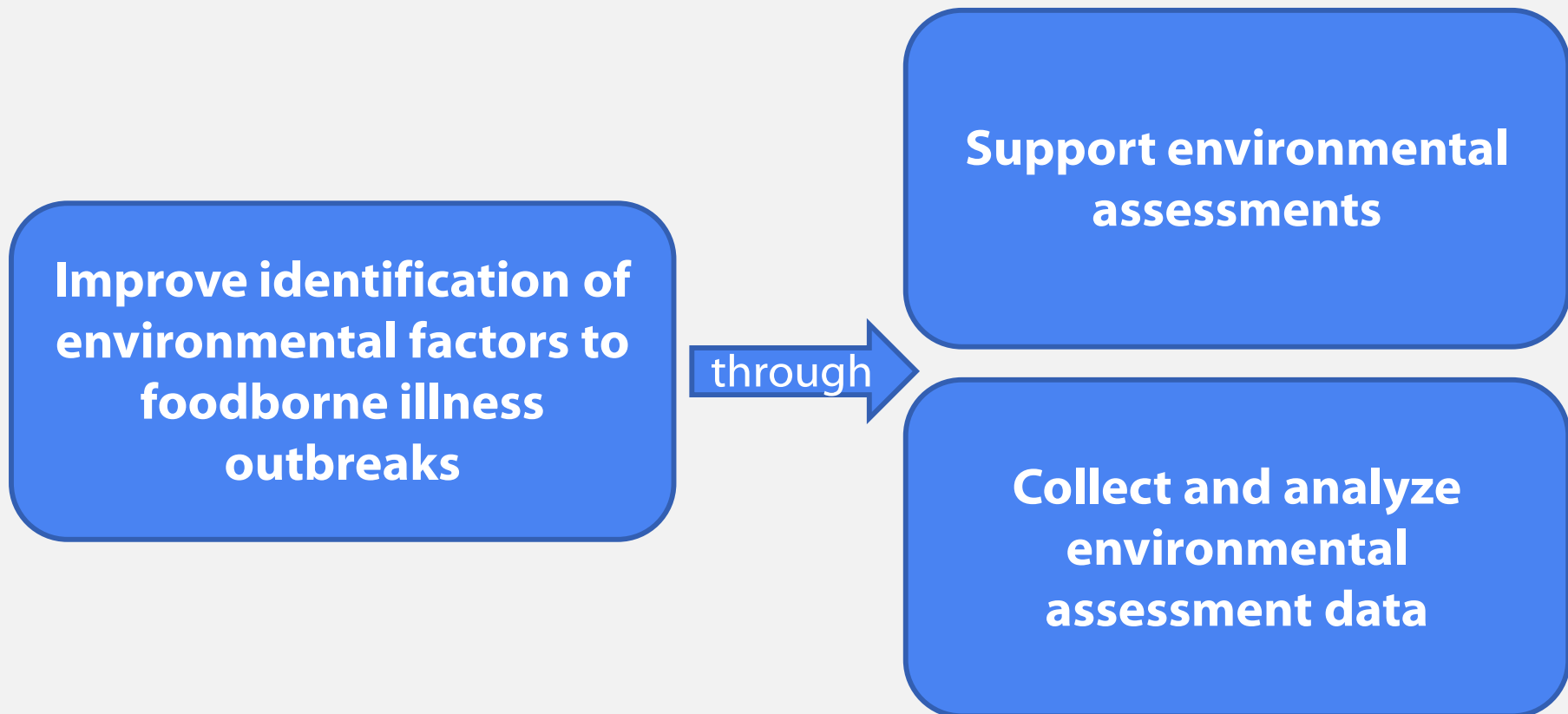


National Environmental Assessment Reporting System (NEARS): Informing foodborne outbreak investigation and prevention

