Food Safety Needs Assessment for Epidemiology Officials – New York Integrated Food Safety Center of Excellence

General Information

The 2011 Food Safety Modernization Act (FSMA) created the opportunity for the Centers for Disease Control and Prevention (CDC) to establish six Integrated Food Safety Centers of Excellence across the United States. These centers serve as resource centers for state and local health departments while providing training and assistance for foodborne illness surveillance and investigations. The New York Integrated Food Safety Center of Excellence (NY CoE) is a partnership between the New York State Department of Health and Cornell University.

This needs assessment is intended to provide the NY CoE with information that will help this group develop and implement training programs targeting state and local health departments. This needs assessment is specifically targeted towards individuals that have responsibility for epidemiological investigations related to food safety and foodborne disease outbreaks at state health departments in the Northeastern and Mid-Atlantic United States, with the view towards using the responses to guide and develop training for both state and local public health agencies in the future. A similar needs assessment has also been sent to state environmental health and laboratory officials involved in foodborne outbreak response. We ask that this assessment be returned no later than January 22, 2016.

Respondent background and experience

To gain a better understanding of your background and experience in food safety-related fields, please answer the following questions to the best of your knowledge.

1. In which state do you work?
   - □ Connecticut
   - □ Delaware
   - □ Maine
   - □ Maryland
   - □ Massachusetts
   - □ New Hampshire
   - □ New Jersey
   - □ New York State
   - □ New York City
   - □ Pennsylvania
   - □ Rhode Island
   - □ Vermont

2. Please indicate all degrees that you have obtained with a □. List the field of study corresponding to each degree obtained in the space provide (e.g. Food Science, Biology, Public Health, etc.)

<table>
<thead>
<tr>
<th>Degree</th>
<th>Obtained?</th>
<th>Field of Study</th>
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<tbody>
<tr>
<td>Bachelor’s</td>
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<td>Nursing (e.g., RN, LVN)</td>
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<td>Master’s (e.g., MS, MPH)</td>
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<td>Doctor of Philosophy (PhD)</td>
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<td>Doctor of Medicine (e.g., MD)</td>
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<tr>
<td>Veterinary (DVM, VMD, BVSc)</td>
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<td>Other (e.g., DrPH):___________</td>
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</table>
3. Approximately how long have you been a member of a public health entity working in food safety/foodborne outbreaks?

☐ Less than 6 months  ☐ 5-10 years  ☐ 30+ years
☐ 6 months to 1 year  ☐ 10-20 years
☐ 1-5 years  ☐ 20-30 years

4. What is your current place of employment (check any that apply)?

☐ State Health Department
☐ State Department of Agriculture or equivalent
☐ State Laboratory
☐ Environmental Health Services
☐ Other, specify: __________________________________________________________

5. Briefly describe your role as it relates to food safety and public health (mark all that apply)

☐ Public Health Nurse
☐ Laboratory Scientist
☐ Epidemiologist/Disease control staff
☐ Environmental Health Specialist
☐ Food Inspector
☐ Other, specify: __________________________________________________________

General resources and needs related to food safety and foodborne disease outbreak investigations

Understanding that “resources” cover availability of money, expertise and trained staff, support resources (e.g., manuals, availability of standard questionnaires), and many other things, we would like to assess your needs where the NY CoE can help. The following section thus requests your opinions on general resources and other needs related to food safety and foodborne disease outbreak investigations. Please respond by focusing on needs that are not specifically financial or budgetary, but cover training and other non-monetary needs (1= strongly disagree, 3= agree, 5= strongly agree).

