

Let's Talk About NEARS

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Agenda



Foodborne Outbreak Investigations



NEARS Overview & the National Impact



NEARS Instrument



Resources



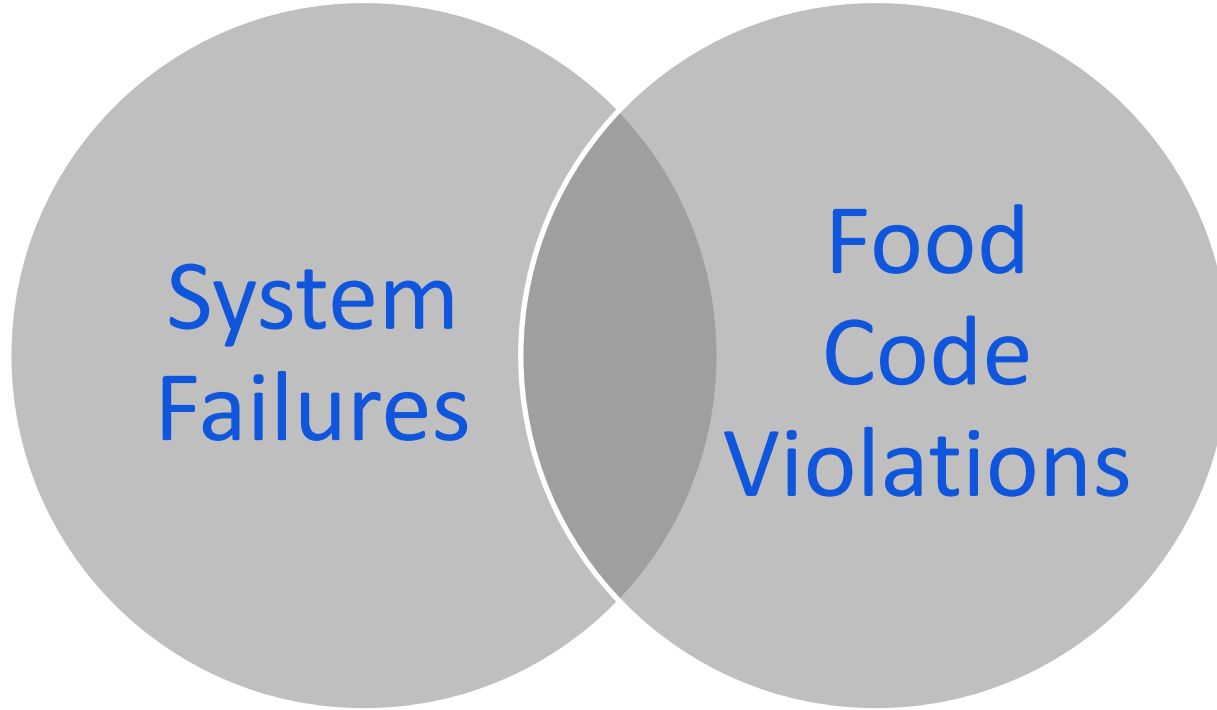
Questions

From Inspector to Investigator

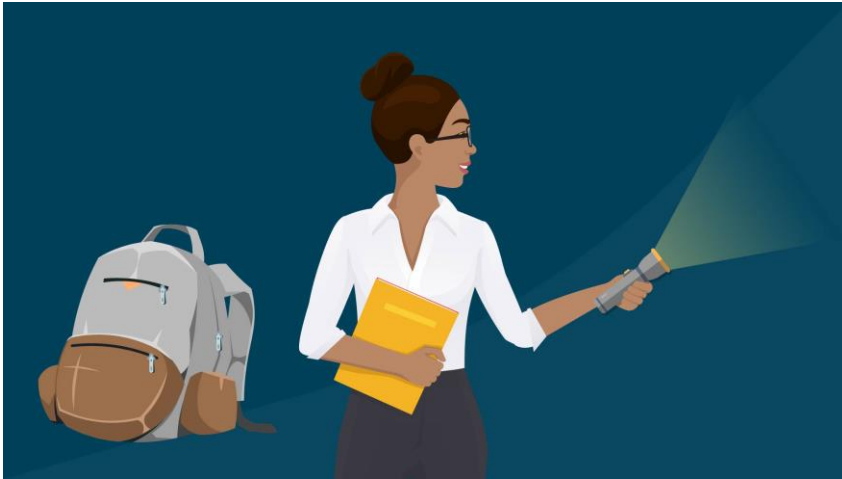
Investigations focus on what happened and how to prevent it from happening again.