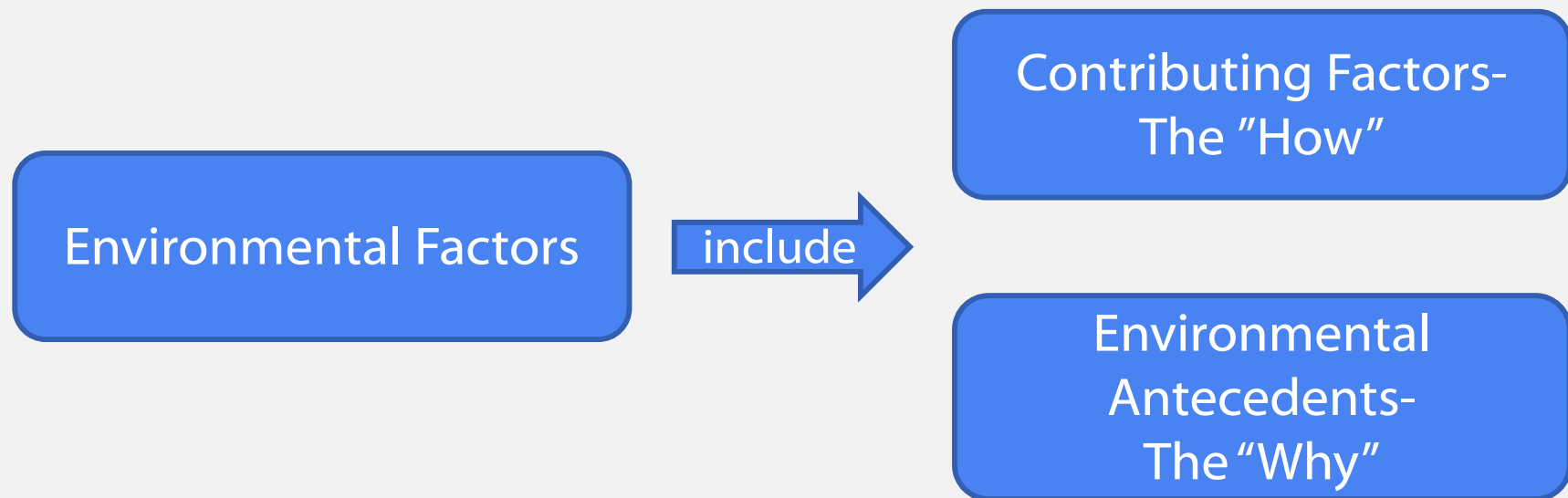
Form Approved
OMB No. 0920-0980
Exp. Date 08/31/2022

CDC estimates the average public reporting burden for this collection of information as two hours per response, including the time for reviewing instructions, searching existing data/information sources, gathering and maintaining the data/information needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to: CDC/ATSDR Information Collection Review Office, 1600 Clifton Road NE, MS D-74, Atlanta, Georgia 30333; ATTN: PRA (0920-0980)

DEHSP's objectives



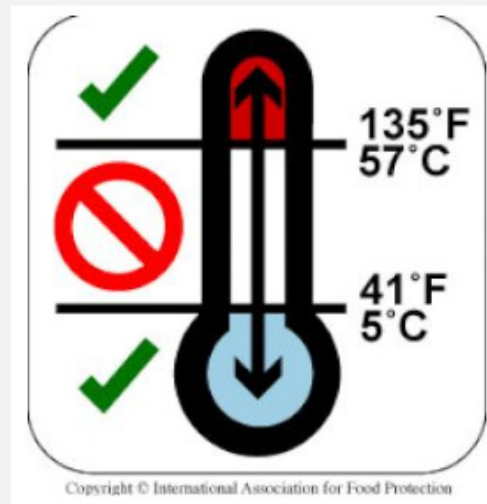
Environmental factors include contributing factors and environmental antecedents