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<thead>
<tr>
<th>General Planning and Preparedness</th>
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<th>N/A</th>
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<tbody>
<tr>
<td>Our state has a complaint system for public-reporting of foodborne illness</td>
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<td>Our state has staff at the <strong>state</strong> level who collect, analyze and enter data from complaints into an electronic data system</td>
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<td>Our state has staff at the <strong>state</strong> level who can follow up on complaints in order to identify clusters and triage in a manner consistent with the potential scale of the resulting public health intervention</td>
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<td>Our state has procedures in place for local health departments to notify the state as soon as they suspect an outbreak</td>
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<td>Our state has mandatory reporting and requires submission of isolates and clinical specimens from a foodborne outbreak</td>
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<td>Our state has criteria in place for determining the scale of an outbreak</td>
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<td>Our state has written criteria in place for when to involve which agencies (local, state, federal)</td>
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<td>Our state can swiftly launch an outbreak response that is coordinated with all relevant agencies (local, state, federal)</td>
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<tr>
<td>Our state has a publicized and readily-accessible contact list of all agencies (local, state and federal) that could be involved in a foodborne outbreak investigation</td>
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<td>Our state has protocols in place for working with any agencies (local, state and federal) that could be involved in a foodborne outbreak investigation</td>
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<tr>
<td>Our state has publicized and readily-accessible written outbreak response protocols</td>
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<td>Staff at the <strong>state</strong> level are trained in our outbreak response protocols</td>
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<td>Our staff at the <strong>state</strong> level have ready access to standard documents (e.g., reporting forms, questionnaires, disease-specific factsheets)</td>
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<td>Our state has staff to monitor and implement control measures to prevent secondary spread</td>
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<td>Our state has effective procedures for communicating with implicated sites, healthcare providers, potentially-affected sites and the public in order to control secondary spread</td>
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<td>Our state has effective procedures for communicating foodborne disease outbreak investigation results and findings to food-processing facilities/food-service establishments and producers in order to prevent future outbreaks</td>
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<td>Our state would benefit from resources targeted to producers/food-processing facilities/food-service establishments and producers in order to prevent future outbreaks</td>
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<td>Our state has an effective system for ensuring that foods implicated in a foodborne outbreak are removed from market, retail, food service establishments and homes ASAP</td>
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<td>Our state has an effective protocol to monitor food recalls</td>
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<td>Our state would like help implementing a more effective food recall protocol</td>
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<td>1</td>
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<td>N/A</td>
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<td><strong>Epidemiology</strong></td>
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<td>Our state has a current protocol for outbreak investigations</td>
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<td>Our state has access to trained interviewers who can collect complete and accurate exposure information in a timely manner</td>
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<td>Our staff at the state level have access to standard questionnaires</td>
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<td>Our initial questionnaire assesses risk settings and a limited exposure history</td>
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<tr>
<td>Our initial questionnaire assesses risk settings and an expanded exposure history</td>
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<td>Our staff at the <strong>state</strong> level are equipped to conduct hypothesis generating questionnaires or Focused interviews on patients diagnosed with foodborne illnesses</td>
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<td>Our state has well established student teams and/or other resources (for example, a “Team Diarrhea”) that can help with patient interviews</td>
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</table>
Our state would benefit from student teams and/or other resources (for example, a “Team Diarrhea”) that can help with patient interviews

Our agency at the state level communicates and coordinates effectively with Environmental Health

Our agency at the state level communicates and coordinates effectively with Laboratory staff

Our staff at the state level are sufficiently trained to analyze data from patient interviews

Our state has well-established electronic resources (software, web programs, online databases) to organize and report data collected from interviews

Our state would benefit from electronic resources (software, web programs, online databases) to organize, analyze and report data collected from interviews

Our state currently uses CDC’s Palantir SEDRIC platform

Our state would benefit from training/guidance on how to use CDC’s Palantir SEDRIC platform.

Our state uses data from Whole Genome Sequencing for routine foodborne pathogen surveillance

Our state would benefit from training/guidance on how to use data from Whole Genome Sequencing for routine foodborne pathogen surveillance

Communications and Metrics

Our state has staff at the state level trained in communicating with the media and risk communication

Our state, at the state level, has key communication staff identified, who can be contacted quickly during a foodborne disease investigation

Our state is using metrics (e.g., CIFOR Performance Measures or FoodCORE metrics) to measure foodborne surveillance and outbreak response performance

Our state would benefit from using metrics (i.e. CIFOR Performance Measures or FoodCORE metrics) to measure foodborne surveillance and outbreak response performance

Our state would benefit from guidance about using the CIFOR Guidelines Toolkit

Our state would benefit from guidance in looking for data for the 16 CIFOR metrics with target ranges (see: http://goo.gl/leZFCW)

Following investigations, our state conducts debriefings to evaluate performance indicators and refine outbreak preparedness and planning

Other general resources and/or Epidemiology needs:
Challenges during outbreak investigations
What are your major challenges in foodborne disease outbreak investigations in your state (1= not a challenge at all, 5= major challenge)?

<table>
<thead>
<tr>
<th>Challenge</th>
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<th>N/A</th>
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<td>Availability of overall resources (e.g., trained staff, protocols, tools)</td>
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<td>Foodborne disease surveillance skills</td>
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<tr>
<td>Designing questionnaires</td>
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<td>Access to standard questionnaires</td>
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<td>Interviewing skills</td>
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<td>Environmental assessment skills</td>
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<td>Controlling secondary spread</td>
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<td>Communicating with media and public</td>
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<td>Communicating with facilities/producers</td>
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<td>Understanding analytical epidemiological methods</td>
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<td>Understanding descriptive epidemiological methods</td>
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<td>Interpreting laboratory data and results</td>
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<td>Understanding legal issues in surveillance/outbreaks</td>
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<td>Increasing use of Culture Independent Diagnostic Testing (CIDT)</td>
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<tr>
<td>Increasing use of Whole Genome Sequencing (WGS)</td>
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<td>Writing outbreak reports</td>
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<tr>
<td>Other challenges not mentioned:</td>
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Needs in food safety core competency training
The following section will ask questions regarding your opinion on training needs for state health departments in the areas of general food safety knowledge and outbreak investigations. For each section, 1= not a need, 2= possibly a need, 3= major need.