System failures are not always food code violations.



From Inspector to Investigator



NEARS Overview and the National Impact

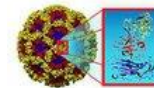
CDC collects and aggregates foodborne outbreak data from health departments.



Environmental Health



Epidemiology



CaliciNet
National Norovirus
Outbreak Network

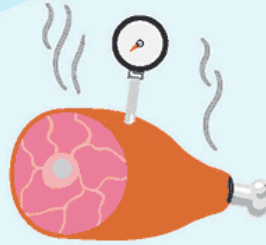


Laboratory

NEARS provides unique data on outbreak establishments.



Interviewing kitchen managers and food workers



Observing how restaurants prepare food (for example, food temperatures)

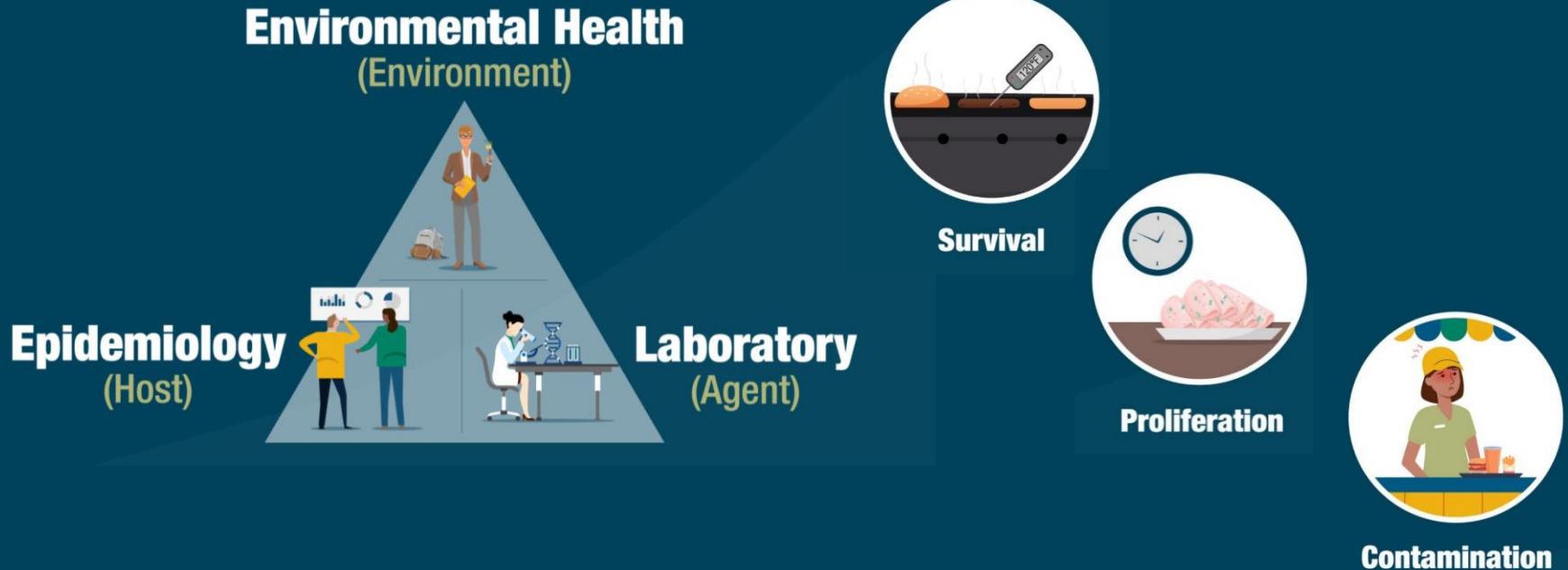


Reviewing or collecting records (for example, records of food cooking temperatures, traceback records)



Sampling for pathogens in the restaurant kitchen

The focus of an outbreak investigation is to understand how and why the outbreak occurred.



