



U.S. CENTERS FOR DISEASE
CONTROL AND PREVENTION

CDC Update

FDA Retail Food Protection Seminar

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National Center for Environmental Health
Division of Environmental Health Science and Practice

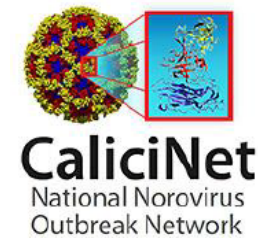
U.S. Foodborne Outbreak Surveillance



Environmental Health



Epidemiology



Laboratory

EATS

Environmental Assessment Training Series

- free and available on the CDC website
- foodborne outbreak environmental assessment skill building
- used by health departments to train new investigators

Modules:

101: foundation skills for environmental assessments

102: environmental assessment skill building in unique settings



Environmental Antecedents of Foodborne Illness Outbreaks, United States, 2017 - 2019

PURPOSE.

Use NEARS data to conduct a descriptive analysis on the root causes of foodborne illness outbreaks

MAIN FINDINGS.

People are the root cause of most outbreaks:

- lack of a food safety culture
- lack of managerial oversight
- lack of training



People



Equipment



Economics



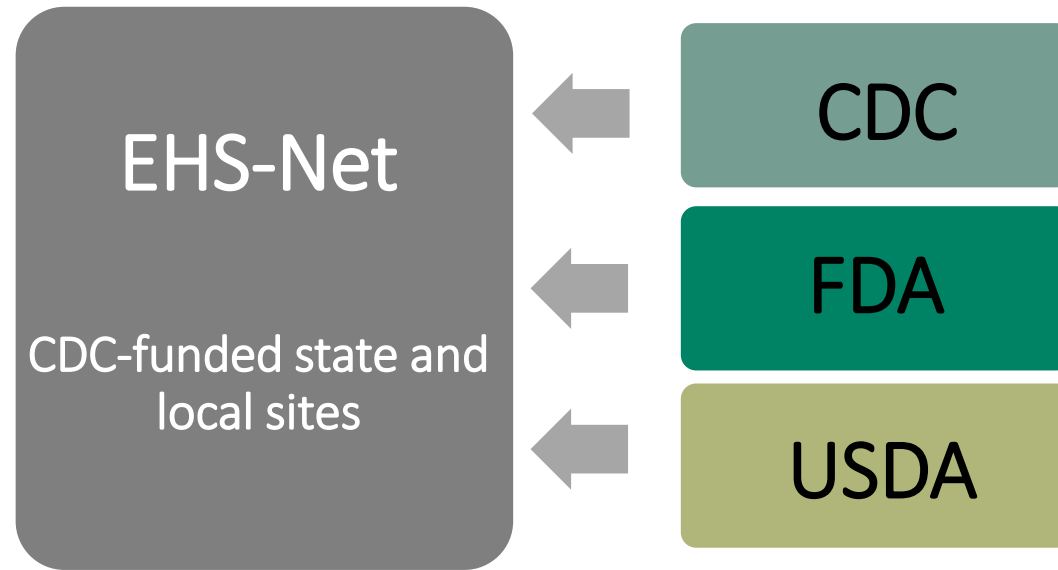
Processes



Food

Environmental Health Specialists Network (EHS-Net)

a network of federal, state, and local environmental health specialists and epidemiologists



CDC funds 8 state and local health departments to conduct research on:

- restaurant food safety policies and practices
- the causes of restaurant-related foodborne illness outbreaks

Environmental Health Specialists Network (EHS-Net)

Notice of Funding Opportunity

Aims to advance research on improving food safety practices to reduce foodborne illness

Supports programs in public health departments to conduct:

- multisite research projects focused on improving retail food safety
- individual research projects, unique to each recipient's needs focused on improving retail food safety
- the environmental health component in foodborne outbreak investigations and report data to CDC's National Environmental Assessment Reporting System (NEARS)



Key dates

Application deadline:
December 2, 2024

Optional letter of intent deadline: November 4, 2024

Informational call: October 15, 2024 at 3 p.m. ET

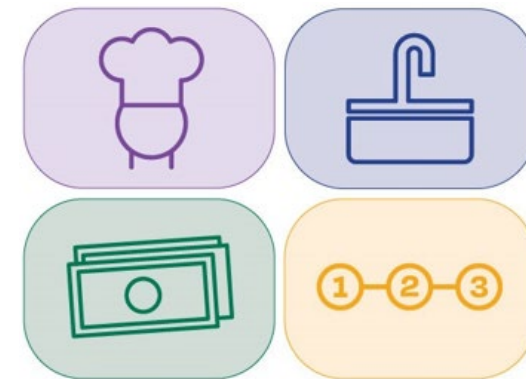
Expected scientific review dates: April 23, 2025