Environmental factors include contributing factors



Contamination



Proliferation



Survival

|

Environmental factors include environmental antecedents



People



Processes



Equipment



Economics



Food

Environmental factor pathway

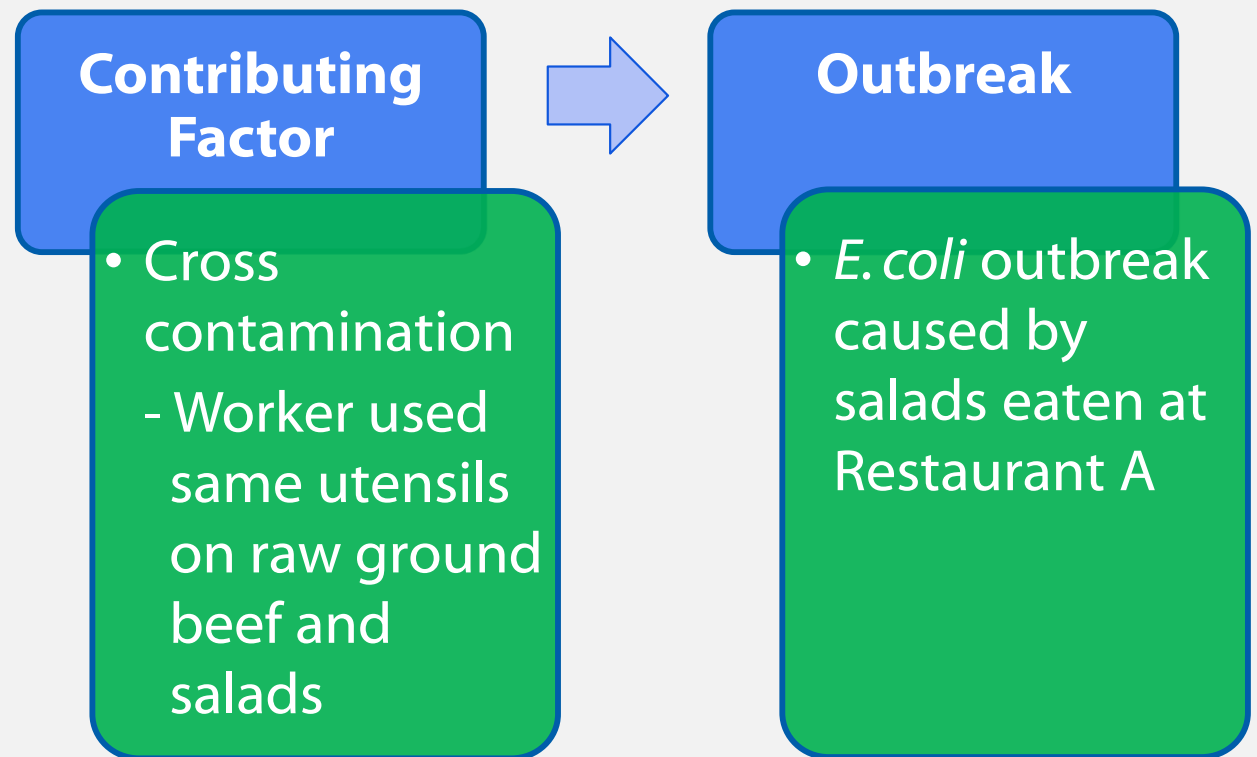


Environmental factor pathway

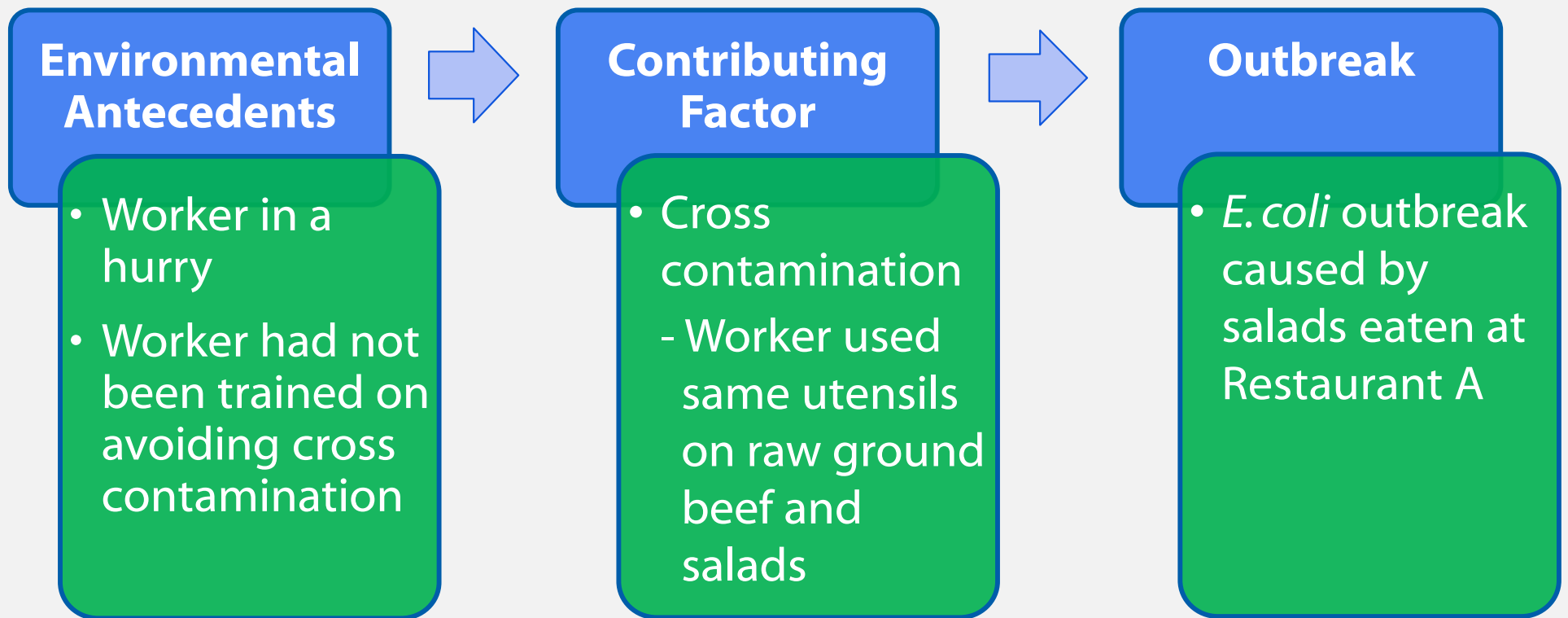
Outbreak

- *E. coli* outbreak caused by salads eaten at Restaurant A

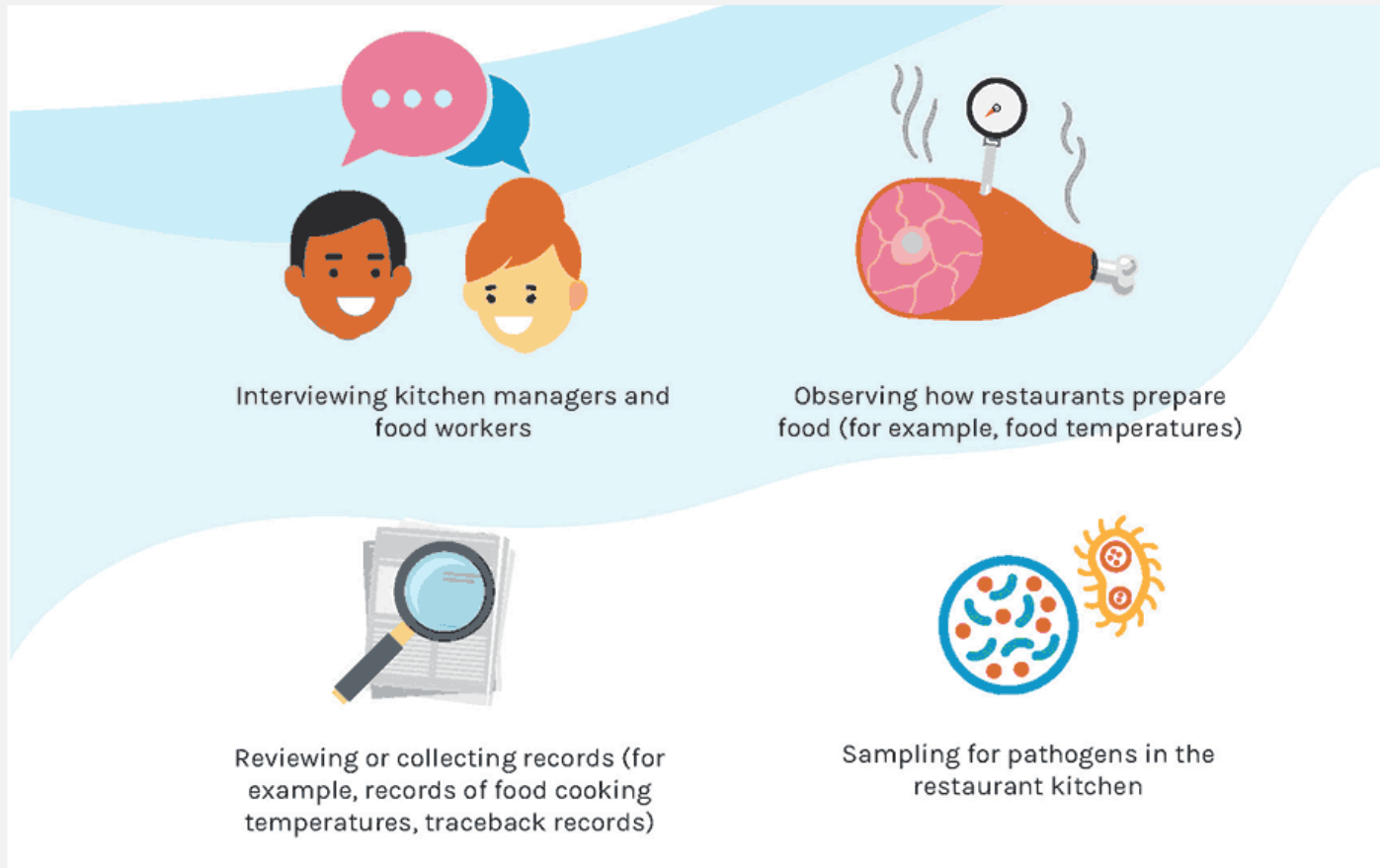
Environmental factor pathway



Environmental factor pathway



Outbreak environmental assessment activities