a. General Food Safety Knowledge

<table>
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<tr>
<th>Training area</th>
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<th>3</th>
<th>Don’t Know</th>
<th>N/A</th>
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<tbody>
<tr>
<td>Food production, processing and distribution in general</td>
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<td>Meat processing and production</td>
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<td>Dairy Processing and production</td>
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<td>Seafood processing and production</td>
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<td>Chemical food safety hazards</td>
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<td>Bacterial foodborne pathogens and toxins</td>
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<td>Viral foodborne pathogens</td>
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<td>Protozoan foodborne pathogens</td>
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<td>Fungal foodborne pathogens and mycotoxins</td>
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<tr>
<td>General knowledge of foodborne pathogens (sources, growth conditions, inhibitory substances, means of inactivation)</td>
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<td>Factors necessary for foodborne pathogens to cause illness (dose-response, portal of entry)</td>
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<tr>
<td>Other Food Safety topics:</td>
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b. Outbreak Investigation

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<th>Training area</th>
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<th>Don’t Know</th>
<th>N/A</th>
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<tr>
<td>Application of CIFOR Guidelines and Toolkit</td>
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<td>Appropriate epidemiological study design (e.g., case-control vs. cohort)</td>
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<td>Planning and conducting outbreak investigation interviews</td>
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<td>Planning and conducting open-ended investigative interviews</td>
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<td>Data analysis and interpretation using standard epidemiological methods</td>
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<td>Traceback/traceforward investigations</td>
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<td>Use of binomials, the pop survey, and other online tools</td>
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<td>Interpreting molecular subtyping data/results</td>
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<td>Risk communication</td>
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<td>Familiarity with appropriate clinical tests for suspected pathogens</td>
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<td>Food and environmental sample collection</td>
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<td>Clinical specimen/stool sample collection</td>
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<td>Environmental investigations in processing plants</td>
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<td>Environmental investigations in production environments</td>
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<td>Environmental investigations in restaurants</td>
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<td>Environmental investigations using the CDC National Environmental Assessment Reporting System (NEARS)</td>
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<td>Writing after action reports</td>
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<td>Debriefing among investigators following each outbreak response and refining outbreak response planning based on lessons learned.</td>
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Other Outbreak Investigation topics:

Formats for training
The following section will ask questions regarding your opinion on training formats for state health departments with regards to outbreak investigations. For each section, score the effectiveness of formats with 1 being the least effective and 5 being the most effective, taking into account any extenuating circumstances (e.g., lack of travel support, unable to take time away from work, etc.).

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<tr>
<th>Training program format</th>
<th>Effectiveness</th>
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<tr>
<td>Short on-line training (&lt; 60 min per program)</td>
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<td>Longer on-line training programs (1 to 8 h programs that can be completed over multiple sessions)</td>
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<td>Comprehensive on-line training programs (8-60 h, can be completed over multiple weeks and months)</td>
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<tr>
<td>In person lecture-based training (1 to 2 days)</td>
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Other questions related to training needs

1. Do you feel there is a need for development of food safety-related certificate programs for public health and food safety professionals?
   ☐ Yes
   ☐ No
   If yes, please indicate the target audience for certificate programs (Select all that apply)
   ☐ Epidemiologists/disease control staff
   ☐ Environmental Health Specialists
   ☐ Laboratory Scientists
   ☐ Agricultural and food industry personnel

2. Have you ever done a needs assessment at the local/county level?
   ☐ Yes
   ☐ No

3. Would you like help with needs assessments at the local/county level?
   ☐ Yes
   ☐ No

4. Would your state ever contact the Center of Excellence for real-time consultation during an outbreak (select all that apply)?
   ☐ Yes, by phone
   ☐ Yes, for an in-person visit
   ☐ No

5. Do you feel you need more current or timely information on foodborne outbreaks?
   ☐ Yes
   ☐ No
   If yes, how would you like to receive your information?
   ☐ Email
   ☐ Website
   ☐ Social media (e.g., Facebook, Twitter, LinkedIn)
   ☐ Other

Please send you completed needs assessment by fax (518-474-7381) or email to Alexandra Newman (alexandra.newman@health.ny.gov) or Paula Huth (paula.pennell-huth@health.ny.gov) no later than January 22, 2016.

Thank you for completing this needs assessment!