak-response-specific training provided, particularly at the local level.

- Because many environmental regulatory personnel, especially at the local level, have responsibilities in many areas and not just food safety, training methods should be designed at both awareness and specialist levels to develop a cadre of staff who can provide "surge capacity" to a food safety specialist or outbreak response team in the event of an outbreak.

- Provide cross-training for partners involved in outbreak response investigations at the local, state, and federal levels. By continuing to promote and enhance cross-training programs, such as Epi-Ready, awareness of the roles and responsibilities of outbreak investigation partners can be highlighted and formal agreements within and between agencies can be fostered.

- Develop an education curriculum for local, state, and federal agencies outlining the roles and responsibilities of agencies related to outbreak control measures required during a foodborne illness outbreak and focusing on tracebacks, recalls, embargoes, and facility closures.

Collaboration and Cooperation

Outbreak response teams should work closely together, not in isolation. Because the work of one team member often builds on that of another team member, good communication among team members and timely sharing of pertinent information is critical (CIFOR, 2009). Furthermore, because of the variable nature of foodborne illness outbreak investigations, multiple partners may be necessary to ensure a complete response. These partners may be found at the local, state, and federal levels and they may be from departments of public health, laboratories, agriculture, FDA, law enforcement, hospitals, and industry, among others. Therefore, because communication and collaboration need to occur routinely and repeatedly through an outbreak investigation, effective methods of intra- and inter-agency communication

and collaboration are essential. However, there still remain both local and state agencies without formal or only informal agreements with outbreak response partners. As staff numbers and experience decline, institutional memory and informal relationships will wane. Therefore, outbreak response policies and procedures need to be formalized.

The *CIFOR Guidelines* have been established to increase collaboration across all relevant areas of expertise, yet about 30% of EH regulatory programs reportedly are not using them. Additionally, the *CIFOR Guidelines* provide a common framework for local, state, and federal agencies to conduct and evaluate their response to foodborne illness disease outbreaks across professional, agency, and geographic boundaries. Unfortunately, many of the recommendations are not fully implemented, such as reviewing disease reports for trends and having written MOUs.

Required actions:

- Develop and implement strategies to enhance intra- and inter-agency collaboration and cooperation at the local, state, and federal levels.

- Establish the *CIFOR Guidelines* as the "gold standard" framework for all foodborne illness outbreak investigations conducted at the local, state, and federal levels.
  - Provide the *CIFOR Guidelines* to a representative of each of the core outbreak investigation team members, EH, epidemiology, laboratory, and public information, at all local and state agencies and federal food safety agencies.
  - A *CIFOR Guidelines* awareness presentation should be created and presented at national, state, and local EH, epidemiology, and laboratory meetings.
  - Consider using the *CIFOR Guidelines* as a basis for foodborne illness outbreak response requirements in the public health department accreditation process.

- Promote the development of formal MOUs and written policies and procedures for foodborne illness outbreak investigations at the local, state, and federal levels.

- Promote continued community foodborne illness response exercises between local, state, and federal level partners to test and update communication and response capacity.

- Enhance the ability of partners to 1) promote reporting of suspected foodborne illness and submission of clinical specimen isolates from community partners, 2) collect and share foodborne illness data through systems with uniform data standards, and 3) communicate electronically through health alert networks.
  - A common barrier to investigation of foodborne illness is delayed notification from reporting sources (CSTE, 2010). Special efforts should be made to promote foodborne illness reporting from community partners (e.g., private laboratories, physicians) as they are likely to identify the index case of a foodborne illness outbreak.

- Since only about 40% of local health departments are reviewing reports for potential foodborne illness trends, user-friendly systems for rapid review of foodborne illness reports and trends need to be developed to promote early outbreak detection.
- Both state and local health departments report lacking the capacity to manage final resolution of recorded complaints for retrieval purposes. Furthermore, in 2010, it was reported that only one-fourth of states were using an electronic database for public health records on foodborne disease outbreak at the local level (CSTE, 2010). Therefore, continued investment in development of an electronic database that can collect and share foodborne illness outbreak data will promote coordination of outbreak identification, response, and control.
- Future reductions in foodborne illness require an understanding of the risk factors contributing to the occurrence of illness. Rapid identification of contributing factors can lead to development of disease prevention measures. Sharing prevention messages with affected retail food operations, manufacturing and processing facilities, food producers, and consumers is the key to reducing the occurrence of foodborne illness outbreaks.

- Risk communication specialists should be included in the outbreak investigation process at the local, state, and federal levels to ensure accurate and consistent messages are provided to the public.
  - Because information, both accurate and inaccurate, can travel rapidly today and there can be significant economic consequences to food industries, food-safety-specific risk communication training and certification programs should be developed for personnel at the local, state, and federal levels.

Fiscal Issues

State and local EH programs inclusive of food safety programs have a long and unfortunate history of being inadequately funded. This built-in institutional shortfall is compounded by the severe recession that began in 2008, which the profession has yet to fully recover. State and local governments have been disproportionately and adversely impacted.

Given that nearly half of all funding support for food protection and foodborne illness response programs are provided by state and local government, the resulting impact on these programs is severe. The loss of program capacity has been documented in this study. Without a commensurate commitment to rebuild this capacity, many of the risk reduction goals established for these programs will simply not be achieved.

Moreover, as the federal government continues to implement FSMA and build the infrastructure for an integrated national food safety system, funding for FDA's food safety program must be increased and maintained.

<u>Required actions:</u>

- Full funding of FSMA implementation activities must be achieved.

- Capacity to build local, state, and federal agencies into a truly integrated national food safety system must be achieved.
- Greater program efficiencies must be realized by implementing risk-based inspection programs.
- Resources should be committed to ensure greater workforce capacity in developing workforce skill sets and competencies that reflect contemporary needs.
- Strategies that stress prevention of foodborne illness throughout the food supply system must be adopted, both as sound public health policy and for the cost savings it will yield.
- Additional cost savings obtained through better system coordination, consolidation of duplicate efforts, and streamlined regulatory functions should be identified and implemented as a means of achieving even greater budget efficiencies.
- Resources to support research that will enable quicker identification and response to potential threats should be provided. Additionally, there needs to be a resource commitment made to better identify and promote best practice models.

Methods

NEHA was asked by members of the Workforce Capacity Workgroup to undertake an assessment of current capacity of local and state agencies to manage foodborne illness outbreak investigations. Preliminary data was gathered through an initial assessment on food safety program capacity. The report for the initial assessment, Initial Environmental Health Regulatory Food Safety Program Capacity Assessment Results Summary April 2011 can be found on the NEHA Web site. Based on information from the initial assessment, with the assistance of focus groups from NEHA, AFDO, ASTHO, and NACCHO a second, more extensive assessment was developed to specifically address foodborne illness outbreak capacity of local and state agencies.

This report is an analysis and summary of responses to the second extensive assessment. The assessment was created using the survey tool, Zoomerang, and was both anecdotal and qualitative; addressing EH food safety program capacity issues such as staff, resources, training, and budgets.

NEHA, AFDO, and NACCHO facilitated distribution of the link for both assessments to EH and food safety managers and directors. Assessments were announced through e-mail to NEHA state and regional affiliates, Certified Professional in Food Safety credentialed list, NEHA's e-News electronic membership newsletter, and on its Web site, Facebook page, and through Twitter. AFDO e-mailed the assessment to its list of state food safety program managers with encouragement to complete it. NACCHO shared the assessment with its food safety distribution list, EH distribution lists, and EH advisory groups. It was also included in their EH newsletter. The assessment was also promoted through CDC's EH listserv.

Given the wide promotion of the assessment information, it is not possible to estimate the percentage of completion rate. However, at the close of the assessment on foodborne illness outbreak response capacity, 896 individuals visited the Zoomerang assessment link with 142 completing and 70 partially completing the assessment. After review of partial responses, 23 were determined to be substantially complete and were included. This report is based on a total of 163 responses where 123 (75%) participants identify themselves as working at local agencies and 40 (24%) from state agencies.

Additionally, staff from two (1%) tribal agencies responded to the assessment. NEHA greatly appreciates the input and comments from the tribal agencies. Unfortunately, due to the small number of responses and confidentiality concerns, responses from the tribal agencies were omitted from this report. Consideration should be given for an assessment in the future specifically on tribal agency foodborne illness investigation capacity.

The data collected is provided as summary tables for local and state agencies in the Results and Discussion. For all assessment questions, a more detailed breakdown of the results is given in separate tables for local and state agencies by jurisdiction size in the Appendix. Throughout this

report, data in tables for local agency participants is highlighted in blue and state agency participants are highlighted in green.

Jurisdiction size is asked in order to compare economic impacts and workforce capacity on smaller local agencies verses larger local and state agencies. Throughout the report, smaller local agencies refer to those serving a jurisdiction of less than 250,000. Larger local agencies are those reporting a jurisdiction of more than 250,000.

With a number of questions regarding budget, staffing, and capacity, this assessment was directed to those in management roles related to food safety; and 69% identify themselves by traditional supervisory titles (manager, director, supervisor, etc.). However, given the wide range of job titles in the EH field, it is difficult to determine an individual's role and responsibility by job title alone. All job titles that have food safety program responsibilities are included. More detailed information on demographics of assessment participants is presented in the Results and Discussion and the Appendix.

Results and Discussion

Please note:

- For each table, the number and percentages of responses are summarized for local and state agencies.
  - For each question, a more detailed breakdown of responses by agency jurisdiction size is provided in the Appendix.
- Smaller local agency denotes local agencies serving a jurisdiction with a population of <250,000.
- Larger local agency denotes local agencies serving a jurisdiction with a population of >250,000.

Symbols Key

n: number of responses
<: less than
>: greater than

Question 1: Please indicate the level of government in which you work.

Key Finding: *Out of a total of 163 responses, 123 (75%) participants identify themselves as working at local agencies and 40 (25%) at state agencies.*

Question 2: Please provide the following information:

A. State
B. Name of agency or department (or division, branch, bureau, etc.)
C. Job title
D. Number of staff you supervise or manage
E. Estimated size of population in your agency's jurisdiction

Question 2.A Please provide the following information: *state.*

Findings from Table 2.A in the Appendix

- There is representation from 39 states and the District of Columbia either by a local, state, or tribal agency. The highest overall participation is from California with 9% (15/163) followed by New Jersey at 7% (12/163).
- Participation by state agency staff is highest in Florida, 15% (6/40); Minnesota, 8% (3/40); and Texas, 8% (3/40).

Question 2.B: Please provide the following information: *name of agency or department (or division, bureau, etc.).*

Findings from Tables 2.B in the Appendix

- Participation by local agencies is highest in the following states: California, 11% (14/123); New Jersey, 10% (12/123), and Colorado, 8% (10/123).

Question 2.C: Please provide the following information: *job title.*

Key Finding: *This assessment is directed to those in management roles related to food safety; and 58% identify themselves using traditional supervisory titles (administrator, chief, commissioner, director, leader, manager, or supervisor).*

Table 2.C.1 Summary of Job Titles

Job Title (n=153)	Number of Responses	Percentage of Responses
Administrator	5	**3%**
Agent	1	**<1%**
Chief	9	**6%**
Commissioner	2	**1%**
Coordinator	7	**4%**
Director	48	**31%**
Education	3	**2%**
Environmental Compliance Service Consultant	1	**<1%**
Environmental Health or Environmentalist	4	**3%**
Environmental Health Specialist	20	**13%**
Epidemiologist	1	**<1%**
Health Officer	4	**2%**
Inspector	1	**<1%**
Investigator	1	**<1%**
Leader	2	**2%**
Manager	13	**8%**
Manager, Environmental Health	8	**5%**
Public Health	2	**1%**
Sanitarian	10	**6%**
Supervisor	11	**7%**

Detailed Findings based on Tables 2.C.2 in the Appendix

- 31% identify their job title as “Director.”
- 7% identify their job title as “Manager.”
- 8% identify their job title as “Supervisor.”
- 13% identify their job title as “Environmental Health Specialist.”

Question 2.D: Please provide the following information: *number of staff you supervise or manage.*

Key Finding: *Approximately 80% of participants report supervising one or more staff.*

Table 2.D.1 Summary of Number of Staff Supervised by Assessment Participants for Local and State Agencies

Number of Staff Supervised	Local Agency (n=113)	State Agency (n=40)	All (n=153)
None	21 (18%)	8 (20%)	**29 (19%)**
1–5	35 (30%)	8 (20%)	**42 (27%)**
6–10	20 (17%)	5 (12%)	**25 (16%)**
11–20	21 (18%)	6 (15%)	**27 (14%)**
21–50	12 (10%)	4 (10%)	**16 (7%)**
51–100	4 (3%)	3 (7%)	**7 (5%)**
101–200	2 (2%)	2 (5%)	**4 (3%)**
>200	—	4 (10%)	**4 (3%)**

Detailed Findings Based on Tables 2.D.2 and 2.D.3 in the Appendix

- 60% (48/81) of participants from smaller local agencies supervise <5 staff.
  - 20% (16/81) of participants from smaller local agencies do not report having a supervisory role for other staff.
- 38% (8/21) of participants from local agencies with jurisdictions of >500,000 supervise 20–50 staff.
- 33% (9/27) of state agency participants from jurisdictions of >500,000 report supervising >50 staff.

Question 2.E: Please provide the following information: *estimated size of population in your agency's jurisdiction.*

Jurisdiction size is asked in order to compare workforce capacity and economic impacts on smaller local agencies versus larger local and state agencies.

Key Findings: *Greatest participation in this assessment (52%) is from smaller local agencies (jurisdiction <250,000), followed by larger local agencies (jurisdiction >250,000) at 24%, and state agencies at 25%. (Please see the Detailed Findings below.)*

Table 2.E.1 Summary of Estimated Size of Population in Local and State Agency Jurisdictions

Jurisdiction Size	Local Agency (n=119)	State Agency (n=40)	All (n=159)
<50,000	35 (29%)	3 (7%)	38 (24%)
50,001–100,000	27 (23%)	3 (7%)	30 (19%)
100,001–250,000	21 (18%)	3 (7%)	24 (15%)
250,001–500,000	14 (12%)	1 (3%)	15 (9%)
500,001–1 million	10 (8%)	3 (7%)	13 (8%)
1–5 million	12 (10%)	12 (30%)	24 (15%)
>5 million	—	15 (38%)	15 (9%)

Detailed Findings Based on Table 2.E.1 above

- Of all participants from local agencies (119), 70% represent agencies with jurisdictions with a population of <250,000 and 30% represent local agencies with a population of >250,000.
- 33% of participants from state agencies report jurisdictions of <1 million.

Question 3: What is your agency's annual staff turnover rate? Please see formula below.

For example, if you have a staff of 20 and 5 have resigned or been laid off in the last year, your turnover rate would be 5/20 = 0.25 or 25%.

# of employees leaving agency per year (laid off, fired, resigned)
total # of employees

Key Finding: *Local agencies (28%) and state agencies (35%) report 11–30% turnover rates in the last year.*

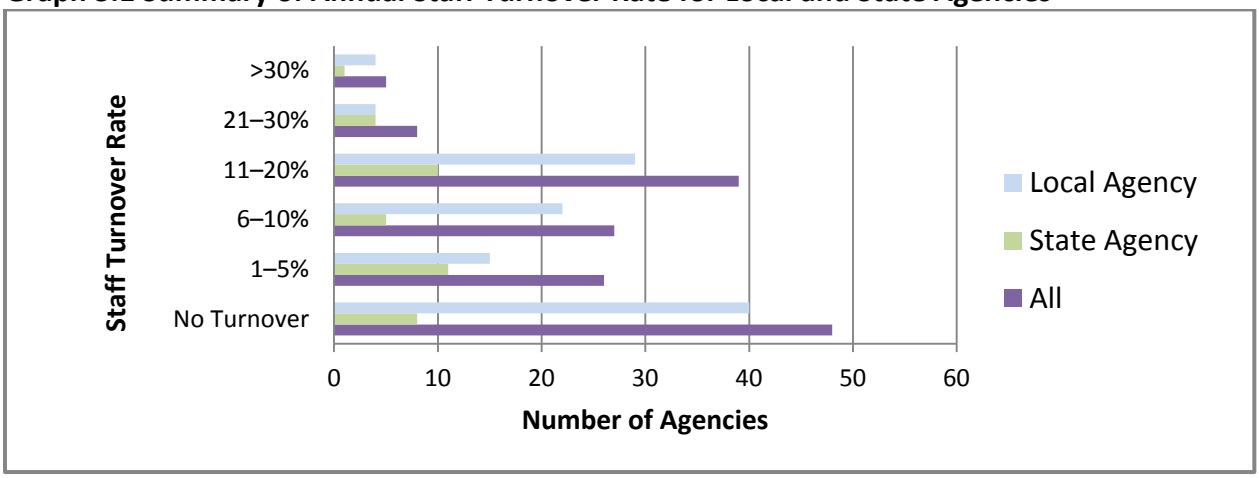
Table 3.1 Summary of Annual Staff Turnover Rate for Local and State Agencies

Staff Turnover Rate	Local Agency (n=116)	State Agency (n=40)	All (n=156)
1–5%	15 (13%)	11 (28%)	**26 (17%)**
6–10%	22 (19%)	5 (13%)	**27 (17%)**
11–20%	29 (26%)	10 (28%)	**39 (25%)**
21–30%	4 (3%)	4 (8%)	**8 (5%)**
>30%	4 (3%)	1 (3%)	**5 (3%)**
No Turnover	40 (34%)	8 (20%)	**48 (31%)**

Detailed Findings Based on Tables 3.2 and 3.3 in the Appendix

- 24% (20/82) of smaller local agencies report an annual staff turnover rate of 11–20%.
- 38% (13/34) of larger local agencies report an annual staff turnover rate of 6–10%.
- 30% of state agencies with jurisdictions >500,000 report a 1–5% annual staff turnover rate.

Graph 3.1 Summary of Annual Staff Turnover Rate for Local and State Agencies



Question 4: Has your agency implemented or mandated furlough days? If yes, please provide the number of furlough days per year below.

Key Findings: *Both local and state agencies (20% or more) report mandated furlough days. This mandate has a higher impact at larger local agencies with 28% reporting furlough days compared to 22% of local agencies from smaller jurisdictions. In contrast, state agencies, in particular those >1 million in jurisdiction size, do not experience the impact to the same extent with 82% reporting no mandated furlough days. (Please see the Detailed Findings below.)*

Table 4.1.A Summary of Implemented or Mandated Furlough Days for Local and State Agencies

Implemented or Mandated Furlough Days	Local Agency (n=118)	State Agency (n=40)	All (n=158)
Yes	28 (24%)	8 (20%)	**36 (23%)**
No	90 (76%)	32 (80%)	**123 (77%)**

Table 4.1.B Summary of Number of Implemented or Mandated Furlough Days for Local and State Agencies

Number of Implemented or Mandated Furlough Days	Local Agency (n=20)	State Agency (n=7)	All (n=27)
1–3	1 (5%)	3 (43%)	**4 (15%)**
4–6	7 (35%)	2 (29%)	**9 (33%)**
7–12	8 (40%)	2 (29%)	**10 (37%)**
>12	4 (20%)	—	**4 (15%)**

*Please note: For this table, the number of responses under "Number of Implemented or Mandated Furlough Days" is based on 20 local agencies and 7 state agencies that answered "Yes" **and** provided the number of furlough days.*

Detailed Findings Based on Tables 4.2, 4.3, 4.4, and 4.5 in the Appendix

- 22% (18/83) of smaller local agencies and 28% (10/35) of larger local agencies report furlough days.
- 63% (10/16) of smaller local agencies providing the number of mandated furlough days report 7 or more furlough days.
- 82% (23/28) of state agencies with jurisdictions >1 million have not implemented furlough days.

A Sample of Comments on Mandated Furlough Days

(Please see the complete list of comments in the Appendix, Question 4.)

- Six days the last two years for staff; 96 hours the last 9 months for management.

Question 5: Of your agency's staff, what percentage (%) do you expect will retire within the next five (5) years?

Key Finding: *For all agencies, 35% expect >10% of their staff to retire within five years. In addition, nearly one third (31%) of state agencies expect 11–25% of their staff to retire in that time period.*

Table 5.1 Summary of Percentage of Staff Expected to Retire Within Five Years for Local and State Agencies

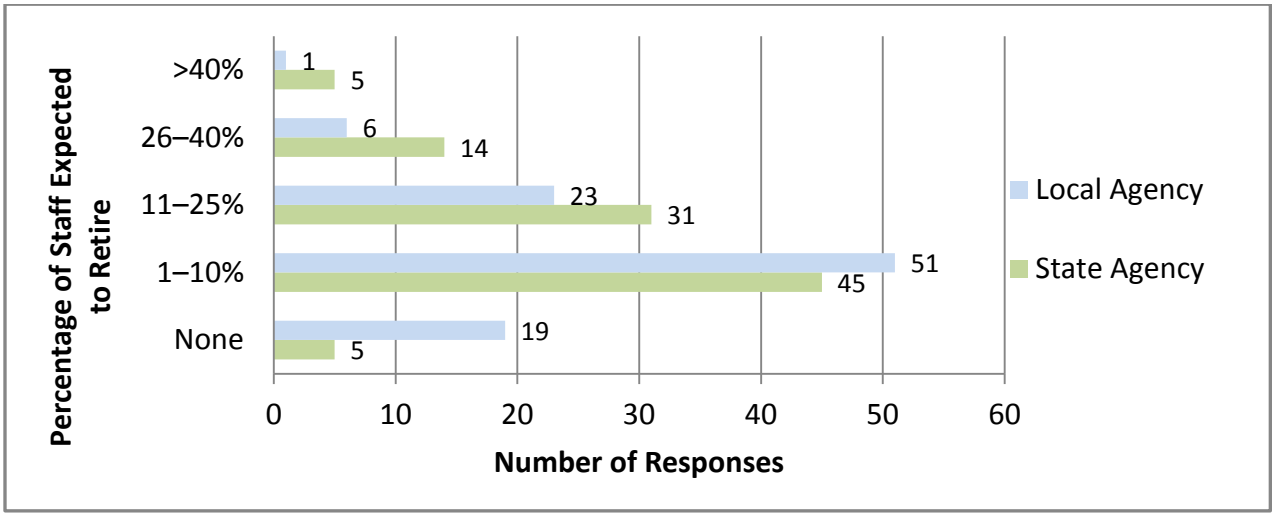
Percentage of Staff Expected to Retire Within 5 Years	Local Agency (n=118)	State Agency (n=40)	All (n=158)
1–10%	60 (51%)	19 (45%)	**79 (49%)**
11–25%	27 (23%)	13 (31%)	**40 (25%)**
26–40%	7 (6%)	6 (14%)	**13 (8%)**
>40%	1 (1%)	2 (5%)	**3 (2%)**
None	23 (19%)	2 (5%)	**25 (15%)**

Detailed Findings Based on Tables 5.2 and 5.3 in the Appendix

In the next five years:

- 24% (20/83) of smaller local agencies and 40% (14/35) of larger local agencies expect 10% or more of their staff to retire.
- 57% (16/28) of state agencies with jurisdictions of >1 million report >10% of their staff is expected to retire.

Graph 5.1 Summary of Percentage of Staff Expected to Retire Within Five Years for Local and State Agencies



Question 6: Has your agency implemented any early retirement incentive programs?

This question is asked to determine if expected retirement (Question 5) is influenced by early retirement incentives at local and state agencies.

Key Finding: *Only 12% of all local agencies and 16% of state agencies report early retirement incentives.*

Table 6.1 Summary of Early Retirement Incentive Programs Implemented for Local and State Agencies

Early Retirement Incentive	Local Agency (n=112)	State Agency (n=38)	All (n=150)
Yes	13 (12%)	6 (16%)	**19 (13%)**
No	99 (88%)	32 (84%)	**131 (87%)**

Detailed Findings Based on Tables 6.2 and 6.3 in the Appendix

- 92% (72/78) of smaller local agencies and 79% (27/34) of larger local agencies do not report retirement incentives.
- 88% (22/25) of state agencies with jurisdictions of >1 million report no retirement incentives have been implemented.

A Sample of Comments on Early Retirement Incentives

(Please see the complete list of comments in the Appendix, Question 6.)

- Had two rounds of "early retirement incentive programs" in the past few years. Each round resulted in a 7–10% staff reduction in the department.
- Yes, but the program required retirement by June 24, 2010, so really hasn't impacted the most recent past fiscal year.
- The town offered a program in 2010.
- Offered on three occasions in the past for limited times.
- In the past 5 years, early retirement programs have been offered twice.
- 2010: 2 positions eliminated.

Question 7: For your jurisdiction, please estimate the number of retail food facilities (including outdoor, temporary, and mobile venues) and food manufacturer/processor facilities.

Key Finding: *The number of facilities is substantial—33% of all local agencies report >1,000 retail operations in their jurisdictions, and 10% of all local agencies also indicate >50 manufacturing facilities in their jurisdictions. Of state agencies, 49% report >10,000 retail facilities in their jurisdictions.*

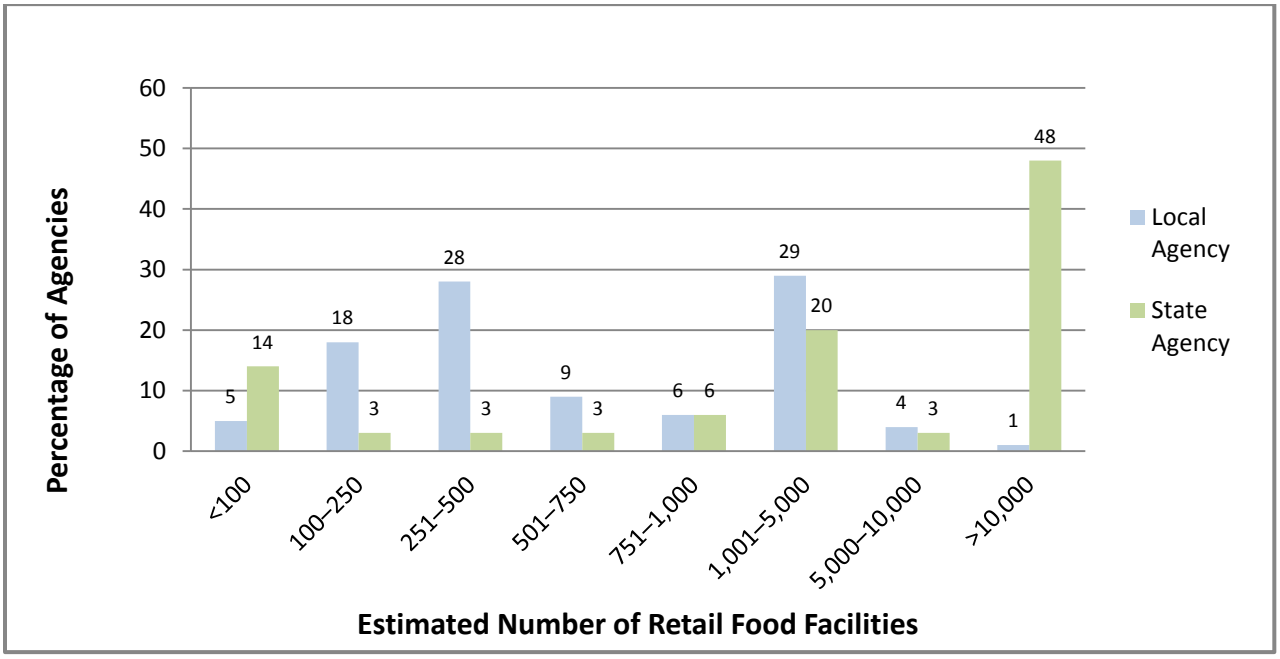
Table 7.1 Summary of Retail and Manufacturing Food Facilities for Local and State Agencies

Number of Facilities	Local Agency (n=116)	State Agency (n=39)	All (n=155)
Retail Facilities			
None or N/A	—	—	—
<100	6 (5%)	5 (13%)	**11 (7%)**
100–250	21 (18%)	1 (3%)	**22 (14%)**
251–500	32 (28%)	1 (3%)	**33 (21%)**
501–1,000	18 (15%)	3 (7%)	**12 (7%)**
1,001–5,000	33 (28%)	7 (18%)	**40 (26%)**
5,001–10,000	5 (4%)	1 (3%)	**6 (4%)**
>10,000	1 (1%)	17 (44%)	**18 (12%)**
Manufacturing Facilities			
None or N/A	40 (34%)	7 (18%)	**47 (33%)**
1–10	39 (34%)	3 (7%)	**42 (30%)**
11–25	10 (9%)	1 (3%)	**11 (8%)**
26–50	4 (3%)	3 (7%)	**7 (5%)**
51–100	4 (3%)	1 (3%)	**5 (3%)**
101–250	4 (3%)	2 (5%)	**6 (4%)**
251–500	2 (2%)	5 (13%)	**7 (5%)**
501–1,000	—	6 (15%)	**4 (3%)**
1,001–5,000	—	8 (20%)	**8 (6%)**
5,001–>10,000	—	3 (8%)	**3 (2%)**

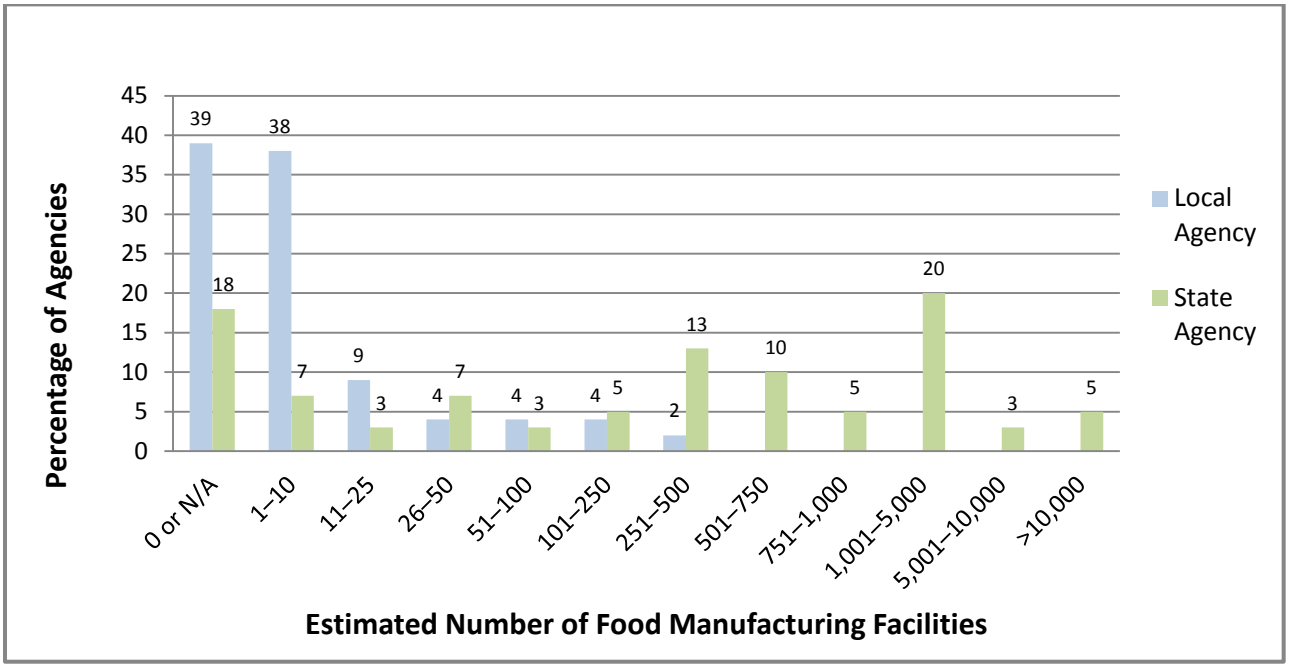
Detailed Findings Based on Tables 7.2 and 7.3 in the Appendix

- 47% (30/81) of smaller local agencies report 251–500 retail facilities and 47% (38/81) report 1–10 manufacturing facilities in their jurisdictions.
  - In general, oversight of manufacturing facilities is the responsibility of state agencies, which may be reflected in the 34% (40/116) of all local agencies report "none or not applicable."
- 71% (25/35) of larger local agencies report 1,001–5,000 retail facilities in their jurisdictions.
- 28% (7/25) of state agencies with jurisdictions of >1 million report >1,000 manufacturing facilities in their jurisdictions.

Graph 7.1 Summary of Retail Food Facilities for Local and State Agencies



Graph 7.2 Summary of Manufacturing Food Facilities for Local and State Agencies



Question 8: Specific to your agency's foodborne illness outbreak response and investigation capacity: Over the past two years, please indicate any change to administrative and program capacities. Additional comments or information are welcome, but not required.

Environmental assessments/investigations are conducted to identify the contributing factors and environmental antecedents (e.g., what caused the outbreak and why those conditions/practices existed) in a foodborne illness outbreak.

Key Findings:

Local Agencies

- *At least 30% of local agencies report a decrease in capacity in the following areas: number of staff and food safety program budget/training/travel and technology budgets.*
  - *Average years of staff food safety experience and staff salaries increased by only 31% and 24% of local agencies, respectively.*
  - *All other capacities increased in only 3–12% of local agencies in the past two years.*
- *At least 23% of local agencies report a decrease in the following activities and responsibilities:*
  - *Inspection time per facility,*
  - *Ability to conduct and response time for environmental assessments,*
  - *Ability to do follow-up inspections, and*
  - *In responding to food recalls.*

State Agencies

- *Approximately 40% of state agencies report the most impacted administrative and program capacity decreases are:*
  - *Average years of food safety experience,*
  - *Food safety travel budget,*
  - *Ability to do routine inspections, and*
  - *Follow-up inspections on environmental assessments.*
- *More than 20% of state agencies report increases in capacity that includes the ability to respond to food recalls and increases in local retail food license and/or inspection fees.*

Table 8.1.A Administrative and Program Capacities in Past Two Years for Local Agencies

Administrative and Program Capacity	Local Agency (n=119)						
	No Change	Decrease				Increased	N/A
		1–10%	11–20%	21–30%	>30%		
Number of staff	70 (59%)	13 (11%)	10 (8%)	8 (7%)	6 (5%)	11 (9%)	—
Average years of staff food safety experience	42 (35%)	14 (12%)	9 (8%)	6 (5%)	4 (3%)	37 (31%)	3 (2%)
Staff salaries	63 (53%)	18 (15%)	—	1 (1%)	—	28 (24%)	8 (7%)
Food safety program budget	48 (40%)	25 (21%)	10 (9%)	8 (7%)	2 (1%)	14 (12%)	6 (5%)
Food safety training budget	58 (49%)	15 (13%)	9 (8%)	7 (6%)	11 (10%)	9 (8%)	5 (4%)
Food safety travel budget	53 (46%)	17 (14%)	11 (9%)	7 (6%)	12 (10%)	5 (4%)	9 (8%)
Technology/equipment budget	58 (49%)	23 (19%)	6 (5%)	6 (5%)	7 (6%)	12 (10%)	2 (1%)
Ability to support any federal, state, or local government food safety mandates	71 (62%)	15 (13%)	1 (1%)	4 (3%)	3 (2%)	4 (3%)	1 (1%)
Ability to do routine inspections	54 (45%)	29 (24%)	6 (5%)	4 (3%)	3 (2%)	15 (13%)	2 (1%)
Inspection time per facility	69 (58%)	19 (16%)	3 (2%)	3 (2%)	1 (1%)	14 (12%)	4 (3%)
Ability to conduct environmental assessments	64 (49%)	12 (10%)	5 (4%)	2 (2%)	7 (6%)	11 (9%)	11 (9%)
Response time to conduct environmental assessments	67 (56%)	13 (11%)	5 (4%)	2 (2%)	6 (5%)	10 (9%)	11 (9%)
Ability to do follow-up inspections on environmental assessments	59 (50%)	14 (12%)	10 (8%)	4 (3%)	7 (6%)	9 (8%)	9 (8%)
Ability to respond to food recalls	73 (61%)	13 (11%)	5 (4%)	4 (3%)	5 (4%)	9 (8%)	4 (3%)
Outsourcing of food safety program	48 (40%)	1 (1%)	1 (1%)	2 (2%)	1 (1%)	4 (3%)	48 (50%)
Local retail food license and/or inspection	72 (60%)	13 (11%)	8 (7%)	3 (3%)	5 (4%)	6 (5%)	3 (3%)
Grant funding	57 (48%)	7 (6%)	2 (2%)	1 (1%)	3 (3%)	9 (7%)	34 (29%)

Table 8.1.B Administrative and Program Capacities in Past Two Years for State Agencies

Administrative and Program Capacity	State Agency (n=40)						
	No Change	Decrease				Increased	N/A
		1–10%	11–20%	21–30%	>30%		
Number of staff	20 (50%)	9 (23%)	4 (10%)	1 (3%)	—	5 (12%)	1 (3%)
Average years of staff food safety experience	13 (33%)	8 (20%)	5 (13%)	2 (5%)	1 (3%)	5 (12%)	1 (3%)
Staff salaries	20 (50%)	14 (35%)	3 (8%)	1 (3%)	—	1 (3%)	—
Food safety program budget	21 (53%)	7 (17%)	3 (8%)	2 (5%)	—	3 (8%)	1 (3%)
Food safety training budget	21 (53%)	8 (20%)	3 (8%)	2 (5%)	1 (2%)	2 (5%)	1 (3%)
Food safety travel budget	19 (48%)	8 (20%)	2 (5%)	2 (5%)	4 10%)	3 (8%)	2 (5%)
Technology/equipment budget	22 (55%)	7 (17%)	1 (3%)	2 (5%)	1 (3%)	5 (12%)	—
Ability to support any federal, state, or local government food safety mandates	23 (58%)	9 (23%)	4 (10%)	1 (3%)	—	1 (3%)	1 (3%)
Ability to do routine inspections	20 (50%)	9 (23%)	3 (8%)	1 (3%)	1 (3%)	1 (3%)	1 (3%)
Inspection time per facility	21 (53%)	7 (17%)	2 (3%)	1 (3%)	—	3 (8%)	2 (5%)
Ability to conduct environmental assessments	26 (65%)	5 (12%)	2 (5%)	1 (3%)	—	2 (5%)	2 (5%)
Response time to conduct environmental assessments	26 (65%)	5 (12%)	2 (5%)	1 (3%)	—	2 (5%)	2 (5%)
Ability to do follow-up inspections on environmental assessments	22 (55%)	10 25%)	3 (5%)	1 (3%)	—	2 (5%)	2 (5%)
Ability to respond to food recalls	20 (50%)	8 (20%)	—	1 (3%)	—	3 (8%)	8 (20%)
Outsourcing of food safety program	20 (50%)	3 (8%)	—	2 (5%)	1 (2%)	1 (2%)	12 (30%)
Retail food license and/or inspection	20 (50%)	8 (20%)	—	1 (23%)	—	7 (16%)	8 (20%)
Grant funding	13 (32%)	6 (40%)	—	2 (3%)	—	7 (18%)	7 (18%)

Detailed Findings Based on Tables 8.1.C, 8.2, and 8.3 in the Appendix

- 19% (16/83) of smaller local agencies and 31% (11/36) of larger local agencies report a decrease of up to 10% in their ability to support federal, state, or local government mandates.
- 29% (24/83) of smaller local agencies have seen a decrease of >10% in their number of staff and 23% (19/83) report a decrease of 11–30% in average years of staff experience.
- >60% of smaller local agencies report up to a 10% decrease or no change in staff salaries in the past two years; and 52% of larger local agencies report up to a 15% decrease or no change in staff salaries.
- 19% (16/83) of smaller local agencies report a decrease of 11% or more in their food safety program budget.
- Only 4% (5/119) of local agencies and 7% (3/40) of state agencies report an increase in travel budgets.
- 14% (12/83) of smaller and 19% (7/36) of larger local agencies report a decrease of up to 10% in inspection time per facility; and only 12% (14/119) of local agencies report an increase in inspection time/facility.
- 8% (7/83) of smaller local agencies report >30% decrease in their ability to conduct environmental assessments.
- 17% (14/83) of smaller local agencies and 19% (7/36) of larger local agencies report up to a 20% decrease in retail license and inspections.
- 22% of state agencies with jurisdictions >1 million (6/27) report a decrease in their ability to do follow-up inspections.

A Sample of Comments on Administrative and Program Capacities
(Please see the complete list of comments in the Appendix, Question 8.)

Number of staff:

- Mandatory furlough reducing staff time by 10% has been ongoing for more than two years.
- Reduced regional inspection obligations. Reduced number of food facility inspections from approximately 2,200 facilities to 380. EH department staff positions not filled.
- Budget year 2011 we had to lay off a total of 28% of our staff. Prior to 2011 our turnover was extremely low.

Average years of staff food safety experience:

- The average within the food inspection program has gone up slightly due to fewer staff leaving and increased longevity - average 4 years.
- We have hired few new staff dues to finances. Therefore our staff is getting older and in the short term more experienced. The concern is long term.
- Some staff is not properly trained and they do not meet education requirements.

Staff salaries:

- But this union contract ends 12/31/11 and no raise to be given next contract.
- No cost of living increases. Strictly pay for performance and is very nominal.

Food safety program budget:

- Revenue decreased by 76% when de-regionalization occurred.
- Decrease caused by reallocation of staff to the nuisance programs thereby causing a subsequent drop in fees in the food safety program cost methodology.
- Inspection authority for child care centers, hospitals, nursing homes delegated to other agencies last year and not-for-profit/churches serving the public eliminated and not inspected by any agency.