The root cause informs the control strategies to stop the outbreak and prevent it from occurring again.



People



Equipment



Food



Processes



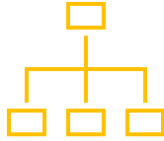
Economics

NEARS outbreak data advance the food safety science and practice.

- ✓ Improve outbreak investigations
- ✓ Improve outbreak prevention



People are the top norovirus outbreak root causes.



Lack of managerial oversight / policy enforcement

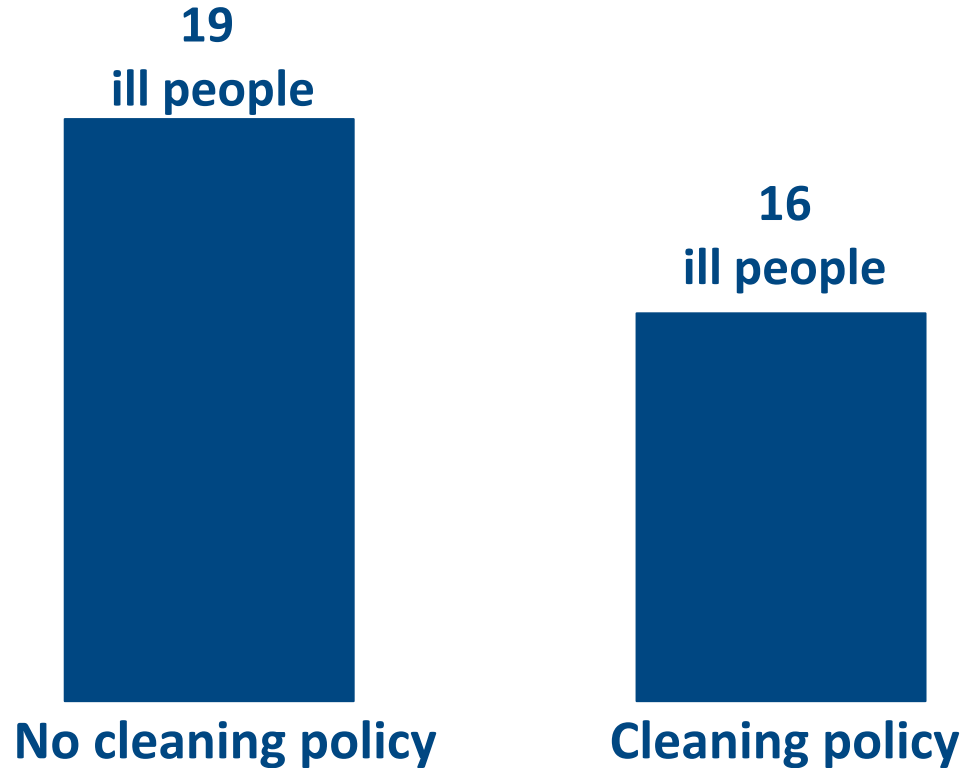


Lack of training on processes

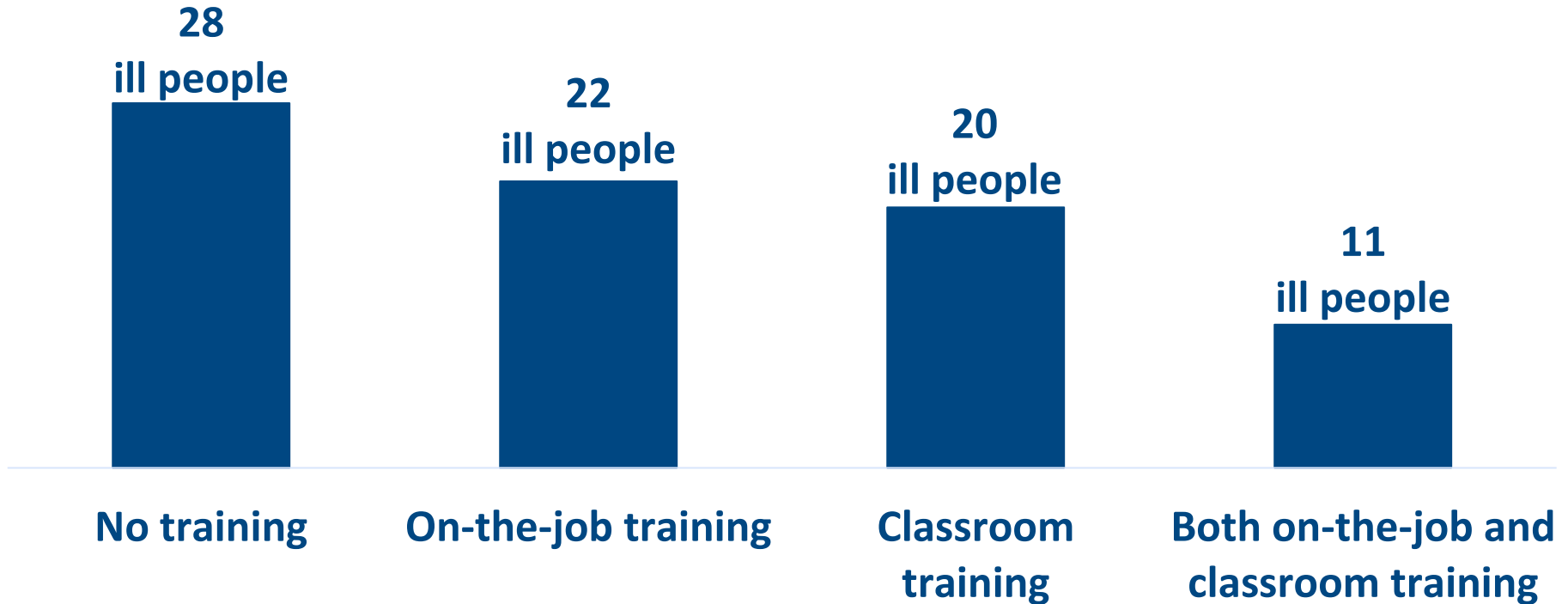


Lack of food safety culture

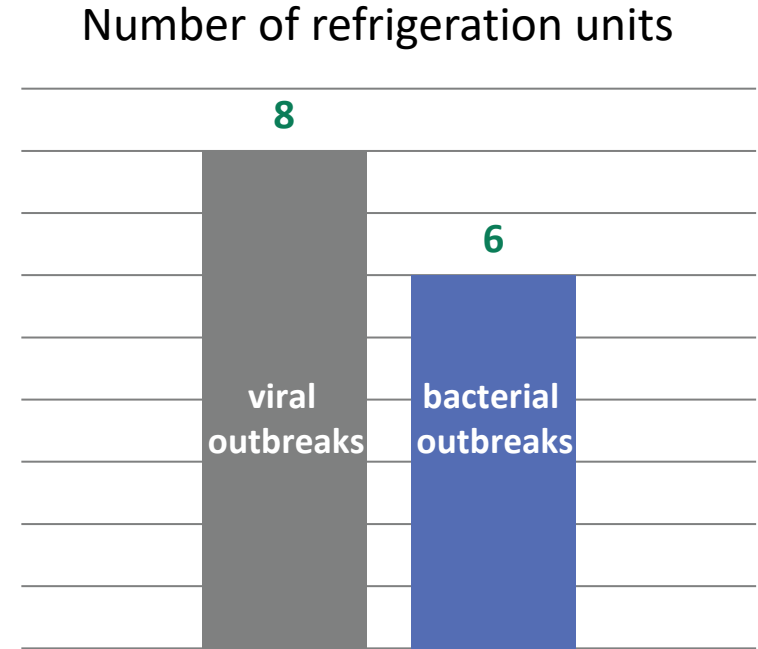
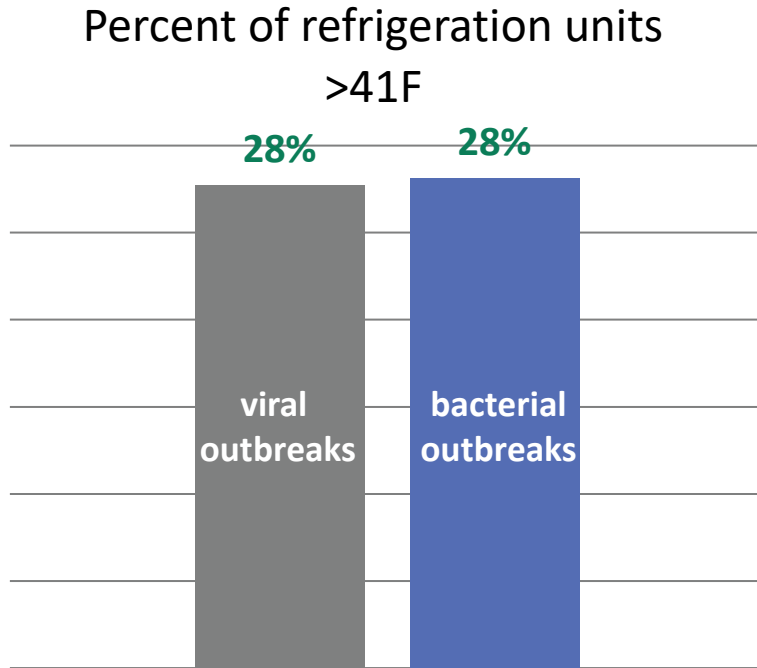
Norovirus outbreaks are smaller in restaurants with cleaning policies.



Restaurants that provide staff food safety training have smaller norovirus outbreaks.



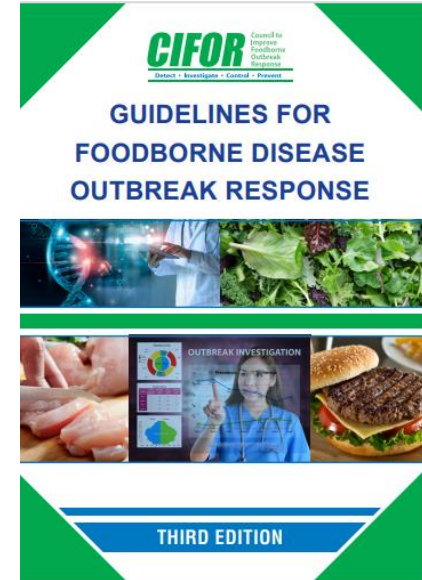
Restaurants with bacterial outbreaks had almost 25% fewer refrigeration units than restaurants with viral outbreaks.



NEARS data supported the importance of collaborative outbreak investigations.

Investigations more often identified an agent, food, and contributing factor if they had:

- a robust epidemiology investigation method
- a thorough environmental assessment (multiple visits)
- the collection of clinical samples.



NEARS data enhanced FDA *Calls to Action* to mitigate norovirus.