Expected secondary review dates: June 6, 2025

Expected award date:
August 29, 2025

Expected start date:
September 30, 2025

Expiration date: March 9, 2025



Identifying Root Causes of Handwashing Violations

an FDA and EHS-Net Initiative

Meghan Holst, CDC

Artem Zoubstov, New York City Department of Health and Mental Hygiene

Brendalee Viveiros, Rhode Island Department of Health

Purpose

- Apply critical thinking to identify root cause(s) of handwashing violations
- Inform corrective action/intervention to improve food safety practices
- Collect feedback on *Handwashing Violation Root Cause Guide*

Risk-based Inspections and Environmental Assessments

Target risky practices and behaviors

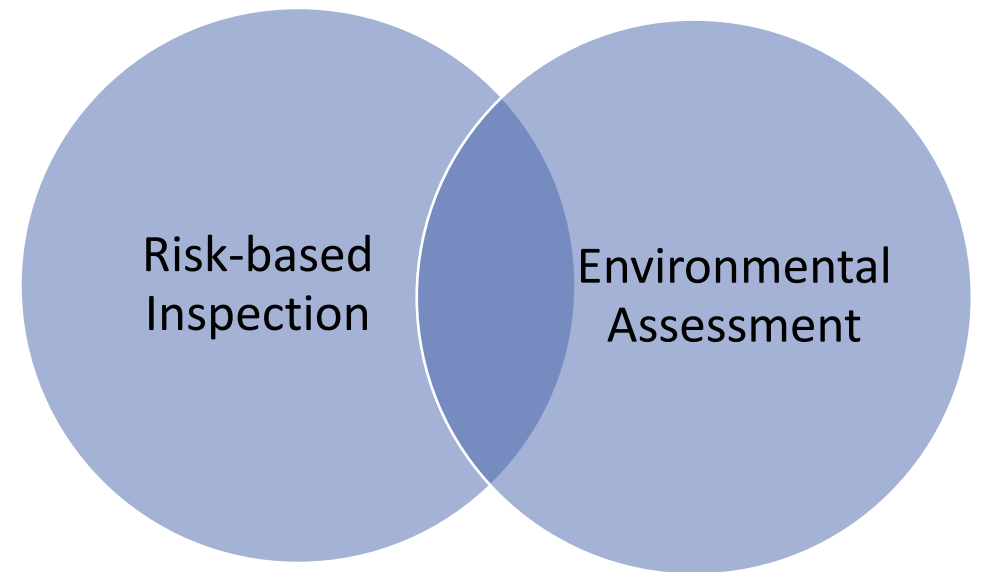
- Environmental Assessments: What led to the contamination, proliferation, and/or survival of agent in food?
- Risk-based Inspections: What are the top risk factors that can lead to foodborne illness?

Collect evidence during the site visit

- Interviews
- Observations
- Record Review

Recommend and prioritize corrective actions

- Focus is on developing long-term, practical solutions.



The root cause informs the control strategies to correct a violation and prevent it from occurring again.