Food safety staff training budget:

- Cut completely from budget. We only attend trainings that funding is available for outside of our agency.
- Look for free webinars, training or self training opportunities.
- With more trainees you might say the training budget has increased but the staffing level has remained the same, equipment for new employees is costly with roughly $3,500.00 per trainee.
- Our food and drug program was cut 16.6% for the next two years.

Technology/equipment budget:

- One year grant to convert to electronic field inspections using Tablet PC and commercial software system.
- Trying to figure out how to allocate future technology costs for tablet computers. Cost methodology is not suited for future anticipated costs!
- Food is very low but HAZMAT gets money and has a lot of equipment.
- We have a very limited budget for this area, needs to be increased as computers and field tablets are expiring and we have no funds to replace them with.

Ability to do routine inspections:

- More temporary events, more permanent facilities, existing facilities expanding menus and new practices and facilities embracing the “sustainability” movement - e.g., raw and fresh food movements, garden to table, housing gardens.
- New programs have stressed the quality of inspections and we are utilizing a new Cutting Edge program that works with industry to support their active managerial control programs by doing verification visits every other inspection.
- Staff is down and so only doing CAT 3 and 4 inspections only.

Inspection time per facility:

- Slight increase due to change to electronic inspections.
- We spend more time on the more critical facilities and have increased follow-up for serious violations.
- Trending to fewer, but higher quality inspections.
- As mentioned above, we are implementing the Food Code and inspection time has increased because of the use of the new inspection form.

Ability to respond to food recalls:

- This takes a lot of time and most major facilities do a good job. It's the Mom and Pop places that are not in the loop.
- Recently approved to start mass communication contract which will be used to notify vendors of recall notices. Will still conduct random inspections for recalled foods on small percentage of inventory.

Retail food license and/or inspection:

- Fees for the food certificates that we issue have increased, although overall revenue has gone down at least 30% due to afore-mentioned transfer or elimination of DOH inspected facilities.
- We will be conducting an fee assessment and revise the next coming year.

Grant funding:

- Reduction in PHEP (Public Health Emergency Preparedness-CDC) funds of 10 percent each year. Slight offset by electronic inspection grant $.
- Only grant funding available is the $2000 from FDA for standardization.
- Due to gaps in funding we are more aggressively going after food safety grants.
- Decrease in Local Public Health Grant funds (funneled through State Agency), and other grant funds to support EH programs.

Question 9: Does your agency have the following positions as part of your foodborne illness outbreak response and investigation staff?

Key Finding: *State agencies and larger local agencies report a more diverse, multi-disciplinary staff than smaller local agencies. Local agencies report a need for laboratory staff and communication/public relations professionals while state agencies typically do report having public health nurses on staff.*

Table 9.1 Summary of Positions for Local and State Agencies

Positions	Local Agency (n=119)		State Agency (n=40)		All (n=159)	
	Yes	No	Yes	No	Yes	No
Environmental Health Specialist	112 (95%)	6 (5%)	33 (87%)	5 (13%)	**145 (93%)**	**11 (7%)**
Food Safety Specialist	66 (59%)	45 (41%)	30 (79%)	8 (21%)	**96 (64%)**	**53 (36%)**
Epidemiologist	63 (55%)	52 (45%)	28 (76%)	9 (24%)	**91 (60%)**	**61 (40%)**
Laboratory Professional	25 (22%)	87 (78%)	31 (82%)	7 (18%)	**56 (37%)**	**94 (63%)**
Public Health Nurse	98 (84%)	18 (16%)	19 (53%)	17 (47%)	**117 (77%)**	**35 (23%)**
Public Relations/Media Specialist	71 (62%)	43 (38%)	32 (86%)	5 (14%)	**103 (68%)**	**48 (32%)**
Risk Communication Specialist	34 (31%)	75 (69%)	14 (40%)	21 (60%)	**48 (33%)**	**96 (67%)**

Please note: For this table, percentages may be >100% because participants could provide more than one response.

Detailed Findings Based on Tables 9.2 and 9.3 in the Appendix

- 57% (47/83) of smaller local agencies do not have an epidemiologist and 82% (68/83) do not have public health nurses or laboratory professionals in their agency.
- 28% (10/36) of larger local agencies do not have a food safety specialist and 53% (19/36) do not employ laboratory professionals.
- 54% (45/83) of smaller local agencies, 55% (20/36) of larger local agencies, and 60% (16/27) of state agencies with a jurisdiction of >1 million do not have a risk communication specialist on staff.
- 22% (6/27) of state agencies with jurisdictions of >1 million do not have an epidemiologist on staff and 44% (12/27) do not have a laboratory professional.

Question 10: In a single incident with current staffing, what is the largest foodborne illness outbreak (number of cases/ill persons) that your agency is able to handle?

For this question, please use the CDC definition of a foodborne illness outbreak, "the occurrence of two or more similar illnesses resulting from ingestion of a common food."

Key Finding: *For the most part, jurisdiction size is an indicator of number of cases an agency is able to handle. Almost half of smaller local agencies are able to handle smaller outbreaks (<20 cases/ill persons), while about half of larger local agencies report the capacity to manage outbreaks of >100 cases. (Please see the Detailed Findings below.)*

Table 10.1 Summary of Foodborne Illness (FBI) Outbreak Capacity for Local and State Agencies

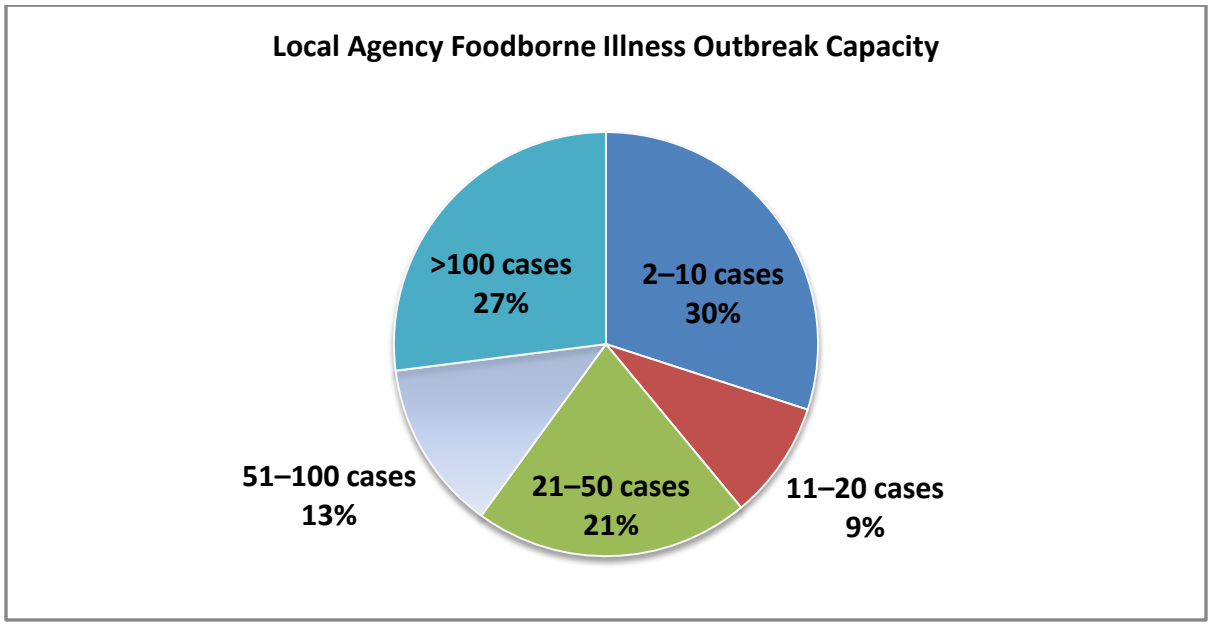
FBI Outbreak Capacity	Local Agency (n=117)	State Agency (n=39)	All (n=156)
2–10 cases	35 (30%)	6 (15%)	**41 (26%)**
11–20 cases	11 (9%)	3 (8%)	**14 (9%)**
21–50 cases	24 (21%)	4 (10%)	**28 (18%)**
51–100 cases	15 (13%)	2 (5%)	**17 (11%)**
>100 cases	32 (27%)	24 (62%)	**56 (36%)**

Please note: For this table, capacity is measured as the largest number of cases/ill persons an agency is able to handle with current staffing.

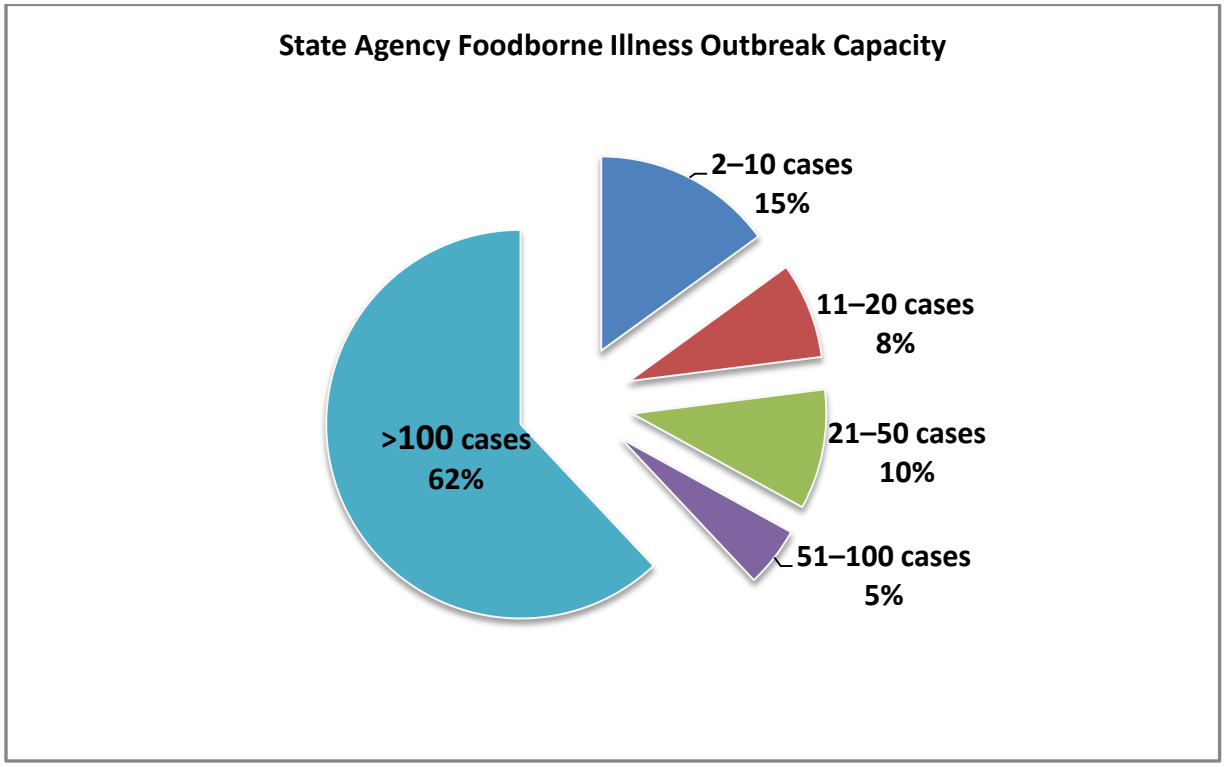
Detailed Findings Based on Tables 10.2 and 10.3 in the Appendix

- 47% (38/81) of smaller local agencies report they could handle foodborne illness outbreaks of 2–20 cases.
- 18% (15/81) of smaller local agencies and 47% (17/36) of larger local agencies report the capacity to manage outbreaks of >100 cases.
- 81% (21/26) of state agencies with jurisdictions of >1 million report the capacity to manage foodborne illness outbreaks of >50 cases.

Graph 10.1 Summary of Foodborne Illness Outbreak Capacity for Local Agencies (maximum capacity identified by number of cases/ill people.



Graph 10.2 Summary of Foodborne Illness Outbreak Capacity for State Agencies



Question 11: If your agency's current staffing does not meet the need for foodborne illness outbreak response and investigation, how many additional full-time employees (FTEs) for each position would be needed for full capacity?

Key Finding: *For local agencies, 35% indicate a need for additional environmental health specialists, 20% for additional public health nurses, 19% for additional laboratory professionals, and 18% for additional epidemiologists to meet full capacity for foodborne illness outbreak response. For state agencies, 15% report a need for additional management and environmental health specialists, 18% for additional laboratory professionals, and 20% for epidemiologists.*

Table 11.1 Summary of Additional Staffing Needed to Meet Full Capacity for Foodborne Illness Outbreak Response and Investigation for Local and State Agencies

Agency	Number of Additional FTEs Needed (Local Agency n=64, State Agency n=17, All n=81)			
	0	1–3	4–5	>8
Administrative				
Local	13 (20%)	12 (20%)	1 (1%)	—
State	2 (3%)	3 (18%)	1 (6%)	—
All	15 (19%)	15 (19%)	2 (3%)	—
Management				
Local	15 (23%)	9 (14%)	2 (3%)	—
State	3 (8%)	6 (35%)	1 (6%)	—
All	18 (22%)	15 (22%)	3 (4%)	—
Environmental Health Specialist				
Local	6 (9%)	42 (66%)	3 (5%)	2 (3%)
State	1 (6%)	6 (35%)	1 (6%)	2 (12%)
All	7 (9%)	48 (59%)	4 (5%)	4 (5%)
Public Health Nurse				
Local	14 (22%)	24 (38%)	2 (3%)	1 (1%)
State	3 (18%)	5 (29%)	1 (6%)	—
All	17 (21%)	29 (36%)	3 (4%)	1 (1%)
Laboratory Professional				
Local	15 (23%)	23 (36%)	1 (2%)	—
State	1 (6%)	7 (41%)	—	—
All	16 (20%)	30 (38%)	1 (1%)	

Agency	Number of Additional FTEs Needed (Local Agency n=64, State Agency n=17, All n=81)			
	0	1–3	4–5	>8
Epidemiologist				
Local	15 (23%)	21 (33%)	—	—
State	1 (6%)	8 (47%)	1 (6%)	—
All	16 (20%)	29 (36%)	1 (1%)	—

Please note: For this table, percentages may be >100% because participants could provide more than one response. Additional staffing is measured in FTEs, individuals working eight hours per day.

Detailed Findings Based on Tables 11.2 and 11.3 in the Appendix

- 27% (22/83) of smaller local agencies report a need for 1 or more public health nurses.
- 42% (9/21) of local agencies with jurisdictions of 100,000–250,000 indicate a need for 1–3 more environmental health specialists.
- 22% (6/27) of state agencies with jurisdictions >1 million report a need for at least one additional manager.

A Sample of Comments on Staffing Needs

(Please see the complete list of comments in the Appendix, Question 11.)

- We would rely on the State Health Dept. for the epidemiologist, the laboratory professional and any other requirement.
- We as an agency would not be alone in conducting a foodborne illness outbreak response. The state currently has an RRT and working with them we would conduct the investigation.
- We support county health departments which are part of the DOH team.

Question 12: In the event of a foodborne illness outbreak, please estimate the percentage (%) of your agency's staff time that would be available for response and investigation work.

Key Finding: *State agencies report higher percentages of staff time available to respond to foodborne outbreaks. More state agencies (26%) report having 100% of their staff time available for foodborne illness outbreak investigations than do local agencies (23%). In addition, 47% of all local agencies would have <50% of their staff time available for outbreak response and investigation.*

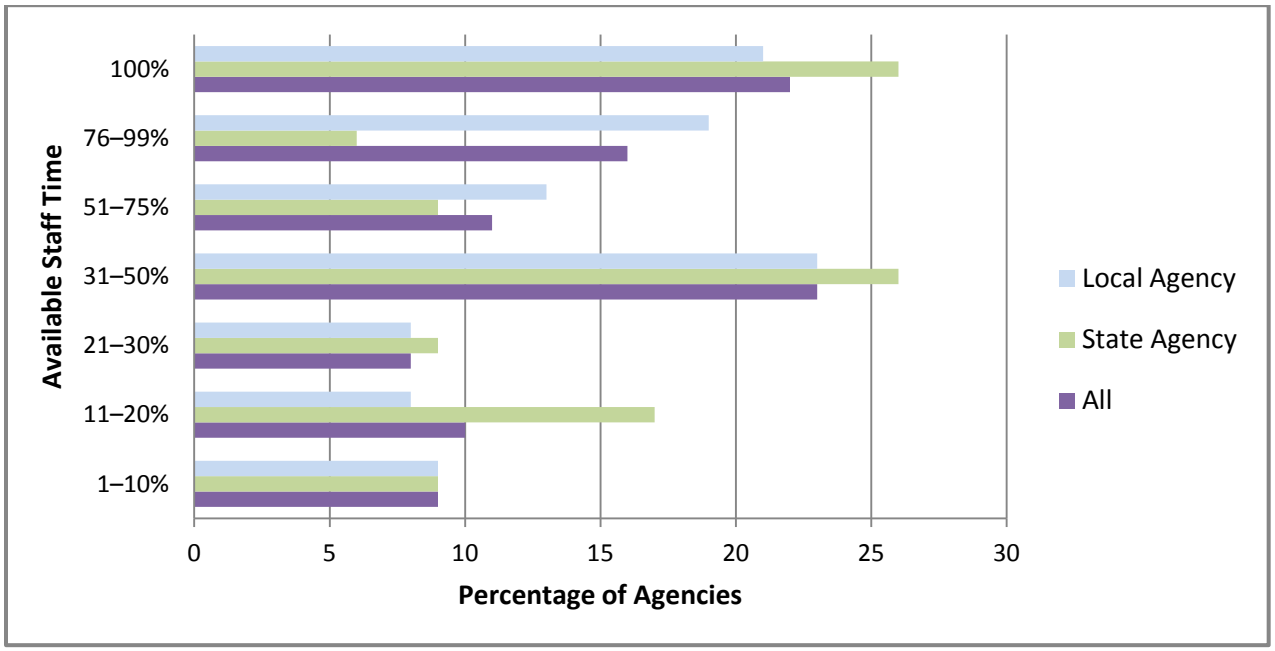
Table 12.1 Summary of Staff Time Available for Foodborne Illness Outbreak Response and Investigation for Local and State Agencies

Percentage of Available Staff Time	Local Agency (n=104)	State Agency (n=35)	All (n=139)
1–10%	9 (9%)	3 (9%)	**12 (9%)**
11–20%	8 (8%)	6 (17%)	**14 (10%)**
21–30%	8 (8%)	3 (9%)	**11 (8%)**
31–50%	24 (23%)	9 (26%)	**33 (23%)**
51–75%	13 (13%)	3 (9%)	**16 (11%)**
76–99%	20 (19%)	2 (6%)	**22 (16%)**
100%	22 (21%)	9 (26%)	**31 (22%)**

Detailed Findings Based on Tables 12.2 and 12.3 in the Appendix

- 25% (19/75) of larger local agencies report 30% or less of their staff time is available for foodborne illness outbreak investigations.
- 47% (8/17) of local agencies with jurisdictions >500,000 indicate 50% or more of their staff time is available for foodborne illness outbreak investigations.
- 75% (9/12) of state agencies with jurisdictions of 1–5 million state >30% of their staff time is available for foodborne illness outbreak investigations, while 33% (4/12) report 100% of staff time could be devoted to investigations.
- 36% (4/11) of state agencies with jurisdictions >5 million report 100% of staff time would be available for foodborne illness outbreak investigations.

Graph 12.1 Summary of Staff Time Available for Foodborne Illness Outbreak Response and Investigation for Local and State Agencies



A Sample of Comments on Available Staff Time

(Please see the complete list of comments in the Appendix, Question 12.)

- This depends on the size of the outbreak. For every 10 people involved in the outbreak (reported ill OR well), one additional staff is added to the response team. Size of departmental response will increase according to this equation.
- When a foodborne illness occurs, this becomes the priority and the rest of the routine inspections get dropped. This causes us to get further behind on our inspections.
- It depends. If there was a very large outbreak with people still becoming ill, we would set up an incident command structure that would incorporate various positions within the entire agency.

Question 13: Over the past two years, of the total time that your agency's staff worked on foodborne illness (FBI) outbreak responses and investigations, please estimate the number of hours that occurred as overtime (in addition to a normal 40 hour workweek), hours on weekends, and hours that occurred over holidays.

Key Finding: *For smaller local agencies, an average of 39% report their staff does not work on foodborne illness outbreak investigations as overtime, on weekends, or on holidays. Larger local agencies are more likely to work overtime and on weekends, but only 21% report foodborne illness investigations taking place on holidays. More than 50% of state agencies report >10 hours of overtime is on foodborne illness outbreaks. (Please see the Detailed Findings below.)*

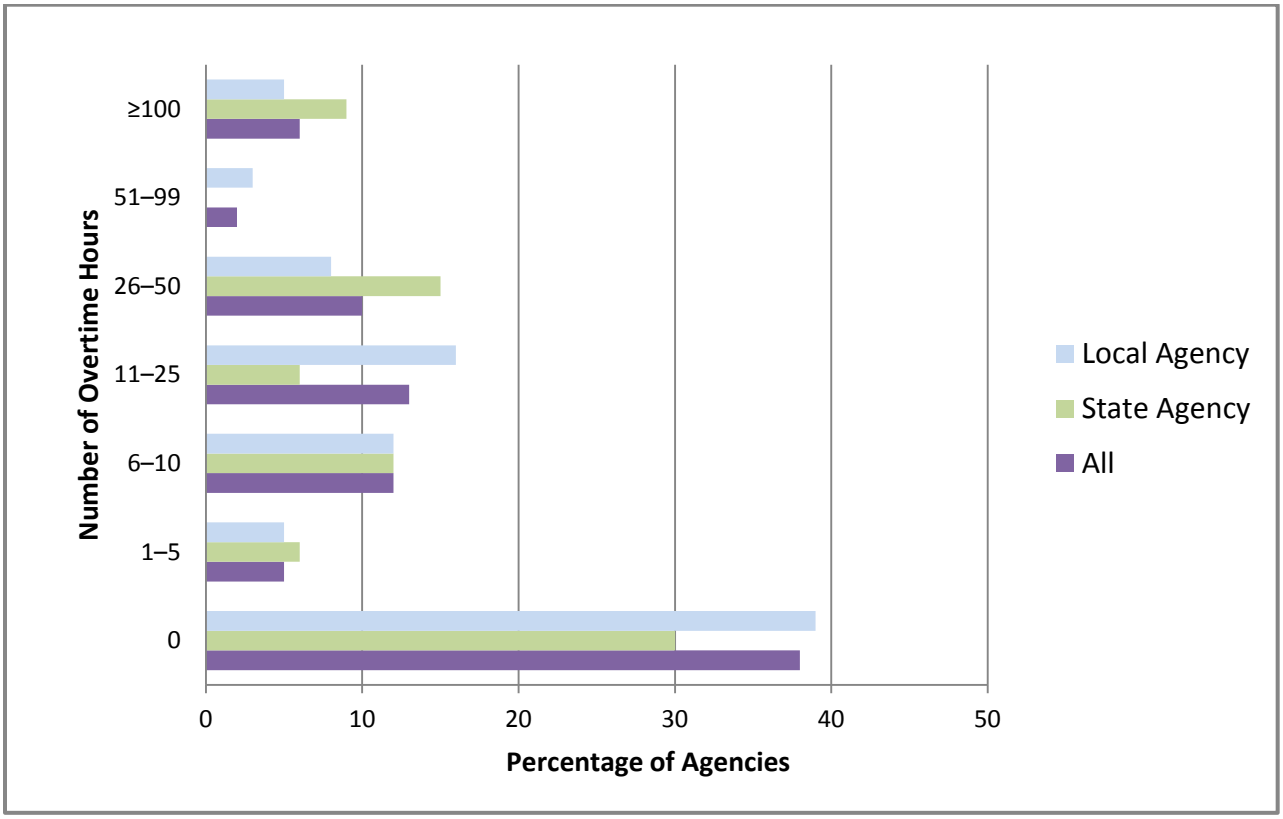
Table 13.1 Summary of Estimated Number of Hours on Foodborne Illness (FBI) Outbreak Response and Investigation Outside of a Normal (40-hour) Workweek for Local and State Agencies

Agency	Hours on FBI Investigations Outside of a Normal Workweek (Local Agency n=108, State Agency n=33)							
	0	1–5 hrs	6–10 hrs	11–25 hrs	26–50 hrs	51–99 hrs	100 hrs or more	Unknown or N/A
Overtime								
Local	43 (39%)	5 (5%)	13 (12%)	17 (16%)	9 (8%)	3 (3%)	5 (5%)	8 (7%)
State	10 (30%)	2 (6%)	4 (12%)	2 (6%)	5 (15%)	—	3 (9%)	7 (21%)
All	53 (38%)	7 (5%)	17 (12%)	19 (13%)	14 (10%)	3 (2%)	8 (6%)	15 (11%)
Weekends								
Local	47 (44%)	5 (5%)	12 (11%)	14 (13%)	5 (5%)	—	3 (3%)	5 (5%)
State	10 (30%)	2 (6%)	4 (12%)	6 (18%)	—	2 (6%)	3 (9%)	5 (15%)
All	57 (40%)	7 (5%)	16 (11%)	20 (14%)	5 (4%)	2 (2%)	6 (4%)	10 (7%)
Holidays								
Local	62 (57%)	9 (8%)	5 (5%)	4 (4%)	2 (2%)	—	—	4 (4%)
State	16 (48%)	1 (3%)	3 (10%)	2 (7%)	1 (3%)	—	—	6 (21%)
All	78 (55%)	10 (7%)	8 (6%)	6 (4%)	3 (2%)	—	—	10 (7%)

Detailed Findings Based on Tables 13.2 and 13.3 in the Appendix

- 46% (33/71) of smaller local agencies and 34% (10/29) of larger local agencies indicate their staff did not work >40 hours a week on foodborne illness outbreak investigations.
- 17% (13/75) of smaller local agencies report 10 hours or more of staff time occurred on weekends.
- 61% (20/33) of larger local agencies report no foodborne illness outbreak investigations occurred on holidays.
- 14% (3/26) of state agencies with jurisdictions >1 million report >100 hours overtime on foodborne illness outbreak investigations.

Graph 13.1 Summary of Estimated Number of Hours on Foodborne Illness Outbreak Response and Investigation Outside of a Normal (40-hour) Workweek for Local and State Agencies



Question 14: Does your agency have a written agreement or memorandum of understanding (MOU) with other agencies to share foodborne illness investigation and response data and expertise?

Key Finding: *More than 70% of all local and state agencies have either a written or informal MOU with other agencies to provide information and expertise during a foodborne illness outbreak investigation and response. Larger local agencies are more likely to have a formal agreement (75%) than smaller agencies (32%). (Please see the Detailed Findings below.)*

Table 14.1 Summary of Local and State Agencies that have Written Agreements or MOUs with Other Agencies

Have Written Agreement or MOU	Local Agency (n=115)	State Agency (n=39)	All (n=154)
Yes	39 (34%)	22 (56%)	**61 (40%)**
No	26 (23%)	4 (10%)	**30 (19%)**
Not yet, but writing/will write an agreement/MOU	5 (4%)	5 (13%)	**10 (6%)**
Have informal agreement with other agencies or departments	45 (40%)	8 (20%)	**53 (34%)**

Detailed Findings Based on Tables 14.2 and 14.3 in the Appendix

- 49% (26/58) of smaller local agencies report an informal agreement with other agencies to share foodborne illness investigation and response data and expertise.
- 28% (10/36) of local agencies with jurisdictions >100,000 do not have a written agreement or MOU with other agencies to provide information and expertise; however 33% have an informal agreement.
- 55% (15/27) of state agencies with jurisdictions >1 million have a written agreement or MOU with other agencies to provide information and expertise.

Question 15: If you have an agreement or MOU, with which agencies do you share data and expertise? Please check all that apply.

Key Finding: *Local agencies are most likely to have MOUs to share data and expertise during a foodborne illness outbreak with cities, counties, state departments of health, and state departments of agriculture. Both larger local agencies and state agencies have agreements to share data and expertise with FDA and CDC. State agencies also have agreements with USDA.*

Table 15.1 Summary of Local and State Agencies that have Agreements or MOUs with Other Agencies

Agreement or MOU Partners	Local Agency (n=84)	State Agency (n=30)	All (n=114)
City	21 (25%)	13 (43%)	**34 (30%)**
County	32 (38%)	15 (50%)	**37 (32%)**
State Department of Agriculture	23 (27%)	19 (63%)	**42 (37%)**
State Department of Health	56 (66%)	15 (50%)	**71 (62%)**
University	6 (7%)	6 (20%)	**12 (10%)**
FDA	16 (15%)	14 (47%)	**30 (26%)**
CDC	18 (21%)	9 (30%)	**27 (24%)**
Indian Health Service	1 (1%)	3 (10%)	**4 (3%)**
USDA	11 (13%)	9 (30%)	**20 (18%)**
International	—	—	**—**
Other, please specify	—	—	**—**

Please note: For this table, the number of responses are from Question 14. Agencies that indicate having an MOU or a written or informal agreement with other agencies may have more than one agency to share data and expertise, and therefore percentages may be >100%.

Detailed Findings Based on Tables 15.2 and 15.3 in the Appendix

Of the agencies that report a written or informal agreement to share data and expertise during a foodborne illness outbreak (Question 14):

- 88% (51/58) of smaller local agencies share data and expertise with state departments of health, 66% (38/58) with state departments of agriculture, and 47% (27/58) with counties.
- 35% (9/26) of larger local agencies share data and expertise with counties, 19% (5/26) with state departments of health, and 19% (5/26) state departments of agriculture.
- 45% (9/20) of state agencies with jurisdictions of >1 million share data and expertise with CDC, 35% (7/20) with USDA, 25% (5/20) with universities, and 15% (3/20) with the Indian Health Service.

Question 16: Please estimate your agency's staff foodborne illness outbreak investigation experience.

Key Finding: *Nearly a third of local agencies (30%) and 39% of state agencies do not have staff with <2 years of foodborne illness outbreak investigation experience. Most local agencies have a fairly even distribution of staff with 3–5 years, 6–10 years, and >10 years of experience. State agencies have a higher percentage of staff with >5 years of experience.*

Table 16.1 Summary of Number of Staff with Years of Foodborne Illness Outbreak Investigation Experience for Local and State Agencies

Number of Staff	Local Agency (n=115)	State Agency (n=40)	All (n=155)
<2 Years of Experience			
0	34 (30%)	4 (10%)	**38 (25%)**
1–5	47 (41%)	18 (45%)	**65 (42%)**
6–10	7 (6%)	1 (3%)	**8 (5%)**
11–20	1 (1%)	1 (3%)	**2 (1%)**
21–30	1 (1%)	4 (10%)	**5 (3%)**
>30	—	—	—
3–5 Years of Experience			
0	22 (19%)	6 (15%)	**28 (18%)**
1–5	50 (43%)	15 (38%)	**65 (42%)**
6–10	6 (5%)	1 (3%)	**7 (5%)**
11–20	3 (3%)	—	**3 (2%)**
21–30	2 (2%)	2 (2%)	**4 (3%)**
>30	4 (3%)	—	**4 (3%)**
6–10 Years of Experience			
0	18 (16%)	3 (8%)	**21 (14%)**
1–5	58 (50%)	21 (53%)	**79 (51%)**
6–10	7 (5%)	1 (3%)	**8 (5%)**
11–20	7 (5%)	1 (3%)	**8 (5%)**
21–30	1 (1%)	1 (3%)	**2 (1%)**
>30	2 (2%)	1 (3%)	**3 (2%)**
>10 Years of Experience			
0	9 (8%)	—	**9 (6%)**
1–5	55 (48%)	27 (68%)	**82 (53%)**

Number of Staff	Local Agency (n=115)	State Agency (n=40)	All (n=155)
6–10	23 (20%)	4 (10%)	**27 (17%)**
11–20	8 (7%)	1 (2%)	**9 (6%)**
21–30	1 (1%)	—	**1 (1%)**
>30	5 (4%)	1 (2%)	**6 (4%)**

Please note: For this table, percentages may be >100% because participants could provide more than one response.

Detailed Findings Based on Tables 16.2 and 16.3 in the Appendix

- 70% (28/79) of smaller local agencies report 5 or fewer staff with <2 years of foodborne illness outbreak investigation experience and 49% (39/79) report 1–5 staff with 3–5 years of experience.
- 50% (11/22) of local agencies with jurisdictions >500,000 report 1–5 staff with 6–10 years of experience and 64% (14/22) have 1–5 staff with >10 years of experience.
- 39% (11/28) of state agencies with jurisdictions >1 million have 1–5 staff members with <2 years of foodborne illness outbreak investigation experience.

Question 17: Please estimate the number of your agency's staff that hold the following certifications and/or credentials.

Key Finding: *Both local and state agency staff report the most commonly held credentials/certifications are the Registered Environmental Health Specialist (REHS) credential and ServSafe certification.*

Table 17.1 Summary of Number of Staff that Hold Certifications/Credentials for Local and State Agencies

Agency	Number of Staff that Hold Certifications/Credentials (Local Agency n=111, State Agency n=31, All n=142)					
	0	**1–5**	**6–10**	**11–20**	**21–30**	**>30**
Registered Environmental Health Specialist/Registered Sanitarian (REHS/RS)						
Local	6 (5%)	54 (49%)	15 (14%)	14 (13%)	3 (3%)	9 (8%)
State	8 (26%)	15 (48%)	—	3 (10%)	—	4 (13%)
All	14 (10%)	69 (49%)	15 (11%)	17 (12%)	3 (2%)	13 (9%)
Certified Professional – Food Safety (CP-FS)						
Local	42 (38%)	25 (23%)	3 (3%)	—	1 (1%)	—
State	15 (48%)	8 (26%)	1 (3%)	1 (3%)	—	—
All	57 (40%)	33 (23%)	4 (3%)	1 (1%)	1 (1%)	
NEHA Certified Professional Food Manager (CPFM)						
Local	50 (45%)	7 (6%)	—	—	—	—
State	15 (48%)	7 (23%)	—	—	—	—
All	65 (46%)	14 (10%)	—	—	—	—
ServSafe						
Local	19 (17%)	54 (49%)	6 (5%)	6 (5%)	4 (4%)	1 (1%)
State	7 (23%)	8 (26%)	2 (6%)	4 (13%)	1 (3%)	2 (6%)
All	26 (18%0	62 (44%)	8 (6%)	10 (7%)	5 (4%)	3 (2%)

Detailed Findings Based on Tables 17.2 and 17.3 in the Appendix

- **Registered Environmental Health Specialist/Registered Sanitarian (REHS/RS)**
  - 64% (49/77) of smaller local agencies indicate at least one staff holds the REHS credential.
  - 26% (9/34) of larger local agencies indicate >30 staff holds the REHS credential.
  - 64% (16/25) of state agencies with jurisdictions >250,000 report at least one staff holds the REHS credential.

- **Certified Professional Food Safety (CP-FS)**
  - 27% (21/77) of smaller local agencies indicate at least one staff holds the CP-FS credential.
  - 19% (4/21) of state agencies with jurisdictions of >1 million indicate at least one staff member holds the CP-FS credential.

- **ServSafe**
  - 44% (11/25) of larger local agencies have 11 or more staff with ServSafe certification.
  - 29% (6/21) of state agencies with a jurisdiction >1 million have 11 or more staff with ServSafe certification.

A Sample of Comments on Staff Certifications and/or Credentials

(Please see the complete list of comments in the Appendix, Question 17.)

- We have staff who are certified in HAZWHOPPER, first aid, CPR and HACCP, additional training in Emergency Preparedness.
- Bachelor Degrees.
- FDA Standardization Certification.

Question 18: Please estimate the total hours of foodborne illness outbreak response and investigation training that your agency's staff received in the past two years.

Key Finding: *More than half of local agency staff receives 8 hours or less of foodborne illness outbreak response and investigation training. For state agency staff, 44% report >12 hours of training in the past two years.*

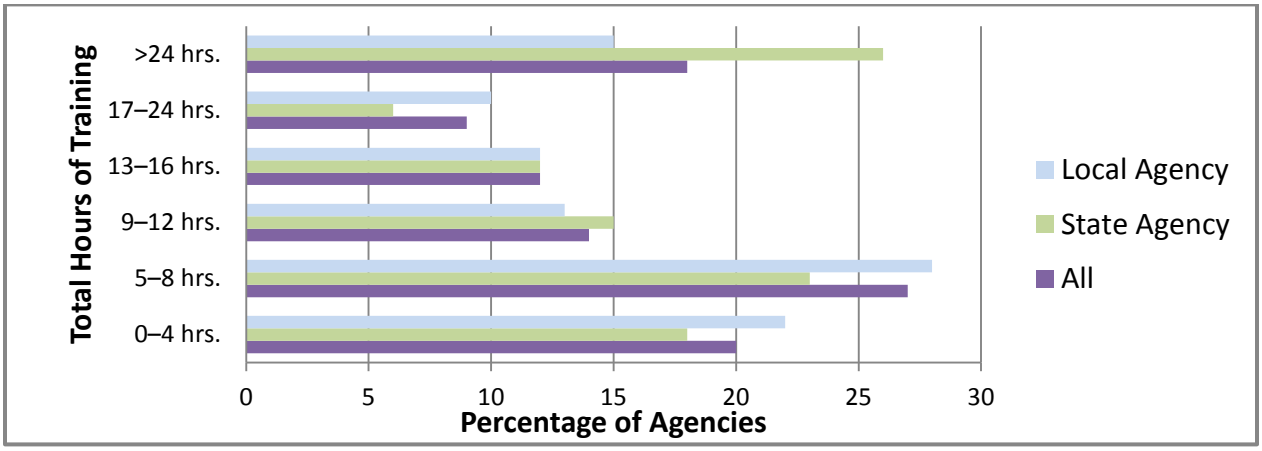
Table 18.1 Summary of Estimated Hours of Staff Foodborne Illness Outbreak Response and Investigation Training in the Past Two Years for Local and State Agencies

Estimated Hours of Training	Local Agency (n=111)	State Agency (n=34)	All (n=145)
0–4	24 (22%)	6 (18%)	**30 (20%)**
5–8	31 (28%)	8 (23%)	**39 (27%)**
9–12	15 (13%)	5 (15%)	**20 (14%)**
13–16	13 (12%)	4 (12%)	**17 (12%)**
17–24	11 (10%)	2 (6%)	**13 (9%)**
>24	17 (15%)	9 (26%)	**26 (18%)**

Detailed Findings Based on Tables 18.2 and 18.3 in the Appendix

- 54% (31/57) of local agency staff with jurisdictions of >100,000 report eight hours or less of foodborne illness outbreak response and investigation training in the past two years.
- 58% (18/33) of larger local agency staff receive >8 hours of training.
- 36% (8/22) of state agency staff from jurisdictions of >1 million report >24 hours of training.

Graph 18.1 Summary of Estimated Hours of Staff Foodborne Illness Outbreak Response and Investigation Training in the Past Two Years for Local and State Agencies



Question 19: Please indicate the type of foodborne illness outbreak response training your agency's staff received in the past two years. Please check all that apply.

Key Finding: *For local agencies of all jurisdiction sizes, state-sponsored foodborne illness-specific training accounts for 50–77% of training they received in the past two years, followed by online computer training, and FDA-sponsored training. In-house training (65%) is the commonly reported training method for larger local agencies. In-house (73%) and computer training (66%) are the most commonly reported training sources for state agencies in the past two years.*

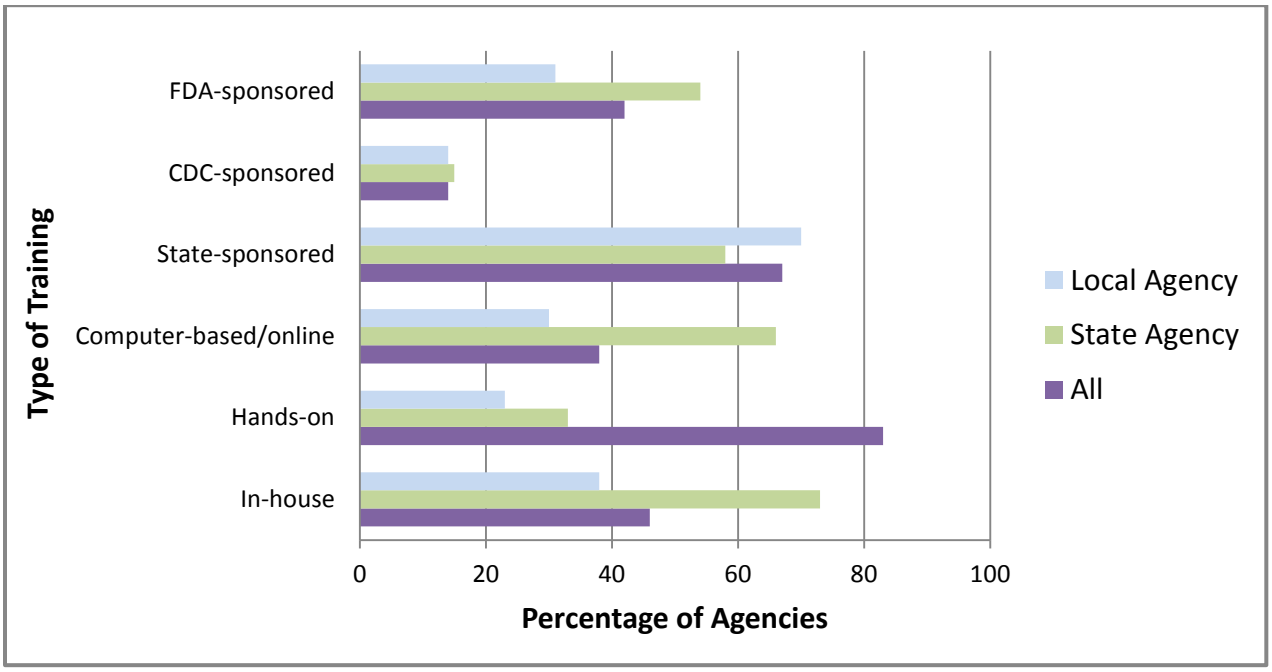
Table 19.1 Summary of Type of Staff Foodborne Illness (FBI) Outbreak Response Training in the Past Two Years for Local and State Agencies

Type of FBI Outbreak Response Training	Local Agency (n=109)	State Agency (n=33)	All (n=142)
In-house	41 (38%)	24 (73%)	65 (46%)
Hands-on	25 (23%)	10 (33%)	35 (83%)
Computer-based/online	33 (30%)	22 (66%)	55 (38%)
State-sponsored	77 (70%)	19 (58%)	96 (67%)
CDC-sponsored	15 (14%)	5 (15%)	20 (14%)
FDA-sponsored	34 (31%)	18 (54%)	52 (42%)
Other, please specify	—	4 (12%)	4 (3%)

Detailed Findings Based on Tables 19.2 and 19.3 in the Appendix

- **Received in-house training:**
  - 20% (6/29) of smaller local agencies.
  - 44% (15/34) of larger local agencies.
- **Received state-sponsored training:**
  - 72% (21/29) of smaller local agencies.
  - 65% (22/34) of larger local agencies.
- **Received FDA-sponsored training:**
  - 24% (7/29) of smaller local agencies.
  - 32% (11/34) of larger local agencies.
  - 54% of state agencies.
    - 64% (14/22) of state agencies with jurisdictions >1 million
- **Received hands-on training** – 36% (8/22) of state agencies with jurisdictions >1 million
- **Received computer-based/online training** – 64% (14/22) of state agencies with jurisdictions >1 million.