We need to improve reporting of environmental assessment data

- **Environmental assessment data are key to:**
 - Understand how and why outbreaks occur
 - Develop appropriate guidelines, policies and practices
 - Prevent future outbreaks
- **Engage food safety officials responsible for conducting environmental assessments**
- **Limited environmental assessment data reported at a national level**

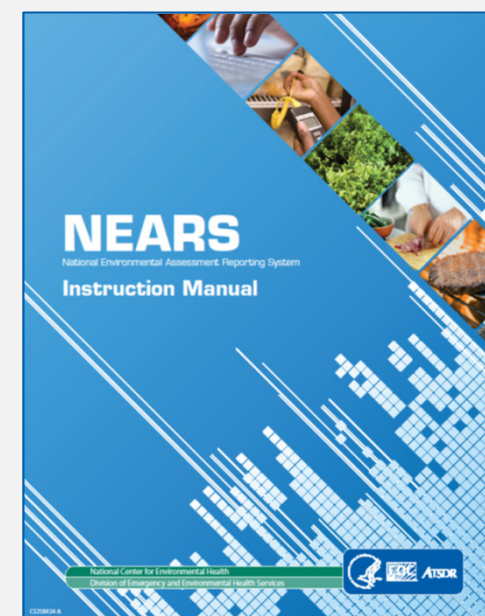
Support of environmental assessments: Environmental Assessment Training Series (EATS)

- Designed to improve program competency in conducting environmental assessments
- Free, web-based, interactive, self-paced
- CEUs are available
- Participants show a 25-percentage point increase in test scores



Collection and analysis of environmental assessment data: National Environmental Assessment Reporting System (NEARS)

- Companion surveillance system to the National Outbreak Reporting System (NORS)
- Repository for state and local program data collected from environmental assessments
- 45 state and local agencies are currently registered to report data into NEARS



Collection and analysis of environmental assessment data: National Environmental Assessment Reporting System (NEARS)

Programs report data on:

- **Outbreak characteristics**
 - Contributing factor identification
- **Investigation characteristics**
 - Timeliness of environmental assessment, environmental sampling
- **Outbreak establishment characteristics**
 - Characteristics
 - Ownership, meals served daily
 - Food safety policies and practices
 - Ill worker exclusion, cleaning, cold holding temperatures

Short-term benefits of NEARS participation

**Annual report from
CDC summarizing
your NEARS data**

***Complements
FDA Standard 5
Requirements**

**Collaboration/
communication with
other states/localities
participating in
NEARS**

**Potential scientific
publication
opportunities**

**Ability to document
and track foodborne
outbreak response
data**

CDC's National Environmental Assessment Reporting System (NEARS)

2015 Summary Report

In 2015, a total of 114 outbreaks were reported to NEARS. This summary provides information on characteristics of those outbreaks and the establishments where the outbreaks occurred.

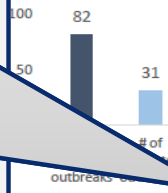
The data included in this summary were collected by NEARS participants in California; Connecticut; Davis County, Utah; Fairfax County, Virginia; Harris County, Texas; Minnesota; New York City; New York State; Rhode Island; Tennessee; and Wisconsin.

88%
outbreaks reported to NORS

Average # of Visits to Complete an Environmental Assessment
2 Visits

Outbreak Characteristics

Foodborne Illness Outbreaks*



* N varies because of missing data in NEARS.

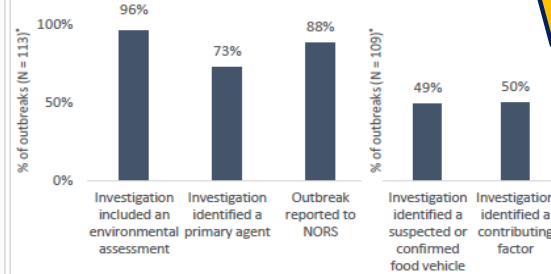
Outbreak Response

The average number of days between the date the outbreak establishment was identified for an environmental assessment and the date of the following activities with the outbreak establishment:

- 1st contact = 1 day (min = 0, max = 15)
- Establishment observation = 2 days (min = 0, max = 29)
- Manager interview = 14 days (min = 0, max = 121)

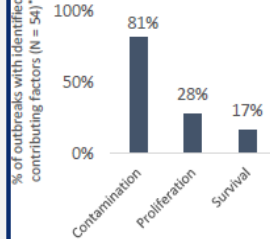
The average number of visits to the outbreak establishment needed to complete an environmental assessment = 2 visits (min = 1, max = 6)

Outbreak Investigation Characteristics



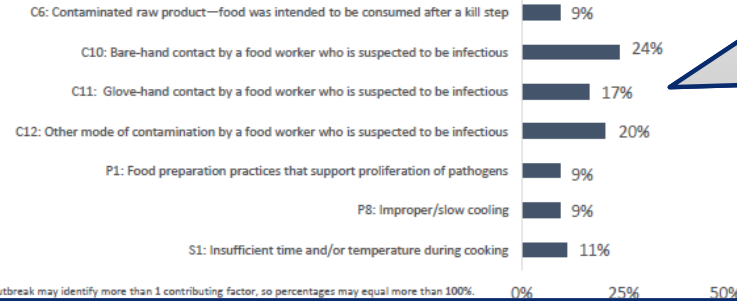
* N varies because of missing data in NEARS.

Outbreak Contributing Factors*



* Each outbreak may identify more than 1 contributing factor, so percentages may equal more than 100%.

Most Common Outbreak Contributing Factors*



* Each outbreak may identify more than 1 contributing factor, so percentages may equal more than 100%.

Contributing Factors
C10
C11
C12

Long-term benefits of NEARS participation

Data to
improve
foodborne
outbreak
response

What investigation characteristics lead to identification of contributing factors?

Outbreak contributing factors were more often identified when

- an outbreak pathogen had been identified,
- environmental assessments were comprehensive and timely.