People



Equipment



Food



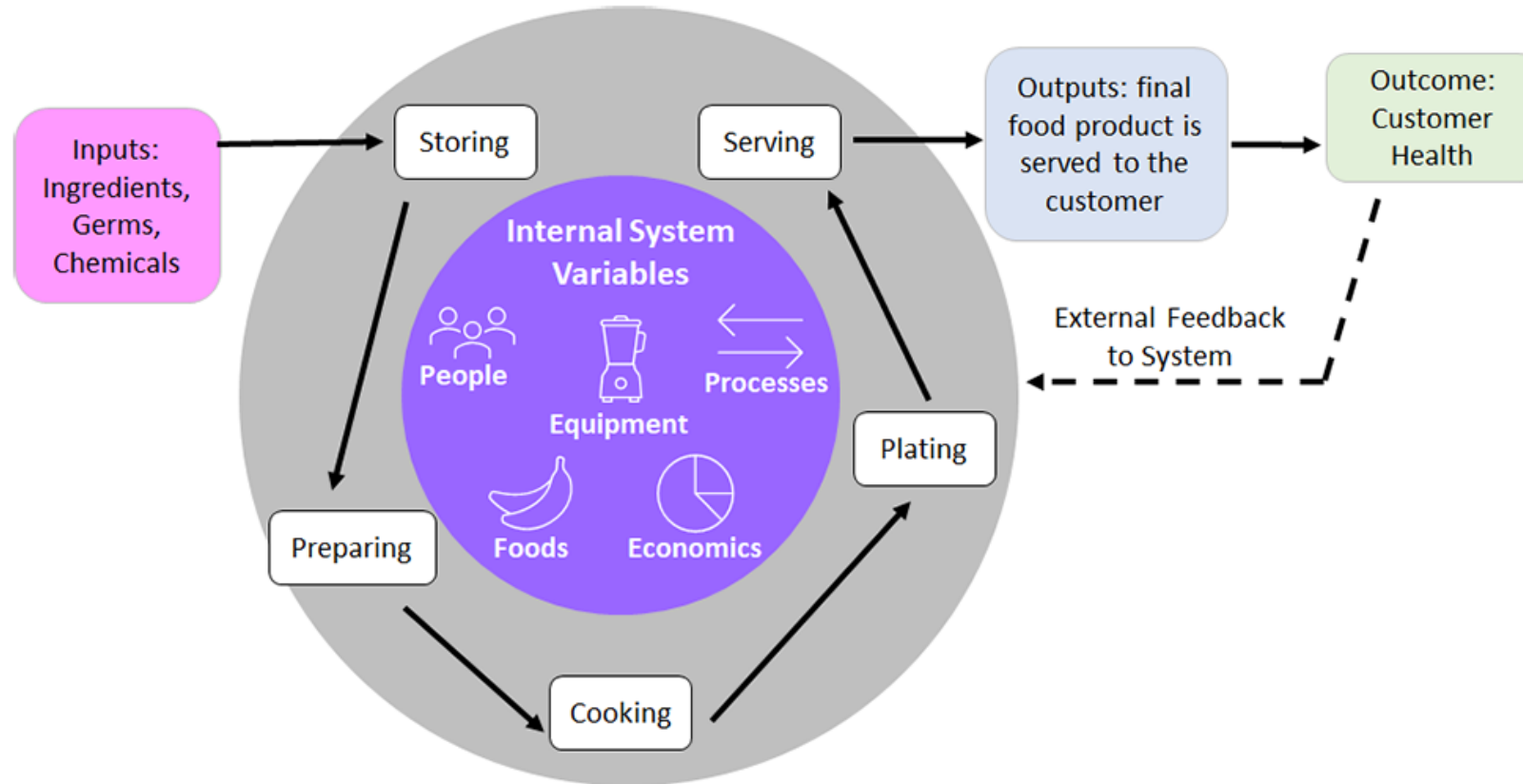
Processes



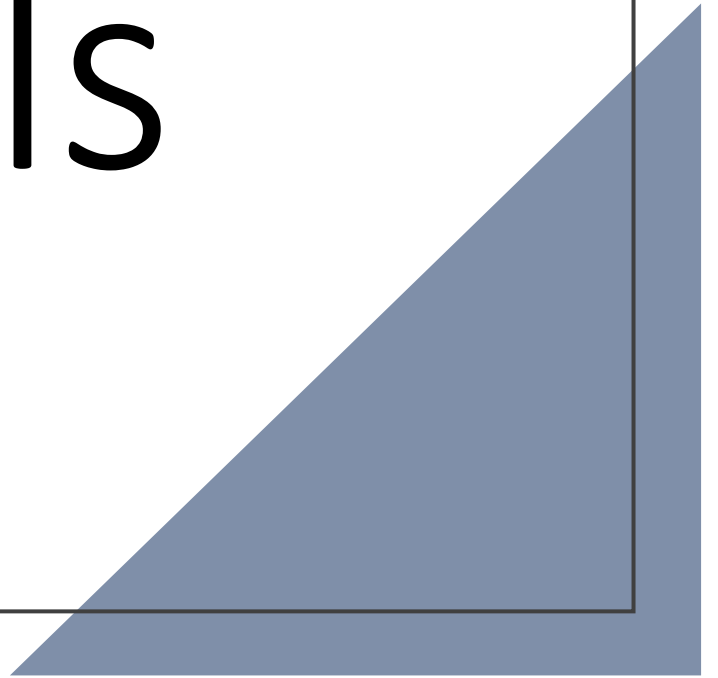