Graph 19.1 Type of Staff Foodborne Illness Outbreak Response Training in the Past Two Years for Local and State Agencies



Question 20: Please indicate the topics or titles of the foodborne illness outbreak response training your agency's staff received in the past two years.

Key Finding: *General foodborne illness is the most common foodborne illness outbreak response training for both local and state agencies in the past two years. Local agencies typically receive training from their state, FDA, and Epi-Ready Team Training. State agencies typically receive training from FDA (32%), Epi-Ready (20%), and CIFOR (16%).*

Table 20.1 Summary of Topics or Types of Foodborne Illness (FBI) Outbreak Response Training in the Past Two Years for Local and State Agencies

FBI Outbreak Response Training Topic or Type	Local Agency (n=69)	State Agency (n=25)	All (n=94)
General FBI topics	44 (64%)	13 (52%)	57 (60%)
Epi-Ready	10 (14%)	5 (20%)	15 (16%)
FDA	11 (16%)	8 (32%)	19 (20%)
State	12 (17%)	2 (8%)	14 (15%)
Conferences	7 (10%)	—	7 (7%)
CIFOR	4 (6%)	4 (16%)	8 (8%)
Other	12 (17%)	8 (32%)	20 (21%)

Please note: For this table, percentages may be >100% because participants could provide more than one response.

Detailed Findings Based on Tables 20.2 and 20.3 in the Appendix

- 17% (8/47) of smaller local agencies report receiving state foodborne illness outbreak response training in the past two years.
- 27% (6/22) of larger local agencies report participation in FDA training.
- 47% (7/15) of state agencies with jurisdictions of >1 million report receiving FDA training.

Question 21: Does your agency have sufficient capacity to meet the following tasks/responsibilities? If your agency does not have oversight responsibility for a specific task, please check "N/A."

Key Findings: *Please note: The information below only includes responses from agencies with oversight responsibility for the stated tasks.*

Local Agencies

More than 30% of local agencies with this responsibility report they do not have the capacity to undertake the following tasks: pathogen-specific surveillance, foodborne illness investigation at food manufacturer/processor facilities, food sampling, environmental swabs, or outbreak control measures.

State Agencies

More than 25% of state agencies report they do not have the capacity to undertake the following tasks or responsibilities: pathogen-specific surveillance, outbreak investigations at food manufacturer/processor facilities; environmental assessments/investigation, food sampling, environmental swabs, recalls, or recall effectiveness checks.

Table 21.1A Summary of Capacity to Meet Foodborne Illness (FBI) Outbreak Response and Investigation Tasks/Responsibilities for Local Agencies

FBI Outbreak Response and Investigation Tasks/Responsibilities (n=109)	Have Capacity	Do Not Have Capacity	N/A
Recording and responding to FBI complaints	90 (83%)	19 (17%)	—
Pathogen-specific surveillance	38 (35%)	45 (42%)	25 (23%)
Epidemiologic investigations	57 (52%)	36 (33%)	16 (15%)
Outbreak investigations at retail food facilities	88 (81%)	20 (19%)	—
Outbreak investigations at food manufacturer/processor facilities	22 (20%)	29 (27%)	57 (53%)
Environmental assessments/investigations	74 (69%)	23 (22%)	10 (9%)
Food sampling	67 (62%)	33 (30%)	9 (8%)
Environmental swabs	49 (45%)	43 (39%)	17 (16%)
Laboratory tasks	13 (12%)	35 (33%)	59 (55%)
Outbreak control measures	64 (60%)	35 (33%)	7 (7%)
Recalls	52 (48%)	39 (36%)	17 (16%)
Recall effectiveness checks	41 (38%)	48 (45%)	18 (17%)
Embargos	63 (58%)	33 (30%)	13 (12%)
Closures	91 (84%)	14 (13%)	3 (3%)
Tracebacks	24 (23%)	54 (51%)	27 (26%)
Training retail food facility and food manufacturer or processor personnel on FBI outbreak response investigation	36 (34%)	56 (52%)	15 (14%)

Table 21.1B Summary of Capacity to Meet Foodborne Illness (FBI) Outbreak Response and Investigation Tasks/Responsibilities for State Agencies

FBI Outbreak Response and Investigation Tasks/Responsibilities (n=33)	Have Capacity	Do Not Have Capacity	N/A
Recording and responding to FBI complaints	25 (76%)	5 (15%)	3 (9%)
Pathogen-specific surveillance	12 (36%)	10 (30%)	11 (32%)
Epidemiologic investigations	12 (36.5%)	12 (36%)	9 (27%)
Outbreak investigations at retail food facilities	21 (64%)	8 (24%)	4 (12%)
Outbreak investigations at food manufacturer/processor facilities	15 (45%)	9 (27%)	9 (27%)
Environmental assessments/investigations	21 (64%)	12 (35%)	—
Food sampling	17 (52%)	11 (32%)	5 (15%)
Environmental swabs	12 (36%)	17 (52%)	4 (12%)
Laboratory tasks	16 (49%)	5 (15%)	12 (36%)
Outbreak control measures	22 (67%)	8 (24%)	3 (9%)
Recalls	18 (55%)	10 (29%)	5 (15%)
Recall effectiveness checks	17 (52%)	11 (33%)	5 (15%)
Embargos	22 (67%)	5 (15%)	6 (18%)
Closures	25 (76%)	5 (15%)	3 (9%)
Tracebacks	18 (55%)	9 (27%)	6 (18%)
Training retail food facility and food manufacturer or processor personnel on FBI outbreak response investigation	9 (27%)	20 (61%)	4 (12%)

Detailed Findings Based on Tables 21.1C, 21.2 and 21.3 in the Appendix

- 22% (17/76) of smaller local agencies do not have capacity to record and respond to foodborne illness complaints and 41% (31/75) do not have capacity for pathogen-specific surveillance.
- 77% (58/75) of smaller local agencies have capacity to investigate outbreaks at retail food facilities; however, of the agencies with responsibility to investigate food manufacturer or processor facility outbreaks, 60% (23/38) report they do not have capacity to meet that need.
- 16% (5/30) of larger local agencies do not have the capacity to handle environmental assessments/investigations.
- 59% (13/22) of state agencies with jurisdictions >1 million report the capacity to handle environmental assessments/investigations; however, 42% (8/19) do not have the capacity to sample foods and 60% (12/20) do not have the capacity to undertake environmental swabs.

Question 22: Does your agency's staff have sufficient training to undertake the tasks/responsibilities below?

Key Findings: *Please note: The information below only includes responses from agencies with oversight responsibility for the stated tasks.*

Local Agencies

For local agencies, 25% or more report they do not have staff with sufficient training to undertake the following tasks: pathogen-specific surveillance, outbreak investigations at food manufacturer/processor facilities, outbreak control measures, environmental swabs, or food sampling.

State Agencies

For state agencies, 30% or more report their staff is not sufficiently trained in environmental swabs, laboratory tasks, outbreak control measures, recalls, or recall effectiveness checks.

Table 22.1A Summary of Staff Training to Undertake Foodborne Illness (FBI) Outbreak Response and Investigation Tasks/Responsibilities for Local Agencies

FBI Outbreak Response and Investigation Tasks/Responsibilities	Local Agency (n=108)		
	Have Trained Staff	Do Not Have Trained Staff	N/A
Recording and responding to FBI complaints	95 (88%)	11 (10%)	1 (1%)
Pathogen-specific surveillance	51 (47%)	39 (36%)	12 (11%)
Epidemiologic investigations	71 (67%)	26 (24%)	10 (9%)
Outbreak investigation in retail food facilities	98 (91%)	8 (7%)	2 (2%)
Outbreak investigations at food manufacturer/processor facilities	36 (33%)	29 (27%)	31 (28%)
Environmental assessments/investigations	79 (73%)	21 (19%)	7 (6%)
Food sampling	73 (68%)	25 (23%)	9 (8%)
Environmental swabs	50 (46%)	44 (41%)	13 (12%)
Laboratory tasks	13 (12%)	47 (44%)	47 (44%)
Outbreak control measures	67 (62%)	32 (30%)	8 (7%)
Recalls	59 (55%)	31 (29%)	15 (14%)
Recall effectiveness checks	45 (42%)	45 (42%)	15 (14%)
Embargos	57 (53%)	38 (35%)	13 (12%)
Closures	90 (83%)	15 (14%)	3 (3%)
Tracebacks	33 (31%)	51 (47%)	22 (20%)
Training retail food facility and food manufacturer/processor personnel on FBI outbreak response investigations	46 (43%)	46 (43%)	15 (14%)

Table 22.1B Summary of Staff Training to Undertake Foodborne Illness (FBI) Outbreak Response and Investigation Tasks/Responsibilities for State Agencies

FBI Outbreak Investigation Tasks/Responsibilities	State Agency (n=34)		
	Have Trained Staff	Do Not Have Trained Staff	N/A
Recording and responding to FBI complaints	26 (76%)	4 (12%)	1 (3%)
Pathogen-specific surveillance	22 (65%)	8 (24%)	12 (35%)
Epidemiologic investigations	19 (56%)	7 (21%)	8 (24%)
Outbreak investigation in retail food facilities	27 (80%)	3 (9%)	3 (9%)
Outbreak investigations at food manufacturer/processor facilities	18 (53%)	10 (29%)	7 (21%)
Environmental assessments/investigations	24 (58%)	8 (24%)	3 (9%)
Food sampling	25 (73%)	6 (18%)	3 (9%)
Environmental swabs	16 (47%)	15 (44%)	3 (9%)
Laboratory tasks	16 (47%)	9 (26%)	9 (26%)
Outbreak control measures	24 (58%)	10 (29%)	2 (5%)
Recalls	10 (31%)	18 (53%)	4 (13%)
Recall effectiveness checks	18 (53%)	12 (35%)	4 (12%)
Embargos	20 (59%)	7 (20%)	7 (20%)
Closures	28 (82%)	3 (9%)	3 (9%)
Tracebacks	13 (38%)	16 (47%)	1 (3%)
Training retail food facility and food manufacturer/processor personnel on FBI outbreak response investigations	14 (41%)	17 (50%)	3 (9%)

Detailed Findings Based on Tables 22.1C, 22.2, and 22.3 in the Appendix

Local Agencies

- 84% (37/44) of smaller and 76% (13/17) of larger local agencies report they do not have trained staff in laboratory tasks.
- 46% (35/76) of smaller and 41% (11/27) of larger local agencies do not have staff trained to, educate and train retail food facility and food manufacturer/processor personnel on foodborne illness outbreak response investigations.
- 39% (27/69) of smaller local agencies reported *not* having staff sufficiently trained in outbreak control measures.
- Of larger local agencies, 16% (4/25) do not have staff sufficiently trained in outbreak investigation in food manufacturer/processor facilities and 12% (4/32) are not trained in environmental assessments/investigations.

State Agencies with Jurisdictions of >1 Million

- 43% (9/21) indicate their staff is not trained to educate and train retail food facility and food manufacturer/processor personnel on foodborne illness outbreak response investigations.
- 24% (5/21) report their staff is not sufficiently trained in laboratory tasks, outbreak investigations at food manufacturer/processor facilities (28%, 6/21), recalls (57%, 12/21), recall effectiveness checks (28%, 6/21), and tracebacks (38%, 8/21).

Question 23: Does your agency have the *Council to Improve Foodborne Outbreak Response (CIFOR) Guidelines for Foodborne Disease Outbreak Response* and/or the *CIFOR Toolkit*? Please check all that apply.

Key Finding: *More than half of local agencies report having the* CIFOR Guidelines*, but only 17% of smaller and 35% of larger local agencies have the* CIFOR Toolkit*. A majority (91%) of state agencies with jurisdictions >1 million report having the* CIFOR Guidelines*, but only about 40% also have the* CIFOR Toolkit*.(Please see the Detailed Findings below.)*

Table 23.1 Summary of Local and State Agencies that have the *CIFOR Guidelines* and/or *CIFOR Toolkit*

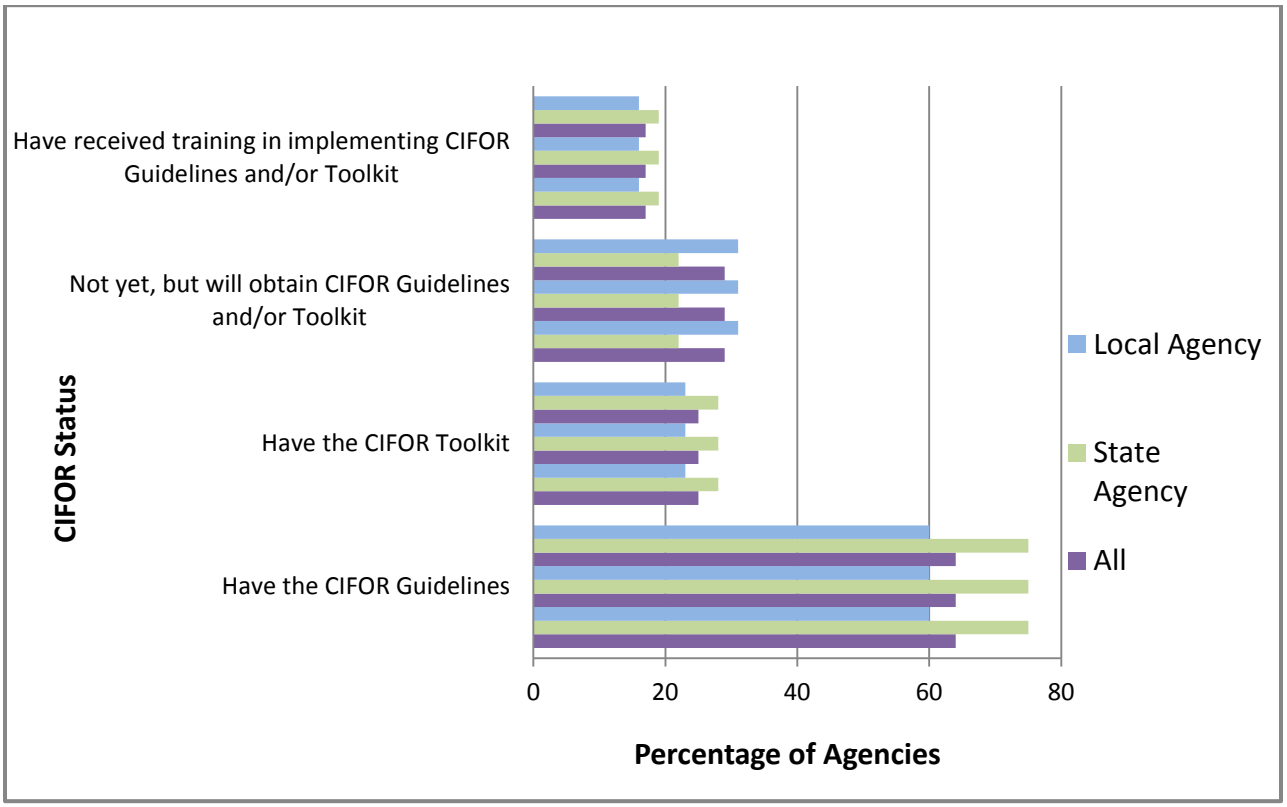
Have *CIFOR Guidelines* and/or *CIFOR Toolkit*?	Local Agency (n=94)	State Agency (n=32)	All (n=126)
Have the *CIFOR Guidelines*	56 (60%)	24 (75%)	80 (64%)
Have the *CIFOR Toolkit*	22 (23%)	9 (28%)	31 (25%)
Not yet, but will obtain the *CIFOR Guidelines* and/or *CIFOR Toolkit*	29 (31%)	7 (22%)	36 (29%)
Received training in implementing the *CIFOR Guidelines* and/or *Toolkit*	15 (16%)	6 (19%)	21 (17%)

Please note: For this table, percentages may be >100% because participants could provide more than one response.

Detailed Findings Based on Table 23.2 and 23.3 in the Appendix

- 57% (36/63) of smaller local agencies report having the *CIFOR Guidelines* and 33% (21/63) plan to obtain them.
- 65% (20/31) of larger local agencies report having the *CIFOR Guidelines*, and 26% (8/31) report receiving training in utilizing the *CIFOR Guidelines* and/or *CIFOR Toolkit*.
- 20% (4/20) of state agencies with jurisdictions >1 million report receiving training in utilizing the *CIFOR Guidelines* and/or *CIFOR Toolkit*.

Graph 23.1 Summary of Local and State Agencies that have the *CIFOR Guidelines* and/or *CIFOR Toolkit*



Question 24: Is your agency implementing the Environmental Health Investigation component of the *CIFOR Guidelines*? If no, please tell us why.

Key Finding: *Smaller local agencies are less likely to have implemented the EH Investigation component of the* CIFOR Guidelines *than larger local agencies. Approximately half of state agencies with jurisdictions of >1 million report implementing all or part of the EH Investigation component.*

Table 24.1 Summary of Implementation of *CIFOR Guidelines* Environmental Health (EH) Investigation Component for Local and State Agencies

Implementation of *CIFOR Guidelines* EH Investigation	Local Agency (n=101)	State Agency (n=32)	All (n=133)
Yes	13 (13%)	9 (28%)	**22 (16%)**
Yes, but only sections of it	24 (24%)	4 (13%)	**28 (21%)**
Not yet, but will implement it soon	34 (34%)	9 (28%)	**43 (32%)**
No	30 (30%)	10 (31%)	**40 (30%)**

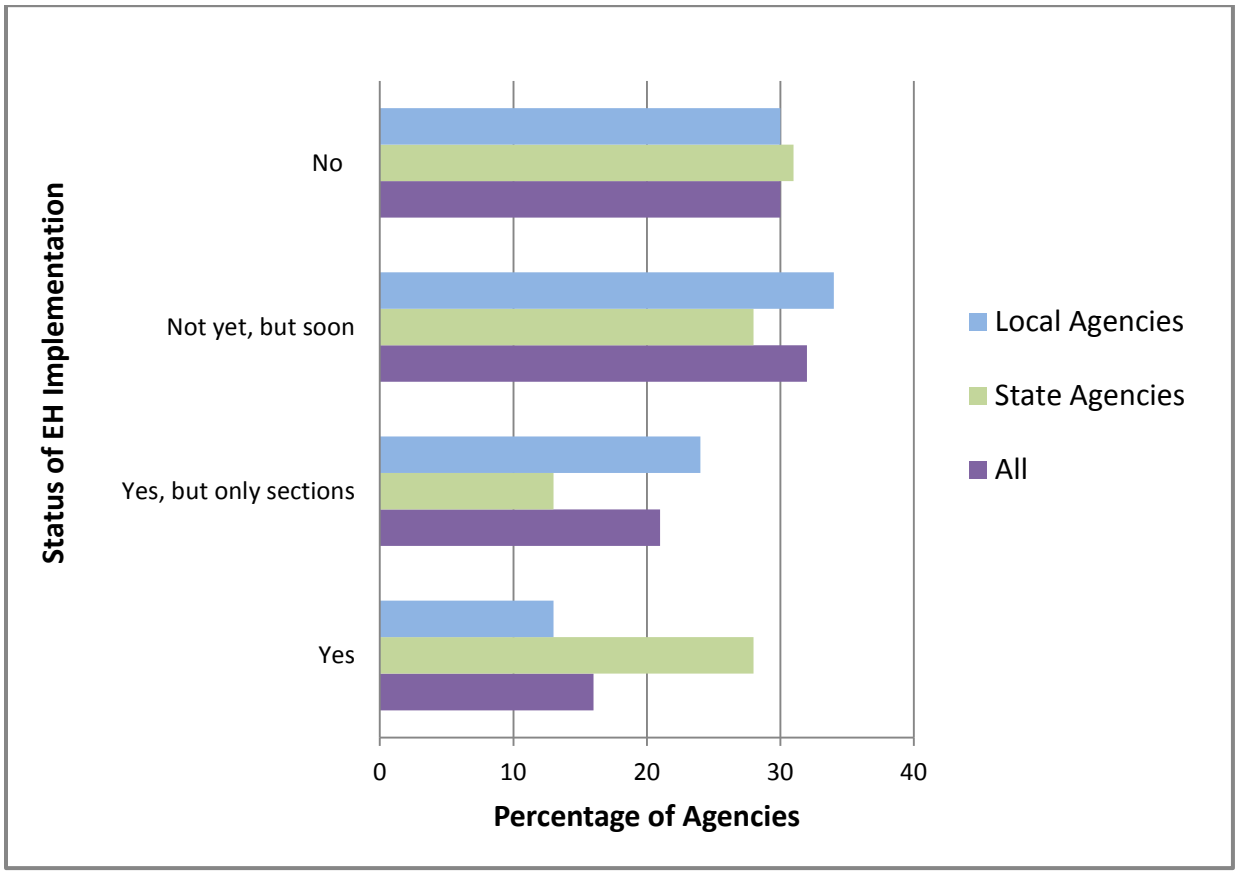
Detailed Findings Based on Table 24.2 and 24.3 in the Appendix

- 32% (23/71) of smaller local agencies have implemented at least sections of the *CIFOR Guidelines* EH Investigation component.
- 30% (10/30) of larger local agencies have *not* implemented the EH Investigation component, but will soon.
- 33% (7/21) of state agencies with jurisdictions >1 million also have *not* implemented the EH Investigation component, but 14% (3/21) plan to do so soon.

A Sample of Comments on Implementing *CIFOR Guidelines* EH Investigation Component
(Please see the complete list of comments in the Appendix, Question 24.)

- Not familiar with CIFOR guidelines.
- No resources.
- Used guide to craft state-wide protocol.
- The department has no directive to implement.
- We've been doing most of this for years, so haven't considered any formal implementation.

Graph 24.1 Summary of Implementation of *CIFOR Guidelines* Environmental Health (EH) Investigation Component for Local and State Agencies



Question 25: Does your agency have the following capabilities or procedures?

Key Findings:

- *More than 75% of local and state agencies indicate they have the capability to conduct risk-based inspections and maintain a contact list for foodborne outbreak response. Local agencies also have procedures in place to ensure final resolution for recorded complaints for retrieval purposes.*
- *In contrast, >50% of local agencies state they "do not have/do not yet have the capability" for written operating procedures or an MOU. For local agencies, capabilities or procedures with the highest number of "not yet/do not have" also include regularly reviewing complaint log or database to identify trends and possible contributing factors (60%) and written procedures to address traceback and recall of implicated foods (80%).*
- *More than 50% of state agencies report they "do not have/do not yet have the capability" to regularly review complaint log or database to identify trends and possible contributing factors, or have written procedures on traceback and recall of implicated foods (>70%).*

Table 25.1 Summary of Capabilities or Procedures for Foodborne Illness (FBI) Outbreak Response and Investigation for Local and State Agencies

Capabilities or Procedures for FBI Outbreak Response	Local Agency (n=101)				State Agency (n=33)			
	Yes	Not Yet, But Will	Do Not Have Capability	N/A	Yes	Not Yet, But Will	Do Not Have Capability	N/A
Follow risk-based inspection policy	79 (78%)	13 (13%)	8 (8%)	1 (1%)	28 (85%)	2 (6%)	2 (6%)	2 (6%)
Have written operating procedures or MOU	47 (47%)	24 (24%)	27 (27%)	2 (2%)	23 (70%)	7 (21%)	4 (12%)	—
Have a contact list for FBI outbreak response	81 (81%)	10 (10%)	9 (9%)	—	29 (88%)	2 (6%)	3 (9%)	—
Contact list has been updated in last year	63 (62%)	22 (22%)	5 (5%)	11 (11%)	17 (52%)	8 (26%)	3 (10%)	3 (10%)
Have an alternative laboratory contact list	46 (46%)	12 (12%)	32 (32%)	10 (10%)	20 (60%)	5 (16%)	4 (13%)	3 (9%)
Alternative lab contact list updated in last year	33 (34%)	12 (12%)	31 (32%)	21 (22%)	13 (39%)	8 (24%)	5 (15%)	7 (21%)
Maintain logs or databases of FBI complaints or referrals	74 (73%)	10 (10%)	16 (16%)	1 (1%)	22 (65%)	5 (15%)	4 (12%)	3 (9%)
Have final resolution for recorded complaints for retrieval purposes	76 (75%)	10 (10%)	13 (13%)	2 (2%)	14 (42%)	7 (21%)	7 (21%)	6 (18%)

Capabilities or Procedures for FBI Outbreak Response	Local Agency (n=101)				State Agency (n=33)			
	Yes	Not Yet, But Will	Do Not Have Capability	N/A	Yes	Not Yet, But Will	Do Not Have Capability	N/A
Regularly review complaint log or database to identify trends and possible contributing factors	38 (38%)	22 (22%)	37 (37%)	3 (3%)	12 (35%)	9 (27%)	10 (30%)	4 (12%)
Have written procedures on *traceback* of implicated foods	17 (17%)	28 (28%)	46 (46%)	9 (9%)	9 (27%)	12 (35%)	9 (26%)	4 (12%)
Have written procedures on *recall* of implicated foods	23 (22%)	32 (50%)	43 (41%)	7 (7%)	14 (42%)	9 (27%)	6 (18%)	5 (15%)

Please note: For this table, the description of capabilities have been abbreviated. Please see the Appendix for full descriptions. Percentages may be >100% because participants could provide more than one response.

Detailed Findings Based on Tables 25.2 and 25.3 in the Appendix

The information below does not include responses of N/A; it is based on agencies indicating the following responsibilities.

- 75% (52/69) of both smaller local agencies and smaller state agencies (9/12) with jurisdictions <1 million follow a risk-based inspection policy in conducting inspections.
- 78% (51/65) of smaller local agencies and 53% (9/17) of state agencies with jurisdictions >1 million "do not/not yet have" capability for written operating procedures to address the recall of foods implicated in a foodborne illness outbreak.
- Only 38% (13/32) of larger local agencies and 34% (8/18) of state agencies with jurisdictions >1 million regularly review data in the complaint log or database and foodborne illness outbreak investigations to identify trends and possible contributing factors most likely to cause foodborne illness.
- 42% (28/67) of smaller local agencies and 62% (13/21) of state agencies with jurisdictions of >1 million report they "do not/not yet have" written operating procedures or an MOU that clearly identifies the roles, duties, and responsibilities of those staff who participate in foodborne illness investigations and report findings.
- For both smaller and larger local agencies, 19% (13/69 and 6/32) "do not/not yet have" a contact list for individuals, departments, and agencies that may be involved in foodborne illness outbreak response and investigations.
- 58% (36/62) of smaller and 28% (8/29) of larger local agencies report they either "do not/not yet" have an alternative laboratory contact list to provide assistance if a food-related emergency exceeds the capacity of their primary laboratory/ies.

Question 26: Does your agency use any of the information from the previous question (#25) to plan for the next year (e.g., budget, staffing, and/or resources)? Please explain.

Key findings: *For most local agencies, over 70% of local agencies with jurisdictions of <50,000 and 75% of local agencies with jurisdictions of 50,001-100,000, foodborne illness outbreak capabilities are not part of the planning process for budget, staffing, and/or resources. Approximately half of state agencies with jurisdictions of >5 million report the use of outbreak data in budget planning for the next year.*

A Sample of Comments on Future Planning, e.g. Budget, Staffing, and/or Resources
(Please see the complete list of comments in the Appendix, Question 26.)

- Follow a risk-based inspection policy in conducting inspections.
- No or not known. (39 similar comments)
- Yes, EHS is in process of creating written procedures. (11 similar comments)
- The budget does not have any specific ties to FBIs. We have a small staff and the workload is large so there is little dedicated time to work on new procedures.
- We are attempting to go to tablet based inspections. If so, this may provide the capacity for implementing risk-based inspection protocols.
- We set performance goals from year to year and they are focused on addressing any shortcomings. If budget figures are needed to address a weakness then that is also inserted in the budget to address the problem.
- Trying to do initial assessment for FDA Retail Food Standards and program implementation of objectives within each Standard.
- Yes, but given budget constraints in the last several years, additional resources to meet needs cannot factor into the decision.

Question 27: For foodborne illness outbreak response and investigation for the current/most recent fiscal year, please estimate the percentage (%) of your agency's funding from the following sources:

Key Findings: *Local agencies rely most heavily on licensing fees followed by county budget allocations for their support, while state agencies are primarily supported through allocations provided by their state's budget. At the local level, 71% of agencies report >10% of funding is received from license fees and 36% report >11% of funding comes from general county funds. At the state level, 44% report >10% of funding is received from state allocated funds and 38% report >21% of funding comes from license fees.*

Table 27.1 Summary of Estimated Funding and Sources for Foodborne Illness Outbreak Response and Investigation for the Current/Most Recent Fiscal Year for Local and State Agencies

Estimated Percentage of Funding	Local Agency (n=74)	State Agency (n=29)	All (n=103)
License Fees			
1–10%	5 (7%)	6 (21%)	11 (10%)
11–20%	1 (1%)	—	1 (1%)
21–50%	21 (28%)	2 (7%)	23 (22%)
51–75%	9 (12%)	2 (7%)	11 (10%)
76–100%	22 (30%)	7 (24%)	39 (38%)
Enforcement			
1–10%	15 (20%)	3 (10%)	18 (17%)
11–20%	—	1 (3%)	1 (1%)
21–50%	2 (3%)	—	2 (2%)
51–75%	—	—	—
76–100%	1 (1%)	—	1 (1%)
General City Funds			
1–10%	6 (8%)	—	6 (6%)
11–20%	2 (3%)	—	2 (2%)
21–50%	7 (9%)	—	7 (7%)
51–75%	1 (1%)	—	1 (1%)
76–100%	6 (8%)	—	6 (6%)

Estimated Percentage of Funding	Local Agency (n=74)	State Agency (n=29)	All (n=103)
General County Funds			
1–10%	5 (7%)	—	5 (5%)
11–20%	7 (9%)	—	7 (7%)
21–50%	10 (14%)	1 (3%)	11 (11%)
51–75%	7 (9%)	—	7 (7%)
76–100%	3 (4%)	—	3 (3%)
State Funds			
1–10%	8 (11%)	2 (7%)	10 (10%)
11–20%	4 (5%)	3 (10%)	7 (7%)
21–50%	6 (8%)	3 (10%)	9 (9%)
51–75%	1 (1%)	2 (7%)	3 (3%)
76–100%	2 (3%)	5 (17%)	7 (7%)
Federal Funds			
1–10%	4 (5%)	5 (17%)	9 (9%)
11–20%	1 (1%)	—	1 (1%)
21–50%	2 (3%)	—	2 (2%)
51–75%	3 (4%)	1 (3%)	4 (4%)
76–100%	1 (1%)	—	1 (1%)

Detailed Findings Based on Tables 27.2 and 27.3 in the Appendix

- 30% (16/53) of local agencies with jurisdictions <250,000 receive 21–50% of their funding from license fees, and 17% (9/53) receive <10% of their funding from enforcement.
- 57% (12/21) of local agencies with jurisdictions >250,000 receive 75–100% of their funding from license fees.
- 37% (7/19) of state agencies with jurisdictions >1 million receive 75–100% of their funding from license fees, and 26% (5/19) receive 75–100% from the state budget.

Question 28: (Optional) With the goal of having more effective and efficient foodborne illness outbreak investigations, how can federal, state, and local agencies better collaborate and support each other?

A Sample of Local Agency Comments on Better Collaboration and Support
(Please see the complete list of comments in the Appendix, Question 28.)

<50,000

- Talk to each other. The feds state and local people often don't go to the same conferences.
- Provide nearby, very low cost or free training in locations that do not cost a fortune to stay overnight….
- A list of what FBI bacteria, viruses etc. can be tested for and where.

50,001–100,000

- State has just instituted Maven reporting system which helps quite a bit.
- The State Department of Health provides excellent support during FBI outbreak investigations.
- WE are always reacting to FBIs as there is no way to show how good programs PREVENT THEM. This is why they do not receive much investment from governing bodies.

100,001–250,000

- Clearly defined "chain of command" and electronic data sharing.
- I think we work very well with our state partners.
- Clear/concise communications with locals. Provide accurate detailed information. Faster response time to requests for assessments. Last FBI was statewide. Locals were notified weeks after the initial cases were identified. Most situations establishment management knows about outbreak before local health department and destroys any remaining foods from suspected meals.

250,001–500,000

- Communication.
- Sharing of information in an online format excluding anything that is confidential due to the privacy acts would be beneficial. The sharing of foodborne complaint type information would be helpful because local agencies may be able to help connect dots and reveal outbreaks more rapidly that may not have been identified otherwise in multi jurisdictional outbreaks.

500,000–1 million

- Avoid the trap of Feds feeling they are superior to States and States to Locals. Avoid turf wars. Integrated food safety requires true integration. Set some uniform national standards and encourage States and Locals to strive for them by providing various funding sources to do so.
- Close the communication loop on recalls. Expand capacity for FDA voluntary certification.

1–5 million

- Improved communication lines between local, state, and Federal agencies.

A Sample of State Agency Comments on Better Collaboration and Support

(Please see the complete list of comments in the Appendix, Question 28.)

<50,000

- Training, periodic seminars to engage and collaborate.

50,000–100,000

- Improved communications, coordination, and customer service excellence are critical. Improved staffing, training and salaries would be nice, but we've about given up hope.

250,001–500,000

- Continue to share information and improve communication.

500,001–1 million

- Continue to develop and maintain good communication between all agencies.

1–5 million

- It would be great if FDA could pick up the ball and run with it.

>5 million

- True communication, not just saying we will do it, but actually do it.
- Better coordinate traceback investigations.
- Regionalized training and exercise. Targeted funding for these purposes only.
- Continue cooperative agreements such as FDA's Rapid Response Team grants.
- The FDA program standards have been a key to our success over the last ten years. Not simply a list of minimum requirements, these are the gold standard for retail food safety inspection programs. Supporting these standards would certainly be a step in the right direction.

Appendix

Please note:

- *In the Results and Discussion section of this report, tables summarizing the responses of local and state agencies have been provided (e.g., Table 2.C.1 and Table 3.1).*
  - *Summary tables of local and state agency responses for several questions with a number of sub-parts, such as Question 8, 21, and 22 are provided in the Appendix.*
- *The Appendix contains more detailed tables for each question.*
  - *For each question, tables convey data by local and state agency categorized by jurisdiction size (estimated size of population).*
  - *For each table, the number and percentages of responses are provided for each jurisdiction size.*
  - *For some questions, percentages may not equal 100% if participants could select more than one response or if they did not respond to all parts of the question.*

Symbols Key

n = number of responses
< = less than
> = greater than

Links in Appendix by Question

Question 1: Please indicate the level of government in which you work.
Question 2: Please provide the following information:
- A State
- B Name of agency or department (or division, branch, bureau, etc.)
- C Job title
- D Number of staff you supervise or manage
- E Estimated size of population in your agency's jurisdiction

Question 3: What is your agency's annual staff turnover rate?

Question 4: Has your agency implemented or mandated furlough days?

Question 5: Of your agency's staff, what percentage (%) do you expect will retire within the next five (5) years?

Question 6: Has your agency implemented any early retirement incentive programs?

Question 7: For your jurisdiction, please estimate the number of retail food facilities (including outdoor, temporary, and mobile venues) and food manufacturer/processor facilities.

Question 8: Specific to your agency's foodborne illness outbreak response and investigation capacity: Over the past two years, please indicate any change to administrative and program capacities.

Question 9: Does your agency have the following positions as part of your foodborne illness outbreak response and investigation staff?

Question 10: In a single incident with current staffing, what is the largest foodborne illness outbreak (number of cases/ill persons) that your agency is able to handle?

Question 11: If your agency's current staffing does not meet the need for foodborne illness outbreak response and investigation, how many additional full time employees (FTEs) for each position would be needed for full capacity?

Question 12: In the event of a foodborne illness outbreak, please estimate the percentage (%) of your agency's staff time that would be available for response and investigation work.

Question 13: Over the past two years, of the total time that your agency's staff worked on foodborne illness outbreak responses and investigations, please estimate the number of hours that occurred as overtime (in addition to a normal 40 hour workweek), hours on weekends, and hours that occurred over holidays.

Question 14: Does your agency have a written agreement or memorandum of understanding (MOU) with other agencies to share foodborne illness investigation and response data and expertise?

Question 15: If you have an agreement or MOU, with which agencies do you share data and expertise?

Question 16: Please estimate your agency's staff foodborne illness outbreak investigation experience.

Question 17: Please estimate the number of your agency's staff that hold the following certifications and/or credentials.

Question 18: Please estimate the total hours of foodborne illness outbreak response and investigation training that your agency's staff received in the past two years.

Question 19: Please indicate the type of foodborne illness outbreak response training your agency's staff received in the past two years.

Question 20: Please indicate the topics or titles of the foodborne illness outbreak response training your agency's staff received in the past two years.

Question 21: Does your agency have sufficient capacity to meet the following tasks/responsibilities?

Question 22: Does your agency's staff have sufficient training to undertake the tasks/responsibilities below?

Question 23: Does your agency have the *Council to Improve Foodborne Outbreak Response (CIFOR) Guidelines for Foodborne Disease Outbreak Response* and/or the *CIFOR Toolkit*?

Question 24: Is your agency implementing the Environmental Health Investigation component of the *CIFOR Guidelines*?

Question 25: Does your agency have the following capabilities or procedures?

Question 26: Does your agency use any of the information from the previous question (#25) to plan for the next year (e.g., budget, staffing, and/or resources)?

Question 27: For foodborne illness outbreak response and investigation for the current/most recent fiscal year, please estimate the percentage (%) of your agency's funding from the following sources.

Question 28: Optional: With the goal of having more effective and efficient foodborne illness outbreak investigations, how can federal, state, and local agencies better collaborate and support each other?

Appendix Question 1

Question 1: Please indicate the level of government in which you work.
Overall, there are a total of 163 responses.

- 123 (75%) participants identified themselves as working at local agencies.
- 40 (25%) identified themselves as working at state agencies.

