CDC Update to the Conference for Food Protection

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Updates on the Activities of...

- National Center for Environmental Health (NCEH)
- National Center for Immunization and Respiratory Diseases (NCIRD)
- National Center for Emerging and Zoonotic Infectious Diseases (NCEZID)
National Center for Environmental Health (NCEH)
Environmental Health (EH) Surveillance on Retail-Related Foodborne Illness Outbreaks

- Moved and updated the data entry system
- Published NEARS data that informs prevention and investigation
  - Identified food safety gaps in outbreak establishments
  - Identified outbreak investigation barriers
Restaurants that provide staff food safety training have smaller norovirus outbreaks.

Hoover et al. (2020)
Developing Retail Food Safety Infographics

CHEFS, COOKS, AND CATERERS:
COOK CHICKEN LIVER LIKE IT’S CHICKEN (IT IS)
Cook Chicken Liver to 165°F
ALWAYS COOK CHICKEN LIVER ALL THE WAY THROUGH

Clean & Sanitize Food-Contact Surfaces

Clean & Sanitize
FOOD-CONTACT SURFACES

WARNING: MAY BURN. USE BLEACH WITH WATER ONLY.
Conducting Food Safety Research with the Environmental Health Specialists Network (EHS-Net)

- EHS-Net celebrated 20 years
  - 52 articles
  - 25 plain language summaries
  - 4 infographics
- Research has impacted policies and guidelines driving restaurant food safety across the nation
Findings have informed significant, national food safety policy and practices guidelines.
National Center for Immunization and Respiratory Diseases (NCIRD)
Norovirus Sentinel Testing and Tracking (NoroSTAT)

- Near-real time reporting of norovirus outbreaks by network of 12 sentinel states
  - Selected sites provide broad national coverage
  - Rapidly assess the impact of emergent strains
  - Improved timeliness, completeness, and linking of outbreak reports in NORS and CaliciNet

Leshem 2013 EID
Shah 2017 MMWR
Norovirus Outbreak Reporting, 2019-2020

Possibilities for decrease in reporting:
- Underreporting
- Non-pharmaceutical interventions (NPIs) for COVID-19
  - Handwashing
  - Social distancing
  - Facility closures

www.cdc.gov/norovirus/reporting/norostat/data.html
Impact of Non-Pharmaceutical Interventions for SARS-CoV-2 on Norovirus Outbreaks

NPI implementation during April - July 2020 significantly associated with:

- Reduced number of reported norovirus outbreaks
- Reduced median outbreak size in all settings
National Center for Emerging and Zoonotic Infectious Diseases (NCEZID)
Preventing Foodborne Diseases

- In the summer of 2019, DFWED created the Prevention Office, which focuses on translating epidemiological and laboratory findings into public health interventions.
- The Prevention Office is responsible for preventing not only foodborne diseases but also waterborne diseases, enteric zoonoses, and fungal infections.
- Working with internal and external partners, the Prevention Office is addressing the following foodborne disease prevention priorities:
  - Beef and *Salmonella*
  - Chicken and *Salmonella*
  - Leafy greens and STEC
  - Shellfish and *Vibrio*
- For more information, please contact Sam Crowe at yeo2@cdc.gov
The Evolution of Foodborne Laboratory Surveillance: Implementing Next Generation Molecular Surveillance Methods

Yesterday
PFGE

Today
WGS

Tomorrow
Metagenomics
Effect of COVID on PulseNet

- PulseNet experiencing fewer submissions from states
- Some states have paused PulseNet sequencing or have delayed turn arounds
- Fewer outbreak clusters detected in PulseNet compared to what we were projected to detect with WGS implemented

Human **Salmonella** Uploads to PulseNet, 5-yr Average Compared to 2020, by Week

Human **STEC** Uploads to PulseNet, 5-yr Average Compared to 2020, by Week
Current FoodCORE and OutbreakNet Enhanced Resources

- Annual metrics summaries
- Model Practices (FoodCORE)
- Success Stories

### Performance Metrics:
(See FoodCORE website for complete language and definitions)

<table>
<thead>
<tr>
<th></th>
<th>Salmonella Mean (Range)</th>
<th>STEC Mean (Range)</th>
<th>Listeria Mean (Range)</th>
<th>Shigella Mean (Range)</th>
<th>Campylobacter Mean (Range)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1a. Total number of isolates and isolate-yielding specimens</td>
<td>1082 (398–1661) n=10</td>
<td>239 (79–453) n=10</td>
<td>22 (2–51) n=10</td>
<td>182 (33–665) n=9</td>
<td>475 (70–1287) n=8</td>
</tr>
</tbody>
</table>

Complaint Systems and Effective Surveillance
Creative Public Health Messaging
Epi-Ready in Kentucky
Student Teams
Virginia “Cracks the Case”

https://www.cdc.gov/foodcore/
https://www.cdc.gov/foodsafety/outbreaknetenhanced/index.html
Integrated Food Safety Centers of Excellence (CoEs)

- **Strengthen & Improve** surveillance and outbreak investigations
- **Train & Educate** students and public health personnel
- **Evaluate & Analyze** the timeliness and effectiveness of surveillance and outbreak response
- **Disseminate & Communicate** tools and resources
FoodNet: Foodborne Diseases Active Surveillance Network

- Conducts active, population-based surveillance for 8 pathogens and hemolytic uremic syndrome in 10 sites
- Surveillance includes infections diagnosed by culture-confirmed and culture-independent tests (CIDT)
- Collects data on clinical laboratory testing practices for more than 650 laboratories in FoodNet surveillance catchment areas
- Conducts and analyzes the FoodNet population survey
Upcoming FoodNet Publication of Interest

NORS: National Outbreak Reporting System
FDOSS: Foodborne Disease Outbreak Surveillance System

- Foodborne outbreak data
  - patient demographics
  - pathogen
  - food vehicle
  - outbreak setting
  - contributing factors
- Outbreak summaries for 1998–2017 available on the FDOSS website

https://www.cdc.gov/fdoss/annual-reports/index.html
Highlights from the 2017 FDOSS Annual Report

- 841 foodborne disease outbreaks reported by 50 states, Washington, D.C., and Puerto Rico
  - 14,481 illnesses
  - 827 hospitalizations
  - 20 deaths
  - 14 food recalls
- 32 multistate outbreaks reported
- Restaurants were associated with 489 outbreaks

- Single food categories associated with the most illnesses
  - Turkey: 609
  - Fruits: 521
  - Chicken: 487
  - Pork: 376
- Most common confirmed pathogens
  - Norovirus: 140 outbreaks
  - *Salmonella*: 113 outbreaks
Resources

- www.cdc.gov/nceh/ehs
- https://www.cdc.gov/foodsafety/centers/index.html
- https://wwwn.cdc.gov/norsdashboard/
- https://www.cdc.gov/foodcore/
- https://www.cdc.gov/foodsafety/outbreaknetenhanced/index.html

For more information, contact CDC
1-800-CDC-INFO (232-4636)

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.