Norovirus outbreaks were smaller when

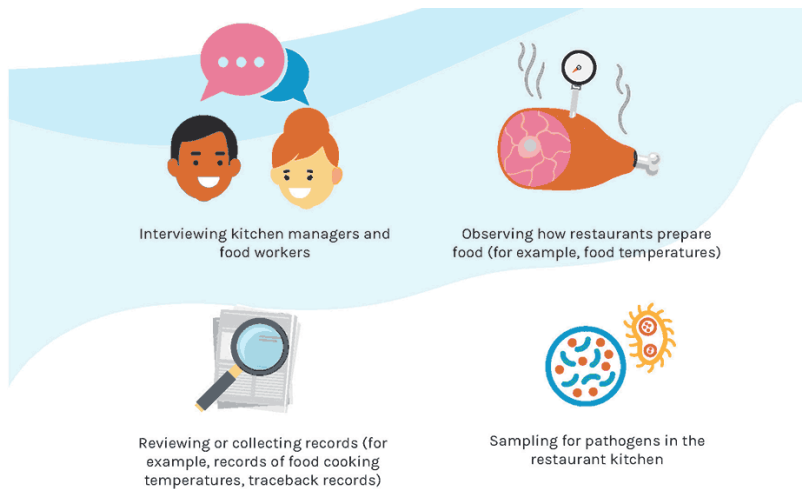
- Restaurants had
 - a certified food safety manager.
 - managers who received on-the-job food safety training.
 - cleaning policies.
- Food workers
 - received food safety training both on the job and in a classroom.
 - wore gloves.



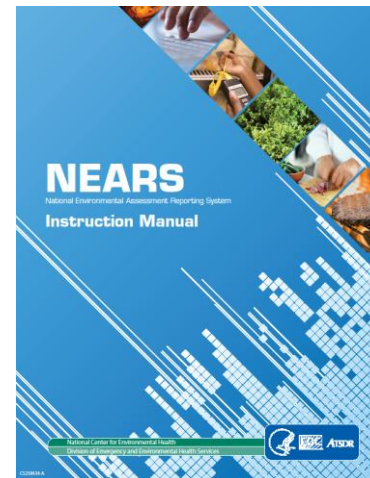
NEARS Instrument

Environmental assessments and NEARS

Environmental assessments



NEARS



Environmental assessment process

Step 1

- Prepare to conduct environmental assessments during outbreak investigations

Step 2

- Conduct environmental assessments during outbreak investigations
- Collect some specific data for NEARS

Step 3

- Report environmental assessment data to NEARS when investigation is complete

Prepare to conduct environmental assessments

- **Review resources**
 - CIFOR Guide for Foodborne Disease Outbreak Response
 - Contributing Factor Definitions
 - IAFP Food Processing and Preparation History Form
 - Centers of Excellence environmental assessment resources
- **Communicate and make a plan with your investigation counterparts**
- **Shadow experienced investigators**
- **Review NEARS guidance**

Conduct environmental assessments

Conduct environmental assessment

- Conduct assessment activities for suspected and confirmed outbreaks
- Keep track of visits, dates
- Consult with epi and lab as needed
- Take and complete NEARS Parts 2, 3, 4 in the field

Collect and synthesize information from the investigation

- Consult with epi and lab as needed
- Determine contributing factors

Complete the investigation

- Complete outbreak report for your jurisdiction
- Report data to relevant state and CDC databases

Report environmental assessment data to NEARS

Part	Purpose
I: General characterization of the outbreak and outbreak response	Characterize the outbreak associated with the reported environmental assessments
II: Establishment characterization, categorization, and menu review	Gather basic information about the establishment's menu, food offered, and potential language barriers
III: Manager Interview	Characterize the policies and practices in the establishment based on a manager interview
IV: Establishment Observation	Collect information about the food establishment based on observations of the facility and the practices used during the environmental assessment
V: Confirmed/Suspected Foods	Capture specific information on the foods suspected and/or confirmed in the outbreak
VI: Positive Samples	Provide information on any environmental sampling
VII: Contributing Factors	Capture the likely contributing factors identified for the outbreak

Report environmental assessment data to NEARS

Part I- Outbreak

- Number of locations
- Agent
- Outbreak ID numbers

Part II- Outbreak establishment

- Establishment type
- Menu
- Violations from last visit



Data come from consultation with epi and lab, records review, and observations during assessment