Appendix Question 2

Question 2: Please provide the following information:

A. State
B. Name of agency or department (or division, bureau, etc.)
C. Job title
D. Number of staff you supervise or manage
E. Estimated size of population in your agency's jurisdiction

Table 2.A State Participation

State	Local Agencies (n=123)	State Agencies (n=40)	All (n=163)	Percentage of Participation
Alabama	0	0	**0**	**0%**
Alaska	0	0	**0**	**0%**
Arizona	1	0	**1**	**<1%**
Arkansas	0	1	**1**	**<1%**
California	14	1	**15**	**9%**
Colorado	10	1	**11**	**6%**
Connecticut	3	0	**3**	**2%**
Delaware	0	0	**0**	**0%**
District of Columbia	0	0	**0**	**0%**
Florida	2	5	**7**	**4%**
Georgia	1	0	**1**	**<1%**
Hawaii	0	1	**1**	**<1%**
Idaho	1	0	**1**	**<1%**
Illinois	3	0	**3**	**2%**
Indiana	7	1	**8**	**5%**
Iowa	2	1	**3**	**2%**
Indiana	0	1	**1**	**<1%**
Kansas	0	1	**1**	**<1%**
Kentucky	0	1	**1**	**<1%**

State	Local Agencies (n=123)	State Agencies (n=40)	All (n=163)	Percentage of Participation
Louisiana	0	0	**0**	**0%**
Maine	0	0	**0**	**0%**
Maryland	2	0	**2**	**1%**
Massachusetts	6	2	**7**	**5%**
Michigan	3	1	**4**	**2%**
Minnesota	6	3	**9**	**6%**
Mississippi	0	1	**1**	**<1%**
Missouri	3	1	**4**	**2%**
Montana	0	0	**0**	**0%**
Nebraska	1	1	**2**	**1%**
New Hampshire	4	1	**5**	**3%**
New Jersey	12	0	**12**	**7%**
New Mexico	0	0	**0**	**0%**
New York	0	2	**2**	**1%**
North Carolina	1	0	**1**	**<1%**
North Dakota	1	1	**2**	**1%**
Ohio	9	0	**9**	**5%**
Oklahoma	2	0	**2**	**1%**
Oregon	3	0	**3**	**2%**
Pennsylvania	3	0	**3**	**2%**
Rhode Island	0	0	**0**	**0%**
South Carolina	0	2	**2**	**1%**
South Dakota	0	0	**0**	**0%**
Tennessee	0	0	**0**	**0%**
Texas	8	3	**11**	**6%**
Utah	1	0	**1**	**<1%**
Vermont	0	1	**1**	**<1%**
Virginia	2	2	**4**	**2%**
Washington	5	1	**6**	**4%**
West Virginia	2	2	**4**	**2%**
Wisconsin	1	1	**2**	**1%**
Wyoming	4	1	**5**	**3%**

Table 2.B State Participation by Local and State Agency

State	Local Agencies	State Agencies
Arizona	Maricopa County Environmental Services Department	
Arkansas		Arkansas Department of Health
California	• Sacramento County Environmental Management Department • City of Vernon Health and Environmental Control Department • Glenn County Environmental Health • Orange County Health Care Agency • Madera County Environmental Health Department • Napa County DEM • Environmental Health • University of California • Alameda County • Placer County Environmental Health Division • Contra Costa County Environmental Health Division • Riverside County Department of Environmental Health • Amador County Environmental Health Department • Santa Barbara County Environmental Health Services	California Department of Public Health
Colorado	• Weld County Department of Public Health and Environment • Boulder County Public Health • Clear Creek County Public and Environmental Health • Broomfield Public Health and Environment • Park County Environmental Health • El Paso County Public Health • Tri-County Health Department • Otero County Health Department • Prowers County Public Health and Environment • Pitkin County Environmental Health	Colorado University
Connecticut	• Towns of Franklin, Lebanon and Salem • Farmington Valley Health District • Plainville-Southington Regional Health District	

State	Local Agencies	State Agencies
Florida	• Martin County Health Department • Volusia County Health Department	• Environmental Health (2) • Department of Health • Department of Agriculture and Consumer Services • Department of Health • Florida Division of Hotels and Restaurants
Georgia	Forsyth County Health Department	
Hawaii		State Department of Health
Idaho	Central District Health Department	
Illinois	• Lake County Health Department • McLean County Health Department • Evanston Health Department	
Indiana	• Noble County • St. Joseph County Health Department • Morgan County Health Department • Hendricks County Health Department • Dearborn County Food Division • Boone County Health Department • Clark County Health Department	Indiana State Department of Health
Iowa	• Boone County Health and Sanitation • Gordo County Department of Public Health	Department of Inspections and Appeals
Kansas		Kansas Department of Agriculture, Division of Food Safety and Lodging
Kentucky		Department for Public Health/Food Safety Branch
Maryland	• Prince George's County Health Department • Baltimore City Health Department	
Massachusetts	• Quincy Health Department, Public Health • Boston Public Health Commission • Town of West Springfield Health Department • Norwood Health Department • Health Department • Sturbridge Board of Health	Massachusetts Department of Public Health/BEH
Michigan	• Allegan County Health Department • Genesee County Health Department • Ottawa County Health Department	Wayne State University
Minnesota	• Washington County Public Health and Environment • Winona County, Environmental Services • Hennepin County Epidemiology and Environmental Health • City of St. Cloud Health and Inspections • City of Hopkins • Anoka County CHES	Minnesota Department of Health (3)

State	Local Agencies	State Agencies
Mississippi		Food Protection Division
Missouri	• Saint Louis County • Lafayette County Health Department • Randolph County Health Department	Department of Health and Senior Services
Nebraska	Lincoln-Lancaster County Health	Agriculture
New Hampshire	• Salem Health Department • Manchester Health Department, Environmental Health and Emergency Preparedness • Portsmouth Health Department	Division of Public Health Services, Food Protection Section
New Jersey	• Atlantic County Division of Public Health • East Orange Health Department (2) • Local Health Department • Wayne Township Health Department • Teaneck • Monmouth County Regional Health Commission • Lawrence Township Health Department • City of Vineland • Stockton College • Cumberland County Health Department • Mahwah Health Department	
New York		• Agriculture and Markets, Division Food Safety and Inspection • State Department of Health, District Office
New Hampshire	Manchester Health Department	
North Carolina	Rockingham County	
North Dakota	Custer Health	Department of Health, Division of Food and Lodging
Ohio	• Public Health Dayton and Montgomery County • Cuyahoga County Board of Health (2) • Cincinnati Health Department • City of Springdale Health Department • Mahoning County District Board of Health (2) • Salem City Health District • Van Wert County Health Department, Environmental Health	
Oklahoma	• Tulsa Health Department, Environmental Public Health • Oklahoma City/County Health Department	
Oregon	• Marion County Environmental Health • Lane County Environmental Health • Hood River County Environmental Health	
Pennsylvania	• Environmental Health Services • Allentown Bureau of Health • City of Bethlehem, Bureau of Health	

State	Local Agencies	State Agencies
South Carolina		Department of Health and Environmental Control (2)
Texas	• Environmental Health Division • City of Waxahachie Environmental Health • Health Services Department • Galveston County Health District • City of Midland • City of Plano Health Department • Environmental Health Department • Harris County Public Health and Environmental Services	• Department of State Health Services • Institutional • Texas Tech University
Utah	Weber-Morgan Health Department	
Vermont		Department of Health, Food and Lodging
Virginia	• Crater Environmental Health • Piedmont Health District	• Environmental Health • Department of Health, Environmental Health • Division of Shellfish Sanitation
Washington	• Tacoma-Pierce County Health Department • Spokane Regional Health District • Environmental Public Health • Island County Public Health • Skagit County Public Health	Department of Health
West Virginia	• Cabell-Huntington Health Department • City of Casper-Natrona County Health Department	• Department of Health • Department of Health and Human Resources, Bureau for Public Health
Wisconsin	Manitowoc County Public Health	Department of Health Services
Wyoming	• City of Casper-Natrona County Health Department (2) • Cheyenne-Laramie County Health Department, Division of Environmental Health • City of Laramie Environmental Health	Consumer Health Services

Table 2.C.2 Specific Job Titles

Job Title Category	Specific Job Title
Administrator	Administrator (2) Environmental Administrator Food & Dairy Administrator Public Health Administrator
Agent	Health Agent
Chief	Bureau Chief for Food and Consumer Safety Chief Chief Food Inspector Chief of Environmental Health Chief of Environmental Health and Emergency Preparedness Chief, Food Safety Section Deputy Chief Food Protection Chief Program Chief
Commissioner	Deputy Health Commissioner Health Commissioner
Coordinator	Consumer Protection Program Coordinator EH Food Program Coordinator Environmental Management Coordinator Food and Waterborne Disease Program Coordinator Food Program Coordinator (2) Program Coordinator
Director	Acting Division Director Assistant Director Environmental Health Associate Director for Environmental Health Department Director Deputy Director (4) Director (12) Director Environmental Health (6) Director of Environmental Public Health (2) Director of Health (3) Director of Public Health Director, Division of Food Protection Director, Environmental & Consumer Safety Services Director, Environmental Health Programs Director, Food Protection Director, Infectious Disease Bureau Division Director Environmental Health Division Director Environmental Director/Sanitarian Environmental Health Director (5) Environmental Services director Food Protection Program, Director Food Service Director

Job Title Category	Specific Job Title
Education	Adjunct Professor Education Coordinator Nurse Educator
Environmental Compliance Service Consultant	ECS
Environmental Health	EPHS III Principal REHS (2)
Environmental Health Specialist	Environmental Health Program Specialist Environmental Health Specialist (5) Environmental Health Specialist III (2) Environmental Health Specialist Senior (3) Food Program Specialist Registered Environmental Health Specialist (7) Supervising Environmental Health Specialist
Environmentalist	Environmentalist
Epidemiologist	Epidemiologist
Health Officer	Health Officer (3) Assistant Health Officer
Inspector	Health Inspector Public Health Inspector
Investigator	Environmental Health Investigator
Leader	Food Safety Program Lead Foods Team Leader
Manager	Division Manager Environmental Manager Branch Manager Food Safety Program Manager Food Program Manager Manager - Food & NNA Manager Manager, Environmental Public Health Division Manager, Environmental Services Plant Program Manager Program Manager (3) Program Manager Threat Prep/Environmental Health
Manager, Environmental Health	Division Manager Environmental Health Deputy Manager Environmental Health Manager (4) Environmental Health Manager/Food & Dairy Consultant Environmental Health Service Manager Manager Environmental Health Division
Public Health	Senior Public Health Specialist Public Health Inspector

Job Title Category	Specific Job Title
Sanitarian	County Sanitarian District Sanitarian Public Health Sanitarian Registered Sanitarian Sanitarian (3) Sanitarian Chief/Food and Training Assistant Senior Sanitarian (2)
Supervisor	Area Food Supervisor Environmental Health Supervisor (3) Environmental Supervisor II Food Safety Supervisor Inspection Supervisor Program Supervisor Environmental Health Supervisor (3)

Table 2.D.2 Number of Staff Supervised by Assessment Participants for Local Agencies

Number of Staff Supervised	Local Agency Responses by Jurisdiction Size					
	<50,000 (n=36)	**50,001–100,000** (n=27)	**100,001–250,000** (n=21)	**250,001–500,000** (n=14)	**500,001–1 million** (n=10)	**1–5 million** (n=12)
None	12 (35%)	4 (15%)	—	1 (7%)	3 (30%)	1 (9%)
1–5	15 (44%)	11 (42%)	6 (28%)	1 (7%)	1 (10%)	1 (9%)
6–10	4 (12%)	5 (19%)	7 (33%)	4 (31%)	—	—
11–15	1 (3%)	2 (7%)	7 (33%)	7 (54%)	—	1 (9%)
16–20	—	1 (4%)	1 (5%)	—	1 (10%)	—
21–30	1 (3%)	1 (4%)	—	—	3 (30%)	3 (27%)
31–50	1 (3%)	1 (4%)	—	—	—	2 (18%)
51–100	—	1 (4%)	—	—	1 (10%)	2 (18%)
>100	—	—	—	—	1 (10%)	1 (9%)

Table 2.D.3 Number of Staff Supervised by Assessment Participants for State Agencies

Number of Staff Supervised	State Agency Responses by Jurisdiction Size						
	<50,000 (n=3)	50,001–100,000 (n=3)	100,001–250,000 (n=3)	250,001–500,000 (n=1)	500,001–1 million (n=3)	1–5 million (n=12)	>5 million (n=15)
None	1 (33%)	—	1 (33%)	—	—	5 (42%)	1 (6%)
1–5	1 (33%)	3 (100%)	1 (33%)	—	3 (100%)	—	—
6–10	1 (33%)	—	1 (33%)	—	—	1 (8%)	2 (13%)
11–15	—	—	—	—	—	1 (8%)	3 (20%)
16–20	—	—	—	—	—	1 (8%)	1 (6%)
21–30	—	—	—	1 (100%)	—	—	2 (13%)
31–50	—	—	—	—	—	1 (8%)	—
51–100	—	—	—	—	—	2 (17%)	1 (6%)
101–200	—	—	—	—	—	1 (8%)	1 (6%)
>200	—	—	—	—	—	—	4 (26%)

Table 2.E.1 Summary of Estimated Size of Population in Local and State Agency Jurisdictions

Jurisdiction Size	Local Agency (n=119)	State Agency (n=40)
<50,000	35 (29%)	3 (7%)
50,001–100,000	27 (23%)	3 (7%)
100,001–250,000	21 (18%)	3 (7%)
250,001–500,000	14 (12%)	1 (3%)
500,001–1 million	10 (8%)	3 (7%)
1–5 million	12 (10%)	12 (30%)
>5 million	—	15 (38%)

Appendix Question 3

Question 3: What is your agency's annual staff turnover rate? Please see formula below.

For example, if you have a staff of 20 and 5 have resigned or been laid off in the last year, your turnover rate would be 5/20 = 0.25 or 25%.

$$\frac{\text{\# of employees leaving agency per year (laid off, fired, resigned)}}{\text{total \# of employees}}$$

Table 3.2 Annual Staff Turnover Rate for Local Agencies

Staff Turnover Rate	Local Agency Responses by Jurisdiction Size					
	<50,000 (n=34)	50,001–100,000 (n=27)	100,001–250,000 (n=21)	250,001–500,000 (n=14)	500,001–1 million (n=10)	1–5 million (n=10)
No Turnover	20 (59%)	12 (44%)	6 (29%)	2 (14%)	—	—
1–5%	3 (9%)	3 (11%)	1 (5%)	3 (21%)	3 (30%)	2 (20%)
6–10%	1 (3%)	2 (11%)	5 (21%)	4 (28%)	5 (50%)	5 (50%)
11–15%	3 (9%)	3 (15%)	3 (14%)	4 (28%)	1 (10%)	1 (10%)
16–20%	3 (9%)	5 (11%)	3 (14%)	1 (7%)	—	2 (20%)
21–25%	—	1 (4%)	—	—	—	—
26–30%	—	1 (4%)	1 (5%)	—	1 (10%)	—
>30%	2 (6%)	1 (4%)	1 (5%)	—	—	—

Table 3.3 Annual Staff Turnover Rate for State Agencies

Staff Turnover Rate	State Agency Responses by Jurisdiction Size						
	<50,000 (n=3)	50,001–100,000 (n=3)	100,001–250,000 (n=3)	250,001–500,000 (n=1)	500,001–1 million (n=3)	1–5 million (n=13)	>5 million (n=15)
No Turnover	1 (50%)	2 (66%)	—	—	1 (33%)	2 (15%)	1 (6%)
1–5%	1 (50%)	—	—	—	1 (33%)	4 (31%)	4 (27%)
6–10%	—	—	1 (50%)	1 (100%)	1 (33%)	2 (15%)	—
11–15%	—	—	—	—	—	4 (31%)	1 (6%)
16–20%	—	—	1 (50%)	—	—	—	5 (33%)
21–25%	—	—	—	—	—	—	3 (20%)
26–30%	—	—	—	—	—	—	1 (6%)
>30%	—	1 (33%)	—	—	—	—	—

Appendix Question 4

Question 4: Has your agency implemented or mandated furlough days? If yes, please provide the number of furlough days per year below.

Table 4.2 Implemented or Mandated Furlough Days for Local Agencies

Implemented or Mandated Furlough Days	Local Agency Responses by Jurisdiction Size					
	<50,000 (n=35)	50,001–100,000 (n=27)	100,001–250,000 (n=21)	250,001–500,000 (n=14)	500,001–1 million (n=10)	1–5 million (n=11)
No	30 (86%)	18 (66%)	17 (81%)	11 (79%)	8 (80%)	6 (55%)
Yes	5 (14%)	9 (33%)	4 (19%)	3 (21%)	2 (20%)	5 (45%)

Table 4.3 Implemented or Mandated Furlough Days for State Agencies

Implemented or Mandated Furlough Days	State Agency Responses by Jurisdiction Size						
	<50,000 (n=3)	50,001–100,000 (n=3)	100,001–250,000 (n=3)	250,001–500,000 (n=1)	500,001–1 million (n=3)	1–5 million (n=13)	>5 million (n=15)
No	3 (100%)	2 (66%)	2 (66%)	—	3 (100%)	12 (92%)	11 (73%)
Yes	—	1 (33%)	1 (33%)	1 (100%)	—	1 (7%)	4 (27%)

Table 4.4 Number of Implemented or Mandated Furlough Days for Local Agencies

Number of Implemented or Mandated Furlough Days	Local Agency Responses by Jurisdiction Size					
	<50,000 (n=4)	50,001–100,000 (n=8)	100,001–250,000 (n=4)	250,001–500,000 (n=2)	500,001–1 million (n=1)	1–5 million (n=2)
1–3	1 (25%)	—	—	—	—	1 (50%)
4–6	—	3 (38%)	2 (50%)	1 (50%)	1 (100%)	—
7–10	1 (25%)	1 (12%)	—	—	—	—
10–12	1 (25%)	2 (25%)	1 (25%)	1 (50%)	—	1 (50%)
>12	1 (25%)	2 (25%)	1 (25%)	—	—	—

Table 4.5 Number of Implemented or Mandated Furlough Days for State Agencies

Number of Implemented or Mandated Furlough Days	State Agency Responses by Jurisdiction Size						
	<50,000 (n=0)	50,001–100,000 (n=1)	100,001–250,000 (n=1)	250,001–500,000 (n=1)	500,001–1 million (n=0)	1–5 million (n=1)	>5 million (n=4)
1–3	—	—	1 (100%)	1 (100%)	—	—	2 (50%)
4–6	—	1 (100%)	—	—	—	1 (100%)	—
7–10	—	—	—	—	—	—	1 (25%)
10–12	—	—	—	—	—	—	1 (25%)
>12	—	—	—	—	—	—	—

Please note: For these tables, some agencies did not provide the number of furlough days.

Local Agency Comments on Furlough Days

50,001–100,000

- For the time they are performing service in the uniformed services for a period not to exceed fifteen calendar days within one calendar year.

500,001–1 million

- 3–5 depending on salary range.

1–5 million

- Six days the last two years for staff; 96 hours the last 9 months for management.

State Agency Comments on Furlough Days

>5 million

- Two last year.

Appendix Question 5

Question 5: Of your agency's staff, what percentage (%) do you expect will retire within the next five (5) years?

Table 5.2 Percentage of Staff Expected to Retire Within Five Years for Local Agencies

Percentage of Staff Expected to Retire Within 5 Years	Local Agency Responses by Jurisdiction Size					
	<50,000 (n=35)	50,001–100,000 (n=27)	100,001–250,000 (n=21)	250,001–500,000 (n=14)	500,001–1 million (n=10)	1–5 million (n=11)
None	15 (43%)	6 (22%)	1 (5%)	1 (7%)	—	—
1–10%	14 (40%)	13 (48%)	13 (62%)	8 (57%)	6 (60%)	6 (55%)
11–25%	2 (6%)	7 (26%)	6 (28%)	4 (29%)	4 (40%)	4 (36%)
26–40%	4 (11%)	—	1 (5%)	1 (7%)	—	1 (9%)
>40%	—	1 (4%)	—	—	—	—

Table 5.3 Percentage of Staff Expected to Retire Within Five Years for State Agencies

Percentage of Staff Expected to Retire Within 5 Years	State Agency Responses by Jurisdiction Size						
	<50,000 (n=3)	50,001–100,000 (n=3)	100,001–250,000 (n=3)	250,001–500,000 (n=1)	500,001–1 million (n=3)	1–5 million (n=12)	>5 million (n=5)
None	—	2 (66%)	—	—	—	—	—
1–10%	3 (100%)	—	2 (66%)	1 (100%)	1 (33%)	4 (33%)	7 (47%)
11–25%	—	—	1 (33%)	—	—	6 (50%)	6 (46%)
26–40%	—	—	—		1 (33%)	2 (17%)	2 (13%)
>40%	—	1 (33%)	—		1 (33%)	—	—

Appendix Question 6

Question 6: Has your agency implemented any early retirement incentive programs?

This question is asked to determine if expected retirement (Question 5) is influenced by early retirement incentives at local and state agencies.

Table 6.2 Early Retirement Incentive Programs Implemented for Local Agencies

Early Retirement Incentive	Local Agency Responses by Jurisdiction Size					
	<50,000 (n=31)	50,001–100,000 (n=26)	100,001–250,000 (n=21)	250,001–500,000 (n=14)	500,001–1 million (n=10)	1–5 million (n=10)
Yes	—	2 (8%)	4 (191%)	4 (29%)	2 (20%)	1 (10%)
No	31 (100%)	24 (92%)	17 (81%)	10 (72%)	8 (80%)	9 (90%)

Table 6.3 Early Retirement Incentive Programs Implemented for State Agencies

Early Retirement Incentive	State Agency Responses by Jurisdiction Size						
	<50,000 (n=3)	50,001–100,000 (n=3)	100,001–250,000 (n=3)	250,001–500,000 (n=1)	500,001–1 million (n=3)	1–5 million (n=11)	>5 million (n=14)
Yes	1 (33%)	2 (66%)	—	—	—	2 (18%)	1 (7%)
No	2 (66%)	1 (33%)	3 (100%)	1 (100%)	3 (100)%	9 (82%)	13 (93%)

Local Agency Comments on Retirement Incentives

<50,000

- The town offered a program in 2010.
- Human resources would handle such.
- Offered on three occasions in the past for limited times.
- Town-wide early retirement offered.

1–5 million

- Had 2 rounds of "early retirement incentive programs" in the past few years. Each round resulted in a 7–10% staff reduction in the Department.

State Agency Comments on Retirement Incentives

1–5 million

- In the past 5 years, early retirement programs have been offered twice.
- Yes but the program required retirement by June 24, 2010, so really hasn't impacted the most recent past fiscal year.

>5 million

- 2010: 2 positions eliminated.

Appendix Question 7

Question 7: For your jurisdiction, please estimate the number of retail food facilities (including outdoor, temporary, and mobile venues) and food manufacturer/processor facilities.

Table 7.2 Retail and Manufacturing Food Facilities for Local Agencies

Number of Facilities	Local Agency Responses by Jurisdiction Size					
	<50,000 (n=34)	**50,001–100,000** (n=27)	**100,001–250,000** (n=29)	**250,001–500,000** (n=14)	**500,001–1 million** (n=10)	**1–5 million** (n=11)
Retail Facilities						
None or N/A	—	—	—	—	—	—
<100	3 (8%)	1 (4%)	—	—	—	—
100–250	19 (55%)	3 (11%)	—	—	—	—
251–500	10 (29%)	16 (59%)	4 (14%)	—	2 (20%)	—
501–750	—	5 (19%)	5 (17%)	—	—	—
751–1,000	1 (3%)	—	4 (14%)	2 (14%)	—	—
1,001–5,000	1 (3%)	—	7 (24%)	11 (79%)	8 (80%)	6 (55%)
5,001–10,000		—	—	—	—	5 (45%)
>10,000	—	—	—	1 (7%)	—	—
Manufacturing Facilities						
None or N/A	7 (21%)	8 (30%)	8 (28%)	8 (57%)	4 (40%)	5 (45%)
1–10	22 (65%)	11 (41%)	5 (17%)	1 (7%)	—	—
11–25	3 (9%)	1 (4%)	2 (7%)	2 (15%)	1 (10%)	1 (9%)
26–50	1 (3%)	—	2 (7%)	—	1 (10%)	—
51–100	—	—	—	2 (15%)	2 (20%)	—
101–250	—	1 (4%)	1 (3%)	—	1 (10%)	1 (9%)
251–500	—	—	—	1 (7%)	—	1 (9%)

Table 7.3 Retail and Manufacturing Food Facilities for State Agencies

Number of Facilities	State Agency Responses by Jurisdiction Size						
	<50,000 (n=3)	50,001–100,000 (n=3)	100,001–250,000 (n=3)	250,001–500,000 (n=1)	500,001–1 million (n=3)	1–5 million (n=12)	>5 million (n=13)
Retail Facilities							
None or N/A	—	—	—	—	—	—	—
<100	3 (100%)	—	1 (33%)	—	—	1 (8%)	—
101–250	—	—	—	—	—	1 (8%)	—
251–500	—	1 (33%)	—	—	—	—	—
501–750	—	1 (33%)	—	—	—	—	—
751–1,000	—	1 (33%)	—	—	—	1 (8%)	—
1,001–5,000	—	—	2 (67%)	1 (100%)	3 (100%)	1 (8%)	—
5,001–10,000	—	—	—	—	—	1 (8%)	—
>10,000	—	—	—	—	—	7 (59%)	10 (100%)
Manufacturing Facilities							
None or N/A	2 (67%)	—	—	—	—	4 (31%)	1 (9%)
<100	1 (33%)	1 (25%)	3 (60%)	—	1 (33%)	2 (15%)	—
101–250	—	—	—	—	—	1 (8%)	1 (9%)
251–500	—	—	—	—	2 (67%)	2 (15%)	1 (9%)
501–750	—	2 (50%)	—	—	—	1 (8%)	1 (9%)
751–1,000	—	—	—	—	—	2 (15%)	—
1,001–5,000	—	1 (25%)	2 (40%)	—	—	1 (8%)	4 (37%)
5,001–10,000	—	—	—	—	—	—	1 (9%)
>10,000	—	—	—	—	—	—	2 (18%)

Appendix Question 8

Question 8: Specific to your agency's foodborne illness outbreak response and investigation capacity: Over the past two years, please indicate any change to administrative and program capacities. *Additional comments or information are welcome, but not required.*

Environmental assessments/investigations are conducted to identify the contributing factors and environmental antecedents (e.g., what caused the outbreak and why those conditions/practices existed) in a foodborne illness outbreak.

Table 8.1.C Summary of Administrative and Program Capacities for Local and State Agencies

Agency	Administrative and Program Capacities for Local and State Agencies (Local Agency n=119, State Agency n=40)									
	No Change	Percent Decrease							Increased	N/A
		1–5%	6–10%	11–15%	16–20%	21–25%	26–30%	>30%		
Number of Staff										
Local	70 (59%)	9 (8%)	4 (3%)	4 (3%)	6 (5%)	2 (2%)	6 (5%)	6 (5%)	11 (9%)	—
State	20 (50%)	6 (15%)	3 (8%)	2 (5%)	2 (5%)	—	1 (3%)	—	5 (12%)	1 (3%)
All	90 (57%)	15 (9%)	7 (4%)	6 (4%)	8 (5%)	2 (1%)	7 (4%)	6 (4%)	16 (10%)	1 (1%)
Average Years of Staff Food Safety Experience										
Local	42 (35%)	9 (8%)	5 (4%)	6 (5%)	3 (2%)	4 (3%)	2 (2%)	4 (3%)	37 (31%)	3 (2%)
State	13 (33%)	3 (8%)	5 (12%)	3 (8%)	2 (6%)	2 (6%)	—	1 (3%)	5 (12%)	1 (3%)
All	55 (35%)	12 (8%)	10 (6%)	9 (6%)	5 (3%)	6 (4%)	2 (1%)	5 (3%)	42 (26%)	4 (3%)
Staff Salaries										
Local	63 (53%)	11 (9%)	7 (6%)	—	—	—	1 (1%)	—	28 (24%)	8 (7%)
State	20 (50%)	11 (28%)	3 (7%)	3 (7%)	—	—	1 (3%)	—	1 (3%)	—
All	83 (52%)	22 (14%)	10 (6%)	3 (2%)	—	—	2 (1%)	—	29 (18%)	8 (5%)
Food Safety Program Budget										
Local	48 (42%)	13 (11%)	12 (11%)	7 (6%)	3 (3%)	3 (3%)	5 (4%)	2 (2%)	14 (12%)	6 (5%)
State	21 (53%)	4 (10%)	3 (8%)	2 (6%)	1 (3%)	—	2 (6%)	—	3 (8%)	1 (3%)
All	69 (43%)	17 (11%)	15 (9%)	9 (6%)	4 (3%)	3 (2%)	7 (4%)	2 (1%)	17 (11%)	7 (4%)

Agency	Administrative and Program Capacities for Local and State Agencies (Local Agency n=119, State Agency n=40)									
	No Change	Percent Decrease							Increased	N/A
		1–5%	6–10%	11–15%	16–20%	21–25%	26–30%	>30%		
Food Safety Training Budget										
Local	58 (51%)	11 (10%)	4 (3%)	6 (5%)	3 (3%)	5 (4%)	2 (2%)	11 (10%)	9 (8%)	5 (4%)
State	21 (53%)	6 (15%)	2 (5%)	1 (3%)	1 (3%)	1 (3%)	1 (3%)	1 (3%)	2 (5%)	1 (3%)
All	79 (50%)	17 (11%)	6 (4%)	7 (4%)	4 (3%)	6 (4%)	3 (2%)	12 (8%)	11 (7%)	6 (4%)
Food Safety Travel Budget										
Local	53 (44%)	14 (12%)	3 (3%)	5 (4%)	6 (5%)	4 (3%)	3 (3%)	12 (10%)	5 (4%)	9 (8%)
State	19 (48%)	5 (13%)	3 (8%)	2 (5%)	—	2 (5%)	—	4 (10%)	3 (8%)	2 (5%)
All	72 (45%)	19 (12%)	6 (4%)	7 (4%)	6 (4%)	6 (4%)	3 (2%)	16 (10%)	8 (5%)	11 (7%)
Technology/Equipment Budget										
Local	58 (51%)	15 (13%)	8 (7%)	3 (3%)	3 (3%)	2 (2%)	4 (4%)	7 (6%)	12 (10%)	2 (2%)
State	22 (55%)	2 (5%)	5 (13%)	1 (3%)	—	2 (5%)	—	1 (3%)	5 (13%)	—
All	80 (50%)	17 (11%)	13 (8%)	4 (3%)	3 (2%)	4 (3%)	4 (3%)	8 (5%)	17 (11%)	2 (1%)
Ability to Support any Federal, State, or Local Government Food Safety Mandates										
Local	71 (60%)	15 (13%)	12 (10%)	1 (1%)	—	3 (3%)	1 (1%)	3 (3%)	4 (3%)	1 (1%)
State	23 (58%)	4 (10%)	5 (13%)	3 (8%)	1 (3%)	1 (3%)	—	—	1 (3%)	1 (3%)
All	94 (59%)	19 (12%)	17 (11%)	4 (3%)	1 (1%)	4 (3%)	1 (1%)	3 (2%)	5 (3%)	2 (1%)
Ability to do Routine Inspections										
Local	54 (45%)	12 (10%)	17 (14%)	6 (5%)	—	2 (2%)	2 (2%)	3 (3%)	15 (13%)	2 (2%)
State	20 (50%)	4 (10%)	5 (13%)	2 (5%)	1 (3%)	—	1 (3%)	1 (3%)	1 (3%)	1 (3%)
All	74 (47%)	16 (10%)	22 (14%)	8 (5%)	1 (1%)	2 (1%)	3 (2%)	4 (3%)	16 (10%)	3 (2%)

Agency	Administrative and Program Capacities for Local and State Agencies (Local Agency n=119, State Agency n=40)									
	No Change	Percent Decrease							Increased	N/A
		1–5%	6–10%	11–15%	16–20%	21–25%	26–30%	>30%		
Inspection Time per Facility										
Local	69 (51%)	9 (8%)	10 (8%)	2 (2%)	1 (1%)	2 (2%)	1 (1%)	1 (1%)	14 (12%)	4 (3%)
State	21 (53%)	4 (10%)	3 (8%)	1 (3%)	1 (3%)	1 (3%)	—	—	3 (8%)	2 (5%)
All	90 (57%)	13 (8%)	13 (8%)	3 (2%)	2 (1%)	3 (2%)	1 (1%)	1 (1%)	17 (11%)	6 (4%)
Ability to Conduct Environmental Assessments										
Local	64 (54%)	5 (4%)	7 (6%)	3 (3%)	2 (2%)	2 (2%)	—	7 (6%)	11 (10%)	11 (10%)
State	26 (65%)	3 (8%)	2 (5%)	2 (5%)	—	1 (2%)	—	—	2 (5%)	2 (5%)
All	90 (57%)	8 (5%)	9 (6%)	5 (3%)	2 (1%)	3 (2%)	—	7 (4%)	13 (8%)	13 (8%)
Response Time to Conduct Environmental Assessments										
Local	67 (56%)	7 (6%)	6 (5%)	3 (3%)	2 (2%)	2 (2%)	—	6 (5%)	10 (9%)	11 (9%)
State	26 (65%)	3 (8%)	2 (5%)	2 (5%)	—	1 (3%)	—	—	2 (5%)	2 (5%)
All	93 (58%)	10 (6%)	8 (5%)	5 (3%)	2 (1%)	3 (2%)	—	6 (4%)	12 (8%)	13 (8%)
Ability to do Follow-Up Inspections on Environmental Assessments										
Local	59 (50%)	5 (4%)	9 (8%)	7 (6%)	3 (3%)	3 (3%)	1 (1%)	7 (6%)	9 (8%)	9 (8%)
State	22 (55%)	6 (15%)	4 (10%)	2 (5%)	1 (3%)	—	1 (3%)	—	2 (5%)	2 (5%)
All	81 (51%)	11 (7%)	13 (8%)	9 (6%)	4 (3%)	3 (2%)	2 (1%)	7 (4%)	11 (7%)	11 (7%)
Ability to Respond to Food Recalls										
Local	73 (61%)	7 (6%)	6 (5%)	2 (2%)	3 (3%)	2 (2%)	2 (2%)	5 (4%)	9 (8%)	4 (3%)
State	20 (50%)	4 (10%)	4 (10%)	—	—	1 (3%)	—	—	3 (8%)	8 (20%)
All	93 (58%)	11 (7%)	10 (6%)	2 (1%)	3 (2%)	3 (2%)	2 (1%)	5 (3%)	12 (8%)	12 (8%)

Agency	Administrative and Program Capacities for Local and State Agencies (Local Agency n=119, State Agency n=40)									
	No Change	Percent Decrease							Increased	N/A
		1–5%	6–10%	11–15%	16–20%	21–25%	26–30%	>30%		
Outsourcing of Food Safety Program										
Local	48 (40%)	—	1 (1%)	1 (1%)	—	1 (1%)	1 (1%)	1 (1%)	4 (3%)	58 (50%)
State	20 (50%)	2 (5%)	1 (2%)	—	—	1 (2%)	1 (2%)	1 (2%)	1 (2%)	12 (30%)
All	68 (43%)	2 (1%)	2 (1%)	1 (1%)	—	2 (1%)	2 (1%)	2 (1%)	5 (3%)	70 (44%)
Retail Food License and/or Inspection										
Local	72 (60%)	7 (6%)	6 (5%)	2 (2%)	6 (5%)	1 (1%)	2 (2%)	5 (5%)	6 (5%)	3 (3%)
State	20 (50%)	4 (9%)	4 (9%)	—	—	1 (2%)	—	—	7 (18%)	8 (20%)
All	92 (58%)	11 (7%)	10 (6%)	2 (1%)	6 (4%)	2 (1%)	2 (1%)	5 (3%)	13 (8%)	11 (7%)
Grant Funding										
Local	57 (48%)	3 (3%)	4 (3%)	1 (1%)	1 (1%)	1 (1%)	—	3 (3%)	9 (8%)	34 (29%)
State	13 (33%)	6 (15%)	3 (8%)	—	—	1 (3%)	1 (3%)	—	7 (18%)	7 (18%)
All	70 (44%)	9 (6%)	7 (4%)	1 (1%)	1 (1%)	2 (1%)	1 (1%)	3 (2%)	16 (10%)	41 (26%)

Please note: For this table, percentages may not equal 100% because participants may not have responded to all parts of this question. Separate summary tables for local and state agencies are provided in the Results and Discussion, Question 8 of this report.

Table 8.2 Administration and Program Capacities in Past Two Years for Local Agencies

Change in Capacity	Administrative & Program Capacities for Local Agencies by Jurisdiction Size					
	<50,000 (n=35)	50,001–100,000 (n=27)	100,001–250,000 (n=21)	250,001–500,000 (n=14)	500,001–1 million (n=10)	1–5 million (n=12)
Number of Staff						
No change	25 (72%)	13 (48%)	17 (81%)	7 (50%)	6 (60%)	2 (17%)
1–5% decrease	1 (3%)	2 (7%)	—	2 (14%)	1 (10%)	3 (25%)
6–10% decrease	1 (3%)	1 (4%)	1 (5%)	—	—	1 (9%)
11–15% decrease	1 (3%)	1 (4%)	2 (10%)	—	—	—
16–20% decrease	2 (6%)	—	—	1 (7%)	2 (20%)	1 (9%)
21–25% decrease	1 (3%)	1 (4%)	—	—	—	—
26–30% decrease	1 (3%)	3 (11%)	1 (5%)	1 (7%)	—	—
>30% decrease	2 (6%)	3 (11%)	—	1 (7%)	—	—
Increased	1 (3%)	3 (11%)	—	2 (14%)	1 (10%)	4 (33%)
Not offered or N/A	—	—	—	—	—	—
Average Years of Staff Food Safety Experience						
No change	15 (43%)	12 (44%)	10 (48%)	3 (22%)	1 (10%)	1 (8%)
1–5% decrease	2 (6%)	1 (4%)	1 (5%)	2 (14%)	1 (10%)	2 (16%)
6–10% decrease	2 (6%)	—	—	—	1 (10%)	2 (16%
11–15% decrease	—	—	—	4 (29%)	—	2 (16%
16–20% decrease	—	1 (4%)	2 (10%)	—	—	—
21–25% decrease	2 (6%)	1 (4%)	1 (5%)	—	—	—
26–30% decrease	—	1 (4%)	1 (5%)	—	—	—
>30% decrease	—	2 (7%)	1 (5%)	1 (7%)	—	—
Increased	12 (35%)	8 (30%)	4 (19%)	3 (22%)	7 (70%)	3 (25%)
Not offered or N/A	1 (3%)	1 (4%)	1 (5%)	—	—	—
Staff Salaries						
No change	15 (42%)	13 (48%)	13 (62%)	11 (78%)	4 (40%)	7 (58%)
1–5% decrease	2 (6%)	4 (15%)	—	—	3 (30%)	2 (16%)
6–10% decrease	2 (6%)	1 (3%)	1 (5%)	—	—	3 (25%)
11–15% decrease	—	—	—	—	—	—
16–20% decrease	—	—	—	—	—	—
21–25% decrease	—	—	—	—	—	—
26–30% decrease	—	—	1	—	—	—
>30% decrease	—	—	—	—	—	—
Increased	12 (34%)	8 (30%)	4 (19%)	3 (22%)	1 (101%)	—
Not offered or N/A	3 (9%)	3 (11%)	1 (5%)	—	1 (10%)	—
Food Safety Program Budget						
No change	15 (43%)	13 (48%)	5 (24%)	5 (36%)	3 (30%)	7 (58%)
1–5% decrease	5 (14%)	1 (3%)	3 (14%)	—	2 (20%)	2 (17%)
6–10% decrease	2 (6%)	4 (15%)	4 (19%)	1 (7%)	1 (10%)	—
11–15% decrease	—	3 (11%)	—	2 (14%)	2 (20%)	—
16–20% decrease	2 (6%)	—	1 (5%)	—	—	—

Change in Capacity	Administrative & Program Capacities for Local Agencies by Jurisdiction Size					
	<50,000 (n=35)	50,001–100,000 (n=27)	100,001–250,000 (n=21)	250,001–500,000 (n=14)	500,001–1 million (n=10)	1–5 million (n=12)
21–25% decrease	1 (3%)	—	2 (10%)	—	—	—
26–30% decrease	1 (3%)	1 (4%)	3 (14%)	—	—	—
>30% decrease	1 (3%)	—	1 (5%)	—	—	—
Increased	2 (6%)	1 (4%)	2 (10%)	6 (43%)	1 (10%)	2 (17%)
Not offered or N/A	4 (11%)	2 (8%)	—	—	—	—
Food Safety Training Budget						
No change	18 (51%)	14 (52%)	9 (43%)	7 (50%)	4 (40%)	6 (50%)
1–5% decrease	3 ((%)	2 (8%)	1 (5%)	1 (7%)	2 (20%)	2 (17%)
6–10% decrease	1 (3%)	—	1 (5%)	1 (7%)	1 (10%)	—
11–15% decrease	—	3 (11%)	—	2 (14%)	1 (10%)	—
16–20% decrease	2 (6%)	—	—	1 (7%)	—	—
21–25% decrease	1 (3%)	1 (4%)	3 (14%)	—	—	—
26–30% decrease	1 (3%)	—	1 (5%)	—	—	
>30% decrease	2 (6%)	2 (8%)	5 (24%)	1 (7%)	—	1 (8%)
Increased	2 (6%)	2 (8%)	1 (5%)	1 (7%)	2 (20%)	1 (8%)
Not offered or N/A	4 (11%)	1 (4%)	—	—	—	—
Food Safety Travel Budget						
No change	17 (49%)	13 (48%)	9 (43%)	6 (43%)	2 (20%)	6 (50%)
1–5% decrease	4 (11%)	2 (7%)	2 (10%)	1 (7%)	3 (30%)	2 (17%)
6–10% decrease	1 (3%)	—	—	1 (7%)	1 (10%)	—
11–15% decrease	1 (3%)	2 (7%)	1 (5%)	—	1 (10%)	—
16–20% decrease	2 (6%)	—	—	3 (21%)	1 (10%)	—
21–25% decrease	1 (3%)	—	2 (10%)	1 (7%)	—	—
26–30% decrease	1 (3%)	1 (4%)	—	1 (7%)	—	—
>30% decrease	1 (3%)	4 (15%)	5 (24%)	1 (7%)	—	1 (8%)
Increased	1 (3%)	2 (7%)	—	—	1 (10%)	1 (8%)
Not offered or N/A	5 (14%)	2 (7%)	2 (10%)	—	—	—
Technology/Equipment Budget						
No change	18 (49%)	12 (44%)	11 (52%)	6 (43%)	4 (40%)	7 (58%)
1–5% decrease	4 (11%)	4 (15%)	1 (5%)	3 (21%)	2 (20%)	1 (8%)
6–10% decrease	3 (9%)	1 (4%)	1 (5%)	1 (7%)	1 (10%)	1 (8%)
11–15% decrease	—	—	1 (5%)	1 (7%)	1 (10%)	—
16–20% decrease	2 (6%)	—	—	1 (7%)	—	—
21–25% decrease	—	—	2 (10%)	—	—	—
26–30% decrease	1 (3%)	1 (4%)	1 (5%)	1 (7%)	—	—
>30% decrease	2 (6%)	3 (11%)	2 (10%)	—	—	—
Increased	2 (6%)	5 (19%)	1 (5%)	1 (7%)	2 (20%)	1 (8%)
Not offered or N/A	1 (3%)	—	—	—	—	1 (8%)