Long-term benefits of NEARS participation

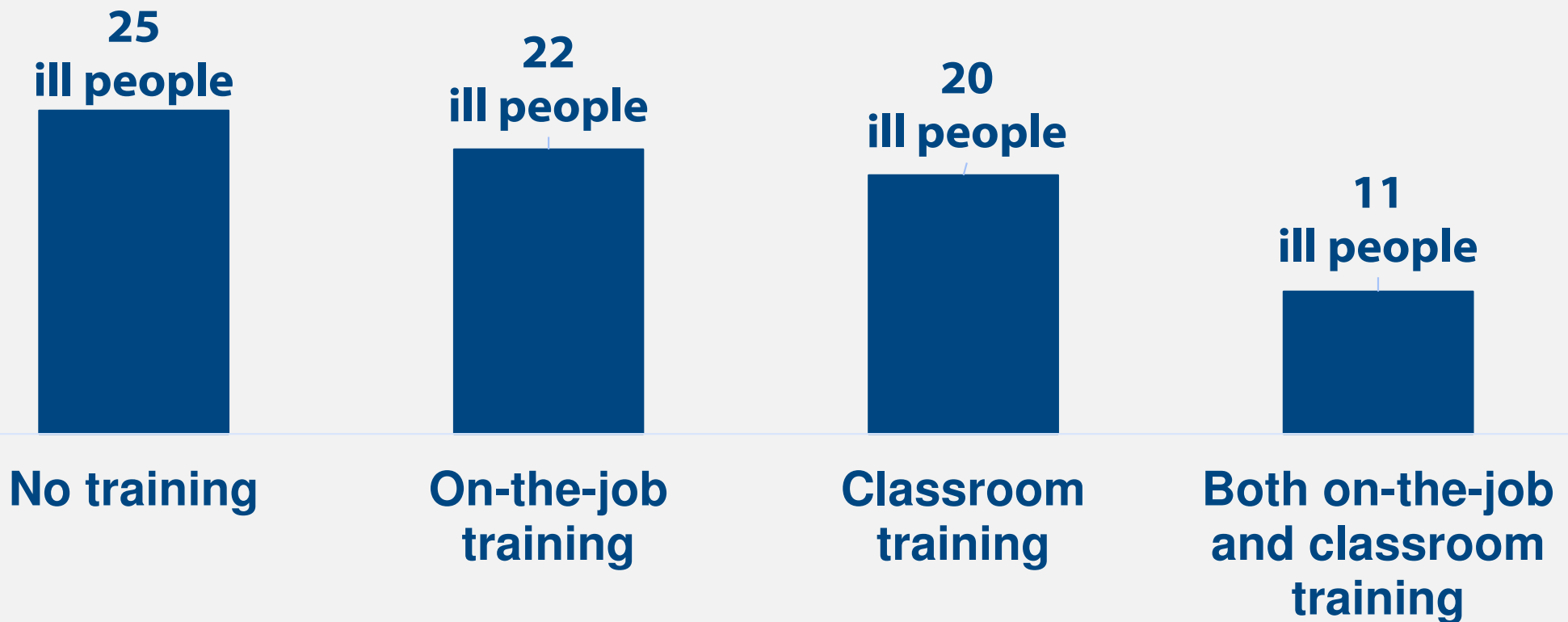
Data to
improve
retail food
safety

What establishment policies and practices are linked with smaller outbreaks?

Analysis of 124 norovirus outbreaks showed that outbreaks were smaller when

- managers received food safety certification
- managers and workers received food safety training
- food workers wore gloves
- restaurants had cleaning policies

Norovirus outbreaks are smaller in restaurants that provide training



Summary

Collection and analysis of environmental assessment data



Improved identification of outbreak environmental factors



Improved prevention and intervention



Improved food safety; fewer outbreaks

Accessing NEARS During the Pilot Program

National Center for Environmental Health



Exploring NEARS

- ✓ **Take online training**

 - CDC's free online environmental assessment training series (EATS)

- ✓ **Fill out Notice of Participation form**

- ✓ **Join NEARS Online Community**

- ✓ **NEARS Instrument Introduction**

Exploring NEARS

After pilot period

- Full access to NEARS
- Questions to NEARS@cdc.gov