

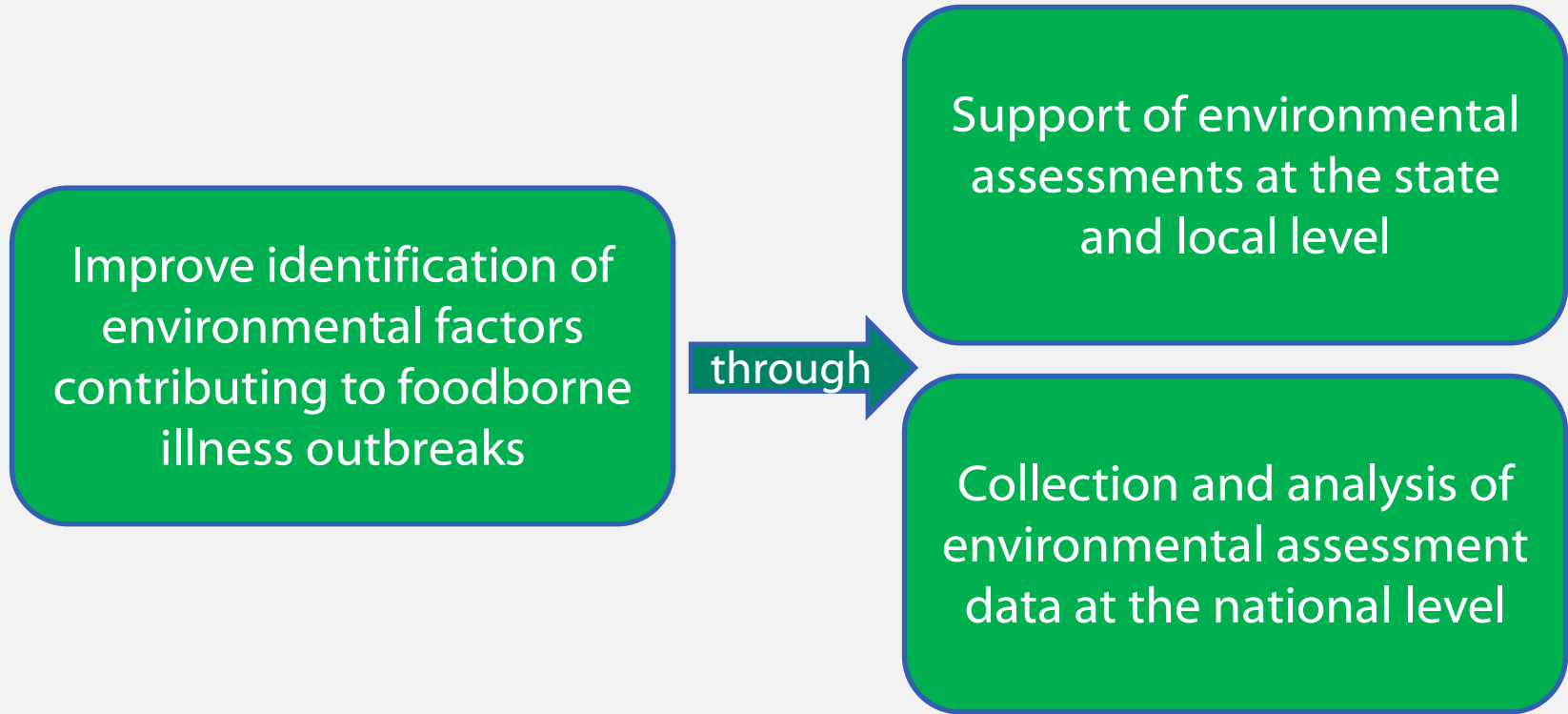
Identifying environmental factors contributing to foodborne illness outbreaks