Change in Capacity	Administrative & Program Capacities for Local Agencies by Jurisdiction Size					
	<50,000 (n=35)	50,001–100,000 (n=27)	100,001–250,000 (n=21)	250,001–500,000 (n=14)	500,001–1 million (n=10)	1–5 million (n=12)
Ability to Support Any Federal, State, or Local Government Food Safety Mandates						
No change	24 (69%)	15 (56%)	12 (57%)	7 (50%)	7 (70%)	6 (550%)
1–5% decrease	4 (11%)	3 (11%)	2 (10%)	2 (14%)	1 (10%)	3 (25%)
6–10% decrease	1 (3%)	2 (7%)	4 (19%)	4 (28%)	—	1 (8%)
11–15% decrease	—	—	—	—	1 (10%)	—
16–20% decrease	—	—	—	—	—	—
21–25% decrease	—	1 (4%)	2 (10%)	—	—	—
26–30% decrease	—	1 (4%)	—	—	—	—
>30% decrease	—	1 (4%)	1 (5%)	1 (7%)	—	—
Increased	—	3 (11%)	—	—	—	1 (8%)
Not offered or N/A	—	—	—	1 (7%)	—	—
Ability to do Routine Inspections						
No change	22 (63%)	8 (30%)	8 (38%)	8 (57%)	6 (60%)	2 (17%)
1–5% decrease	2 (6%)	—	3 (14%)	3 (21%)	1 (10%)	3 (25%)
6–10% decrease	5 (14%)	5 (18%)	3 (14%)	3 (21%)	1 (10%)	—
11–15% decrease	—	2 (7%)	3 (14%)	—	—	1 (8%)
16–20% decrease	—	—	—	—	—	—
21–25% decrease	—	2 (7%)	—	—	—	—
26–30% decrease	1 (3%)	—	—	1 (7%)	—	—
>30% decrease	—	3 (11%)	—	—	—	—
Increased	3 (9%)	4 (15%)	3 (14%)	—	1 (10%)	4 (33%)
Not offered or N/A	1 (3%)	1 (3%)	—	—	—	—
Inspection Time per Facility						
No change	26 (74%)	11 (41%)	12 (57%)	8 (57%)	5 (50%)	7 (58%)
1–5% decrease	1 (3%)	2 (7%)	2 (10%)	1 (7%)	1 (10%)	2 (17%)
6–10% decrease	2 (6%)	3 (11%)	2 (10%)	2 (14%)	1 (10%)	—
11–15% decrease	—	1 (3%)	—	—	1 (10%)	—
16–20% decrease	—	—	1 (5%)	—	—	—
21–25% decrease	—	1 (3%)	1 (5%)	—	—	—
26–30% decrease	—	—	—	1 (7%)	—	—
>30% decrease	—	1 (3%)	—	—	—	—
Increased	3 (8%)	5 (19%)	2 (10%)	2 (14%)	2 (20%)	—
Not offered or N/A	2 (6%)	1 (3%)	—	—	—	1 (8%)
Ability to Conduct Environmental Assessments						
No change	21 (60%)	11 (41%)	11 (53%)	8 (57%)	8 (80%)	5 (42%)
1–5% decrease	3 (8%)	1 (3%)	—	1 (7%)	—	—
6–10% decrease	1 (3%)	5 (19%)	—	1 (7%)	—	—
11–15% decrease	—	—	2 (10%)	—	1 (10%)	—
16–20% decrease	—	—	1 (5%)	1 (7%)	—	—
21–25% decrease	—	1 (3%)	—	1 (7%)	—	—

Change in Capacity	Administrative & Program Capacities for Local Agencies by Jurisdiction Size					
	<50,000 (n=35)	50,001–100,000 (n=27)	100,001–250,000 (n=21)	250,001–500,000 (n=14)	500,001–1 million (n=10)	1–5 million (n=12)
26–30% decrease	—	—	—	—	—	—
>30% decrease	2 (6%)	3 (11%)	2 (10%)	—	—	—
Increased	3 (9%)	3 (11%)	1 (5%)	1 (7%)	—	3 (25%)
Not offered or N/A	4 (11%)	1 (3%)	3 (14%)	—	1 (10%)	2 (17%)
Response Time to Conduct Environmental Assessments						
No change	18 (51%)	14 (52%)	10 (48%)	10 (71%)	8 (80%)	7 (58)
1–5% decrease	3 (9%)	2 (7%)	—	2 (14%)	—	—
6–10% decrease	2 (6%)	2 (7%)	2 (10%)	—	—	—
11–15% decrease	2 (6%)	—	—	—	1 (10%)	—
16–20% decrease	—	1 (3%)	1 (5%)	—	—	—
21–25% decrease	—	—	1 (5%)	1 (7%)	—	—
26–30% decrease	—	—	—	—	—	—
>30% decrease	2 (6%)	2 (7%)	2 (10%)	—	—	—
Increased	2 (6%)	5 (19%)	2 (10%)	—	—	1 (8%)
Not offered or N/A	4 (11%)	—	3 (14%)	1 (7%)	1 (10%)	2 (17%)
Ability to do Follow-Up Inspections						
No change	21 (60%)	9 (33%)	10 (48%)	8 (57%)	6 (60%)	5 (42%)
1–5% decrease	3 (9%)	2 (7%)	—	—	1 (10%)	—
6–10% decrease	3 (9%)	3 (11%)	1 (5%)	2 (14%)	—	—
11–15% decrease	—	3 (11%)	1 (5%)	1 (7%)	2 (20%)	—
16–20% decrease	—	1 (3%)	2 (10%)	—	—	1 (8%)
21–25% decrease	1 (3%)	—	1 (5%)	1 (7%)	—	—
26–30% decrease	—	1 (3%)	—	—	—	—
>30% decrease	1 (3%)	3 (11%)	2 (10%)	1 (7%)	—	—
Increased	3 (9%)	2 (7%)	1 (5%)	—	1 (10%)	2 (17%)
Not offered or N/A	2 (6%)	1 (3%)	3 (14%)	1 (7%)	—	2 (17%)
Ability to Respond To Food Recalls						
No change	25 (71%)	12 (44%)	13 (62%)	9 (64%)	8 (80%)	5 (42%)
1–5% decrease	4 (11%)	—	—	1 (7%)	—	2 (17%)
6–10% decrease	—	3 (11%)	1 (5%)	2 (14%)	—	—
11–15% decrease	—	1 (3%)	—	—	1 (10%)	—
16–20% decrease	—	2 (7%)	—	—	—	1 (8%)
21–25% decrease	—	—	2 (10%)	—	—	—
26–30% decrease	—	—	1 (5%)	1 (7%)	—	—
>30% decrease	—	3 (11%)	1 (5%)	1 (7%)	—	—
Increased	3 (9%)	3 (11%)	—	—	1 (10%)	2 (17%)
Not offered or N/A	1 (3%)	1 (3%)	2 (10%)	—	—	—

Change in Capacity	Administrative & Program Capacities for Local Agencies by Jurisdiction Size					
	<50,000 (n=35)	50,001–100,000 (n=27)	100,001–250,000 (n=21)	250,001–500,000 (n=14)	500,001–1 million (n=10)	1–5 million (n=12)
Outsourcing of Food Safety Program						
No change	15 (43%)	12 (44%)	6 (29%)	6 (43%)	3 (30%)	6 (50%)
1–5% decrease	—	—	—	—	—	—
6–10% decrease	1 (3%)	—	—	—	—	—
11–15% decrease	—	—	—	—	1 (10%)	—
16–20% decrease	—	—	—	—	—	—
21–25% decrease	—	—	1 (5%)	—	—	—
26–30% decrease	—	1 (3%)	—	—	—	—
>30% decrease	—	—	—	1 (7%)	—	—
Increased	1 (3%)	2 (7%)	—	1 (7%)	—	—
Not offered or N/A	18 (51%)	11 (41%)	14 (66%)	5 (36%)	6 (60%)	4 (33%)
Retail Food License and/or Inspection						
No change	25 (71%)	12 (44%)	13 (62%)	9 (64)	8 (80%)	5 (42%)
1–5% decrease	4 (11%)	—	—	1 (7%)	—	2 (17%)
6–10% decrease	—	3 (11%)	1 (5%)	2 (14%)	—	—
11–15% decrease	—	1 (3%)	—	—	1 (10%)	—
16–20% decrease	—	3 (11%)	2 (10%)	—	—	1 (8%)
21–25% decrease	—	—	1 (5%)	—	—	—
26–30% decrease	—	—	1 (5%)	1 (7%)	—	—
>30% decrease	—	3 (11%)	1 (5%)	1 (7%)	—	—
Increased	—	3 (11%)	—	—	1 (10%)	2 (17%)
Not offered or N/A	—	1 (3%)	2 (10%)	—	—	—
Grant Funding						
No change	19 (54%)	13 (48%)	10 (48%)	9 (64%)	2 (20%)	4 (33%)
1–5% decrease	—	1 (3%)	1 (5%)	—	1 (10%)	—
6–10% decrease	—	3 (11%)	—	1 (7%)	—	—
11–15% decrease	—	—	—	—	1 (10%)	—
16–20% decrease	—	—	1 (5%)	—	—	—
21–25% decrease	—	—	1 (5%)	—	—	—
26–30% decrease	—	—	—	—	—	—
>30% decrease	—	1 (3%)	1 (5%)	—	—	1 (11%)
Increased	1 (3%)	1 (3%)	1 (5%)	1 (7%)	3 (30%)	2 (22%)
Not offered or N/A	15 (43%)	7 (26%)	5 (24%)	2 (14%)	3 (30%)	2 (22%)

Table 8.3 Administration and Program Capacities in Past Two Years for State Agencies

Change in Capacity	Administrative & Program Capacities for State Agencies by Jurisdiction Size						
	<50,000 (n=3)	50,001–100,000 (n=3)	100,001–250,000 (n=3)	250,001–500,000 (n=1)	500,001–1 million (n=3)	1–5 million (n=12)	>5 million (n=15)
Number of Staff							
No change	2 (66%)	3 (100%)	—	1 (100%)	1 (33%)	7 (54%)	6 (43%)
1–5% decrease	—	—	1 (33%)	—	2 (66%)	1 (6%)	2 (14%)
6–10% decrease	1 (33%)	—	—	—	—	—	2 (14%)
11–15% decrease	—	—	—	—	—	1 (6%)	1 (7%)
16–20% decrease	—	—	—	—	—	—	2 (14%)
21–25% decrease	—	—	—	—	—	—	—
26–30% decrease	—	—	1 (33%)	—	—	—	—
>30% decrease	—	—	—	—	—	—	—
Increased	—	—	—	—	—	4 (31%)	1 (7%)
Not offered or N/A	—	—	1 (33%)	—	—	—	—
Average Years of Staff Food Safety Experience							
No change	2 (66%)	1 (50%)	1 (33%)	—	—	5 (45%)	4 (33%)
1–5% decrease	—	—	—	—	2 (66%)	—	1 (7%)
6–10% decrease	—	—	1 (33%)	—	—	1 (8%)	3 (20%)
11–15% decrease	—	—	—	—	—	2 (16%)	1 (7%)
16–20% decrease	—	—	—	1 (100%)	—	1 (8%)	—
21–25% decrease	—	—	1 (33%)	—	—	1 (8%)	—
26–30% decrease	—	—	—	—	—	—	—
>30% decrease	—	—	—	—	—	1 (8%)	—
Increased	1 (33%)	1 (33%)	—	—	1 (33%)	—	2 (14%)
Not offered or N/A	—	—	—	—	—	—	1 (7%)
Staff Salaries							
No change	3 (100%)	1 (33%)	1 (33%)	1 (100%)	—	8 (62%)	6 (40%)
1–5% decrease	—	—	1 (33%)	—	1 (33%)	4 (33%)	5 (33%)
6–10% decrease	—	1 (33%)	—	—	1 (33%)	—	1 (7%)
11–15% decrease	—	—	—	—	—	1 (8%)	2 (14%)
16–20% decrease	—	—	—	—	—	—	—
21–25% decrease	—	—	—	—	—	—	—
26–30% decrease	—	—	1 (33%)	—	—	—	—
>30% decrease	—	—	—	—	—	—	—
Increased	—	—	—	—	1 (33%)	—	—
Not offered or N/A	—	—	—	—	—	—	—

Change in Capacity	Administrative & Program Capacities for State Agencies by Jurisdiction Size						
	<50,000 (n=3)	50,001–100,000 (n=3)	100,001–250,000 (n=3)	250,001–500,000 (n=1)	500,001–1 million (n=3)	1–5 million (n=12)	>5 million (n=15)
Food Safety Program Budget							
No change	3 (100%)	1 (33%)	1 (33%)	1 (100%)	—	7 (58%)	8 (53%)
1–5% decrease	—	—	1 (33%)	—	1 (33%)	2 (16%)	—
6–10% decrease	—	—	—	—	1 (33%)	1 (8%)	1 (7%)
11–15% decrease	—	—	—	—	—	—	2 (14%)
16–20% decrease	—	—	—	—	—	—	1 (7%)
21–25% decrease	—	—	—	—	—	—	—
26–30% decrease	—	—	1 (33%)	—	—	—	1 (7%)
>30% decrease	—	—	—	—	—	—	—
Increased	—	—	—	—	1 (33%)	2 (16%)	—
Not offered or N/A	—	1 (33%)	—	—	—	—	—
Food Safety Training Budget							
No change	2 (66%)	1 (33%)	—	1 (100%)	2 (66%)	7 (58%)	8 (53%)
1–5% decrease	1 (33%)	—	2 (66%)	—	—	1 (8%)	2 (14%)
6–10% decrease	—	—	—	—	—	2 (16%)	—
11–15% decrease	—	—	—	—	—	—	1 (7%)
16–20% decrease	—	—	—	—	1 (33%)	—	—
21–25% decrease	—	—	1 (33%)	—	—	—	
26–30% decrease	—	—	—	—	—	—	1 (7%)
>30% decrease	—	—	—	—	—	—	1 (7%)
Increased	—	—	—	—	—	2 (16%)	—
Not offered or N/A	—	—		—	—	—	1 (7%)
Food Safety Travel Budget							
No change	2 (66%)	1 (33%)	1 (33%)	—	—	8 (66%)	6 (43%)
1–5% decrease	1 (33%)	—	1 (33%)	—	—	—	3 (21%)
6–10% decrease	—	—	—	—	—	2 (16%)	1 (7%)
11–15% decrease	—	1 (33%)	—	—	—	—	1 (7%)
16–20% decrease	—	—	—	—	—	—	—
21–25% decrease	—	—	1 (33%)	—	—	—	1 (7%)
26–30% decrease	—	—	—	—	—	—	—
>30% decrease	—	1 (33%)	—	—	2 (66%)	—	1 (7%)
Increased	—	—	—	—	1 (33%)	2 (16%)	—
Not offered or N/A	—	—	—	—	—	1 (8%)	1 (7%)
Technology/Equipment Budget							
No change	1 (33%)	1 (33%)	2 (66%)	1 (100%)	—	10 (83%)	7 (47%)
1–5% decrease	1 (33%)	—	—	—	1 (33%)	—	—
6–10% decrease	—	—	—	—	1 (33%)	1 (8%)	3 (21%)
11–15% decrease	—	—	—	—	—	—	1 (7%)
16–20% decrease	—	—	—	—	—	—	—
21–25% decrease	—	—	1 (33%)	—	—	—	1 (7%)

Change in Capacity	Administrative & Program Capacities for State Agencies by Jurisdiction Size						
	<50,000 (n=3)	50,001–100,000 (n=3)	100,001–250,000 (n=3)	250,001–500,000 (n=1)	500,001–1 million (n=3)	1–5 million (n=12)	>5 million (n=15)
26–30% decrease	—	—	—	—	—	—	—
>30% decrease	—	1 (33%)	—	—	—	—	—
Increased	—	—	—	—	1 (33%)	2 (16%)	2 (14%)
Not offered or N/A	—	—	—	—	—	—	—
Ability to Support any Federal, State, or Local Government Food Safety Mandates							
No change	1 (33%)	—	2 (66%)	1 (100%)	1 (33%)	7 (58%)	11 (73%)
1–5% decrease	—	1 (33%)	—	—	1 (33%)	2 (16%)	—
6–10% decrease	2 (66%)	—	—	—	1 (33%)	1 (8%)	1 (7%)
11–15% decrease	—	1 (33%)	—	—	—	—	2 (14%)
16–20% decrease	—	—	—	—	—	1 (8%)	—
21–25% decrease	—	—	1 (33%)	—	—	—	—
26–30% decrease	—	—	—	—	—	—	—
>30% decrease	—	—	—	—	—	—	—
Increased	—	—	—	—	—	1 (8%)	—
Not offered or N/A	—	—	—	—	—	1 (8%)	—
Ability to do Routine Inspections							
No change	2 (66%)	2 (66%)	2 (66%)	1 (100%)	1 (33%)	7 (58%)	5 (33%)
1–5% decrease	1 (33%)	—	—	—	1 (33%)	1 (8%)	1 (7%)
6–10% decrease	—	—	—	—	1 (33%)	1 (8%)	3 (21%)
11–15% decrease	—	—	—	—	—	—	2 (14%)
16–20% decrease	—	—	—	—	—	1 (8%)	—
21–25% decrease	—	—	—	—	—	—	—
26–30% decrease	—	—	—	—	—	—	1 (7%)
>30% decrease	—	—	1 (33%)	—	—	—	—
Increased	—	—	—	—	—	—	1 (7%)
Not offered or N/A	—	—	—	—	—	—	1 (7%)
Inspection Time per Facility							
No change	1 (33%)	1 (33%)	2 (66%)	—	—	8 (53%)	9 (75%)
1–5% decrease	—	—	—	—	2 (66%)	2 (16%)	—
6–10% decrease	1 (33%)	—	—	—	1 (33%)	—	1 (7%)
11–15% decrease	—	1 (33%)	—	—	—	—	—
16–20% decrease	—	—	—	—	—	—	1 (7%)
21–25% decrease	—	—	1 (33%)	—	—	—	—
26–30% decrease	—	—	—	—	—	—	—

Change in Capacity	Administrative & Program Capacities for State Agencies by Jurisdiction Size						
	<50,000 (n=3)	50,001–100,000 (n=3)	100,001–250,000 (n=3)	250,001–500,000 (n=1)	500,001–1 million (n=3)	1–5 million (n=12)	>5 million (n=15)
>30% decrease	—	—	—	—	—	—	—
Increased	—	—	—	—	—	2 (16%)	1 (7%)
Not offered or N/A	—	—	—	—	—	1 (8%)	1 (7%)
Ability to Conduct Environmental Assessments							
No change	2 (66%)	2 (33%)	2 (66%)	1 (100%)	2 (66%)	9 (75%)	8 (53%)
1–5% decrease	—	—	—	—		1 (8%)	2 (14%)
6–10% decrease	—	—	—	—	1 (33%)	—	1 (7%)
11–15% decrease	1 (33%)	—	—	—	—	—	1 (7%)
16–20% decrease	—	—	—	—	—	—	—
21–25% decrease	—	—	1 (33%)	—	—	—	—
26–30% decrease	—	—	—	—	—	—	—
>30% decrease	—	—	—	—	—	—	—
Increased	—	—	—	—	—	—	2 (14%)
Not offered or N/A	—	—	—	—	—	2 (16%)	—
Response Time to Conduct Environmental Assessments							
No change	2 (66%)	2 (66%)	2 (66%)	1 (100%)	2 (66%)	9 (75%)	8 (53%)
1–5% decrease	—	—	—	—	—	1 (8%)	2 (14%)
6–10% decrease	—	—	—	—	1 (33%)	—	1 (7%)
11–15% decrease	1 (33%)	—	—	—	—	—	1 (7%)
16–20% decrease	—	—	—	—	—	—	—
21–25% decrease	—	—	1 (33%)	—	—	—	—
26–30% decrease	—	—	—	—	—	—	—
>30% decrease	—	—	—	—	—	—	—
Increased	—	—	—	—	—	—	2 (14%)
Not offered or N/A	—	—	—	—	—	2 (16%)	—
Ability to do Follow-Up Inspections							
No change	2 (66%)	1 (33%)	1 (33%)	1 (100%)	—	9 (75%)	8 (53%)
1–5% decrease	—	—	1 (33%)	—	1 (33%)	1 (8%)	3 (21%)
6–10% decrease	1 (33%)	1 (33%)	—	—	1 (33%)	—	1 (7%)
11–15% decrease	—	—	—	—	1 (33%)	—	1 (7%)
16–20% decrease	—	1 (33%)	—	—	—	—	—
21–25% decrease	—	—	—	—	—	—	—
26–30% decrease	—	—	1 (33%)	—	—	—	—
>30% increase	—	—	—	—	—	—	—
Increased	—	—	—	—	—	2 (16%)	—
Not offered or N/A	—	—	—	—	—	1 (8%)	1 (7%)

Change in Capacity	Administrative & Program Capacities for State Agencies by Jurisdiction Size						
	<50,000 (n=3)	50,001–100,000 (n=3)	100,001–250,000 (n=3)	250,001–500,000 (n=1)	500,001–1 million (n=3)	1–5 million (n=12)	>5 million (n=15)
Ability to Respond to Food Recalls							
No change	2 (66%)	—	1 (33%)	—	2 (66%)	9 (75%)	6 (40%)
1–5% decrease	1 (33%)	—	—	—	—	1 (8%)	2 (14%)
6–10% decrease	—	2 (33%)	1 (33%)	—	—	—	1 (7%)
11–15% decrease	—	—	—	—	—	—	—
16–20% decrease	—	—	—	—	—	—	—
21–25% decrease	—	—	1 (33%)	—	—	—	—
26–30% decrease	—	—	—	—	—	—	—
>30% decrease	—	—	—	—	—	—	—
Increased	—	—	—	—	—	1 (8%)	2 (145%)
Not offered or N/A	—	2 (33%)	—	1 (100%)	1 (33%)	2 (16%)	2 (14%)
Outsourcing of Food Safety Program							
No change	3 (100%)	1 (33%)	1 (33%)	—	2 (66%)	7 (58%)	6 (40%))
1–5% decrease	—	—	1 (33%)	—	—	1 (8%)	—
6–10% decrease	—	—	—	—	—	—	1 (7%)
11–15% decrease	—	—	—	—	—	—	—
16–20% decrease	—	—	—	—	—	—	—
21–25% decrease	—	—	—	—	—	—	1 (7%)
26–30% decrease	—	—	1 (33%)	—	—	—	—
>30% increase	—	—	—	—	—	1 (7%)	—
Increased	—	—	—	—	1 (33%)	—	—
Not offered or N/A	—	1 (33%)	—	1 (100%)	—	4 (30%)	6 (42%)
Retail Food License and/or Inspection							
No change	2 (66%)	—	1 (33%)	—	2 (66%)	9 (75%)	6 (42%)
1–5% decrease	—	—	—	—	—	1 (8%)	2 (14%)
6–10% decrease	—	2 (66%)	1 (33%)	—	—	—	1 (7%)
11–15% decrease	—	—	—	—	—	—	—
16–20% decrease	—	—	—	—	—	—	—
21–25% decrease	—	—	1 (33%)	—	—	—	—
26–30% decrease	—	—	—	—	—	—	—
>30% decrease	—	—	—	—	—	—	—
Increased	—	—	—	—	—	1 (8%)	3 (21%)
Not offered or N/A	1 (33%)	—	—	1 (100%)	1 (33%)	2 (16%)	2 (14%)
Grant Funding							
No change	3 (100%)	1 (33%)	2 (66%)	—	1 (33%)	4 (33%)	2 (14%)
1–5% decrease	—	—	—	—	—	—	6 (40%)
6–10% decrease	—	—	—	—	—	2 (16%)	1 (7%)
11–15% decrease	—	—	—	—	—	—	—
16–20% decrease	—	—	—	—	—	—	—

Change in Capacity	Administrative & Program Capacities for State Agencies by Jurisdiction Size						
	<50,000 (n=3)	50,001–100,000 (n=3)	100,001–250,000 (n=3)	250,001–500,000 (n=1)	500,001–1 million (n=3)	1–5 million (n=12)	>5 million (n=15)
21–25% decrease	—	—	—	—	—	—	1 (76%)
26–30% decrease	—	—	1 (33%)	—	—	—	—
>30% decrease	—	—	—	—	—	—	—
Increased	—	—	—	—	—	4 (33%)	3 (21%)
Not offered or N/A	—	1 (33%)	—	—	1 (33%)	2 (16%)	3 (21%)

Local Agency Comments on Number of Staff

<50,000

- Mandatory furlough reducing staff time by 10% has been ongoing for more than two years.
- Only one person staff.
- Staffing decreased from 4 to 2 people 3 years ago.
- We subcontract with a nurse at a hospital; we have a total budget of $4,000. Due to this setup, we very rarely receive timely notice. We have asked for an additional $9,500 to try to make this a one day a week "position" but we are not optimistic.
- Health Officer retired in 2009. Employer has not filled Asst. HO position since. From a staff of 9, down to 8 (1 HO, 4 REHS, 1 public health nurse, 1 secretary, and 1 social services coordinator). Luckily, the public health nurse and REHS work together in handling outbreak situations.
- One part time employee lost.
- Mandatory layoff of part-time staff member 6–11. Staff member entirely RFE and Pools.
- Reduced regional inspection obligations. Reduced number of food facility inspections from approximately 2,200 facilities to 380 EH department staff positions not filled.
- EHS was hired in Aug 2010.

50,001–100,000

- If necessary would enlist assistance from one or more of the other campuses in the system or/and from local or state agencies.
- 2 years ago one staff member was out on extended leave.
- PHN positions.
- Budget year 2011 we had to lay off a total of 28% of our staff. Prior to 2011 our turnover was extremely low.
- Lost 1 of 2 food inspectors.
- Hiring freeze!!! Aaaaaargh.
- 1 full time, 1 nursing staff and 1 epidemiologist.

100,001–250,000

- We have a very stable workforce with very little turnover.
- One retired; one hired.
- 2 of 11 staff handle food only, 2 of 11 part time food (20%), 7 of 11 would only assist in emergency (primarily work onsite sewage program).
- Change due to the reallocation of time to a different environmental health program – nuisances.

250,001–500,000

- Vacancies are filled but all positions must be justified and go through a position freeze (end result - fill slower than normal).
- Food continues to increase while other programs diminish, so staff have been moved to food.

500,001–1 million

- We recently reorganized to beef up staff, eliminating other programs.

>5 million

- In the process of hiring 4 additional REHS for Food and Recreation programs but not yet on the workforce.
- Two left, two came back, one retired.
- Increased staff by approximately 9%.
- 2% increase.

State Agency Comments on Number of Staff

1–5 million

- Change has occurred in our Public Health office/not Environmental Health.
- One Disease Control Specialist position is being held open (vacant) pending approval of the 2012 budget.
- We had a dedicated administrative staff person to take foodborne illness intakes. That position has been eliminated and combined with another individual's duties.
- We have been able to add one FTE due to the FOODCORE grant award.

>5 million

- However, due to state budget issues, we lost those extra positions and additional positions as well.
- We did not have any dedicated staff for this to begin with.
- We had just received approval to add staff in our last state budget to keep up with the existing workload.
- We lost one lab specialist to retirement; one received a promotion and moved to a Shellfish Specialist position and another left the agency.

Local Agency Comments on Average Years of Staff Food Safety Experience

<50,000

- 10 (2)
- 25
- Currently, average years' of experience for facility inspectors is 19.
- New hire with 5 years exp.
- Our staff does outbreak responses for unlicensed facilities or upon request of State Dept of Health.
- Over 40 years.
- Some staff is not properly trained and they do not meet education requirements.
- Unknown.

50,001–100,000

- 13
- 14
- 7–29 years.

100,001–250,000

- 14.5
- For food staff only.
- Same staffing.
- 12 years.
- 8 years.

250,001–500,000

- Staff moved into food; have not worked food previously.
- The average within the food inspection program has gone up slightly due to fewer staff leaving and increased longevity - average 4 years.

500,001–1 million

- 19.6 years average years of experience.
- The years are not posted but most have less than 5 years. People are leaving department due to pay and other reasons.
- We have hired few new staff dues to finances. Therefore our staff is getting older and in the short term more experienced. The concern is long term.
- 12.5 years.
- We range from 1 year to 40 years; however, the average is 4 years.

State Agency Comments on Average Years of Staff Food Safety Experience

50,001–100,000

- Eight.
- No turnover, staff experience increases as the years of working increases.

100,001–250,000

- 6 years.

500,001–1 million

- 10–30 years.
- About 50% of our staff have worked in our agency <7 years.
- Average years of experience approx. 22 years.

>5 million

- Increased by 2 years.
- We have an aging workforce. More people are eligible for retirement and we aren't able to replace them.
- Well, with no staffing change there is an increase in years of staff experience among existing staff.

Local Agency Comments on Staff Salaries

<50,000

- Union.
- 0 percent raise in 2011, 2 percent in 2010.
- 40-60k.
- Salaries were cut in addition to hire freeze.
- COLAs applied but state changes to retirement funding called for an increase from participant, so salaries remain flat.
- $13,500 annual stipend for 260 inspections; $30 per temporary (profit) booth.
- Increased workload without increase in salary.
- Annual cost of living maintained and therefore the average salary has gone up.
- Unknown.

50,001–100,000

- Just last month after 5 years of no increases...not even COLAs.
- 1% net increase (after subtracting 1.5% state-mandated giveback to state for healthcare).
- Selected staff salaries have increased approx. 2%.
- $33,500 - $45,000

100,001–250,000

- Contractual increase of 2.5–5.5% (annual "step increase" + COLA).
- 4% increase in the past two years.
- 50,000.00
- But this union contract ends 12/31/11 and no raise to be given next contract.

250,001–500,000

- No raises other than promotional for past 4 years.
- Salaries the same, increased cost to employee for health care, and furlough days.
- District has continued with a minimum COLA based on union contract which is the CPIU (Consumer Price Index Urban) in June and not below 2%.

500,001–1 million

- No planned increase 2012.
- State has imposed a 3% employee pay-in to their pension plan. No pay raises for State employees for 6 years in this state.
- The starting is $28,000.00 and goes up about 2.5% per year.

1–5 million

- The average staff salary for an EH II is $59,000 per year excluding benefits etc.
- Trainee $4294–5220, EHS I (registered) $5377–6535, EHS II (senior level at least 2 years exp. as REHS) $6097–7411, Supervisor $6367–7740.

State Agency Comments on Staff Salaries

50,001–100,000

- Range from 38,000 to 65,000.

1–5 million

- Decreased due to cost of living going up and no raises in past 3 years.

>5 million

- Due to mandatory furloughs.
- State employees have not received a salary increase in over 6 years while insurance costs and percentage of retirement responsibility has increased.
- In terms of real dollars, state employee salaries are ~17% under comparative private sector salaries. Greater in some areas (such as drugs and medical devices) and lesser in other areas (less technical inspections like nuisances).
- We now contribute 3% more to our retirement.
- 2% COLA for food inspectors in last year of contract in 2011. 1–5% decrease in current negotiations. Management has not had COLA in 3 years, and step increase in 1 of last 3 years.
- No cost of living increases. Strictly pay for performance and is very nominal.

- Answers are for state program staff. Does not include the 200+ staff of local public health agencies that inspect retail food establishments and investigate outbreaks.

Local Agency Comments on Food Safety Program Budget

<50,000

- Entire budget decreased. Specific programs not specified.
- Overhead costs, particularly health insurance, have driven the increase though there have been no staffing changes.
- 1.4 million.
- Food safety classes were decreased in frequency to cut overtime expenses.
- Revenue decreased by 76% when de-regionalization occurred.

50,001–100,000

- Budget for food safety program is not separated from general environmental health budget.
- This includes salaries.
- Increasing due to raise in permit fees.

100,001–250,000

- Elimination of travel and continuing education budget line items.
- 220,000
- Increased because program budget comes from license fees. Have had an increase in licensed places but not an increase in staff.
- Decrease caused by reallocation of staff to the nuisance programs thereby causing a subsequent drop in fees in the food safety program cost methodology.
- Fee based.

250,001–500,000

- This is a 100% cost recovery system; number of permits has dropped by roughly 1% but new fees have bridged that gap.
- Slight increase due to COLA increases.

500,001–1 million

- Decreased fees per state law due to decreased costs.
- Inspection authority for child care centers, hospitals, nursing homes delegated to other agencies last year and not-for-profit/churches serving the public eliminated and not inspected by any agency.
- None, the state DEP gives the county about $200,000.00 each year for beach water tests and other inspections but not food.

1–5 million

- Approx. 3.3 million.

State Agency Comments on Food Safety Program Budget

50,001–100,000

- At state level not district.

100,001–250,000

- Minimal.

1–5 million

- Although there has been a slight decrease, we have never been adequately funded.

>5 million

- We lost 3 positions permanently 3 years ago.
- Our food and drug program was cut 16.6% for the next two years.

Local Agency Comments on Food Safety Staff Training Budget

<50,000

- Eliminated.
- 14K
- Only local classes are approved due to cut in travel budget.
- Cut completely from budget. We only attend trainings that funding is available for outside of our agency.
- Funded with tax dollars where as before, no tax dollars supported regional programming.
- $200 - $300.

50,001–100,000

- Look for free webinars, training or self training opportunities.
- No specific budget for food safety training.
- Here has never been a specific budget for this.

100,001–250,000

- Eliminated.
- However, most classes that are attended are free of charge.

250,001–500,000

- With more trainees you might say the training budget has increased but the staffing level has remained the same, equipment for new employees is costly with roughly $3,500.00 per trainee.

500,001–1 million

- Hasn't been one for 5 years or so.
- We still offer the only training in town and train any food hygiene worker who needs training regardless of the agency which has jurisdiction.
- Zero, everything is on-line to save money.

1–5 million

- Rough estimate $30,000.00 plus.

State Agency Comments on Food Safety Staff Training Budget

50,001–100,000

- At state level not district.

100,001–250,000

- Minimal.

1–5 million

- What budget????? Everything we do is as a part of state EHA or consulting staff training [in-house] which is pretty rare.
- Although there has been a slight decrease, we have never been adequately funded.

>5 million

- No budget.
- Our food and drug program was cut 16.6% for the next two years.

Local Agency Comments on Food Safety Travel Budget

50,001–100,000

- Travel has been curtailed.
- We are allowed to go to any trainings offered thru the state Department of Health, University, FDA or the state Environmental Health Association as long as they are in state.

100,001–250,000

- Eliminated.

250,001–500,000

- No out of State travel budget and justification for in State. No overnight stays covered.

500,001–1 million

- Hasn't been one for 5 years or so.
- Travel to trainings has been virtually eliminated.
- Only when needed and very hard to approve.

1–5 million

- I do not have the mileage reimbursement amounts readily available.
- Ban on out of state travel, County Executive implemented a policy prohibiting staff from out of town travel unless it was required by a grant. The department of health was the only department in the black; all other departments were in the red.

State Agency Comments on Food Safety Travel Budget

50,001–100,000

- At state level not district.
- No travel budget for food safety.

100,001–250,000

- Minimal.

500,001–1 million

- Travel has decreased overall, however out-of-state travel that is sponsored by federal partnerships, etc. has been supported and approved.

1–5 million

- We do have money in our out of state line item for travel but there have been severe restrictions on using it.
- May decrease further due to rising fuel cost and a change in our cost center & decreased fee collections.

>5 million

- But travel restricted to inspection and enforcement activities - no travel for training.
- Statewide travel restrictions implemented.

Local Agency Comments on Technology/Equipment Budget

<50,000

- There is no specific technology/equipment line item for the food safety program. There have been no significant budget changes directly affecting the program.
- 60K
- $200 - $300

100,001–250,000

- One year grant to convert to electronic field inspections using Tablet PC and commercial software system.
- Have had same laptop and portable printers for last 3 years. No change because equipment is the same and software company is the same.
- Trying to figure out how to allocate future technology costs for tablet computers. Cost methodology is not suited for future anticipated costs!

250,001–500,000

- Slight decrease.

500,001–1 million

- Food is very low but HAZMAT gets money and has a lot of equipment.

1–5 million

- Due to electronic database upgrade.

State Agency Comments on Technology/Equipment Budget

50,001–100,000

- At state level not district.

100,001–250,000

- Minimal funding.

1–5 million

- We have some equipment money but there are also severe restrictions on using it. We do not have sufficient funds for updated technology.
- We have a very limited budget for this area, needs to be increased as computers and field tablets are expiring and we have no funds to replace them with.

>5 million

- We acquired a one-time CDC Block grant amount to implement a new electronic inspection system and new field hardware.

Local Agency Comments on Food Safety Mandates

<50,000

- Ability dependent on severity of illness.
- $0
- Much better ability to address food safety issues locally.

50,001–100,000

- I just work more hours - and no, there is no OT.
- As needed.

100,001–250,000

- The budget has not changed, but it seems the state and federal mandates continue to increase in all programs, not just food.
- No state aid since 2010.
- We do the best we can.

250,001–500,000

- Recent reduction where we no longer duplicate in the food processors arena when the processors do interstate sales. Leave this to FDA; do not have a direct contract with them.
- Local workload continues to increase.

500,001–1 million

- It is difficult to quantify. When there is a crisis, we respond to the detriment of routine inspections.
- Very Hard.

1–5 million

- FDA Food Safety Standards implementation, State law and Local Ordinances as well as other agency assistance.
- All mandates are being met; we continue to look for more efficient ways to conduct business to accomplish mandates and meet program goals.

State Agency Comments on Food Safety Mandates

50,001–100,000

- Difficult constrained by budget- travel.

1–5 million

- We're not taking on any federal mandates at this time.
- No change, but there are limitations.

>5 million

- We have an FDA Grant for development of a Rapid Response Team and we are using that funding. We were not ever funded to assist local governments directly but we continue to work with them on issues.

Local Agency Comments on Routine Inspections

<50,000

- Very good.
- Stipend, see above.
- Staff has more time to commit toward program research, evaluation, implementation, and overall assessment. Quality over quantity = finally.

50,001–100,000

- Added inspector allows for increase in inspection frequency.
- As required.
- Done by another agency.
- More temporary events, more permanent facilities, existing facilities expanding menus and new practices and facilities embracing the "sustainability" movement - e.g., raw and fresh food movements, garden to table, housing gardens.

100,001–250,000

- Less time due to extra time being spent getting used to electronic inspection system.
- Staff levels have stayed the same but we have increased in last few years the number of inspections per inspector.
- Rough estimate.

250,001–500,000

- New programs have stressed the quality of inspections and we are utilizing a new Cutting Edge program that works with industry to support their active managerial control programs by doing verification visits every other inspection.

500,001–1 million

- Staff is down and so only doing CAT 3 and 4 inspections only.

1–5 million

- Adding 4 inspectors will reduce average district size by 15% so ability to conduct routine work will increase.
- Losing staff has resulted in changing our inspection frequency formula to spread out our inspections to longer intervals. In one category, convenience stores, we may drop entirely until funds are available.
- Productivity reports indicate 2x per year for food facilities for 2010 were at 98%.
- Vacated positions have not been backfilled in at least 2 years.

State Agency Comments on Routine Inspections

500,001–1 million

- An inspection position was lost following a staff retirement in 2009.

1–5 million

- Overtime is not authorized (ever). This makes it difficult to do one's job if the location is quite a distance from the office.
- This percentage is a guess. We have lost a supervisor position and an inspector so that has reduced our ability to do routine inspections. Additionally, we recently have adopted the 2009 FDA Food Code and rolling this out and learning the new inspection form has slowed our ability to do the number of inspections we should be doing.
- We expect to have trouble providing the regulatory requirement of one routine inspection per year for permitted facilities. We have stopped inspecting festivals completely.

>5 million

- Inspector vacancy rate impacts ability to complete routine inspections.
- We had a change in statute that removed our authority to provide food inspection services at several venues.
- We have had to re-look at our risk matrix and reprioritize our inspections. Lower risk establishments and some moderate risk establishments will have longer inspection intervals or not be inspected at all. We are also considering the use of third party inspections to help us determine risk.

Local Agency Comments on Inspection Time

<50,000

- 1.5 hrs.
- 60 - 120 minutes.
- New inspection form.
- Average one hour.

50,001–100,000

- Done by another agency.
- 1 hour for limited menus and 2+ for full service establishments. We do quality inspections over quantity.

100,001–250,000

- 2.25 hours.
- Based on staff levels staying the same and the increasing number of inspections per inspector time that can be spent in each facility, it is decreasing.
- Slight increase due to change to electronic inspections.
- We spend more time on the more critical facilities and have increased follow-up for serious violations.

250,001–500,000

- Increased time on routine inspections - verification visits will reduce time in future. Risk classifications will dictate frequencies between 1 to 4 inspections per year.

500,001–1 million

- Three to four hours.

1–5 million

- Unknown as this time.

State Agency Comments on Inspection Time

50,001–100,000

- One/year.

250,001–500,000

- Trending to fewer, but higher quality inspections.

1–5 million

- 1.5 to 2.0 hrs per facility; plus driving time.
- As mentioned above, we are implementing the Food Code and inspection time has increased because of the use of the new inspection form.
- We are committed to doing a quality inspection.

>5 million

- We have stretched the frequency rate between inspections, but not sacrificed inspection time.
- We are going to try not to shorten the inspections we do conduct.

Local Agency Comments on Environmental Assessments

<50,000

- Slow.
- Since overtime is not approved some assessments have to be reviewed based on priority, thus increasing the response time.
- 24–48 hrs.