Economics

Systems Theory

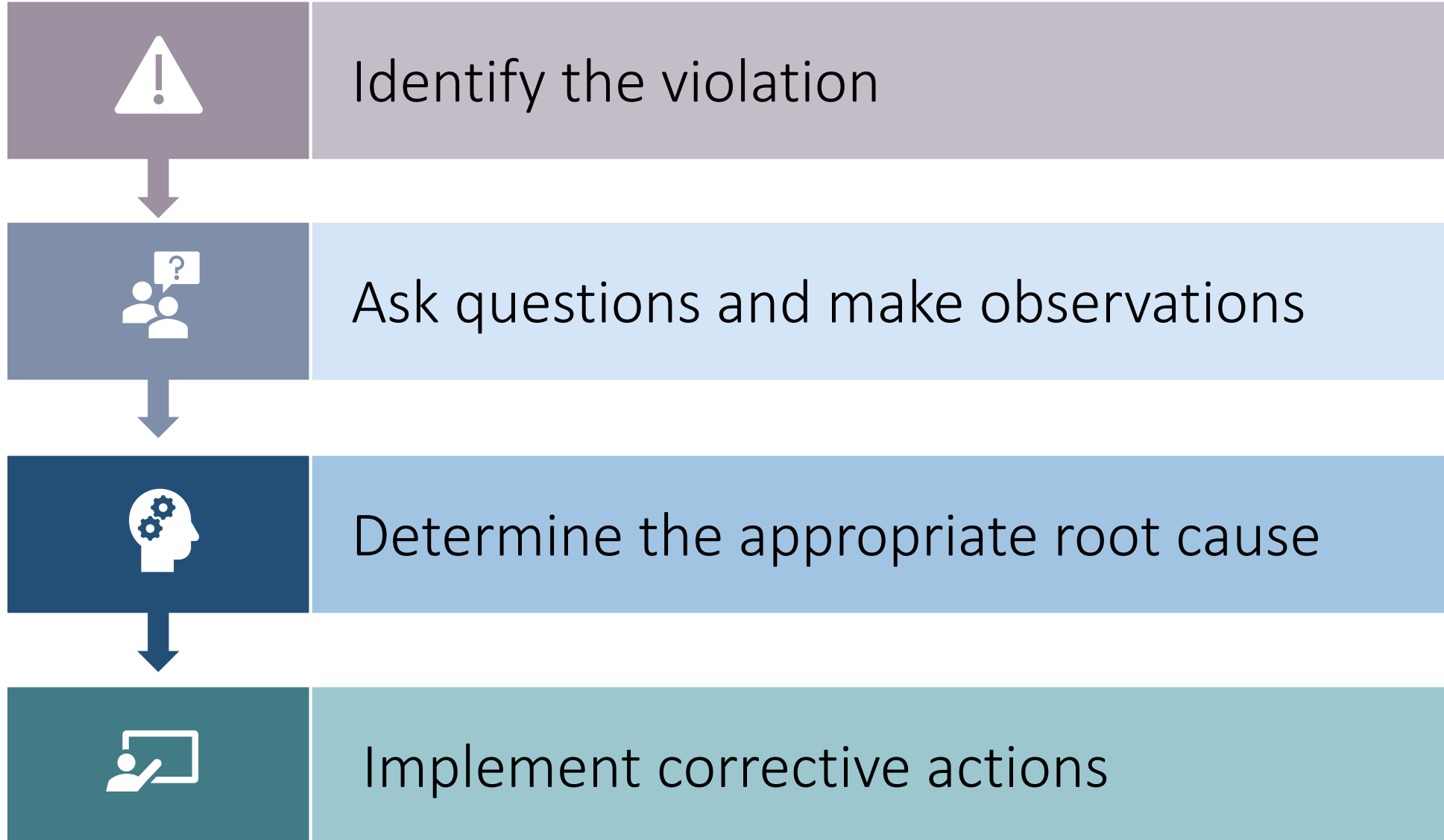
How and why did the violation occur?