Report environmental assessment data to NEARS

Part III- Manager Interview

- Ownership
- Training
- Policies



**Data come from NEARS
manager interview**

Part IV- Establishment Observation

- Hand sinks
- Practices
 - Temperature control
 - Cleaning



**Data come from NEARS
observation**

Report environmental assessment data to NEARS

If the outbreak has a suspected or confirmed food

Part V- Suspected/Confirmed Food

- **Ingredient form**
- **Identification process**



**Data come from EA activities- record
review, observation, interviews**

Report environmental assessment data to NEARS

If environmental sampling was conducted for the outbreak

Part VI- Environmental Sampling

- Number of samples
- Location of samples
- Agent



Data come from lab and EA activities

Report environmental assessment data to NEARS

If a contributing factor was identified for the outbreak

Part VII- Contributing factors

- Identification process
- When it occurred



**Data come from consultation, synthesis
of information from investigation**

NEARS Roles

Investigators: Complete their outbreak investigation.

Data Entry (Investigator or Designee):

- Starts a new assessment in the NEARS system.
- Enters environmental assessment findings (Assessment Status: Open).
- Changes status to "Administrator Review" and notifies Group Admin.

Group Admin:

- Reviews assessment for completeness and accuracy.
- Changes status to "Closed".

CDC NEARS Team:

- Starts the data cleaning process.
- Creates summary reports.

Resources

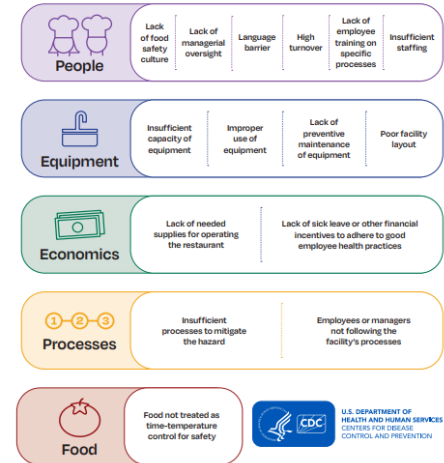
We provide trainings and tools for outbreak investigations.



Root Causes Overview

Root causes are the reasons outbreaks occur. They are sometimes called environmental antecedents. Identifying root causes can help determine the steps needed to stop the outbreak and prevent future ones. Explore the five categories of root causes below, along with examples of each within the context of restaurant outbreaks.

For more information on root causes and reporting them through CDC's National Environmental Assessment Reporting System, visit <https://www.cdc.gov/restaurant-food-safety/hygiene/glossary.html>



We develop infographics based on research findings.

Can Restaurant Managers Talk with Sick Workers? 3 Things Restaurant Managers Need To Know

Restaurant managers: Talk to your employees about their symptoms and diagnoses so you can make sure sick workers don't spread foodborne illness.

- Nearly half of restaurant-related outbreaks are caused by sick food workers.
- Managers need to know if their workers are sick so they can decide if they should handle food.



Three Things To Know

- 1 The Food Code encourages employee and manager conversations about foodborne illness.**
 - The Food Code is a science-based model code published by the Food and Drug Administration that states can use to develop or update their food safety rules to help prevent illness and outbreaks.
 - It says that employees should tell their managers about possible foodborne illness symptoms and that it is the manager's responsibility to ensure employees are aware of these reporting requirements.
 - Most state and local food codes in the United States are modeled on the FDA Food Code.
- 2 The Health Insurance Portability and Accountability Act of 1996 (HIPAA) does not prevent restaurant managers from asking employees about foodborne illness symptoms and diagnoses.**
 - HIPAA sets privacy standards for protected health information.
 - HIPAA does prevent a *health care provider* from sharing health information about an employee with that employee's manager but it does not prevent a *restaurant manager* from asking an employee about their illness symptoms.
- 3 The Americans with Disabilities Act of 1990 (ADA) does not prevent managers from asking employees about foodborne illness symptoms and diagnoses.**
 - ADA seeks to prevent discrimination and ensure equal opportunity for persons with disabilities.
 - Most foodborne illnesses are mild and short-term and are not considered disabilities under ADA.