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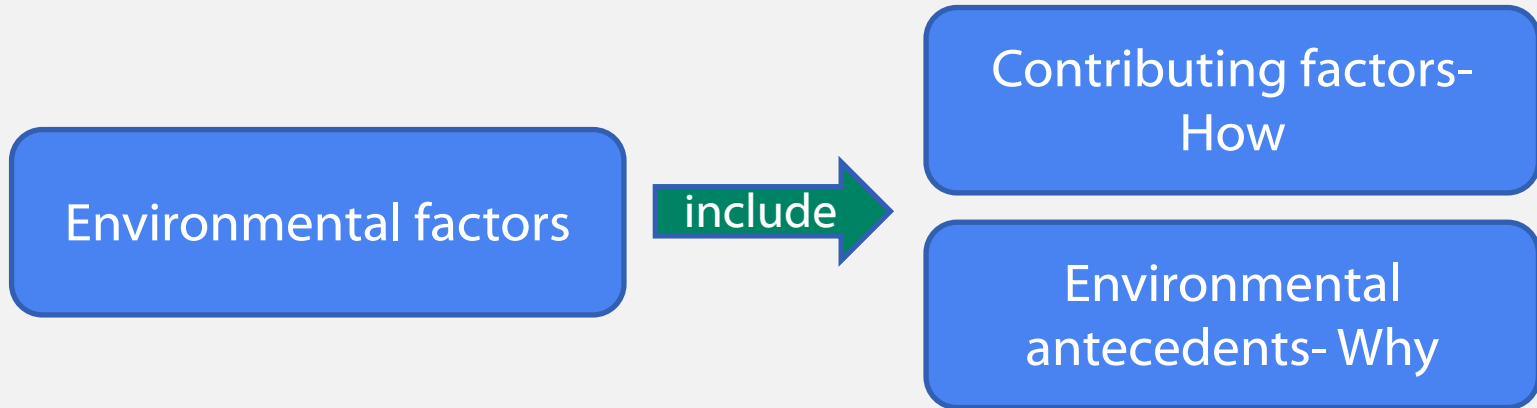
Division of Emergency and Environmental Health
Services (DEEHS)

Environmental Health Services Branch

DEEHS objectives



Environmental factors contributing to outbreaks



Environmental factors contributing to outbreaks

Contributing factors

Contamination

- Cross-contamination of ingredients
- Contact by an infectious/ill worker

Proliferation

- Improper cold holding due to malfunctioning equipment
- Improper cold holding due to improper procedure

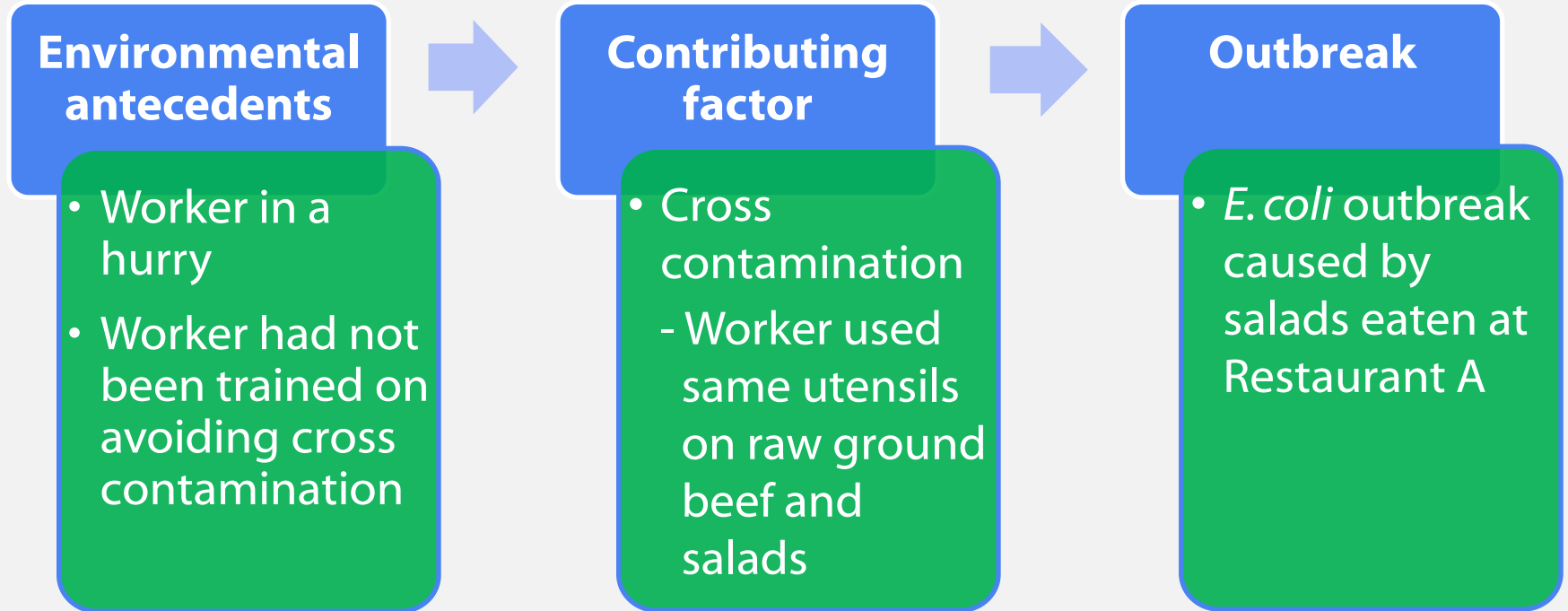
Survival

- Insufficient time/temp during reheating
- Insufficient time/temp during freezing

Environmental antecedents

- People
- Processes
- Equipment
- Economics

Environmental factors contributing to outbreaks



Outbreak environmental assessments

Describe how the environment contributes to the introduction and transmission of illness agents