Root Cause Analysis Tools



Process



Control Measures

Short-term

Embargo/discard/destroy product

Require physical facility or equipment change

Change ingredient (remove or replace)

Change process (correct or replace)

On-the-job training

Fines/penalties

Closure

Limit menu/restrict food

Long-term

Formal training/certification

Policy change (written or documented)

Risk control plans

Increased inspections

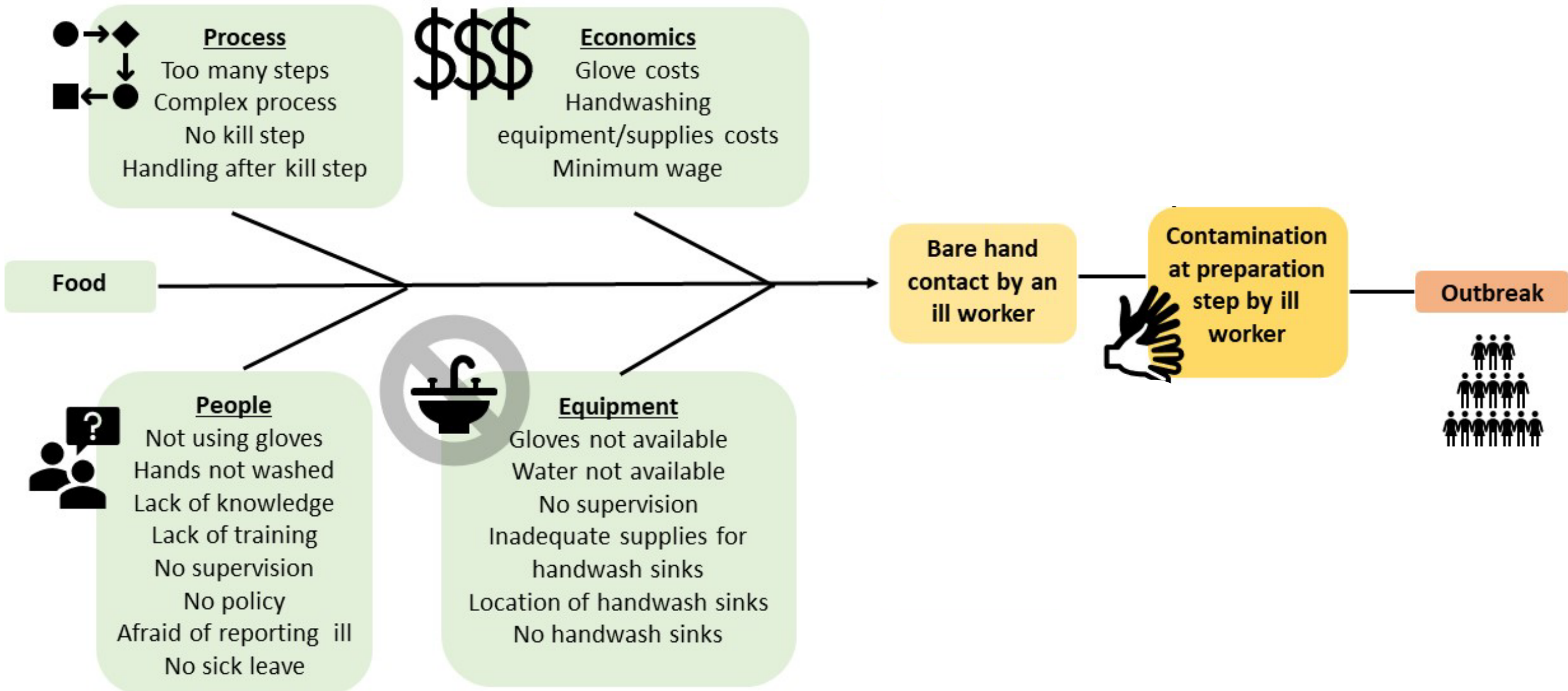
Change supplier

Require consultant or 3rd party audit

Change product (remove or replace)

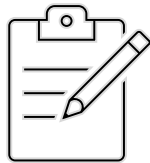
Fishbone Diagrams

Norovirus Outbreak Example



The 5 Whys

Iterative method used to explore cause-and-effect relationships of a particular problem



- Ask “Why” questions five times to identify potential cause
- Identify each cause/factor as one of concern, influence or control
- If the fifth (or last) cause/factor is something you cannot control, return to previous cause/factor



ASK

MANAGER

- Do you ever observe staff washing hands improperly? Do you ever demonstrate the proper handwashing?
- How do you ensure soap, paper towel, etc., is provided at all handwashing stations?

FOOD WORKER

- What kind of handwashing procedural training or information have you received?
- Does the manager ever watch to make sure people are washing their hands properly?



OBSERVE

- Are workers feeling pressured to get dishes out quickly? Do they hesitate to stop what they are doing to wash hands properly when it's busy?
- What about the kitchen facilitates hand washing or makes hand washing more difficult? Are there any supply/equipment deficiencies?



THINK

- Does the manager exhibit active managerial control to monitor handwashing timing?
- What is your impression of the food safety culture of the establishment? Does the staff seem knowledgeable about the risk of foodborne illness?