KITCHEN MANAGER CERTIFICATION

An Important Way To Improve Restaurant Food Safety

RESTAURANTS WITH MANAGERS CERTIFIED IN FOOD SAFETY...



are less likely
to have foodborne
illness outbreaks



have better food
safety practices



have better ratings and
fewer critical violations
on their inspections

Each year, 800 outbreaks of foodborne illness occur in the United States and most of these are linked with restaurants. Government agencies and the restaurant industry can use kitchen manager certification to improve food safety in restaurants.

WHAT IS KITCHEN MANAGER CERTIFICATION?

Certified kitchen managers are restaurant employees with management responsibility who have passed a test to show knowledge of food safety.

TYPICALLY, THEY DO THIS BY:



- Taking a **food safety course**
- Passing a **test** test from an accredited program:

- Always Food Safe Company
- National Registry of Food Safety Professionals
- National Restaurant Association (ServSafe)
- Prometric
- StateFoodSafety.com
- 360training.com (Learn2Serve)



We publish plain language research summaries.

Studies on Restaurant Practices Linked to Foodborne Illness Outbreaks

It is important to learn more about food worker practices. This can help us find ways to reduce risky practices.

Date Marking



We found that almost 1 in 4 restaurants did not label their refrigerated and ready-to-eat foods with dates indicating when the food is no longer safe to eat.

[Date Marking and Restaurant Practices: Key Takeaways from Our Research](#)

Food Safety Culture



Learn the key components of a strong food safety culture in restaurants.

[Restaurants and Food Safety Culture](#)

Retail Delis



Sliced deli meats are at higher risk of *Listeria*, which causes the third highest number of foodborne illness deaths in the United States each year.

[Retail Delis Can Address Gaps in Food Safety: Key Takeaways from 5 Scientific Articles](#)

Food Cooling



Many outbreaks of foodborne illness in restaurants were caused by hot food cooled too slowly.

[Food Cooling Practice Improvements: Key Takeaways from 3 Food Safety Reports](#)

Preparation



Food workers often do not handle food safely. What affects their practices?

[Factors Affecting Safe Food Preparation by Food Workers and Managers](#)

[Food Safety Practices of Restaurant Workers](#)

Restaurant Inspections



Studies found posting health department restaurant inspection scores at restaurants and using letter grades for restaurant inspection results are linked with fewer foodborne outbreaks and could lead to safer restaurants.

[Outbreak Rates and Restaurant Inspection Practices](#)

Studies on Foods Linked to Foodborne Illness Outbreaks in Restaurants

Germs found in some foods can make you sick if you don't kill the germs by cooking the food. These germs can also make you sick if they get into other foods that aren't then cooked.

Chicken



[How Restaurants Prepare and Cook Chicken](#)

Eggs



[How Restaurants Prepare Eggs](#)

Leafy Greens



[How Restaurants Receive Leafy Vegetables](#)

Ground Beef



[Beef Grinding Records Kept by Retail Stores](#)

[Restaurant Ground Beef Handling and Cooking](#)

Tomatoes



[How Restaurants Handle Tomatoes](#)

NEARS Community



FoodSHIELD

- NEARS manual and instrument
- Meeting presentations
- Site resources
- Training materials



Distribution List

- Bi-monthly NEARSletter
- NEARS quarterly meetings
- Conference presentation opportunities
- Recently released trainings and courses
- Funding opportunities

Check out our resources.

- [Webinar: Improving Restaurant Food Safety Through Science & Practice](#)
- Food Safety Findings in [Plain Language](#)
- Environmental Health [Infographics](#)
- Environmental Health [Factsheets](#)
- [NEARS Resources | EHS | CDC](#)
- [Resources to Support Recovery](#)





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

TTY: 1-888-232-6348 [cdc.gov](https://www.cdc.gov)

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