Are conducted by environmental health program staff

Involve food flows- thorough review of the processes and practices used with suspected food items

Are guided by known information about the outbreak (e.g., agent)

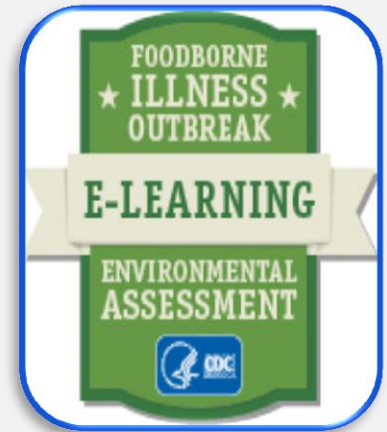
May include staff interviews, observations of food preparation, sampling

Generate recommendations for intervention

DEEHS support of environmental assessments at the state and local level

Development and launch of environmental assessment training

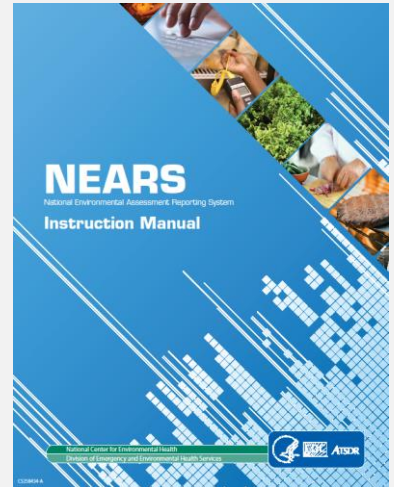
- Designed to improve environmental health programs' competency in conducting environmental assessments during outbreaks
- 4,400 people from over 1,200 federal, state, local government agencies have registered for the training
- Free, web-based, interactive
- Participants are showing a 25 percentage point increase in pre to post test scores



DEEHS collection and analysis of environmental assessment data at the national level

Development and launch of National Environmental Assessment Reporting System (NEARS)

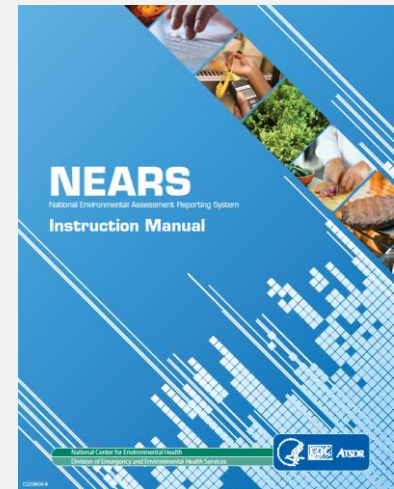
- Repository for state and local programs to report data collected from their environmental assessments
- 21 state and local agencies are currently reporting data into NEARS



DEEHS collection and analysis of environmental assessment data at the national level

Programs report data into NEARS from:

- Interviews
- Observations
- Food flows
- Food and environmental sampling



DEEHS collection and analysis of environmental assessment data at the national level

‘Big’ questions NEARS will help answer

What investigation characteristics lead to identification of environmental antecedents and contributing factors?

↳ Do worker interviews make contributing factor identification more likely?

What environmental antecedents are linked with specific contributing factors?

↳ Is lack of ill worker policies linked with workers working while ill?

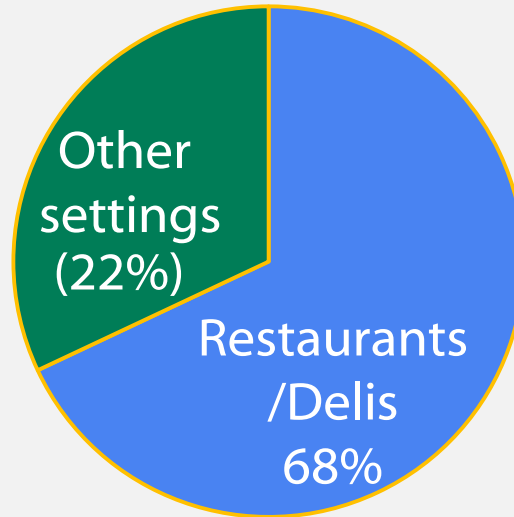
What policies and practices prevent outbreaks?

↳ Are ill worker exclusion policies linked with fewer outbreaks?

DEEHS focus

Our training and NEARS focus on retail food establishments

Outbreak Settings



Summary

Support of environmental assessments at the state and local level

Collection and analysis of environmental assessment data at the national level

Improved identification of environmental factors contributing to foodborne illness outbreaks

Improved prevention and intervention

Improved food safety; fewer outbreaks

Thank you

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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 Centers for Disease Control and Prevention.