5 Whys Worksheet

***5 WHYS Root Cause Analysis Worksheet**
A Back to the Basics Improvement Template

5 WHYS Worksheet

Define the Problem: *(Insert one of the top prioritized student needs)*

Why is it happening? *(Identify each as a concern, influence or control.)*

1. → Why is that?

2. → Why is that?

3. → Why is that?

4. → Why is that?

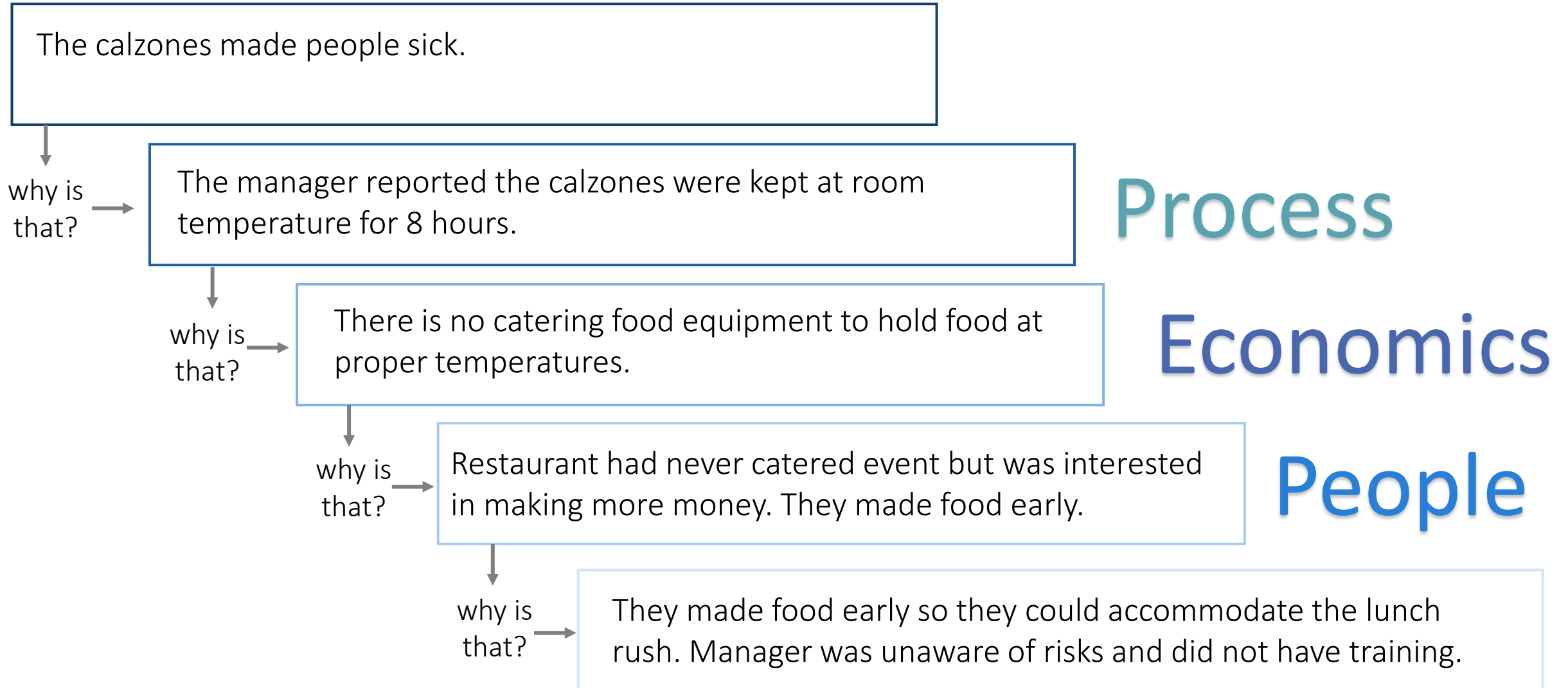
5. → Why is that?

