NEARS Implementation in Metro-Nashville and Tennessee

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Nashville, TN

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Presentation Overview

- NEARS Implementation in Nashville and throughout Tennessee
- Challenges
- Addressing Challenges
- Case In Point
- Why we are using NEARS
Metro Nashville Public Health Department

- Local Government
- Food regulations contracted with TDH and TDA
- 4900 Food establishments / 20 EHS staff
- Participated with EHS-Net since 2003
- Improve foodborne outbreak response
MPHD Investigation Model

- **Outbreak Investigation Team Approach**
  - ENV – EPI – LAB (TDH Lab)

- **EHS lead investigator designation**
  - Isolated FB illness complaint management
  - Lead in FB illness outbreak investigations
    - Environmental assessments
    - Reporting
  - Training other EHS during investigations
  - NEARS data collection and entry
Tennessee Demographics

- 95 Counties
- 7 Regions
- 5 Contract Counties
- 169 EHS

Centralized food regulations
- Tennessee Department of Health
- Based on the 2009 FDA Food Code

- 6.65 Million population
- 28K Food Establishments

Map of Tennessee Health Service Regions
Outbreak Investigation Challenges

- Very few outbreaks identified per county
- Limited outbreak investigation experience
- Necessitates outbreak training
  - Beyond one-time training similar to emergency preparedness
- Designation of regional outbreak investigators

Regional Foodborne Outbreaks From 2015 to Present

<table>
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<th>Region</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
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<tr>
<td>South Central</td>
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Regional Outbreak Investigators

- 13 Regions
- Primary Contacts: 13
- Secondary Contacts: 23
- Field EHS: 6

"Primary Contact"/"Secondary Contact"/"Field EHS"
Who are these regional outbreak investigators?

- Senior EHS staff
- Participated in Epi-Ready training
- NEARS training
- Completed E-Learning web-based training
NEARS Support

- CDC EHS-Net
- TDH Central Office
  - DJ Irving
  - Craig Shepherd
- Notified of all active OB investigations
- Contact lead investigator
  - Site visit investigation support
  - Data collection support
  - Data entry support
- Improved NEARS reporting
- Support outbreak communication and training
- Evaluate NEARS team
Improvement Evaluations

- Solicit feedback from outbreak investigators
  - Assess knowledge gaps
  - Identify training needs
  - Understand perceptions

- REDCap survey
  - 33 questions
  - Knowledge, experience, confidence & opinions
  - Distributed via email to all regions
Opportunities for Improvement

- Appropriate outbreaks to be entered into NEARS
  - Person-to-person vs foodborne outbreaks
- Timely data collection and entry
  - During initial complaint response?
  - After outbreak identification?
- Environmental assessment vs routine inspection
- Accurate and complete data collection
- Proper identification of contributing factors
Addressing the Opportunities

- Provide regional, face-to-face training
  - Environmental assessments
  - Contributing factors
  - NEARS data collection instruments
- Evaluate progress through post exams
- Push CDC e-learning
- Promote and participate in continual education and training
  - Table-top exercises
  - Epi-Ready classes
NEARS Assisting an Outbreak Investigation January 2017

- **Overview:**
  - Three clinically confirmed cases identified through pathogen surveillance
  - One food establishment in common
  - Limited data

- **Lab:**
  - Known clinical etiology (Campylobacter)
  - No food for additional testing
  - No environmental sampling

- **Epidemiology:**
  - Very limited case/control data for studies

- **Environmental:**
  - Significant time gap between incident and notification
  - Several implicated foods
  - No clear Contributing Factors identified
NEARS Manager Interview

- Policy/Procedure questions help reveal:
  - No written or verbal policy to address sanitization of work tables
  - Employees were not trained in proper sanitization between raw and RTE product
  - Occasionally, one table used raw chicken and RTE food
Why do we participate in NEARS?

- **Improves outbreak investigations**
  - Helps ensure environmental assessments occur
  - More accurate contributing factor identification
  - Outbreak team communication and reporting
    - NORS
    - NEARS
  - Improved communication with operators
    - Better understanding of systems
    - Identify and implement most appropriate control measures
  - Higher level of local and state-wide outbreak support

- **Use of NEARS data**
  - Evaluate outbreaks across the entire state
  - Better understand contributing factors and antecedents
  - Supports our programs
    - FDA Standards
    - Illustrates the work we do
  - Contributes to nationwide research
Acknowledgments

- CDC EHS-Net
- Tennessee Department of Health
  - Craig Shepherd
  - DJ Irving
  - Dr. John Dunn
  - Environmental Health Leadership
  - Environmental Health Specialists
- Nashville-Metro Public Health Department
  - Food and Public Facilities Protection

Thank You