50,001–100,000

- Must remain a priority.
- Within 24 hours.

250,001–500,000

- With a full time ERI (environmental related illness) program that has specific staff 1 supervisor and 2 EHS for all complaints and outbreak responses.

500,001–1 million

- All part of routine inspections.
- Within 24 hours.

1–5 million

- Immediate and thorough.
- This is made a priority while other responsibilities may come lower on the priority list.
- Immediate and thorough.

State Agency Comments on Environmental Assessments

1–5 million

- Environmental assessments outside of FBI investigations are an undefined phrase in my section.
- Any inspection that is likely linked to a potential outbreak is given the highest priority.
- Local staff respond; this is our priority.

Local Agency Comments on Response Time

<50,000

- 24–48 hrs.
- Slow.

50,001–100,000

- ASAP to try and resolve the issues.
- Must remain a priority.
- Within 24 hours.

250,001–500,000

- With a full time ERI (environmental related illness) program that has specific staff 1 supervisor and 2 EHS for all complaints and outbreak responses.

500,001–1 million

- All part of routine inspections.
- Within 24 hours.

1–5 million

- This is made a priority while other responsibilities may come lower on the priority list.
- We try to send information to the consultants within 2–3 days.

State Agency Comments on Response Time

1–5 million

- Any inspection that is likely linked to a potential outbreak is given the highest priority.
- Environmental assessments outside of FBI investigations are an undefined phrase in my section.
- Local staff respond this is our priority.

Local Agency Comments on Follow-Up Inspections

<50,000

- Slow.
- Since overtime is not approved some follow-ups have to be reviewed based on priority, thus increasing the response time.
- Yes.

50,001–100,000

- As needed.

250,001–500,000

- Follow up could be better between ERI and regular EHS conducting routine inspections.

500,001–1 million

- Less are done, since the priority is to conduct routine inspections.
- The number of people and what they have planned.

State Agency Comments on Follow-Up Inspections

1–5 million

- If an environmental assessment is the same as an inspection, then we have time. If it is the environmental assessment that goes with an outbreak investigation, we always follow up.

Local Agency Comments on Food Recalls

<50,000

- Slow.
- Some.

50,001–100,000

- This too is a priority.
- As needed.

250,001–500,000

- Vacant districts to be filled with trainees must be accounted in this answer.

500,001–1 million

- A priority.
- This takes a lot of time and most major facilities do a good job. It's the Mom and Pop places that are not in the loop.

1–5 million

- Immediate and thorough.
- Recently approved to start mass communication contract which will be used to notify vendors of recall notices. Will still conduct random inspections for recalled foods on small percentage of inventory.
- We have implemented a policy to respond within 24 hours to an urgent complaint.

State Agency Comments on Food Recalls

50,001–100,000

- Done by agriculture and markets.

1–5 million

- We have a recall list that we send recall information to and have a staff person who focuses on recalls including trying to determine if the affected product has been distributed to our state. Follow up is then done with the establishment receiving the product. Press releases may be issued. In-person effectiveness checks are rarely conducted.

>5 million

- Received additional funding for a Food Recall Coordinator.
- Food recalls are still high on our priority list, but our response time may be somewhat greater.

Local Agency Comments on Outsourcing

<50,000

- Temporary weekend events.

50,001–100,000

- Unlikely to ever happen.
- Our staff teaches and trains the public and do speaking engagements.
- We used to hire part-time assistance for major festivals (inspectors from other jurisdictions); however this was removed from our budget.
- Spanish-speaking instructor is contracted to teach a food workers training in Spanish.

250,001–500,000

- We no longer offer any food safety classes for operators or managers to become certified.
- The county has been recognizing on-line food service worker training programs other than our testing or classroom programs. Programs must go through a thorough review process.

500,001–1 million

- Our State doesn't outsource, they just eliminate or assign to an agency that doesn't have a clue on how to conduct risk based/HACCP type inspections.
- No not at this point.

1–5 million

- EH doesn't have contracted services for food safety programs, but does provide EH customers with available resources outside the county.
- Starting to team with local University-COOP and Public Health Healthy Foods initiatives as means of expanding out-reach capacity: not outsourcing but bringing others into the circle to assist.
- We do not outsource.

State Agency Comments on Outsourcing

1–5 million

- EH doesn't have contracted services for food safety programs, but does provide EH customers with available resources outside the county.

>5 million

- Our statute specifically requires state employees to conduct the state inspections. We are considering looking at third party inspections, but only to determine risk so that a firm may be properly categorized for risk.

Local Agency Comments on Fees

<50,000

- Fees are needed as costs continue to rise, fees remain the same. Fees set by legislature in Iowa. Rarely change fees.
- Goes to town general fund.
- Per facility fees are unchanged. The number and types of facilities are relatively unchanged.
- State increased.
- State retail food license fees increased 60–70% in 2009.

50,001–100,000

- Added a new category for licenses/permits.
- Passage of state legislative bills; Temporary Food Service Permits have decreased due to reduced permit issuances.
- Probably will increase next year.
- We increased our fees for 2012 to reflect the Menu type. It will increase again in 2013 to the following annually; Menu Type 1 $175, Menu Type 2 $225, Menu Type 3 $275, Menu Type 4 $325, Menu Type 5 $400. Temporary Permit by event $70, Commissary $100, Mobile Food Trucks$140, Farmers Market Food Permit $70 for season, $100 Bed and Breakfast, New Plan Review $150. Before this year our fees were a joke and were issued by dining area size.

100,001–250,000

- Cost of license is determined by the state.
- Increases of 10 percent as of July 1, 2011. Last increases were in 2006. No charge for non-profits and governmental establishments. Temporary food service permit fee structure was revised. Uncertain of fiscal impact at this time.
- Range 178.00 - 573.00.
- Up about 5% in last fee schedule change.

250,001–500,000

- For the most part our fees have stayed the same though they are reviewed on an annual basis.
- Fees are adjusted to try to cover 100% of program costs as per the Board of Health Directive. Fees are reviewed by our Food Advisory Committee made of industry and others.
- Increased an average of 3% each year each of the last 2 years.

500,001–1 million

- Fees for the food certificates that we issue have increased, although overall revenue has gone down at least 30% due to afore-mentioned transfer or elimination of DOH inspected facilities.
- Temp or mobile $25.00 foods are about $100.00.

1–5 million

- Average of 2% increase, but no fee increase scheduled for 2012.
- The fees range based on category of the establishment from $255 to over 1250.
- We will be conducting an fee assessment and revise the next coming year.
- Will evaluate need to increase fees FY12–13.

State Agency Comments on Fees

50,001–100,000

- Cheap compared to county- set by public health law.

1–5 million

- No increase of fees for last 4 years. Have bill in Legislature to increase fees next year.

>5 million

- License increase 50% in 2006, civil penalties increased 50% in 2009.
- We have no fees.
- We have seen an increase in the number of licensees. As the population of the state increases, food and drug businesses increase. So our intake of fees increases. Additionally, we are required to cover the cost of the services we provide, and those costs increase although our appropriation does not.

Local Agency Comments on Grant Funding

<50,000

- $3,000 for food-emergency preparedness project.
- None.

50,001–100,000

- No grant funding.
- Not sure.
- The manager of the Preparedness Grant Fund does not distribute the funds to other sections within the Health Dept.
- Thru preparedness for Semi Truck inspections and wrecks on the interstates. (New Program).
- We have never had direct grant funding for food safety activities.
- Zero for this specific program.

100,001–250,000

- Reduction in PHEP (Public Health Emergency Preparedness-CDC) funds of 10 percent each year. Slight offset by electronic inspection grant $).

250,001–500,000

- Only grant funding available is the $2000 from FDA for standardization.
- None.
- County typically does not look for grant funding to run our programs.

500,001–1 million

- From State DEP.
- Due to gaps in funding we are more aggressively going after food safety grants.

1–5 million

- Received FDA grants (>$100K) for food safety training no grants for food program.
- Decrease in Local Public Health Grant funds (funneled through State Agency), and other grant funds to support EH programs.
- We are trying to write for additional funding for training, equipment and outreach.

State Agency Comments on Grant Funding

50,001–100,000

- State level.

1–5 million

- Received additional funding from FOOD CORE.
- Grants, FDA and USDA, have increased.

>5 million

- We do not expect any major changes.

Appendix Question 9

Question 9: Does your agency have the following positions as part of your foodborne illness outbreak response and investigation staff?

Table 9.2 Positions for Local Agencies

Positions Yes/No		Local Agency Responses by Jurisdiction Size					
		<50,000 (n=35)	**50,001–100,000** (n=27)	**100,001–250,000** (n=21)	**250,001–500,000** (n=14)	**500,001–1 million** (n=10)	**1–5 million** (n=12)
Environmental Health Specialist	**Yes**	33 (94%)	25 (93%)	19 (90%)	13 (93%)	10 (100%)	12 (100%)
	No	2 (6%)	2 (7%)	2 (10%)	—	—	—
Food Safety Specialist	**Yes**	18 (51%)	13 (48%)	12 (57%)	11 (79%)	7 (70%)	5 (42%)
	No	14 (40%)	14 (52%)	7 (33%)	3 (21%)	2 (20%)	5 (42%)
Epidemiologist	**Yes**	13 (37%)	8 (30%)	11 (52%)	11 (79%)	10 (100%)	10 (83%)
	No	20 (57%)	19 (70%)	8 (38%)	3 (21%)	—	2 (17%)
Laboratory Professional	**Yes**	3 (9%)	2 (8%)	4 (19%)	5 (36%)	5 (50%)	6 (50%)
	No	28 (80%)	24 (92%)	16 (76%)	9 (64%)	4 (40%)	6 (50%)
Public Health Nurse	**Yes**	28 (80%)	22 (81%)	20 (95%)	12 (86%)	7 (70%)	9 (75%)
	No	5 (14%)	5 (19%)	—	2 (14%)	3 (30%)	3 (25%)
Public Relations/ Media Specialist	**Yes**	13 (37%)	14 (52%)	13 (68%)	12 (86%)	10 (100%)	9 (75%)
	No	20 (57%)	13 (48%)	6 (32%)	2 (14%)	—	2 (17%)
Risk Communication Specialist	**Yes**	4 (12%)	10 (38%)	7 (37%)	5 (36%)	5 (50%)	3 (25%)
	No	27 (77%)	16 (62%)	12 (63%)	9 (64%)	4 (40%)	7 (58%)

Table 9.3 Positions for State Agencies

Positions Yes/No		State Agency Responses by Jurisdiction Size						
		<50,000 (n=3)	50,001–100,000 (n=3)	100,001–250,000 (n=3)	250,001–500,000 (n=1)	500,001–1 million (n=3)	1–5 million (n=12)	>5 million (n=15)
Environmental Health Specialist	**Yes**	2 (67%)	3 (100%)	3 (100%)	1 (100%)	3 (100%)	11 (92%)	10 (66%)
	No	1 (33%)	—	—	—	—	1 (8%)	3 (20%)
Food Safety Specialist	**Yes**	2 (67%)	—	3 (100%)	1 (100%)	2 (100%)	10 (83%)	12 (80%)
	No	1 (33%)	3 (100%)	—	—	—	2 (17%)	2 (17%)
Epidemiologist	**Yes**	1 (33%)	3 (100%)	2 (67%)	1 (100%)	2 (100%)	9 (75%)	10 (66%)
	No	2 (67%)	—	1 (33%)	—	—	3 (25%)	3 (20%)
Laboratory Professional	**Yes**	1 (33%)	3 (100%)	2 (67%)	—	2 (100%)	10 (83%)	13 (87%)
	No	2 (67%)	—	1 (33%)	1 (100%)	—	2 (17%)	1 (6%)
Public Health Nurse	**Yes**	2 (67%)	—	2 (67%)	1 (100%)	1 (100%)	8 (67%)	5 (33%)
	No	1 (33%)	3 (100%)	1 (33%)	—	—	4 (33%)	8 (54%)
Public Relations/ Media Specialist	**Yes**	2 (67%)	3 (100%)	3 (100%)	1 (100%)	1 (100%)	11 (92%)	11 (73%)
	No	1 (33%)	—	—	—	—	1 (8%)	3 (20%)
Risk Communication Specialist	**Yes**	2 (67%)	1 (33%)	1 (33%)	1 (100%)	1 (100%)	4 (33%)	4 (27%)
	No	1 (33%)	2 (67%)	2 (67%)	—	—	7 (58%)	9 (60%)

Please note: For these tables, percentages may be >100% because participants could provide more than one response.

Appendix Question 10

Question 10: In a single incident with current staffing, what is the largest foodborne illness outbreak (number of cases/ill persons) that your agency is able to handle?

For this question, please use the CDC definition of a foodborne illness outbreak, "the occurrence of two or more similar illnesses resulting from ingestion of a common food."

Table 10.2 Foodborne Illness (FBI) Outbreak Capacity for Local Agencies

FBI Outbreak Capacity	Local Agency Responses by Jurisdiction Size					
	<50,000 (n=34)	**50,001–100,000** (n=27)	**100,001–250,000** (n=20)	**250,001–500,000** (n=14)	**500,001–1 million** (n=10)	**1–5 million** (n=12)
2–10 cases	18 (53%)	8 (30%)	4 (20%)	1 (7%)	2 (20%)	2 (17%)
11–20 cases	1 (3%)	5 (18%)	2 (10%)	1 (7%)	1 (10%)	1 (8%)
21–50 cases	8 (23%)	4 (15%)	4 (20%)	3 (22%)	1 (10%)	4 (33%)
51–100 cases	2 (6%)	3 (11%)	7 (35%)	2 (14%)	1 (10%)	—
>100 cases	5 (15%)	7 (26%)	3 (15%)	7 (50%)	5 (50%)	5 (42%)

Table 10.3 Foodborne Illness (FBI) Outbreak Capacity for State Agencies

FBI Outbreak Capacity	State Agency Responses by Jurisdiction Size						
	<50,000 (n=3)	**50,001–100,000** (n=3)	**100,001–250,000** (n=3)	**250,001–500,000** (n=1)	**500,001–1 million** (n=3)	**1–5 million** (n=13)	**>5 million** (n=13)
2–10 cases	2 (67%)	1 (33%)	1 (33%)	—	1 (33%)	—	1 (8%)
11–20 cases	1 (33%)	—	—	—	—	2 (15%)	—
21–50 cases	—	1 (33%)	1 (33%)	—	—	1 (8%)	1 (8%)
51–100 cases	—	—	—	—	—	1 (8%)	1 (8%)
>100 cases	—	1 (33%)	1 (33%)	1 (100%)	2 (67%)	9 (69%)	10 (77%)

Please note: For these tables, capacity is measured by the largest number of cases (ill persons) an agency is able to handle with current staffing.

Appendix Question 11

Question 11: If your agency's current staffing does not meet the need for foodborne illness outbreak response and investigation, how many additional full time employees (FTEs) for each position would be needed for full capacity?

Table 11.2 Additional Staffing Needed to Meet Full Capacity for Foodborne Illness Outbreak Response and Investigation for Local Agencies

Number of Additional FTEs Needed	Local Agency Responses by Jurisdiction Size					
	<50,000 (n=20)	50,001–100,000 (n=18)	100,001–250,000 (n=14)	250,001–500,000 (n=7)	500,001–1 million (n=2)	1–5 million (n=4)
Administrative						
0	6 (30%)	3 (16%)	—	1 (14%)	1 (50%)	2 (50%)
1–3	2 (10%)	4 (22%)	2 (14%)	2 (29%)	1 (50%)	1 (25%)
4–5	—	—	1 (7%)	—	—	—
Management						
0	6 (30%)	3 (16%)	2 (14%)	1 (14%)	2 (100%)	1 (25%)
1–3	2 (10%)	4 (22%)	—	1 (14%)	—	2 (50%)
4–5	1 (5%)	—	1 (7%)	—	—	—
Environmental Health Specialist						
0	2 (10%)	1 (5%)	—	—	1 (50%)	—
1–3	14 (70%)	12 (66%)	9 (64%)	3 (43%)	1 (50%)	1 (25%)
4–5	—	—	1 (7%)	1 (14%)	—	1 (25%)
8–10	—	—	1 (7%)	—	—	1 (25%)
Public Health Nurse						
0	6 (30%)	3 (16%)	1 (7%)	1 (14%)	2 (100%)	1 (25%)
1–3 (includes part time)	8 (40%)	8 (44%)	6 (43%)	1 (14%)	—	2 (50%)
4–5	—	—	1 (7%)	—	—	—
8–10	—	—	—	—	—	—
Laboratory Professional						
0	6 (30%)	1 (5%)	1 (7%)	1 (14%)	2 (100%)	2 (50%)
1–3	7 (35%)	9 (50%)	4 (29%)	1 (14%)	—	1 (25%)
4–5	—	—	1 (7%)	—	—	—
Epidemiologist						
0	7 (35%)	2 (11%)	1 (7%)	—	—	1 (25%)
1–3	5 (25%)	9 (50%)	5 (36%)	1 (14%)	1 (50%)	1 (25%)

Table 11.3 Additional Staffing Needed to Meet Full Capacity for Foodborne Illness Outbreak Response and Investigation for State Agencies

Number of Additional FTEs Needed	State Agency Responses by Jurisdiction Size						
	<50,000 (n=1)	50,001–100,000 (n=2)	100,001–250,000 (n=0)	250,001–500,000 (n=0)	500,001–1 million (n=2)	1–5 million (n=5)	>5 million (n=7)
Administrative							
0	—	1 (50%)	—	—	—	1 (20%)	—
1–3	—	1 (50%)	—	—	—	2 (40%)	—
4–5	—	—	—	—	—	1 (20%)	—
Management							
0	—	1 (50%)	—	—	—	1 (20%)	1 (14%)
1–3	—	—	—	—	—	3 (60%)	3 (43%)
4–5	—	—	—	—	—	1 (20%)	—
Environmental Health Specialist							
0	—	—	—	—	—	—	1 (14%)
1–3	1 (100%)	1 (50%)	—	—	2 (100%)	3 (60%)	1 (14%)
4–5	—	—	—	—	—	—	1 (14%)
8–10	—	—	—	—	—	—	—
20	—	—	—	—	—	—	1 (14%)
Public Health Nurse							
0	—	—	—	—	—	1 (20%)	2 (29%)
1–3	—	2 (100%)	—	—	—	1 (20%)	2 (29%)
4–5	—	—	—	—	—	1 (20%)	—
Laboratory Professional							
0	—	—	—	—	—	—	1 (14%)
1–3	1 (100%)	1 (50%)	—	—	1 (50%)	3 (60%)	2 (29%)
Epidemiologist							
0	—	—	—	—	—	—	1 (14%)
1–3	1 (100%)	1 (50%)	—	—	1 (50%)	3 (20%)	3 (43%)
4–5	—	1 (50%)	—	—	—	—	—

Please note: For these tables, percentages may be >100% because participants could provide more than one response. Additional staffing is measured in FTEs, individuals working eight hours per day, and the range of "Number of FTE's Needed" was determined by responses received.

Local Agency Comments on Staffing Needs

<50,000

- We would rely on the State Health Dept. for the epidemiologist, the laboratory professional and any other requirement.
- Uncertain of true capabilities.

50,001–100,000

- Five secretaries.
- We use an intern to run samples to the State Labs.
- Both of the above positions are provided by State Health Department.
- The State Department of Health provides support with epidemiologists, laboratory and media personnel.

100,001–250,000

- Information Technology.

250,001–500,000

- Additional staff will be provided through the Public Health Department and the State.
- With backup from the State on Epi & Lab work, we are in good shape.

1–5 million

- PH Nurse, Lab, and Epi operate within our Community Health Agency.
- Clerical: 1.

State Agency Comments on Staffing Needs

100,001–250,000

- Hard to answer this question.

>5 million

- Enteric Epidemiologist skill sets needed.
- State Ag is not the lead agency for FBIs.
- State DOH is lead agency.
- The division has outsourced the Epi program since 1996.
- We as an agency would not be alone in conducting an FBI outbreak response. The state currently has an RRT and working with them we would conduct the investigation.
- We support county health departments which are part of the DOH team.

Appendix Question 12

Question 12: In the event of a foodborne illness outbreak, please estimate the percentage (%) of your agency's staff time that would be available for response and investigation work.

Table 12.2 Staff Time Available for Foodborne Illness Outbreak Response and Investigation for Local Agencies

Percentage of Available Staff Time	Local Agency Responses by Jurisdiction Size					
	<50,000 (n=31)	50,001–100,000 (n=25)	100,001–250,000 (n=19)	250,001–500,000 (n=12)	500,001–1 million (n=9)	1–5 million (n=8)
1–10%	6 (19%)	—	1 (5%)	1 (8%)	1 (11%)	—
11–20%	2 (6%)	3 (12%)	—	—	1 (11%)	2 (25%)
21–30%	1 (3%)	3 (12%)	3 (16%)	1 (8%)	—	—
31–50%	9 (29%)	2 (8%)	4 (21%)	4 (33%)	1 (11%)	4 (40%)
51–75%	2 (6%)	5 (20%)	5 (26%)	1 (8%)	—	—
76–99%	5 (16%)	8 (32%)	1 (5%)	3 (25%)	1 (11%)	2 (25%)
100%	6 (19%)	4 (16%)	5 (26%)	2 (17%)	5 (56%)	—

Table 12.3 Staff Time Available for Foodborne Illness Outbreak Response and Investigation for State Agencies

Percentage of Available Staff Time	State Agency Responses by Jurisdiction Size						
	<50,000 (n=3)	50,001–100,000 (n=3)	100,001–250,000 (n=2)	250,001–500,000 (n=1)	500,001–1 million (n=3)	1–5 million (n=12)	>5 million (n=11)
1–10%	—	—	—	—	1 (33%)	1 (8%)	1 (9%)
11–20%	2 (67%)	—	—	—	1 (33%)	1 (8%)	2 (18%)
21–30%	—	—	—	—	—	1 (8%)	2 (18%)
31–50%	1 (33%)	2 (66%)	2 (100%)	—	—	4 (33%)	—
51–755	—	—	—	—	—	1 (8%)	2 (18%)
76–99%	—	—	—	1 (100%)	1 (33%)	—	—
100%	—	1 (33%)	—	—	—	4 (33%)	4 (36%)

Local Agency Comments on Available Staff Time

<50,000

- This depends on the size of the outbreak. For every 10 people involved in the outbreak (reported ill OR well), one additional staff is added to the response team. Size of departmental response will increase according to this equation.
- I would make the time to work with the State representatives and put off inspections.

50,001–100,000

- This would depend entirely on the size and severity of the outbreak. We might deploy as few as one person, or as many as 99%.
- When a FBI occurs, this becomes the priority and the rest of the routine inspections get dropped. This causes us to get further behind on our inspections.

100,001–250,000

- In an event with >100 cases, 50 percent of "In-house" (School nurses work outside of the Agency and make up 50 percent of overall Agency staff) Agency staff would respond including: Env. Health specialists, Senior PH Specialists, Managers, PH Nurses.

250,001–500,000

- We divert our resources from other work to respond. We do not have a response team that is only focused on response. We just don't end up getting other work done.
- Staff that are assigned such duties would be assigned as high of a percentage as necessary to investigate the outbreak. Other work would be lower priority.

500,001–1 million

- In the event of an outbreak, a complete investigation is a priority.

1–5 million

- Depends on the situation. Based on our disaster preparedness plan, all other work could stop if needed to address an FBI of significance.
- 5 staff.
- It depends. If there was a very large outbreak with people still becoming ill, we would set up an incident command structure that would incorporate various positions within the entire agency.

State Agency Comments on Available Staff Time

>5 million

- FBI outbreaks are investigated by local public health agencies with support from the state health department. Capacity to do investigations varies greatly among local agencies. There is not one answer for the state.
- Dependent on the situation.

Appendix Question 13

Question 13: Over the past two years, of the total time that your agency's staff worked on foodborne illness outbreak responses and investigations, please estimate the number of hours that occurred as overtime (in addition to a normal 40-hour workweek), hours on weekends, and hours that occurred over holidays.

Table 13.2 Estimated Number of Hours on Foodborne Illness (FBI) Outbreak Response and Investigation Outside of a Normal (40-hour) Workweek for Local Agencies

Hours on FBI Investigations Outside of a Normal Workweek	Local Agency Responses by Jurisdiction Size					
	<50,000 (n=32)	50,001–100,000 (n=24)	100,001–250,000 (n=19)	250,001–500,000 (n=14)	500,001–1 million (n=10)	1–5 million (n=9)
Overtime						
0	18 (56%)	9 (38%)	6 (32%)	5 (36%)	3 (30%)	2 (22%)
1–5	2 (6%)	1 (4%)	1 (5%)	1 (7%)	—	—
6–10	3 (9%)	1 (4%)	3 (16%)	4 (29%)	1 (10%)	1 (11%)
11–25	3 (9%)	6 (25%)	5 (26%)	2 (14%)	—	1 (11%)
26–50	1 (3%)	2 (8%)	3 (16%)	—	3 (30%)	—
51–99	—	1 (4%)	—	—	2 (20%)	—
≥100	1 (3%)	2 (8%)	—	—	—	2 (22%)
Unknown or N/A	3 (10%)	1 (4%)	—	—	1 (10%)	3 (33%)
Weekends						
0	18 (56%)	10 (42%)	7 (37%)	7 (50%)	4 (40%)	1 (11%)
1–5	3 (9%)	—	1 (5%)	—	—	1 (11%)
6–10	1 (3%)	3 (12%)	4 (21%)	2 (14%)	1 (10%)	1 (11%)
11–25	2 (6%)	4 (17%)	2 (10%)	4 (29%)	1 (10%)	1 (11%)
26–50	1 (3%)	2 (8%)	—	—	2 (20%)	—
51–99	—	—	—	—	—	—
≥100	1 (3%)	1 (4%)	—	—	—	1 (11%)
Unknown or N/A	3 (9%)	1 (4%)	—	—	—	1 (11%)
Holidays						
0	21 (66%)	11 (46%)	10 (53%)	8 (57%)	7 (70%)	5 (26%)
1–5	2 (6%)	3 (13%)	2 (103%)	2 (14%)	—	—
6–10	—	2 (8%)	1 (5%)	2 (14%)	—	—
11–25	2 (6%)	1 (4%)	1 (5%)	—	—	—
26–50	—	1 (4%)	1 (5%)	—	—	—
51–99	—	—	—	—	—	—
≥100	—	—	—	—	—	—
Unknown or N/A	3 (9%)	1 (4%)	—	—	—	—

Table 13.3 Estimated Number of Hours on Foodborne Illness (FBI) Outbreak Response and Investigation Outside of a Normal (40-hour) Workweek for State Agencies

Hours on FBI Investigations Outside of a Normal Workweek	State Agency Responses by Jurisdiction Size						
	<50,000 (n=3)	50,001–100,000 (n=3)	100,001–250,000 (n=2)	250,001–500,000 (n=1)	500,001–1 million (n=3)	1–5 million (n=11)	>5 million (n=10)
Overtime							
0	1 (33%)	1 (33%)	2 (100%)	1 (100%)	—	3 (27%)	2 (20%)
1–5	1 (33%)	1 (33%)	—	—	—	—	—
6–10	—	—	—	—	1 (33%)	2 (18%)	1 (10%)
11–25	—	—	—	—	—	—	2 (20%)
26–50	1 (33%)	—	—	—	1 (33%)	2 (18%)	1 (10%)
51–99	—	—	—	—	—	—	—
≥100	—	—	—	—	—	—	3 (30%)
Unknown or N/A	—	1 (33%)	—	—	1 (33%)	4 (36%)	1 (10%)
Weekends							
0	1 (33%)	—	2 (100%)	1 (100%)	—	3 (27%)	3 (30%)
1–5	1 (33%)	1 (33%)	—	—	—	—	—
6–10	—	1 (33%)	—	—	—	1 (9%)	2 (20%)
11–25	1 (33%)	—	—	—	2 (66%)	2 (18%)	1 (10%)
26–50	—	—	—	—	—	—	—
51–99	—	1 (33%)	—	—	—	—	1 (10%)
≥100	—	—	—	—	—	1 (9%)	2 (20%)
Unknown or N/A	—	—	—	—	—	4 (36%)	1 (10%)
Holidays							
0	2 (67%)	1 (33%)	2 (100%)	1 (100%)	—	4 (36%)	6 (60%)
1–5	1 (33%)	—	—	—	—	—	—
6–10	—	1 (33%)	—	—	—	1 (9%)	1 (10%)
11–25	—	—	—	—	—	2 (18%)	—
26–50	—	1 (33%)	—	—	—	—	—
51–99	—	—	—	—	—	—	—
≥100	—	—	—	—	—	—	—
Unknown or N/A	—	—	—	—	1 (100%)	4 (36%)	1 (13%)

Appendix Question 14

Question 14: Does your agency have a written agreement or memorandum of understanding (MOU) with other agencies to share foodborne illness investigation and response data and expertise?

Table 14.2 Local Agencies that have Written Agreements or MOUs with Other Agencies

Written Agreement or MOU	Local Agency Responses by Jurisdiction Size					
	<50,000 (n=32)	**50,001–100,000** (n=26)	**100,001–250,000** (n=21)	**250,001–500,000** (n=14)	**500,001–1 million** (n=10)	**1–5 million** (n=12)
Yes	11 (34%)	5 (19%)	9 (43%)	5 (36%)	5 (50%)	4 (33%)
No	8 (25%)	4 (15%)	4 (19%)	2 (14%)	4 (40%)	4 (33%)
Not yet, but writing/will write an agreement/MOU	1 (3%)	3 (11%)	1 (5%)	—	—	—
Have informal agreement with other agencies or departments	12 (38%)	14 (44%)	7 (33%)	7 (50%)	1 (10%)	4 (33%)

Table 14.3 State Agencies that have Written Agreements or MOUs with Other Agencies

Written Agreement or MOU	State Agency Responses by Jurisdiction Size						
	<50,000 (n=3)	**50,000–100,000** (n=3)	**100,001–250,000** (n=2)	**250,001–500,000** (n=1)	**500,001–1 million** (n=3)	**1–5 million** (n=13)	**>5 Million** (n=14)
Yes	2 (66%)	—	2 (100%)	—	3 (100%)	6 (46%)	9 (64%)
No	1 (33%)	1 (33%)	—	—	—	1 (8%)	1 (7%)
Not yet, but writing/will write an agreement/MOU	—		—	—	—	2 (15%)	3 (21%)
Have informal agreement with other agencies or departments	—	2 (66%)	—	1 (100%)	—	4 (31%)	1 (7%)

Appendix Question 15

Question 15: If you have an agreement or MOU, with which agencies do you share data and expertise? Please check all that apply.

Table 15.2 Local Agencies that have Agreements or MOUs with Other Agencies

Agreement or MOU Partners	Local Agency Responses by Jurisdiction Size					
	<50,000 (n=23)	**50,001–100,000** (n=19)	**100,001–250,000** (n=16)	**250,001–500,000** (n=12)	**500,001–1 million** (n=6)	**1–5 million** (n=8)
City	2 (9%)	5 (10%)	6 (38%)	1 (8%)	3 (50%)	4 (50%)
County	9 (39%)	10 (53%)	8 (50%)	5 (42%)	—	—
State Department of Agriculture	4 (17%)	8 (42%)	6 (38%)	5 (42%)	—	—
State Department of Health	16 (70%)	17 (89%)	14 (88%)	9 (75%)	—	—
University	2 (9%)	—	—	2 (16%)	—	2 (25%)
FDA	1 (4%)	4 (21%)	5 (32%)	4 (33%)	2 (33%)	2 (25%)
CDC	1 (4%)	6 (19%)	4 (25%)	2 (16%)	2 (33%)	3 (38%)
Indian Health Service	—	—	1 (6%)	—	—	—
USDA	—	3 (16%)	2 (12%)	2 (16%)	1 (16%)	3 (38%)
International	—	—	—	—	—	—
Other	—	—	—	—	—	—

Table 15.3 State Agencies that have Agreements or MOUs with Other Agencies

Agreements or MOUs with Partners	State Agency Responses by Jurisdiction Size						
	<50,000 (n=2)	50,001–100,000 (n=2)	100,001–250,000 (n=2)	250,001–500,000 (n=1)	500,001–1 million (n=3)	1–5 million (n=10)	>5 million (n=10)
City	1 (50%)	1 (50%)	1 (50%)	—	1 (33%)	5 (50%)	4 (40%)
County	1 (50%)	2 (100%)	1 (50%)	—	1 (33%)	6 (60%)	4 (40%)
State Department of Agriculture	—	1 (50%)	2 (100%)	1 (100%)	2 (66%)	5 (50%)	7 (70%)
State Department of Health	1 (50%)	—	1 (50%)	1 (100%)	1 (33%)	4 (40%)	7 (70%)
University	1 (50%)	—	—	—	—	4 (40%)	1 (10%)
FDA	—	—	—	—	2 (66%)	6 (60%)	6 (60%)
CDC	—	—	—	—	—	4 (40%)	5 (50%)
Indian Health Service	—	—	—	—	—	2 (20%)	1 (10%)
USDA	—	1 (50%)	—	—	1 (33%)	4 (40%)	3 (30%)
International	—	—	—	—	—	—	—
Other	—	—	—	—	—	—	—

Please note: For these tables, the number of responses are from Question 14. Agencies that indicate having an MOU or a written or informal agreement with other agencies may have more than one agency to share data and expertise, and therefore percentages may be >100%.

Appendix Question 16

Question 16: Please estimate your agency's staff foodborne illness outbreak investigation experience.

Table 16.2 Number of Staff with Years of Foodborne Illness Outbreak Investigation Experience for Local Agencies

Number of Staff	Local Agency Responses by Jurisdiction Size					
	<50,000 (n=32)	**50,001–100,000** (n=26)	**100,001–250,000** (n=21)	**250,001–500,000** (n=14)	**500,001–1 million** (n=10)	**1–5 million** (n=12)
<2 Years of Experience						
0	12 (38%)	13 (50%)	5 (23%)	2 (14%)	1 (10%)	1 (8%)
1–5	10 (32%)	7 (27%)	11 (52%)	8 (57%)	8 (80%)	3 (25%)
6–10	—	—	2 (10%)	—	1 (10%)	4 (33%)
11–20	—	—	—	1 (7%)	—	—
21–30	—	—	—	1 (7%)	—	—
>30	—	—	—	—	—	—
3–5 Years of Experience						
0	3 (9%)	5 (19%)	5 (24%)	4 (29%)	2 (20%)	3 (25%)
1–5	15 (46%)	15 (58%)	9 (43%)	3 (21%)	4 (40%)	4 (33%)
6–10	1 (3%)	2 (8%)	1 (5%)	—	1 (10%)	1 (8%)
11–20	1 (3%)	1 (4%)	—	—	1 (10%)	—
21–30	—	—	1 (5%)	1 (7%)	—	—
>30	1 (3%)	—	1 (5%)	1 (7%)	—	1 (8%)
6–10 Years of Experience						
0	3 (9%)	5 (22%)	2 (10%)	4 (29%)	2 (20%)	2 (22%)
1–5	19 (59%)	15 (58%)	9 (43%)	4 (29%)	6 (60%)	5 (42%)
6–10	3 (9%)	1 (4%)	2 (10%)	—	—	1 (8%)
11–20	1 (3%)	2 (8%)	2 (10%)	—	1 (10%)	1 (8%)
21–30	—	—	—	1 (10%)	—	—
>30	—	—	1 (5%)	1 (10%)	—	—
>10 Years of Experience						
0	3 (9%)	1 (4%)	—	3 (21%)	—	2 (17%)
1–5	14 (44%)	9 (35%)	12 (57%)	6 (43%)	8 (80%)	6 (50%)
6–10	7 (22%)	9 (35%)	4 (19%)	—	—	3 (25%)
11–20	1 (3%)	3 (12%)	1 (5%)	1 (7%)	2 (20%)	—
21–30	—	1 (4%)	—	—	—	—
>30	—	1 (4%)	2 (10%)	2 (14%)	—	—

Table 16.3 Number of Staff with Years of Foodborne Illness Outbreak Investigation Experience for State Agencies

Number of Staff	State Agency Responses by Jurisdiction Size						
	<50,000 (n=3)	50,001–100,000 (n=3)	100,001–250,000 (n=2)	250,001–500,000 (n=1)	500,001–1 million (n=3)	1–5 million (n=13)	>5 million (n=15)
<2 Years of Experience							
0	1 (33%)	—	—	—	—	1 (7%)	2 (13%)
1–5	1 (33%)	2 (66%)	2 (100%)	1 (100%)	1 (33%)	7 (54%)	4 (26%)
6–10	—	1 (33%)	—	—	—	—	1 (6%)
11–20	—	—	—	—	—	1 (7%)	—
21–30	—	—	—	—	—	2 (15%)	2 (13%)
>30	—	—	—	—	—	—	—
3–5 Years of Experience							
0	—	—	1 (50%)	1 (100%)	—	—	4 (27%)
1–5	2 (67%)	1 (100%)	1 (50%)	—	1 (100%)	4 (31%)	6 (40%)
6–10	1 (33%)	—	—	—	—	—	—
11–20	—	—	—	—	—	—	—
21–30	—	—	—	—	—	1 (7%)	1 (6%)
>30	—	—	—	—	—	—	—
6–10 Years of Experience							
0	—	—	2 (100%)	—	—	1 (7%)	—
1–5	3 (100%)	2 (100%)	—	1 (100%)	1 (50%)	3 (23%)	11 (73%)
6–10	—	—	—	—	1 (50%)	—	—
11–20	—	—	—	—	—	1 (7%)	—
21–30	—	—	—	—	—	1 (7%)	—
>30	—	—	—	—	—	—	1 (6%)
>10 Years of Experience							
0	—	—	—	—	—	—	—
1–5	3 (100%)	2 (100%)	2 (100%)	—	1 (50%)	7 (54%)	12 (80%)
6–10	—	—	—	1 (100%)	—	2 (15%)	1 (6%)
11–20	—	—	—	—	1 (50%)	—	—
21–30	—	—	—	—	—	—	—
>30	—	—	—	—	—	—	1 (6%)

Please note: For these tables, percentages may be >100% because participants could provide more than one response.

Appendix Question 17

Question 17: Please estimate the number of your agency's staff that hold the following certifications and/or credentials.

Table 17.2 Number of Staff that Hold Certifications/Credentials for Local Agencies

Number of Staff	Local Agency Responses Jurisdiction Size					
	<50,000 (n=31)	**50,001–100,000** (n=25)	**100,001–250,000** (n=21)	**250,001–500,000** (n=14)	**500,001–1 million** (n=10)	**1–5 million** (n=10)
Registered Environmental Health Specialist/Registered Sanitarian (REHS/RS)						
0	2 (6%)	2 (8%)	2 (9%)	—	—	—
1–5	23 (74%)	19 (76%)	7 (33%)	3 (21%)	1 (10%)	1 (10%)
6–10	1 (3%)	1 (4%)	5 (24%)	6 (43%)	2 (20%)	—
11–20	1 (3%)	1 (4%)	4 (19%)	2 (14%)	3 (30%)	3 (30%)
21–30	—	—	—	1 (7%)	1 (10%)	1 (10%)
>30	—	—	—	2 (14%)	3 (10%)	4 (40%)
NEHA Certified Professional – Food Safety (CP-FS)						
0	9 (29%)	10 (40%)	7 (33%)	8 (57%)	5 (50%)	3 (350%)
1–5	5 (16%)	9 (36%)	7 (33%)	1 (7%)	1 (10%)	2 (20%)
6–10	—	—	2 (10%)	1 (7%)	—	—
11–20	—	—	—	—	—	—
21–30	—	—	—	—	—	1 (10%)
>30	—	—	—	—	—	—
NEHA Certified Professional Food Manager (CPFM)						
0	11 (35%)	13 (52%)	9 (90%)	9 (90%)	6 (100%)	2 (50%)
1–5	1 (3%)	2 (8%)	1 (10%)	1 (10%)	—	2 (50%)
Please note: No local agency indicated more than five staff hold this credential.						
ServSafe						
0	4 (13%)	4 (16%)	4 (19%)	4 (29%)	3 (30%)	—
1–5	21 (68%)	15 (60%)	10 (48%)	5 (36%)	1 (10%)	2 (20%)
6–10	—	2 (8%)	2 (10%)	2 (14%)	—	—
11–20	—	—	—	1 (7%)	3 (30%)	2 (20%)
21–30	—	—	—	—	2 (20%)	2 (20%)
>30	—	—	—	—	—	1 (10%)

Table 17.3 Number of Staff that Hold Certifications/Credentials for State Agencies

Number of Staff	State Agency Responses by Jurisdiction Size						
	<50,000 (n=3)	50,001–100,000 (n=1)	100,001–250,000 (n=2)	250,001–500,000 (n=1)	500,001–1 million (n=3)	1–5 million (n=11)	>5 million (n=10)
Registered Environmental Health Specialist/Registered Sanitarian (REHS/RS)							
0	—	—	1 (50%)	—	—	1 (9%)	6 (60%)
1–5	2 (66%)	1 (100%)	1 (50%)	1 (100%)	3 (100%)	4 (36%)	2 (20%)
6–10	—	—	—	—	—	—	—
11–20	—	—	—	—	—	3 (27%)	—
21–30	—	—	—	—	—	—	—
>30	—	—	—	—	—	3 (27%)	1 (10%)
Certified Professional – Food Safety (CP-FS)							
0	1 (33%)	—	1 (50%)	—	1 (33%)	8 (73%)	4 (40%)
1–5	1 (33%)	1 (100%)	—	1 (100%)	2 (66%)	—	3 (30%)
6–10	—	—	—	—	—	—	1 (10%)
11–20	—	—	1 (50%)	—	—	—	—
21–30	—	—	—	—	—	—	—
>30	—	—	—	—	—	—	—
NEHA Certified Professional Food Manager (CPFM)							
0	1 (33%)	1 (100%)	1 (50%)	—	—	7 (64%)	5 (50%)
1–5	1 (33%)	—	—	—	1 (33%)	1 (9%)	4 (40%)
Please note: No state agency indicated more than five of their staff hold this credential.							
ServSafe							
0	1 (33%)	1 (100%)	—	—	—	3 (27%)	2 (20%)
1–5	2 (66%)	—	—	—	1 (33%)	1 (9%)	4 (40%)
6–10	—	—	1 (50%)	—	—	1 (9%)	—
11–20	—	—	—	—	—	3 (27%)	1 (10%)
21–30	—	—	1 (50%)	—	—	—	—
>30	—	—		—	—	1 (9%)	1 (10%)

Local Agency Comments on Other Credentials

<50,000

- FDA Certified Inspector.
- State REHS.