The Wedding Food Tasting

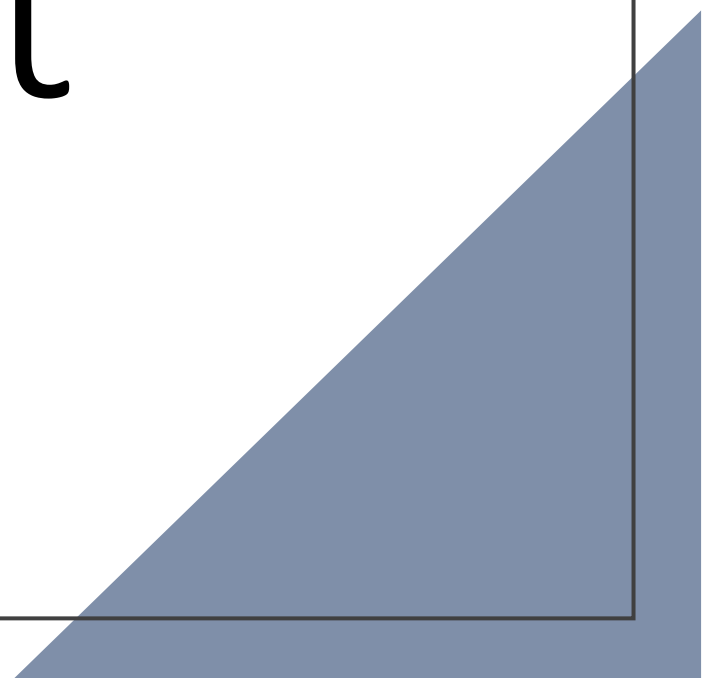
<https://www.youtube.com/watch?v=w-wK936N50I>



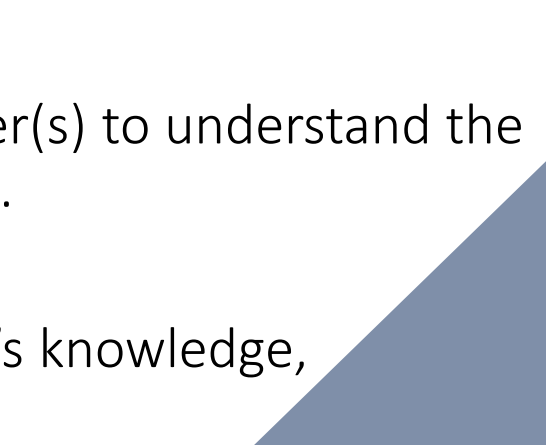
Why is it happening?



Handwashing Violation Root Cause Guide



Using the Guide

- Guide is a starting point to initiate discussions based on handwashing violations.
 - There may be several underlying root causes.
 - The inspector should engage with manager and food worker(s) to understand the establishment practices, processes, and food safety culture.
 - The root cause is determined from evidence and inspector's knowledge, skills, and experience.
- 

Handwashing Violation Root Cause Guide

ABOUT THE GUIDE.

Developed by CDC's Environmental Health Specialists' Network (EHS-Net) using data from FDA's Risk Factor Study

Created to help inspectors understand the root cause of handwashing violations, and assist in implementing corrective actions



CONTENTS.

- Background and Steps
- Divided into three main violations:
 - Did not wash when required
 - Improper handwash procedure
 - Equipment issue
- Potential questions and observations are provided, with suggested root causes
- Corrective actions based on people, economics, equipment and processes are provided

VIOLATION: Improper Handwash Procedure

Example violations:

- Improper Process: did not wash hands long enough, did not use soap or paper towels, used incorrect hand sink
- Substitutions: used hand sanitizer instead of washing hands, washed gloved hands
- Post-Handwashing Contamination: contaminated hands after washing, contaminated gloves after putting them on

Questions and Observations	Root Causes to Consider
<p>Is there a sufficient handwashing policy and are the workers knowledgeable about it? <i>For the manager:</i> Ask about the policy and the training they provide food <u>workers</u> <i>For the food worker:</i> Ask about training they've received</p>	Lack of employee training on specific processes (People)
<p>Does the staff seem concerned about proper food safety? <i>Observations:</i> Hesitation to skip or speed up hand washing when it's busy</p>	Lack of a food safety culture (People)
<p>Does the manager exhibit active managerial control to monitor handwashing? <i>For the manager:</i> Ask if they have observed incorrect handwashing and how they address <u>it</u> <i>For the food worker:</i> Ask if the manager ever makes sure they are washing hands properly</p>	Lack of management oversight (People)
<p>Does the staff have enough time to stop and wash hands properly? <i>Observations:</i> Understaffing, rushed employees</p>	Insufficient staffing (People)
<p>Are there adequate and accessible handwashing supplies at sinks? <i>For the manager:</i> Ask about how the soap and paper towels are <u>replenished</u> <i>For the worker:</i> Ask about how long supplies have been missing from sink <u>area</u> <i>Observations:</i> Verify hot water, soap and paper towels are at each hand sink, accessibility of hand sinks to preparation areas</p>	Lack of needed supplies for operating the restaurant (Equipment)

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Questions and Observations

Root Causes to Consider

Is there a sufficient handwashing policy and are the workers knowledgeable about it?