50,001–100,000

- Bachelor Degrees.
- FDA Standardization Certification.
- FDA Standardized Officer.
- HACCP – 2.
- State RS = 5.

100,001–250,000

- State PH.
- 7 State-licensed Environmental Health Practitioners; 9 State-certified Food Service Sanitation Managers.

250,001–500,000

- 4 Standardized Food Inspection Officer.
- One FDA standardized.

500,001–1 million

- LEHP in state- 0.

1–5 million

- Approximately 23; we have staff who are certified in HAZWHOPPER, first aid, CPR and HACCP, additional training in Emergency Preparedness.

State Agency Comments on Other Credentials

<50,000

- HACCP Managers. (2)

50,001–100,000

- 4 Sanitarian's; licensing was taken away for RS.

1–5 million

- 4 FDA Rating Officers (3 in Dairy; 1 in Retail Food), 1 Commissioned Officer.

>5 million

- 150 Food Protection Manager Certification - National Registry.
- Standardized Shellfish Specialists – 11.

Appendix Question 18

Question 18: Please estimate the total hours of foodborne illness outbreak response and investigation training that your agency's staff received in the past two years.

Table 18.2 Estimated Hours of Staff Foodborne Illness Outbreak Response and Investigation Training in the Past Two Years for Local Agencies

Estimated Hours of Training	Local Agency Responses by Jurisdiction Size					
	<50,000 (n=31)	50,001–100,000 (n=26)	100,001–250,000 (n=21)	250,001–500,000 (n=12)	500,001–1 million (n=10)	1–5 million (n=11)
0–4	8 (26%)	6 (23%)	5 (24%)	1 (8%)	2 (20%)	2 (18%)
5–8	10 (32%)	7 (27%)	4 (19%)	3 (25%)	4 (40%)	3 (27.5%)
9–12	3 (10%)	3 (12%)	3 (14%)	2 (17%)	3 (30%)	1 (9%)
13–16	2 (6%)	3 (12%)	2 (10%)	3 (25%)	1 (10%)	2 (18%)
17–24	1 (3%)	6 (23%)	4 (19%)	—	—	—
>24	7 (23%)	1 (4%)	3 (14%)	3 (25%)	—	3 (27.5%)

Table 18.3 Estimated Hours of Staff Foodborne Illness Outbreak Response and Investigation Training in the Past Two Years for State Agencies

Estimated Hours of Training	State Agency Responses by Jurisdiction Size						
	<50,000 (n=3)	50,001–100,000 (n=3)	100,001–250,000 (n=2)	250,001–500,000 (n=1)	500,001–1 million (n=3)	1–5 million (n=10)	>5 million (n=12)
0–4	1 (33%)	2 (67%)	—	—	—	2 (20%)	1 (8%)
5–8	2 (67%)	—	—	1 (100%)	—	4 (40%)	1 (8%)
9–12	—	—	—	—	1 (33%)	2 (20%)	2 (17%)
13–16	—	—	1 (50%)	—	1 (33%)	—	2 (17%)
17–24	—	1 (33%)	1 (50%)	—	—	—	—
>24	—	—	—	—	1 (33%)	2 (20%)	6 (50%)

Appendix Question 19

Question 19: Please indicate the type of foodborne illness outbreak response training your agency's staff received in the past two years. Please check all that apply.

Table 19.2 Type of Staff Foodborne Illness (FBI) Outbreak Response Training in the Past Two Years for Local Agencies

Type of FBI Outbreak Response Training	Local Agency Responses by Jurisdiction Size					
	<50,000 (n=29)	50,001–100,000 (n=25)	100,001–250,000 (n=21)	250,001–500,000 (n=13)	500,001–1 million (n=10)	1–5 million (n=11)
In-house	6 (20%)	4 (16%)	9 (43%)	7 (54%)	6 (60%)	9 (82%)
Hands-on	3 (10%)	5 (20%)	4 (19%)	3 (23%)	3 (30%)	7 (64%)
Computer-based/ online	8 (28%)	8 (28%)	4 (19%)	5 (38%)	4 (40%)	4 (44%)
State-sponsored	21 (72%)	18 (72%)	15 (71%)	10 (77%)	5 (50%)	8 (73%)
CDC-sponsored	1 (3%)	7 (28%)	1 (5%)	—	2 (20%)	4 (36%)
FDA-sponsored	7 (24%)	10 (40%)	7 (33%)	3 (23%)	6 (60%)	2 (18%)
Other, please specify	2 (7%)	3 (12%)	4 (19%)	1 (7%)	—	—

Table 19.3 Type of Staff Foodborne Illness (FBI) Outbreak Response Training in the Past Two Years for State Agencies

Type of FBI Outbreak Response Training	State Agency Responses by Jurisdiction Size						
	<50,000 (n=3)	50,001–100,000 (n=2)	100,001–250,000 (n=2)	250,001–500,000 (n=1)	500,001–1 million (n=3)	1–5 million (n=10)	>5 million (n=12)
In-house	1 (33%)	1 (50%)	2 (100%)	—	—	9 (90%)	10 (83%)
Hands-on	2 (66%)	—	—	—	—	3 (30%)	5 (42%)
Computer-based/ online	2 (66%)	2 (100%)	1 (50%)	—	2 (66%)	5 (50%)	9 (75%)
State-sponsored	2 (66%)	—	1 (50%)	1 (100%)	—	8 (80%)	7 (58%)
CDC-sponsored	1 (33%)	—	—	—	1 (33%)	1 (10%)	2 (17%)
FDA-sponsored	2 (66%)	—	—	—	2 (66%)	5 (50%)	9 (75%)
Other, please specify	—	—	—	—	—	—	4 (8%)

Please note: For these tables, percentages may be >100% because participants could provide more than one response.

Local Agency Comments on Other Types of Training

<50,000

- Conference lectures.
- State professional membership org.

50,001–100,000

- Academic classes and lectures, self-training.
- NEHA.
- NEHA-sponsored.

100,001–250,000

- AFDO Conferences.
- Local CIFOR grant.
- State PH Epi Coursework. (2)
- Professional group.
- ServSafe.

250,001–500,000

- State EHA.

1–5 million

- CDPH.
- CEIP, NEHA Epi-Ready.

State Agency Comments on Other Types of Training

>5 million

- IFPTI.
- State Association.
- Homeland Security, WIFSS, IFPTI.
- NEHA.

Appendix Question 20

Question 20: Please indicate the topics or titles of the foodborne illness outbreak response training your agency's staff received in the past two years.

Table 20.2 Topics or Type of Foodborne Illness (FBI) Outbreak Response Training in Past Two Years for Local Agencies

FBI Outbreak Response Training Topic or Type	Local Agency Responses by Jurisdiction Size					
	<50,000 (n=15)	50,001–100,000 (n=19)	100,001–250,000 (n=13)	250,001–500,000 (n=8)	500,001–1 million (n=7)	1–5 million (n=7)
General FBI topics	10 (66%)	12 (63%)	9 (69%)	6 (75%)	4 (57%)	3 (43%)
Epi-Ready	1 (6%)	5 (26%)	2 (15%)	1 (12%)	1 (8%)	—
FDA	2 (13%)	2 (11%)	1 (7%)	1 (12%)	2 (16%)	3 (43%)
State	4 (27%)	2 (11%)	2 (15%)	1 (12%)	1 (8%)	2 (28%)
Conferences	2 (13%)	2 (11%)	3 (23%)	—	—	—
CIFOR	—	—	2 (15%)	—	2 (16%)	—
Other	3 (20%)	2 (11%)	4 (31%)	1 (12%)	—	2 (28%)

Table 20.3 Topics or Types of Foodborne Illness (FBI) Outbreak Response Training in Past Two Years for State Agencies

FBI Outbreak Response Training Topic or Type	State Agency Responses by Jurisdiction Size						
	<50,000 (n=3)	50,001–100,000 (n=1)	100,001–250,000 (n=1)	250,001–500,000 (n=1)	500,001–1 million (n=4)	1–5 million (n=4)	>5 million (n=11)
General FBI topics	2 (66%)	1 (100%)	—	1 (100%)	3 (75%)	1 (25%)	5 (45%)
Epi-Ready	—	—	1 (100%)	—	—	1 (25%)	3 (27%)
FDA	—	—	—	—	1 (25%)	1 (25%)	6 (55%)
State	—	—	—	—	—	1 (25%)	1 (9%)
Conferences	—	—	—	—	—	—	—
CIFOR	—	—	—	—	1 (25%)	1 (25%)	2 (18%)
Other	1 (33%)	—	—	—	1 (25%)	3 (75%)	2 (18%)

Please note: For these tables, percentages may be >100% because participants could provide more than one response.

Local Agency Comments on General Training Topics

<50,000

- E. coli O157, Cryptosporidiosis, Salmonella.
- Emerging pathogens.
- FBI Investigations. (2)
- Food Emergency Response Outbreak Investigations.
- Foodborne disease investigation for local health departments.
- Managing Food Safety.
- Tabletop exercise.
- Varied.

50,001–100,000

- Basic information on how to handle investigations.
- Agriculture and Food Vulnerability Assessment Training Course.
- Emergency response.
- Epi-X and Foodborne Illness Response for local health departments.
- FBI Investigations (3) and Food safety.
- Foodborne Disease Outbreak Response Workshop; Case Studies at various meetings.
- Foodborne Illness outbreak Protocol.
- HA How to perform an investigation. Evidence trails.
- Epidemiology of an investigation. CCP, Emergency Response.
- State Epi Chain of Command.

100,001–250,000

- Foodborne outbreak response plan training.
- Foodborne Illness Investigations & Environmental Sampling, Impact of Food recalls.
- Civil litigation involving Foodborne illness.
- Food Safety Farm to Fork.
- Foodborne Disease Investigations for Local Health Departments.
- How to respond to an FBI. (2)
- Oswego case Study. (2)
- Outbreak Investigation Procedures & Protocols.

250,001–500,000

- FBI Investigation, Basic CD training.
- Foodborne Outbreak Response Teams, Effective Team Dynamics, Surveillance Systems, Routine and Non Routine Outbreaks, Foodborne Disease Investigations, Intelligence & Information Sharing.
- General Outbreak Investigation.
- Investigating a foodborne illness.
- Norovirus updated protocols.
- Policy and procedure on FBI and Food Worker Exclusions.

500,001–1 million

- Etiology of pathogenic organisms.
- Risk Based Inspection; Foodborne Illness investigation.
- Writing a FBI case definition, collecting food samples and environmental samples during an FBI, questionnaire writing for FBI.

1–5 million

- Foodborne illnesses.
- Statistical analysis of foodborne illness outbreak data, -'After Action' summary review of foodborne illness outbreak response.

State Agency Comments on General Training Topics

<50,000

- Food Emergency Response Outbreak Investigations.
- Epidemiology investigation, practice, and general epidemiological training.

50,001–100,000

- Epi and local response collaboration.

250,001–500,000

- EH Investigation Epi Lab.

500,001–1 million

- Food as a chemical weapon, Food Safety.
- Risk assessment.
- Full day joint FBI training (in house) for Epi/Lab/Sanitarians (Nov. 2011).
- Mostly environmental aspects of the investigation but some basic epidemiology and lab overview as well.

1–5 million

- Epi 101, conducting environmental assessments.

>5 million

- Environmental Assessment.
- Emergency response, National Incident Management, Agro-terrorism, environmental sampling and assessments.
- Environmental Health Assessment, Foodborne Outbreaks.
- Foodborne Illness Investigations for Environmental Specialists; Outbreak Investigation.
- Traceback, Environmental Sampling, Table-Top Exercises.

Local Agency Comments on Epi-Ready Training

<50,000

- Epi-Ready.

50,001–100,000

- Epi-Ready. (4)
- Epi info.

100,001–250,000

- Epi-Ready. (2)

250,001–500,000

- Epi-Ready.

500,001–1 million

- The NEHA course developed for CDC.

1–5 million

- Outbreak investigation.

State Agency Comments on Epi-Ready Training

100,001–250,000

- Epi-Ready Team Training Workshop concerning foodborne outbreaks.

1–5 million

- Epi-Ready (NEHA-CDC).

>5 million

- Epi-Ready. (2)
- Epi-Ready for Response Teams.

Local Agency Comments on FDA Training

<50,000

- FDA.
- FDA Standardization.

50,001–100,000

- Completed pre-standardization training on FDA ORUS.
- Pre-standardization training.

100,001–250,000

- Foodborne Illness Investigations FD325.

250,001–500,000

- Various FDA trainings.

500,001–1 million

- FDA voluntary accreditation.
- Development of FDA Program Standard 5.

1–5 million

- FDA foodborne outbreak investigation course.
- FDA online courses.
- Retail Food Processes (FDA).

State Agency Comments on FDA Training

500,001–1 million

- FDA ORAU online training courses for new inspection staff.

1–5 million

- Foodborne Illness Investigations from ORAU "Hands on" Approach to Foodborne Investigations, Dr. Philip Brachman.

>5 million

- FDA ORA courses. (2)
- FDA Model Food Code in Nov. - new FDA course that involves temporary food establishment and special event.
- Incorporating active managerial control. No CDC courses.
- We use quite a few of the ORA courses, and we provide our own training to supplement required NIMS training.
- FDA ORAU Modules Foodborne Disease.
- Epi courses through ORA University (ORAU).

Local Agency Comments on State Training

<50,000

- FBI outbreak response within the agency.
- Direct contact training by the State.
- State Food Safety Summit.
- Food Outbreak training- offered by state HD.

50,001–100,000

- Certification from the State Department of Health.
- Regional Department of Health training, Dept. of Ag retail food training.

100,001–250,000

- Foodborne update in state.
- State PH Epi Coursework. (2)

250,001–500,000

- State FBI field focus program.

500,001–1 million

- State DH quarterly updates and foodborne outbreak response training.

1–5 million

- State Epi-Ready Training.

State Agency Comments on State Training

1–5 million

- Annual Epi-updates by state Epi-staff.

>5 million

- State Association.

Local Agency Comments on Conferences

<50,000

- CEU at NEHA affiliate meetings.
- EHTER training, as well as conference.

50,001–100,000

- Northeast Epidemiology Conference.
- Various classes at the annual NJEHA.

100,001–250,000

- AFDO Conferences.
- NE Regional Food Safety Conference.
- Training included in state DOH workshop.

Please note: There are no state agency comments on conferences.

Local Agency Comments on CIFOR

100,001–250,000

- CIFOR Training Workshop.
- CIFOR guidelines for outbreak response.

500,001–1 million

- CIFOR outbreak response training-Ohio Environmental Health Association.
- CIFOR.

State Agency Comments on CIFOR

500,001–1 million

- Program Manager attended regional PulseNet meeting and participated in CIFOR exercise for draft toolkit.

1–5 million

- CIFOR/PulseNet.

>5 million

- CIFOR Outbreak Response Training.
- In-State CIFOR Outbreak Response Training.

Local Agency Comments on Other Training

<50,000

- CDC FoodNet.
- HACCP manager's course through NSF.
- NEHA E-.

50,001–100,000

- Academic fundamentals, outbreak documents, grad seminars, lectures, discussions, etc.
- NEHA -regional outbreak legal issues.

100,001–250,000

- Raw milk outbreaks.
- Norovirus issues.
- E coli and spinach outbreak; S. Saintpaul outbreak associated with tomatoes & hot peppers.
- ServSafe principles.

250,001–500,000

- ETHER.

1–5 million

- CEIP-Epi response.
- CDC 'FOODNET' summary information.
- In-house policy review for Foodborne Illness Response; Webinar from State on outbreak regarding white pepper.

State Agency Comments on Other Training

>5 million

- IFPTI 3 day training.
- Outbreak and recall training conducted within the agency.

Appendix Question 21

Question 21: Does your agency have sufficient capacity to meet the following tasks/responsibilities? If your agency does not have oversight responsibility for a specific task, please check "N/A."

Table 21.1C Summary of Capacity to Meet Foodborne Illness (FBI) Outbreak Response and Investigation Tasks/Responsibilities for Local and State Agencies

Capacity	Local Agency (n=109)	State Agency (n=33)	All (n=142)
Recording and Responding to FBI Complaints			
Have sufficient capacity	90 (83%)	25 (76%)	**115 (81%)**
Do not have capacity	19 (17%)	5 (15%)	**24 (17%)**
N/A	—	3 (9%)	**3 (2%)**
Pathogen-specific Surveillance			
Have sufficient capacity	38 (35%)	12 (36%)	**51 (36%)**
Do not have capacity	45 (42%)	10 (30%)	**55 (39%)**
N/A	25 (23%)	11 (32%)	**36 (25%)**
Epidemiologic Investigations			
Have sufficient capacity	57 (52%)	12 (36.5%)	**69 (48%)**
Do not have capacity	36 (33%)	12 (36.5%)	**48 (34%)**
N/A	16 (15%)	9 (27%)	**25 (18%)**
Outbreak Investigations at Retail Food Facilities			
Have sufficient capacity	88 (81%)	21 (64%)	**109 (77%)**
Do not have capacity	20 (19%)	8 (24%)	**28 (20%)**
N/A	—	4 (12%)	**4 (3%)**
Outbreak Investigations at Food Manufacturer/Processor Facilities			
Have sufficient capacity	22 (20%)	15 (45%)	**37 (26%)**
Do not have capacity	29 (27%)	9 (27%)	**38 (27%)**
N/A	57 (53%)	9 (27%)	**66 (47%)**
Environmental Assessments/Investigations			
Have sufficient capacity	74 (69%)	21 (64%)	**95 (67%)**
Do not have capacity	23 (22%)	12 (35%)	**35 (25%)**
N/A	10 (9%)	—	**10 (7%)**
Food Sampling			
Have sufficient capacity	67 (62%)	17 (52%)	**84 (59%)**
Do not have capacity	33 (30%)	11 (32%)	**44 (31%)**
N/A	9 (8%)	5 (15%)	**14 (10%)**
Environmental Swabs			
Have sufficient capacity	49 (45%)	12 (36%)	**61 (43%)**
Do not have capacity	43 (39%)	17 (52%)	**60 (42%)**

Capacity	Local Agency (n=109)	State Agency (n=33)	All (n=142)
N/A	17 (16%)	4 (12%)	**21 (15%)**
Laboratory Tasks			
Have sufficient capacity	13 (12%)	16 (49%)	**29 (21%)**
Do not have capacity	35 (33%)	5 (15%)	**40 (28%)**
N/A	59 (55%)	12 (36%)	**71 (51%)**
Outbreak Control Measures			
Have sufficient capacity	64 (60%)	22 (67%)	**86 (62%)**
Do not have capacity	35 (33%)	8 (24%)	**43 (31%)**
N/A	7 (7%)	3 (9%)	**10 (7%)**
Recalls			
Have sufficient capacity	52 (48%)	18 (55%)	**71 (50%)**
Do not have capacity	39 (36%)	10 (29%)	**49 (35%)**
N/A	17 (16%)	5 (15%)	**22 (15%)**
Recall Effectiveness Checks			
Have sufficient capacity	41 (38%)	17 (52%)	**58 (41%)**
Do not have capacity	48 (45%)	11 (33%)	**59 (42%)**
N/A	18 (17%)	5 (15%)	**23 (17%)**
Embargos			
Have sufficient capacity	63 (58%)	22 (67%)	**85 (60%)**
Do not have capacity	33 (30%)	5 (15%)	**38 (27%)**
N/A	13 (12%)	6 (18%)	**19 (13%)**
Closures			
Have sufficient capacity	91 (84%)	25 (76%)	**116 (82%)**
Do not have capacity	14 (13%)	5 (15%)	**19 (14%)**
N/A	3 (3%)	3 (9%)	**6 (4%)**
Tracebacks			
Have sufficient capacity	24 (23%)	18 (55%)	**42 (30%)**
Do not have capacity	54 (51%)	9 (27%)	**63 (46%)**
N/A	27 (26%)	6 (18%)	**33 (24%)**
Training retail food facility and food manufacturer or processor personnel on FBI outbreak response investigation			
Have sufficient capacity	36 (34%)	9 (27%)	**45 (32%)**
Do not have capacity	56 (52%)	20 (61%)	**76 (54%)**
N/A	15 (14%)	4 (12%)	**19 (14%)**

Please note: Tables 21.1A and 21.1B are in the Results and Discussion of this report.

Table 21.2 Capacity to Meet Foodborne Illness (FBI) Outbreak Response and Investigation Tasks/Responsibilities for Local Agencies

Capacity	Local Agency Responses by Jurisdiction Size					
	<50,000 (n=30)	50,001–100,000 (n=25)	100,001–250,000 (n=21)	250,001–500,000 (n=13)	500,001–1 million (n=10)	1–5 million (n=10)
Recording and Responding to FBI Complaints						
Have sufficient capacity	24 (80%)	19 (76%)	16 (76%)	12 (92%)	9 (90%)	10 (100%)
Do not have capacity	6 (20%)	6 (24%)	5 (24%)	1 (8%)	1 (10%)	—
N/A	—	—	—	—	—	—
Pathogen-specific Surveillance						
Have sufficient capacity	5 (17%)	11 (44%)	6 (29%)	4 (31%)	6 (60%)	6 (60%)
Do not have capacity	14 (47%)	8 (32%)	9 (43%)	8 (61%)	4 (40%)	2 (20%)
N/A	10 (33%)	6 (24%)	6 (29%)	1 (8%)	—	2 (20%)
Epidemiologic Investigations						
Have sufficient capacity	11 (37%)	11 (44%)	11 (53%)	7 (54%)	7 (70%)	10 (100%)
Do not have capacity	11 (37%)	10 (40%)	7 (33%)	5 (38%)	3 (30%)	—
N/A	8 (27%)	4 (16%)	3 (14%)	1 (8%)	—	—
Outbreak Investigations at Retail Food Facilities						
Have sufficient capacity	22 (73%)	19 (76%)	17 (81%)	11 (85%)	9 (90%)	10 (100%)
Do not have capacity	8 (27%)	6 (24%)	3 (15%)	2 (15%)	1 (10%)	—
N/A	—	—	—	—	—	—
Outbreak Investigations at Food Manufacturer/Processor Facilities						
Have sufficient capacity	7 (24%)	7 (28%)	1 (5%)	1 (8%)	3 (30%)	3 (30%)
Do not have capacity	12 (40%)	4 (16%)	7 (33%)	5 (38%)	1 (10%)	—
N/A	10 (33%)	14 (56%)	13 (62%)	7 (54%)	6 (60%)	7 (70%)
Environmental Assessments/Investigations						
Have sufficient capacity	18 (60%)	18 (72%)	13 (62%)	9 (70%)	7 (70%)	9 (90%)
Do not have capacity	6 (20%)	6 (24%)	6 (29%)	2 (15%)	3 (30%)	—
N/A	4 (13%)	1 (4%)	2 (9%)	2 (15%)	—	1 (10%)
Food Sampling						
Have sufficient capacity	17 (57%)	15 (60%)	12 (57%)	8 (61%)	6 (60%)	9 (90%)
Do not have capacity	10 (33%)	7 (28%)	8 (38%)	4 (31%)	3 (30%)	1 (10%)
N/A	3 (10%)	3 (12%)	1 (5%)	1 (8%)	1 (10%)	—
Environmental Swabs						
Have sufficient capacity	11 (37%)	12 (48%)	9 (43%)	6 (46%)	5 (50%)	6 (60%)
Do not have capacity	14 (47%)	8 (32%)	10 (48%)	4 (31%)	4 (40%)	3 (30%)
N/A	5 (16%)	5 (20%)	2 (9%)	3 (23%)	1 (10%)	1 (10%)

Capacity	Local Agency Responses by Jurisdiction Size					
	<50,000 (n=30)	50,001–100,000 (n=25)	100,001–250,000 (n=21)	250,001–500,000 (n=13)	500,001–1 million (n=10)	1–5 million (n=10)
Laboratory Tasks						
Have sufficient capacity	1 (3%)	1 (4%)	3 (14%)	2 (15%)	3 (30%)	3 (30%)
Do not have capacity	15 (50%)	8 (32%)	7 (33%)	2 (15%)	1 (10%)	2 (20%)
N/A	14 (47%)	16 (64%)	10 (48%)	9 (70%)	5 (50%)	5 (50%)
Outbreak Control Measures						
Have sufficient capacity	11 (37%)	16 (64%)	14 (67%)	10 (77%)	5 (50%)	8 (80%)
Do not have capacity	13 (43%)	8 (32%)	6 (28%)	3 (23%)	4 (40%)	1 (10%)
N/A	5 (17%)	1 (4%)	1 (5%)	—	—	—
Recalls						
Have sufficient capacity	14 (47%)	13 (52%)	9 (43%)	5 (39%)	5 (50%)	6 (60%)
Do not have capacity	11 (37%)	9 (36%)	8 (38%)	6 (46%)	3 (30%)	2 (20%)
N/A	5 (16%)	3 (12%)	4 (19%)	2 (15%)	2 (20%)	1 (10%)
Recall Effectiveness Checks						
Have sufficient capacity	10 (33%)	9 (36%)	10 (48%)	3 (23%)	4 (40%)	5 (50%)
Do not have capacity	15 (50%)	10 (40%)	9 (43%)	7 (54%)	4 (40%)	3 (30%)
N/A	5 (17%)	6 (24%)	1 (5%)	3 (23%)	2 (20%)	1 (10%)
Embargos						
Have sufficient capacity	19 (64%)	15 (60%)	8 (38%)	9 (70%)	5 (50%)	7 (70%)
Do not have capacity	10 (33%)	6 (24%)	10 (48%)	2 (15%)	4 (40%)	1 (10%)
N/A	1 (3%)	4 (16%)	3 (14%)	2 (15%)	1 (10%)	2 (20%)
Closures						
Have sufficient capacity	23 (79%)	20 (80%)	16 (76%)	13 (100%)	9 (90%)	10 (100%)
Do not have capacity	5 (17%)	3 (12%)	5 (24%)	—	1 (10%)	—
N/A	1 (4%)	2 (8%)	—	—	—	—
Tracebacks						
Have sufficient capacity	3 (10%)	8 (32%)	1 (5%)	4 (31%)	5 (50%)	3 (30%)
Do not have capacity	17 (57%)	12 (48%)	12 (57%)	6 (46%)	3 (30%)	4 (40%)
N/A	9 (30%)	5 (20%)	6 (29%)	3 (23%)	2 (20%)	2 (20%)
Training retail food facility and food manufacturer or processor personnel on FBI outbreak response investigation						
Have sufficient capacity	7 (23%)	9 (36%)	7 (33%)	1 (8%)	5 (50%)	7 (70%)
Do not have capacity	16 (54%)	12 (48%)	12 (57%)	8 (67%)	5 (50%)	3 (30%)
N/A	7 (23%)	3 (12%)	2 (10%)	3 (25%)	—	—

Table 21.3 Capacity to Meet Foodborne Illness (FBI) Outbreak Response and Investigation Tasks and Responsibilities for State Agencies

Capacity	State Agency Responses by Jurisdiction Size						
	<50,000 (n=3)	50,001–100,000 (n=3)	100,001–250,000 (n=2)	250,001–500,000 (n=1)	500,001–1 million (n=3)	1–5 million (n=9)	>5 million (n=12)
Recording and Responding to FBI Complaints							
Have capacity	2 (67%)	2 (67%)	2 (100%)	1 (100%)	2 (67%)	9 (99%)	7 (58%)
Do not have capacity	1 (33%)	1 (33%)	—	—	—	—	3 (25%)
N/A	—	—	—	—	1 (33%)	—	2 (17%)
Pathogen-specific Surveillance							
Have capacity	—	—	1 (50%)	1 (100%)	1 (33%)	4 (44%)	5 (41.5%)
Do not have capacity	2 (67%)	1 (33%)	1 (50%)	—	—	1 (11%)	5 (41.5%)
N/A	1 (33%)	2 (67%)	—	—	2 (67%)	4 (44%)	2 (17%)
Epidemiologic Investigations							
Have capacity	1 (33%)	1 (33%)	1 (50%)	1 (100%)	1 (33%)	5 (55%)	1 (9%)
Do not have capacity	2 (67%)	2 (67%)	1 (50%)	—	1 (33%)	1 (110%)	5 (45.5%)
N/A	—	—	—	—	1 (33%)	3 (33%)	5 (45.5%)
Outbreak Investigations at Retail Food Facilities							
Have capacity	3 (100%)	1 (33%)	1 (50%)	1 (100%)	2 (67%)	7 (77%)	6 (50%)
Do not have capacity	—	2 (66%)	—	—	—	2 (22%)	4 (33%)
N/A	—	—	1 (50%)	—	1 (33%)	—	2 (17%)
Outbreak Investigations at Food Manufacturer/Processor Facilities							
Have capacity	2 (66%)	1 (33%)	—	—	1 (33%)	3 (33%)	8 (67%)
Do not have capacity	—	2 (66%)	1 (50%)	—	1 (33%)	4 (44%)	1 (8%)
N/A	1 (33%)	—	1 (50%)	1 (100%)	1 (33%)	2 (22%)	3 (25%)
Environmental Assessments/Investigations							
Have capacity	3 (100%)	1 (33%)	2 (100%)	1 (100%)	2 (67%)	5 (55%)	7 (58%)
Do not have capacity	—	2 (66%)	—	—	1 (33%)	4 (44%)	5 (42%)
N/A	—	—	—	—	—	—	—
Food Sampling							
Have capacity	2 (66%)	1 (33%)	2 (100%)	1 (100%)	1 (33%)	4 (44%)	6 (50%)
Do not have capacity	—	2 (66%)	—	—	1 (33%)	4 (44%)	4 (33%)
N/A	1 (33%)	—	—	—	1 (33%)	1 (11%)	2 (17%)
Environmental Swabs							
Have capacity	1 (33%)	1 (33%)	2 (100%)	—	—	4 (44%)	3 (25%)
Do not have capacity	—	2 (66%)	—	1 (100%)	2 (67%)	5 (55%)	7 (58%)
N/A	1 (33%)	—	—	—	1 (33%)	—	2 (17%)

Capacity	State Agency Responses by Jurisdiction Size						
	<50,000 (n=3)	50,001–100,000 (n=3)	100,001–250,000 (n=2)	250,001–500,000 (n=1)	500,001–1 million (n=3)	1–5 million (n=9)	>5 million (n=12)
Laboratory Tasks							
Have capacity	1 (33%)	1 (33%)	1 (50%)	—	1 (33%)	6 (66%)	5 (42%)
Do not have capacity	—	1 (33%)	—	1 (100%)	—	1 (11%)	2 (17%)
N/A	1 (33%)	1 (33%)	1 (50%)	—	2 (67%)	2 (22%)	5 (42%)
Outbreak Control Measures							
Have capacity	3 (100%)	1 (33%)	1 (50%)	1 (100%)	2 (67%)	7 (77%)	6 (50%)
Do not have capacity	—	2 (66%)	—	—	—	2 (22%)	4 (33%)
N/A	—	—	1 (50%)	—	—	—	2 (17%)
Recalls							
Have capacity	3 (100%)	1 (33%)	1 (50%)	—	1 (33%)	4 (44%)	8 (67%)
Do not have capacity	—	2 (66%)	1 (50%)	—	1 (33%)	4 (44%)	2 (17%)
N/A	—	—	—	1 (100%)	1 (33%)	1 (11%)	2 (17%)
Recall Effectiveness Checks							
Have capacity	1 (33%)	1 (33%)	1 (50%)	—	2 (67%)	5 (55%)	6 (50%)
Do not have capacity	1 (33%)	2 (66%)	—	—	—	4 (44%)	4 (33%)
N/A	—	—	1 (50%)	1 (100%)	1 (33%)	—	2 (17%)
Embargos							
Have capacity	1 (33%)	1 (33%)	1 (50%)	—	2 (67%)	7 (77%)	9 (75%)
Do not have capacity	1 (33%)	2 (66%)	1 (50%)	—	—	1 (11%)	—
N/A	—	—	—	1 (100%)	1 (33%)	1 (11%)	3 (25%)
Closures							
Have capacity	1 (33%)	1 (33%)	1 (50%)	1 (100%)	2 (67%)	9 (99%)	9 (75%)
Do not have capacity	1 (33%)	2 (66%)	1 (50%)	—	—	—	1 (8%)
N/A	—	—	—	—	1 (33%)	—	2 (17%)
Tracebacks							
Have capacity	2 (66%)	1 (33%)	1 (50%)	1 (100%)	1 (33%)	4 (44%)	7 (58%)
Do not have capacity	—	1 (33)	1 (50%)	—	1 (33%)	3 (33%)	3 (25%)
N/A	—	1 (33%)	—	—	1 (33%)	2 (22%)	2 (17%)
Training retail food facility and food manufacturer or processor personnel on FBI outbreak response investigation							
Have capacity	2 (667%)	—	1 (50%)	—	1 (33%)	1 (11%)	3 (25%)
Do not have capacity	—	2 (66%)	1 (50%)	1 (100%)	1 (33%)	6 (66%)	9 (75%)
N/A	1 (33%)	—	—	—	1 (33%)	2 (22%)	—

Appendix Question 22

Question 22: Does your agency's staff have sufficient training to undertake the tasks/responsibilities below?

Table 22.1C Summary of Staff Training to Undertake Foodborne Illness (FBI) Outbreak Response and Investigation Tasks/Responsibilities for Local and State Agencies

Staff Training	Local Agency (n=108)	State Agency (n=34)	All (n=142)
Recording and Responding to FBI Complaints			
Have trained staff	95 (88%)	26 (84%)	**121 (88%)**
Do not have trained staff	11 (10%)	4 (13%)	**15 (11%)**
N/A	1 (1%)	1 (3%)	**2 (1%)**
Pathogen-specific Surveillance			
Have trained staff	51 (50%)	22 (52%)	**73 (51%)**
Do not have trained staff	39 (38%)	8 (19%)	**47 (33%)**
N/A	12 (12%)	12 (29%)	**24 (17%)**
Epidemiologic Investigations			
Have trained staff	71 (67%)	19 (56%)	**90 (64%)**
Do not have trained staff	26 (24%)	7 (21%)	**33 (23%)**
N/A	10 (9%)	8 (23%)	**18 (13%)**
Outbreak Investigation in Retail Food Facilities			
Have trained staff	98 (91%)	27 (82%)	**125 (90%)**
Do not have trained staff	8 (7%)	3 (9%)	**11 (8%)**
N/A	2 (2%)	3 (9%)	**5 (4%)**
Outbreak Investigations at Food Manufacturer/Processor Facilities			
Have trained staff	36 (38%)	18 (51%)	**54 (41%)**
Do not have trained staff	29 (30%)	10 (29%)	**39 (30%)**
N/A	31 (32%)	7 (20%)	**38 (29%)**
Environmental Assessments/Investigations			
Have trained staff	79 (74%)	24 (69%)	**103 (73%)**
Do not have trained staff	21 (20%)	8 (23%)	**29 (20%)**
N/A	7 (6%)	3 (8%)	**10 (7%)**
Food Sampling			
Have trained staff	73 (68%)	25 (73%)	**98 (70%)**
Do not have trained staff	25 (23%)	6 (18%)	**31 (22%)**
N/A	9 (9%)	3 (9%)	**12 (8%)**
Environmental Swabs			
Have trained staff	50 (47%)	16 (47%)	**66 (47%)**
Do not have trained staff	44 (41%)	15 (44%)	**59 (42%)**
N/A	13 (12%)	3 (9%)	**16 (11%)**

Staff Training	Local Agency (n=108)	State Agency (n=34)	All (n=142)
Laboratory Tasks			
Have trained staff	13 (12%)	16 (47%)	**29 (20%)**
Do not have trained staff	47 (44%)	9 (26.5%)	**56 (40%)**
N/A	47 (44%)	9 (26.5%)	**56 (40%)**
Outbreak Control Measures			
Have trained staff	67 (63%)	24 (67%)	**91 (64%)**
Do not have trained staff	32 (30%)	10 (28%)	**42 (29%)**
N/A	8 (7%)	2 (5%)	**10 (7%)**
Recalls			
Have trained staff	59 (56%)	10 (31%)	**69 (50%)**
Do not have trained staff	31 (30%)	18 (56%)	**49 (36%)**
N/A	15 (14%)	4 (13%)	**19 (14%)**
Recall Effectiveness Checks			
Have trained staff	45 (43%)	18 (53%)	**63 (45%)**
Do not have trained staff	45 (43%)	12 (35%)	**57 (41%)**
N/A	15 (14%)	4 (12%)	**19 (14%)**
Embargos			
Have trained staff	57 (53%)	20 (59%)	**77 (54%)**
Do not have trained staff	38 (35%)	7 (20.5%)	**45 (32%)**
N/A	13 (12%)	7 (20.5%)	**20 (14%)**
Closures			
Have trained staff	90 (83%)	28 (82%)	**118 (83%)**
Do not have trained staff	15 (14%)	3 (9%)	**18 (32%)**
N/A	3 (3%)	3 (9%)	**6 (4%)**
Tracebacks			
Have trained staff	33 (31%)	13 (43%)	**46 (34%)**
Do not have trained staff	51 (48%)	16 (54%)	**67 (49%)**
N/A	22 (21%)	1 (3%)	**23 (17%)**
Training retail food facility and food manufacturer/processor personnel on FBI outbreak response investigations			
Have trained staff	46 (43%)	14 (41%)	**60 (43%)**
Do not have trained staff	46 (43%)	17 (50%)	**63 (43%)**
N/A	15 (14%)	3 (9%)	**18 (13%)**

Please note: Separate summaries of local and state responses are available in Tables 22.1A and 22.1B in the Results and Discussion of this report.

Table 22.2 Staff Training to Undertake Foodborne Illness (FBI) Outbreak Response and Investigation Tasks/Responsibilities for Local Agencies

Staff Training	Local Agency Responses by Jurisdiction Size					
	<50,000 (n=30)	50,001–100,000 (n=25)	100,001–250,000 (n=21)	250,001–500,000 (n=12)	500,001–1 million (n=10)	1–5 million (n=10)
Recording and Responding to FBI Complaints						
Have trained staff	24 (80%)	22 (88%)	19 (90%)	12 (100%)	8 (80%)	10 (100%)
Do not have trained staff	5 (17%)	3 (12%)	2 (10%)	—	1 (10%)	—
N/A	1 (3%)	—	—	—	—	—
Pathogen-specific Surveillance						
Have trained staff	8 (27%)	12 (48%)	8 (38%)	8 (67%)	7 (70%)	8 (80%)
Do not have trained staff	17 (57%)	7 (28%)	8 (38%)	3 (25%)	3 (30%)	1 (10%)
N/A	5 (16%)	—	5 (24%)	1 (8%)	—	1 (10%)
Epidemiologic Investigations						
Have trained staff	14 (47%)	15 (60%)	14 (66%)	8 (67%)	10 (100%)	10 (100%)
Do not have trained staff	11 (37%)	7 (28%)	5 (24%)	3 (25%)	—	—
N/A	5 (16%)	2 (8%)	2 (10%)	1 (8%)	—	—
Outbreak Investigation in Retail Food Facilities						
Have trained staff	24 (80%)	24 (96%)	19 (90%)	12 (100%)	9 (90%)	10 (100%)
Do not have trained staff	4 (13%)	1 (4%)	2 (10%)	—	1 (10%)	—
N/A	2 (7%)	—	—	—	—	—
Outbreak Investigations at Food Manufacturer/Processor Facilities						
Have trained staff	12 (40%)	11 (65%)	3 (14%)	4 (34%)	4 (40%)	2 (20%)
Do not have trained staff	11 (37%)	6 (35%)	8 (38%)	1 (8%)	2 (20%)	1 (10%)
N/A	7 (23%)	—	10 (48%)	7 (58%)	5 (50%)	2 (20%)
Environmental Assessments/Investigations						
Have trained staff	19 (63%)	19 (76%)	14 (66%)	9 (75%)	10 (100%)	8 (80%)
Do not have trained staff	8 (27%)	4 (16%)	5 (24%)	3 (25%)	—	1 (10%)
N/A	3 (10%)	2 (8%)	2 (10%)	—	—	—
Food Sampling						
Have trained staff	18 (62%)	15 (60%)	16 (76%)	11 (92%)	7 (70%)	6 (60%)
Do not have trained staff	8 (27%)	6 (24%)	5 (24%)	—	2 (20%)	4 (40%)
N/A	3 (10%)	4 (16%)	—	1 (8%)	1 (10%)	—
Environmental Swabs						
Have trained staff	11 (37%)	13 (52%)	11 (52%)	7 (58%)	4 (40%)	4 (40%)
Do not have trained staff	15 (50%)	8 (32%)	9 (43%)	3 (25%)	5 (50%)	4 (40%)
N/A	4 (13%)	4 (16%)	1 (5%)	2 (17%)	1 (10%)	1 (10%)

Staff Training	Local Agency Responses by Jurisdiction Size					
	<50,000 (n=30)	50,001–100,000 (n=25)	100,001–250,000 (n=21)	250,001–500,000 (n=12)	500,001–1 million (n=10)	1–5 million (n=10)
Laboratory Tasks						
Have trained staff	1 (3%)	2 (8%)	4 (19%)	1 (8%)	3 (30%)	2 (20%)
Do not have trained staff	17 (57%)	11 (42%)	9 (45%)	3 (25%)	3 (30%)	4 (40%)
N/A	12 (40%)	13 (50%)	7 (33%)	8 (67%)	4 (40%)	3 (30%)
Outbreak Control Measures						
Have trained staff	13 (43.5%)	17 (68%)	12 (57%)	11 (92%)	8 (80%)	6 (60%)
Do not have trained staff	13 (43.5%)	7 (28%)	7 (33%)	—	2 (20%)	3 (30%)
N/A	4 (13%)	1 (4%)	2 (10%)	1 (8%)	—	—
Recalls						
Have trained staff	12 (41%)	17 (68%)	13 (62%)	6 (50%)	6 (60%)	5 (50%)
Do not have trained staff	13 (45%)	5 (20%)	6 (28%)	2 (17%)	2 (20%)	3 (30%)
N/A	4 (14%)	3 (12%)	2 (10%)	3 (25%)	2 (20%)	1 (10%)
Recall Effectiveness Check						
Have trained staff	11 (37%)	11 (46%)	10 (48%)	5 (42%)	5 (50%)	3 (30%)
Do not have trained staff	14 (47%)	9 (37%)	8 (38%)	5 (42%)	3 (30%)	6 (60%)
N/A	5 (16%)	4 (17%)	2 (10%)	2 (17%)	2 (20%)	—
Embargos						
Have trained staff	15 (50%)	13 (52%)	8 (38%)	10 (84%)	5 (50%)	6 (60%)
Do not have trained staff	14 (47%)	7 (28%)	10 (48%)	1 (8%)	4 (40%)	2 (20%)
N/A	1 (3%)	5 (20%)	3 (14%)	1 (8%)	1 (10%)	2 (20%)
Closures						
Have trained staff	21 (70%)	21 (84%)	18 (86%)	12 (100%)	9 (90%)	9 (90%)
Do not have trained staff	8 (27%)	2 (8%)	3 (14%)	—	1 (10%)	1 (10%)
N/A	1 (3%)	2 (8%)	—	—	—	—
Tracebacks						
Have trained staff	6 (20%)	10 (40%)	4 (20%)	4 (33%)	6 (60%)	3 (30%)
Do not have trained staff	19 (63%)	9 (36%)	12 (60%)	5 (42%)	2 (20%)	4 (40%)
N/A	5 (17%)	6 (24%)	4 (20%)	3 (25%)	2 (20%)	2 (20%)
Training retail food facility and food manufacturer/processor personnel on FBI outbreak response investigations						
Have trained staff	9 (31%)	13 (52%)	8 (38%)	4 (33%)	6 (60%)	6 (60%)
Do not have trained staff	17 (59%)	8 (32%)	10 (48%)	4 (33%)	3 (30%)	4 (40%)
N/A	3 (10%)	4 (16%)	3 (14%)	4 (33%)	1 (10%)	—

Table 22.3 Staff Training to Undertake Foodborne Illness (FBI) Outbreak Response and Investigation Tasks/Responsibilities for State Agencies

Staff Training	State Agency Responses by Jurisdiction Size						
	<50,000 (n=3)	50,001–100,000 (n=3)	100,001–250,000 (n=3)	250,001–500,000 (n=1)	500,001–1 million (n=3)	1–5 million (n=9)	>5 million (n=12)
Recording and Responding to FBI Complaints							
Have trained staff	3 (100%)	3 (100%)	1 (33%)	1 (100%)	3 (100%)	6 (66%)	9 (75%)
Do not have trained staff	—	—	1 (33%)	—	—	2 (22%)	1 (8%)
N/A	—	—	—	—	—	—	1 (8%)
Pathogen-specific Surveillance							
Have trained staff	1 (33%)	2 (20%)	2 (67%)	1 (100%)	2 (67%)	4 (44%)	8 (67%)
Do not have trained staff	—	2 (20%)	1 (33%)	—	—	3 (33%)	2 (17%)
N/A	1 (33%)	6 (60%)	—	—	1 (33%)	2 (22%)	2 (17%)
Epidemiologic Investigations							
Have trained staff	1 (33%)	2 (67%)	1 (33%)	1 (100%)	2 (67%)	5 (55%)	6 (50%)
Do not have trained staff	2 (67%)	1 (33%)	1 (3%)	—	—	2 (22%)	1 (8%)
N/A	—	—	—	—	1 (33%)	2 (22%)	5 (42%)
Outbreak Investigation in Retail Food Facilities							
Have trained staff	3 (100%)	2 (67%)	2 (67%)	1 (100%)	2 (67%)	8 (88%)	8 (67%)
Do not have trained staff	—	—	—	—	—	1 (11%)	2 (17%)
N/A	—	—	—	—	1 (33%)	—	2 (17%)
Outbreak Investigations at Food Manufacturer/Processor Facilities							
Have trained staff	1 (33%)	1 (33%)	1 (33%)	—	1 (33%)	4 (44%)	9 (75%)
Do not have trained staff	2 (67%)	2 (67%)	—	—	1 (33%)	3 (33%)	2 (17%)
N/A	—	—	1 (33%)	1 (100%)	1 (33%)	2 (22%)	1 (8%)
Environmental Assessments/Investigations							
Have trained staff	2 (67%)	2 (67%)	1 (33%)	1 (100%)	2 (67%)	6 (66%)	9 (75%)
Do not have trained staff	1 (33%)	1 (33%)	1 (33%)	—	—	3 (33%)	2 (17%)
N/A	—	—	—	—	1 (33%)	—	1 (8%)
Food Sampling							
Have trained staff	2 (67%)	2 (67%)	1 (33%)	1 (100%)	1 (33%)	8 (88%)	10 (83%)
Do not have trained staff	—	1 (33%)	1 (33%)	—	1 (33%)	2 (22%)	1 (8%)
N/A	1 (33%)	—	—	—	1 (33%)	—	1 (8%)
Environmental Swabs							
Have trained staff	2 (67%)	2 (67%)	—	—	—	4 (44%)	6 (50%)
Do not have trained staff	—	1 (33%)	1 (33%)	1 (100%)	2 (67%)	5 (55%)	5 (42%)
N/A	1 (33%)	—	—	—	1 (33%)	—	1 (8%)

Staff Training	State Agency Responses by Jurisdiction Size						
	<50,000 (n=3)	50,001–100,000 (n=3)	100,001–250,000 (n=3)	250,001–500,000 (n=1)	500,001–1 million (n=3)	1–5 million (n=9)	>5 million (n=12)
Laboratory Tasks							
Have trained staff	1 (33%)	1 (33%)	1 (33%)	—	1 (33%)	4 (44%)	7 (58%)
Do not have trained staff	1 (33%)	1 (33%)	1 (33%)	1 (100%)	—	2 (22%)	3 (25%)
N/A	1 (33%)	1 (33%)	—	—	—	3 (33%)	2 (17%)
Outbreak Control Measures							
Have trained staff	3 (100%)	1 (33%)	1 (33%)	1 (100%)	2 (67%)	6 (66%)	8 (67%)
Do not have trained staff	—	2 (67%)	1 (33%)	—	1 (33%)	3 (33%)	3 (25%)
N/A	—	—	—	—	—	—	1 (8%)
Recalls							
Have trained staff	3 (100%)	1 (33%)	—	—		6 (66%)	—
Do not have trained staff	—	2 (67%)	1 (33%)	—	2 (22%)	2 (22%)	10 (83%)
N/A	—	—	—	1 (100%)	1 (33%)	1 (11%)	1 (8%)
Recall Effectiveness Checks							
Have trained staff	1 (33%)	—	1 (33%)	—	2 (67%)	6 (66%)	7 (58%)
Do not have trained staff	2 (67%)	3 (100%)	1 (33%)	—	—	2 (22%)	4 (34%)
N/A	—	—	—	1 (100%)	1 (33%)	1 (10%)	1 (8%)
Embargos							
Have trained staff	1 (33%)	1 (33%)	1 (33%)	—	2 (67%)	6 (66%)	9 (75%)
Do not have trained staff	2 (67%)	2 (67%)	1 (33%)	—	—	2 (22%)	—
N/A	—	—	—	1 (100%)	1 (33%)	1 (11%)	3 (25%)
Closures							
Have trained staff	2 (67%)	2 (67%)	1 (33%)	1 (100%)	2 (67%)	9 (99%)	10 (83%)
Do not have trained staff	1 (33%)	1 (33%)	1 (33%)	—	—	—	—
N/A	—	—	—	—	1 (33%)	—	2 (17%)
Tracebacks							
Have trained staff	1 (33%)	—	1 (33%)	—	1 (33%)	4 (44%)	6 (50%)
Do not have trained staff	2 (67%)	3 (100%)	1 (33%)	1 (100%)	1 (33%)	4 (44%)	4 (33%)
N/A	—	—	—	—	1 (33%)	—	—
Training retail food facility and food manufacturer/processor personnel on FBI outbreak response investigations							
Have trained staff	1 (33%)	—	1 (33%)	—	—	4 (44%)	7 (58%)
Do not have trained staff	1 (33%)	3 (100%)	1 (33%)	1 (100%)	2 (67%)	4 (44%)	5 (42%)
N/A	1 (33%)	—	—	—	1 (33%)	1 (11%)	—

Appendix Question 23

Question 23: Does your agency have the *Council to Improve Foodborne Outbreak Response* (*CIFOR*) *Guidelines for Foodborne Disease Outbreak Response* and/or the *CIFOR Toolkit*? Please check all that apply.

Table 23.2 Local Agencies that have the *CIFOR Guidelines* and/or *CIFOR Toolkit*

Have *CIFOR Guidelines* and/or *CIFOR Toolkit*?	Local Agency Responses by Jurisdiction Size					
	<50,000 (n=23)	**50,001–100,000** (n=21)	**100,001–250,000** (n=19)	**250,001–500,000** (n=12)	**500,001–1 million** (n=10)	**1–5 million** (n=9)
Have *CIFOR Guidelines*	11 (48%)	10 (48%)	15 (79%)	9 (75%)	4 (40%)	7 (78%)
Have *CIFOR Toolkit*	4 (17%)	3 (14%)	4 (21%)	4 (33%)	2 (20%)	5 (56%)
Not yet, but will obtain the *CIFOR Guidelines* and/or *CIFOR Toolkit*	11 (48%)	5 (26%)	5 (26%)	3 (25%)	4 (40%)	1 (11%)
Received training in implementing the *CIFOR Guidelines* and/or *Toolkit*	1 (4%)	2 (10%)	4 (21%)	3 (25%)	3 (30%)	2 (22%)

Table 23.3 State Agencies that have the *CIFOR Guidelines* and/or *CIFOR Toolkit*

Have *CIFOR Guidelines* and/or *CIFOR Toolkit*?	State Agency Responses by Jurisdiction Size						
	<50,000 (n=3)	**50,001–100,000** (n=3)	**100,001–250,000** (n=2)	**250,001–500,000** (n=1)	**500,001–1 million** (n=3)	**1–5 million** (n=9)	**>5 million** (n=11)
Have *CIFOR Guidelines*	—	2 (67%)	—	1 (100%)	2 (67%)	8 (89%)	11 (100%)
Have *CIFOR Toolkit*	—	—	—	—	1 (33%)	4 (44%)	4 (36%)
Not yet, but will obtain the *CIFOR Guidelines* and/or *CIFOR Toolkit*	3 (100%)	1 (33%)	2 (100%)	—	—	1 (11%)	—
Received training in implementing the *CIFOR Guidelines* and/or *Toolkit*	—	—	—	—	2 (67%)	2 (22%)	2 (27%)

Please note: For these tables, percentages may be >100% because participants could provide more than one response.

Appendix Question 24

Question 24: Is your agency implementing the Environmental Health Investigation component of the *CIFOR Guidelines*? If no, please tell us why.

Table 24.2 Implementation of *CIFOR Guidelines* Environmental Health (EH) Investigation Component for Local Agencies

Implementation of *CIFOR Guidelines* EH Investigation	Local Agency Responses by Jurisdiction Size					
	<50,000 (n=28)	50,001–100,000 (n=22)	100,001–250,000 (n=21)	250,001–500,000 (n=12)	500,001–1 million (n=9)	1–5 million (n=9)
Yes	2 (7%)	3 (14%)	2 (10%)	2 (17%)	2 (22%)	2 (22%)
Yes, but only sections of it	2 (7%)	5 (23%)	9 (43%)	3 (25%)	—	5 (56%)
Not yet, but will implement it soon	9 (32%)	9 (41%)	6 (29%)	5 (42%)	4 (44%)	1 (11%)
No	15 (54%)	5 (23%)	4 (19%)	2 (17%)	3 (33%)	1 (11%)

Table 24.3 Implementation of *CIFOR Guidelines* EH Investigation Component for State Agencies

Implementation of *CIFOR Guidelines* EH Investigation	State Agency Responses by Jurisdiction Size						
	<50,000 (n=3)	50,001–100,000 (n=3)	100,001–250,000 (n=2)	250,001–500,000 (n=1)	500,001–1 million (n=2)	1–5 million (n=9)	>5 million (n=12)
Yes	—	—	—	—	—	3 (33%)	6 (50%)
Yes, but only sections of it	—	—	—	—	1 (50%)	2 (22%)	1 (8%)
Not yet, but will implement it soon	3 (100%)	2 (67%)	—	1 (100%)	1 (50%)	2 (22%)	1 (8%)
No	—	1 (33%)	2 (100%)	—	—	2 (22%)	4 (33%)

Local Agency Comments: No, please tell us why

<50,000

- Do not have Guidelines or Toolkit.
- EH unwilling to adopt.
- Have never heard of it or received training on the subject.
- Management does not feel it necessary.
- No clue about it.
- Not familiar with CIFOR guidelines. (3)
- State contracts with county.
- We use the DPH outbreak manual and procedures.

50,001–100,000

- Don't know what this is?
- Haven't looked at these guidelines.
- I have not read it so I cannot tell you if I can.

100,001–250,000

- Just haven't done it.
- Need to obtain CIFOR Guidelines/Tool Kit.
- Not aware of CIFOR.

250,001–500,000

- Used guide to craft state-wide protocol.

500,001–1 million

- Never heard of it.

State Agency Comments: No, please tell us why

50,001–100,000

- The department has no directive to implement.
- Waiting for central office guidelines.

1–5 million

- HHS takes the lead on investigations, provide guidance to our staff.
- We've been doing most of this for years, so haven't considered any formal implementation.

>5 million

- No resources.
- State Health has primacy.
- The agency we contract Epi services with uses these guidelines.
- We have not had much exposure to the CIFOR or training.

Appendix Question 25

Question 25: Does your agency have the following capabilities or procedures?

Table 25.2 Capabilities or Procedures for Foodborne Illness (FBI) Outbreak Response and Investigation for Local Agencies

FBI Outbreak Response and Investigation Capabilities or Procedures	Local Agency Responses by Jurisdiction Size					
	<50,000 (n=25)	50,000–100,000 (n=25)	100,001–250,000 (n=19)	250,001–500,000 (n=13)	500,001–1 million (n=10)	1–5 million (n=9)
Follow a risk-based inspection policy in conducting inspections						
Yes, have sufficient capability	16 (64%)	21 (84%)	15 (78%)	11 (85%)	8 (10%)	8 (88%)
No, not yet but will	3 (12%)	3 (12%)	2 (11%)	2 (15%)	2 (20%)	1 (11%)
Do not have capability	6 (24%)	—	2 (11%)	—	—	—
N/A	—	1 (4%)	—	—	—	—
Have written operating procedures or a MOU that clearly identifies the roles, duties, and responsibilities of those staff who participate in FBI investigations and report findings						
Yes, have sufficient capability	6 (24%)	11 (44%)	11 (58%)	8 (62%)	5 (50%)	6 (66%)
No, not yet but will	2 (8%)	9 (36%)	4 (21%)	3 (23%)	3 (30%)	3 (33%)
Do not have capability	16 (59%)	4 (15%)	3 (12%)	2 (15%)	2 (20%)	—
N/A	1 (4%)	1 (4%)	—	—	—	—
Have a contact list for individuals, departments, and agencies that may be involved in FBI outbreak response and investigations						
Yes, have sufficient capability	18 (72%)	22 (88%)	16 (84%)	9 (69%)	8 (80%)	8 (88%)
No, not yet but will	2 (8%)	2 (8%)	3 (16%)	—	2 (20%)	1 (11%)
Do not have capability	5 (20%)	1 (4%)	—	3 (23%)	—	—
N/A	—	—	—	—	—	—
This contact list has been updated within last year						
Yes, have sufficient capability	14 (56%)	18 (29%)	11 (58%)	9 (69%)	8 (80%)	3 (33%)
No, not yet but will	4 (15%)	3 (12%)	4 (21%)	4 (31%)	2 (20%)	5 (55%)
Do not have capability	6 (24%)	2 (8%)	3 (16%)	—	—	—
N/A	1 (4%)	2 (8%)	1 (5%)	—	—	1 (11%)
Have an alternative laboratory contact list to provide assistance in the event that a food-related emergency exceeds the capacity of your primary support lab(s)						
Yes, have sufficient capability	11 (44%)	8 (32%)	7 (37%)	10 (77%)	6 (60%)	4 (44%)
No, not yet but will	3 (12%)	2 (8%)	3 (12%)	—	3 (30%)	1 (11%)
Do not have capability	11 (44%)	10 (40%)	7 (37%)	3 (23%)	—	1 (11%)
N/A	—	5 (20%)	2 (11%)	—	1 (10%)	2 (22%)

FBI Outbreak Response and Investigation Capabilities or Procedures	Local Agency Responses by Jurisdiction Size					
	<50,000 (n=25)	50,000–100,000 (n=25)	100,001–250,000 (n=19)	250,001–500,000 (n=13)	500,001–1 million (n=10)	1–5 million (n=9)
The alternative lab contact list has been updated within last year						
Yes, have sufficient capability	8 (32%)	5 (20%)	5 (26%)	8 (62%)	6 (60%)	1 (11%)
No, not yet but will	3 (12%)	—	3 (12%)	1 (7%)	3 (30%)	2 (22%)
Do not have capability	12 (48%)	9 (36%)	6 (47%)	3 (23%)	—	1 (11%)
N/A	2 (8%)	9 (36%)	4 (21%)	1 (7%)	1 (10%)	4 (44%)
Maintain logs or databases of FBI complaints or referral reports from other sources						
Yes, have sufficient capability	15 (60%)	18 (72%)	14 (19%)	11 (85%)	8 (80%)	8 (88%)
No, not yet but will	1 (4%)	4 (40%)	2 (20%)	1 (8%)	2 (20%)	—
Do not have capability	8 (32%)	3 (12%)	3 (19%)	1 (8%)	—	1 (11%)
N/A	1 (4%)	—	—	—	—	—
Have a final resolution for each recorded complaint filed with or linked to the facility record for retrieval purposes						
Yes, have sufficient capability	14 (56%)	20 (80%)	15 (20%)	12 (92%)	8 (80%)	7 (77%)
No, not yet but will	3 (30%)	2 (8%)	2 (20%)	—	2 (20%)	1 (11%)
Do not have capability	7 (28%)	2 (8%)	2 (15%)	1 (8%)	—	1 (11%)
N/A	1 (4%)	1 (4%)	—	—	—	—
Regularly conduct review of data in the complaint log or database and FBI outbreak investigations to identify trends and possible contributing factors most likely to cause FBI						
Yes, have sufficient capability	4 (16%)	12 (32%)	9 (24%)	6 (46%)	5 (50%)	2 (22%)
No, not yet but will	5 (25%)	3 (12%)	2 (9%)	4 (31%)	3 (30%)	5 (55%)
Do not have capability	15 (60%)	8 (32%)	8 (22%)	3 (19%)	1 (10%)	2 (22%)
N/A	1 (4%)	2 (8%)	—	—	—	—
Have written operating procedures to address the traceback of foods implicated in a FBI outbreak? *Please note: The traceback procedure provides for the coordinated involvement of all appropriate agencies and identifies a coordinator to guide the investigation.*						
Yes, have sufficient capability	2 (8%)	4 (16%)	3 (18%)	3 (19%)	3 (30%)	2 (22%)
No, not yet but will	6 (24%)	8 (32%)	3 (11%)	3 (19%)	4 (40%)	4 (44%)
Do not have capability	16 (64%)	10 (40%)	9 (20%)	5 (38%)	3 (30%)	3 (33%)
N/A	1 (4%)	3 (12%)	4 (44%)	1 (8%)	—	—
Have written operating procedures to address the recall of foods implicated in a FBI outbreak						
Yes, have sufficient capability	4 (16%)	4 (17%)	5 (22%)	5 (38%)	4 (40%)	1 (11%)
No, not yet but will	6 (24%)	10 (40%)	2 (6%)	5 (38%)	4 (40%)	5 (55%)
Do not have capability	14 (56%)	9 (36%)	10 (23%)	6 (46%)	2 (20%)	2 (22%)
N/A	—	2 (8%)	2 (29%)	2 (15%)	—	1 (11%)

Table 25.3 Capabilities or Procedures for Foodborne Illness (FBI) Outbreak Response and Investigation for State Agencies

FBI Outbreak Response and Investigation Capabilities or Procedures	State Agency Responses by Jurisdiction Size						
	<50,000 (n=3)	50,001–100,000 (n=3)	100,001–250,000 (n=2)	250,001–500,000 (n=1)	500,001–1 million (n=3)	1–5 million (n=9)	>5 million (n=12)
Follow a risk-based inspection policy in conducting inspections							
Yes, have sufficient capability	1 (33%)	3 (100%)	2 (100%)	1 (100%)	2 (66%)	9 (100%)	9 (75%)
No, not yet but will	—	—	—	—	1 (33%)	—	1 (8%)
Do not have capability	2 (66%)	—	—	—	—	—	—
N/A	—	—	—	—	—	—	2 (17%)
Have written operating procedures or a MOU that clearly identifies the roles, duties, and responsibilities of those staff who participate in FBI investigations and report findings							
Yes, have sufficient capability	2 (66%)	1 (33%)	2 (100%)	1 (100%)	3 (100%)	7 (78%)	6 (50%)
No, not yet but will	—	—	—	—	—	1 (11%)	6 (50%)
Do not have capability	1 (33%)	2 (66%)	—	—	—	1 (11%)	—
N/A	—	—	—	—	—	—	—
Have a contact list for individuals, departments, and agencies that may be involved in FBI outbreak response and investigations							
Yes, have sufficient capability	2 (66%)	1 (33%)	2 (100%)	1 (100%)	3 (100%)	7 (78%)	12 (100%)
No, not yet but will	—	—	—	—	—	2 (22%)	—
Do not have capability	1 (33%)	2 (66%)	—	—	—	—	—
N/A	—	—	—	—	—	—	—
This contact list has been updated within last year							
Yes, have sufficient capability	—	1 (33%)	—	1 (100%)	2 (66%)	5 (55%)	7 (58%)
No, not yet but will	1 (33%)	—	—	—	1 (33%)	2 (22%)	4 (33%)
Do not have capability	1 (33%)	—	—	—	—	1 (11%)	1 (8%)
N/A	1 (33%)	1 (33%)	—	—	—	1 (11%)	—
Have an alternative laboratory contact list to provide assistance in the event that a food-related emergency exceeds the capacity of your primary support lab(s)							
Yes, have sufficient capability	—	—	1 (50%)	1 (100%)	2 (66%)	5 (55%)	10 (83%)
No, not yet but will	1 (33%)	—	1 (50%)	—	—	1 (11%)	2 (17%)
Do not have capability	2 (66%)	—	—	—	—	2 (22%)	—
N/A	—	1 (33%)	—	—	1 (33%)	1 (11%)	—
The alternative lab contact list has been updated within last year							
Yes, have sufficient capability	—	1 (33%)	—	—	—	5 (55%)	6 (50%)

FBI Outbreak Response and Investigation Capabilities or Procedures	State Agency Responses by Jurisdiction Size						
	<50,000 (n=3)	50,001–100,000 (n=3)	100,001–250,000 (n=2)	250,001–500,000 (n=1)	500,001–1 million (n=3)	1–5 million (n=9)	>5 million (n=12)
No, not yet but will	1 (33%)	—	2 (100%)	—	1 (33%)	2 (22%)	2 (17%)
Do not have capability	1 (33%)	—	—	1 (100%)	1 (33%)	1 (11%)	1 (8%)
N/A	1 (33%)	1 (33%)	—	—	1 (33%)	1 (11%)	3 (25%)
Maintain logs or databases of FBI complaints or referral reports from other sources							
Yes, have sufficient capability	—	2 (66%)	1 (50%)	1 (100%)	2 (66%)	5 (55%)	10 (83%)
No, not yet but will	1 (33%)	—	1 (50%)	—	—	1 (11%)	2 (17%)
Do not have capability	2 (66%)	—	—	—	—	2 (22%)	—
N/A	—	1 (33%)	—	—	1 (33%)	1 (11%)	—
Have a final resolution for each recorded complaint filed with or linked to the facility record for retrieval purposes							
Yes, have sufficient capability	—	3 (100%)	1 (50%)	—	1 (33%)	4 (44%)	4 (33%)
No, not yet but will	1 (33%)	—	1 (50%)	—	1 (33%)	1 (11%)	3 (25%)
Do not have capability	1 (33%)	—	—	—	—	3 (33%)	3 (25%)
N/A	1 (33%)	—	—	1 (100%)	1 (33%)	1 (11%)	2 (17%)
Regularly conduct a review of the data in the complaint log or database and the FBI outbreak investigations to identify trends and possible contributing factors that are most likely to cause FBI							
Yes, have sufficient capability	—	1 (33%)	—	1 (100%)	1 (33%)	3 (33%)	5 (42%)
No, not yet but will	1 (33%)	—	2 (100%)	—	1 (33%)	2 (22%)	3 (25%)
Do not have capability	2 (66%)	2 (66%)	—	—	—	3 (33%)	3 (25%)
N/A	—	—	—	—	1 (33%)	2 (22%)	1 (8%)
Have written operating procedures to address the traceback of foods implicated in a FBI outbreak *Please note: The traceback procedure provides for the coordinated involvement of all appropriate agencies and identifies a coordinator to guide the investigation.*							
Yes, have sufficient capability	2 (66%)	—	—	—	1 (33%)	1 (11%)	4 (33%)
No, not yet but will	—	—	2 (100%)	—	—	4 (44%)	6 (50%)
Do not have capability	1 (33%)	3 (33%)	—	1 (100%)	1 (33%)	2 (22%)	1 (8%)
N/A	—	—	—	—	1 (33%)	2 (22%)	1 (8%)
Have written operating procedures to address the recall of foods implicated in a FBI outbreak							
Yes, have sufficient capability	2 (66%)	—	1 (50%)	—	2 (66%)	1 (11%)	7 (58%)
No, not yet but will	—	—	1 (50%)	—	—	4 (44%)	4 (33%)
Do not have capability	1 (33%)	3 (100%)	—	1 (100%)	—	1 (11%)	—
N/A	—	—	—	—	1 (33%)	3 (33%)	1 (8%)

Appendix Question 26

Question 26: Does your agency use any of the information from the previous question (#25) to plan for the next year (e.g., budget, staffing, and/or resources)? Please explain.

Local Agency Responses

<50,000

- As stated above, we are arising from an additional $9,500 and $6,000 for one day a week for a public health nurse and one day a week additional to add to the part-time inspector.
- Follow a risk-based inspection policy in conducting inspections.
- No. (9)
- No, not really.
- No—budget will not increase in 2012.
- Not sure.
- Not that I am aware of.
- To date, no - FBIs have been very rare in our jurisdiction. Other, higher profile Environmental Health programs tend to drive budgetary processes.
- Yes, EHS is in process of creating written procedures.

50,001–100,000

- It's only me...will see if counterparts on other campuses want to create our own network that includes #25 elements.
- No. (4)
- No for now. But plan to do that in the future.
- No, because the Preparedness Director monopolizes all time of the county budget decision makers. Preparedness group in this county in particular has done more harm than good for the Health Departments purpose. No one is auditing the Preparedness Directors purchases and its payroll.
- No, our budget is very strict. Unfortunately at this point it is a flat budget from year to year.
- Not really.
- Not sure.
- Not usually. Unless it is decided that there needs to be a change in our existing capacity, all planning is based on our current capabilities. FBI outbreak investigation is a required capability of the environmental health department.
- The budget does not have any specific ties to FBIs. We have a small staff and the workload is large so there is little dedicated time to work on new procedures.
- Unknown.
- We try….
- Will need to start this process.
- Yes – specifically grant requests.
- Yes as far as training budget.
- Yes!

- Yes, specific budget items are identified for resources and training.
- Yes—budget/staffing/inspection scheduling.

100,001–250,000

- Financial budget is currently limiting implementations beyond the department's status 2 years ago.
- Have not considered all of the aspects in #25 in past budget requests; but plan to explain in further detail for the next budget year to address staffing and resources.
- No. (2)
- No, almost all guidance for outbreak investigation comes from the state department.
- Not yet.
- We are attempting to go to tablet based inspections. If so, this may provide the capacity for implementing risk-based inspection protocols.
- We plan on putting all of what we do in clearly written SOPs in the next year. This is required by the PH accreditation board and is the right thing to do. Staff time will be accounted for in the development of such plans.
- Yes.

250,001–500,000

- No. (3)
- No, budgeting does not reflect complaints as a component for funding.
- Used for need of filling positions.
- Yes. (3)

500,001–1 million

- Hot washes determine needs for improvements and/or staffing.
- No. (2)
- No we do not currently do that.
- We set performance goals from year to year and they are focused on addressing any shortcomings. If budget figures are needed to address a weakness then that is also inserted in the budget to address the problem.

1–5 million

- No. (2)
- Not really. Budget is based more on routine inspections.
- Trying to do initial assessment for FDA Retail Food Standards and program implementation of objectives within each Standard.

50,001–100,000

- Yes, where applicable and feasible.

100,001–250,000

- In the process of developing these policies and following FDA Voluntary Retail Food Standards Program Specifically STD 5.

250,001–500,000

- No.

500,001–1 million

- We plan and budget on numbers of facilities licensed and needing inspections.
- Work in conjunction with the Epidemiology Section which takes the initial FBI calls. We then work with them as well as Department of Agriculture or the Department of Business and Professional Regulations for investigation purposes.

1–5 million

- I don't know.
- CIFOR.
- Done by Epi- section staff....not us.
- Use data on staffing and number of investigations for annual budget request.
- Use past incidents as justification for funding, positions, training, etc.
- Yes, as time allows.
- Yes, emergency preparedness resources and budget are based on several of the components of question #25.

>5 million

- Division has no input on budget process.
- Not applicable.
- NO. (2)
- No, we are not involved with the budgeting process which is a significant problem.
- Not at this time.
- We do look at this information to determine what we will need, however we are required to submit budget requests to the legislature for less than previous requests, so this information is never used by appropriations committee members.
- We will.
- Yes - The division monitors this information quarterly to ensure that it continues to meet Standard #5 of the FDA program standards.
- Yes, but given budget constraints in the last several years, additional resources to meet needs cannot factor into the decision.

Appendix Question 27

Question 27: For foodborne illness outbreak response and investigation for the current/most recent fiscal year, please estimate the percentage (%) of your agency's funding from the following sources:

Table 27.2 Estimated Funding and Sources for Foodborne Illness Outbreak Response and Investigation for the Current/Most Recent Fiscal Year for Local Agencies

Estimated Funding Percentage (%)	Local Agency Responses by Jurisdiction Size					
	<50,000 (n=18)	50,001–100,000 (n=21)	100,001–250,000 (n=14)	250,001–500,000 (n=11)	500,001–1 million (n=7)	1–5 million (n=3)
License Fees						
1–10%	2 (11%)	1 (5%)	2 (14%)	—	—	—
11–20%	1 (5%)	—	—	—	—	—
21–50%	6 (33%)	5 (24%)	5 (36%)	2 (18%)	2 (29%)	1 (33%)
51–75%	3 (16%)	2 (10%)	1 (7%)	2 (18%)	1 (14%)	—
76–100%	1 (5%)	4 (19%)	4 (33%)	7 (64%)	3 (43%)	2 (66%)
Enforcement						
1–10%	2 (11%)	2 (10%)	5 (36%)	2 (18%)	1 (14%)	3 (100%)
11–20%	—	—	—	—	—	—
21–50%	1 (5%)	—	—	—	—	—
51–75%	—	—	—	—	—	—
76–100%	—	—	1 (7%)	—	—	—
General City Funds						
1–10%	2 (11%)	2 (10%)	—	1 (11%)	1 (14%)	—
11–20%	—	2 (10%)	—	—	—	—
21–50%	1 (5%)	1 (5%)	4 (29%)	1 (11%)	—	—
51–75%	—	1 (5%)	—	—	—	—
76–100%	2 (11%)	3 (14%)	1 (7%)	—	—	—
General County Funds						
1–10%	—	—	1 (7%)	3 (27%)	1 (14%)	—
11–20%	3 (16%)	1 (5%)	1 (7%)	1 (9%)	1 (14%)	—
21–50%	5 (27%)	4 (19%)	1 (7%)	—	—	—
51–75%	2 (11%)	1 (5%)	2 (14%)	1 (9%)	1 (14%)	—
76–100%	2 (11%)	1 (5%)	—	—	—	—
State Funds						
1–10%	5 (27%)	1 (5%)	—	—	2 (29%)	—
11–20%	2 (11%)	1 (5%)	—	—	1 (14%)	—
21–50%	2 (11%)	3 (14%)	—	1 (9%)	—	—
51–75%	—	1 (5%)	—	—	—	—
76–100%	—	2 (10%)	—	—	—	—

Estimated Funding Percentage (%)	Local Agency Responses by Jurisdiction Size					
	<50,000 (n=18)	**50,001–100,000** (n=21)	**100,001–250,000** (n=14)	**250,001–500,000** (n=11)	**500,001–1 million** (n=7)	**1–5 million** (n=3)
Federal Funds						
1–10%	1 (5%)	1 (5%)	1 (7%)	1 (9%)	—	—
11–20%	—	—	1 (7%)		—	—
21–50%	—	1 (5%)	—	1 (9%)	—	—
51–75%	2 (11%)	—	1 (7%)	—	—	—
76–100%	1 (5%)	—	—	—	—	—

Please note: For these tables, percentages may be >100% because participants could provide more than one response.

Table 27.3 Estimated Funding and Sources for Foodborne Illness Outbreak Response and Investigation for the Current/Most Recent Fiscal Year for State Agencies

Estimated Funding Percentage (%)	State Agency Responses by Jurisdiction Size						
	<50,000 (n=2)	50,001–100,000 (n=3)	100,001–250,000 (n=2)	250,001–500,000 (n=1)	500,001–1 million (n=2)	1–5 million (n=9)	>5 million (n=10)
License Fees							
1–10%	—	—	2 (100%)	—	1 (50%)	1 (11%)	2 (20%)
11–20%	—	—	—	—	—	—	—
21–50%	—	—	—	1 (100%)	—	1 (11%)	—
51–75%	—	—	—	—	1 (50%)	1 11%)	—
76–100%	—	—	—	—	—	3 (33%)	4 (40%)
Enforcement							
1–10%	—	—	—	—	—	1 (11%)	2 (20%)
11–20%	1 (50%)	—	—	—	—	—	—
21–50%	—	—	—	—	—	—	—
51–75%	—	—	—	—	—	—	—
76–100%	—	—	—	—	—	—	—
General City Funds							
Please note: There are no responses from state agencies for this funding source.							
General County Funds							
1–10%	—	—	—	—	—	—	—
11–20%	—	—	—	—	—	—	—
21–50%	—	—	—	—	1 (50%)	—	—
State Funds							
1–10%		—	—	—	—	1 (11%)	1 (10%)
11–20%	1 (50%)	—	—	—	1 (50%)	1 (11%)	—
21–50%	—	—	1 (50%)	1 (100%)	—	1 (11%)	—
51–75%	—	—	1 (50%)	—	—		1 (25%)
76–100%	—	—	—	—	—	3 (33%)	2 (50%)
Federal Funds							
1–10%	—	—	—	—	—	1 (11%)	4 (40%)
11–20%	—	—	—	—	—	—	—
21–50%	—	—	—	—	—	—	—
51–75%	—	—	—	—	—	—	1 (10%)
76–100%	—	—	—	—	—	—	—

Please note: For this table, percentages may be >100% because participants could provide more than one response.

Appendix Question 28

Question 28: (Optional) With the goal of having more effective and efficient foodborne illness outbreak investigations, how can federal, state, and local agencies better collaborate and support each other?

Local Agency Responses

<50,000

- Talk to each other. The feds state and local people often don't go to the same conferences.
- More funding.
- Provide funding and training.
- Try to get Local EH to engage in joint investigations.
- Regional Meetings or formation of a regional committee. Regular communication/updates via email.
- We have not had an outbreak that I am aware of, however, we would contact the State Health Dept. for their assistance and we assume the investigation would be efficient and effective.
- Provide more training.
- Not sure.
- Provide funding for an inspector and/or nurse.
- Provide nearby, very low cost or free training in locations that do not cost a fortune to stay overnight….
- A list of what FBI bacteria, viruses etc. can be tested for and where.
- Standardization of inspectors by FDA.

50,001–100,000

- Better sharing of information in a timely fashion.
- Better communication. (2)
- Hire more R.E.H.S.'s.
- More interagency training, coordination, and communication is needed. Local agencies or their associations should be involved with federal and state planning efforts.
- Training and assistance with procedures would be helpful.
- State has just instituted Maven reporting system which helps quite a bit.
- These items are not and should not be "line itemed" in budgets. That's why I couldn't answer previous question. Would never support separate line items - similar to disaster response. May need additional expenditures for an adequate response.
- The State Department of Health provides excellent support during FBI outbreak investigations.
- U.S. Congress needs to fund programs to support better collaboration.
- WE are always reacting to FBIs as there is no way to show how good programs PREVENT THEM. This is why they do not receive much investment from governing bodies.
- Our Department works very closely with the State on every FBI outbreak investigation. We are available anytime as requested.

100,001–250,000

- Clearly defined "chain of command" and electronic data sharing.
- This survey is the first time that I am hearing about FBI involvement in a foodborne outbreak. This may be the result the State's approach to foodborne outbreak, but at the local level we are not familiar with their involvement.
- Need state funding to locals; our state DOH works well with us.
- Provide free or low cost training in conducting a comprehensive FBI outbreak investigation
- I think we work very well with our state partners.
- Clear/concise communications with locals. Provide accurate detailed information. Faster response time to requests for assessments. Last FBI was statewide. Locals were notified weeks after the initial cases were identified. Most situations establishment management knows about outbreak before local health department and destroys any remaining foods from suspected meals.
- A state based response protocol would make it easier for local cross-jurisdictional investigations.

250,001–500,000

- EPI training programs through NEHA done with ERI team and field staff
- Provide State and Federal Funding to support locals.
- Locals need more funding earmarked for the food sanitation program for staffing and for training to carry out investigations.
- No opinion.
- Communication.
- Sharing of information in an online format excluding anything that is confidential due to the privacy acts would be beneficial. The sharing of foodborne complaint type information would be helpful because local agencies may be able to help connect dots and reveal outbreaks more rapidly that may not have been identified otherwise in multi jurisdictional outbreaks.

500,000–1 million

- Avoid the trap of Feds feeling they are superior to States and States to Locals. Avoid turf wars. Integrated food safety requires true integration. Set some uniform national standards and encourage States and Locals to strive for them by providing various funding sources to do so.
- More timely sharing of data and information.
- Better communication and one contact person.
- Close the communication loop on recalls. Expand capacity for FDA voluntary certification.

1–5 million

- Improved communication lines between local, state, and Federal agencies.
- Increase educational opportunities across all levels.
- COMMUNICATION, COMMUNICATION, COMMUNICATION! Better Hospital education for doctors and communicable disease documentation for sample collecting and reporting!
- Yes.
- Yes, they could but our staff is overwhelmed with just trying to meet our quotas for routine inspections.

State Agency Responses

<50,000

- Training, periodic seminars to engage and collaborate.

50,000–100,000

- Improved communications, coordination, and customer service excellence are critical. Improved staffing, training and salaries would be nice, but we've about given up hope.
- Opening communication lines and having agencies realize there is one common goal.

250,001–500,000

- Continue to share information and improve communication.

500,001–1 million

- Continue to develop and maintain good communication between all agencies.

1–5 million

- It would be great if FDA could pick up the ball and run with it.
- More communication is needed from the beginning of an outbreak between local to state, state to FDA, and FDA to state.

>5 million

- True communication, not just saying we will do it, but actually do it.
- Better coordinate traceback investigations.
- We need to have information from FDA much faster than we get it now. We work very well with our FDA District Office, but when other offices or HQ is involved, the information slows down or is non-existent. We have commissioned staff, so sharing of information should not be a problem.
- Regionalized training and exercise. Targeted funding for these purposes only.
- Continue cooperative agreements such as FDA's Rapid Response Team grants.
- The FDA program standards have been a key to our success over the last ten years. Not simply a list of minimum requirements, these are the gold standard for retail food safety inspection programs. Supporting these standards would certainly be a step in the right direction.

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