Lack of employee training on specific processes (People)

For the manager: Ask about the policy and the training they provide food workers

For the food worker: Ask about training they've received

Does the staff seem concerned about proper food safety?

Lack of a food safety culture (People)

Observations: Hesitation to skip or speed up hand washing when it's busy

Does the manager exhibit active managerial control to monitor handwashing?

Lack of management oversight (People)

For the manager: Ask if they have observed incorrect handwashing and how they address it

For the food worker: Ask if the manager ever makes sure they are washing hands properly

Does the staff have enough time to stop and wash hands properly?

Insufficient staffing (People)

Observations: Understaffing, rushed employees

Are there adequate and accessible handwashing supplies at sinks?

Lack of needed supplies for operating the restaurant (Equipment)

For the manager: Ask about how the soap and paper towels are replenished

For the worker: Ask about how long supplies have been missing from sink area

Observations: Verify hot water, soap and paper towels are at each hand sink, accessibility of hand sinks to preparation areas



Handwashing Exercise

- 1) Gather information from food worker and manager interview.
- 2) Using the **Guide**, determine root causes and corrective actions.

Food Worker Interview

You are inspecting a restaurant and observe a food worker not washing their hands for 20 seconds. The scrubbing of the hands was less than 10 seconds. You observed the food worker prepare ready-to-eat foods next. All handwash stations seem accessible and adequately stocked.

Instructions:

1. Working in pairs, choose 5 of the 15 questions to ask the food worker
2. Once you select a question, turn the page over to see the answer

Report Out

What themes did you gather from the food worker interview?

What additional questions would you like to ask?

Manager Interview

It takes the manager a while to find the written policy but they locate it in a binder. They mention they haven't opened this binder "in ages." You review the policy and it includes the proper procedures for handwashing.

The manager tells you they instruct staff on the importance to wash hands when doing their job on their first day. They do not specifically train them on how and when to wash hands. They do not reinforce handwashing practices, explain why handwashing is important to protect food, or monitor handwashing. They state handwashing is common sense and they don't need to micromanage handwashing as they are not their parent.

Handwashing Violation Root Cause Guide

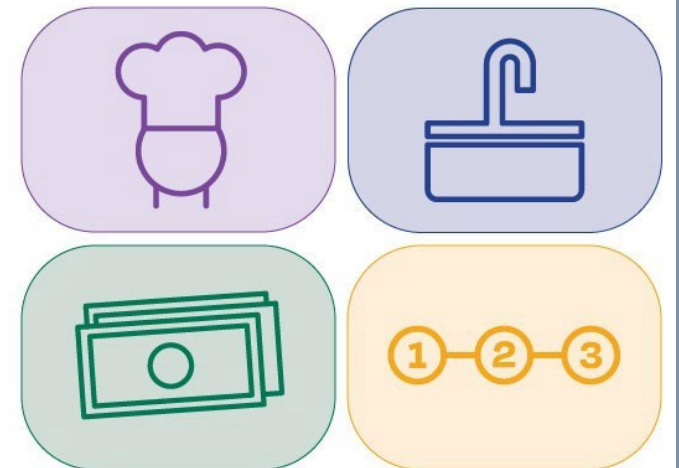
STEPS.

- **Step 1:** Determine the violation.
 - Did not wash hands when required
 - Improper handwash procedure
 - Equipment issue
- **Step 2:** Ask questions and make observations about the violation.
- **Step 3:** Determine the most appropriate root causes to consider. Root cause categories are in parenthesis beside each root cause.
- **Step 4:** Use the root cause categories identified in Step 3 to make recommendations on corrective actions.


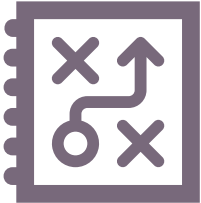

Using the guide, answer the questions on the last page of the workbook about root causes and corrective actions.

Report Out

Which **root causes** did you identify?
What **control measures** do you recommend?



Corrective Actions

	Root Cause	Corrective Action
	Food Safety Culture	Tug on heart strings through story telling
	Insufficient Staffing	Recommend reducing the menu
	Inadequate Training	Provide training and tools

Feedback



CLARITY

COMPLETENESS

USABILITY

SUGGESTIONS