

INFECTION PREVENTION IN THE KITCHEN: KEY AREAS OF FOCUS FOR ENSURING FOOD SAFETY IN YOUR FACILITY

Evelyn Cook

OBJECTIVES

- ▶ Describe outbreaks of foodborne illness
- ▶ Identify state and federal regulations requiring food safety oversight.
- ▶ Describe areas of Infection Control Oversight of Food Services recommended by APIC
- ▶ Identify 10 key focus areas for the IP conducting a kitchen inspection or survey.

FOODBORNE ILLNESS: A PROBLEM?

► Impact of foodborne illness:

- ▶ CDC estimates 76 million people/year affected
- ▶ 300,000 require hospital treatment
- ▶ 5,000 deaths

► Offending agent(s):

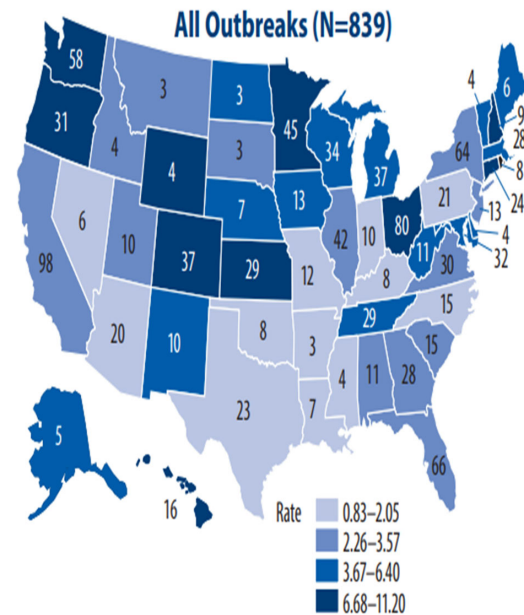
- ▶ Unpasteurized milk (*Campylobacter*)
- ▶ Shellfish (*noroviruses*)
- ▶ Unpasteurized apple cider (*Escherichia coli* O1057:H7)
- ▶ Raw and undercooked eggs (*Salmonella*)
- ▶ Fish (ciguatera poisoning)
- ▶ Raspberries (*Cyclospora*)
- ▶ Strawberries (hepatitis A)
- ▶ Ready to eat meats (*Listeria*)

Foodborne, food related illness and role of the healthcare professionals [Justine Bold](#)¹ and [Kamran Rostami](#)² Gastroenterol Hepatol Bench 2011



Overall Stats 2016

Outbreaks	839
NC outbreaks	15
Illness	14,259
Hospitalizations	875
Deaths	17
Food Product Recall	18



SURVEILLANCE FOR FOODBORNE DISEASE OUTBREAKS US: 2016 HIGHLIGHTS

▶ Norovirus most common

- ▶ 36% outbreaks
- ▶ 42% illness

Hospitals/LTCF
5 outbreaks
187 infected

▶ Salmonella

- ▶ 33% outbreaks
- ▶ 33% illness

Hospitals/LTCF
3 outbreaks
11 infected

▶ Shiga toxin producing *Escherichia coli*

- ▶ 6% outbreaks
- ▶ 4% illness

SPICE

ADDRESSING A FOODBORNE OUTBREAK

▶ Food and Nutrition Services (FNS) should:

- ▶ Save suspected foods for culturing by an appropriate laboratory
- ▶ Document departmental conditions at time of preparation
- ▶ Report gastrointestinal symptoms from patients, visitors or HCP to the IP/employee/occupational health department
- ▶ Provide a list of foods served during the suspected interval
- ▶ Implement and supervise control measures to prevent further occurrence of the illness
- ▶ Follow state and local laws/regulations when reporting to local health authorities

NUTRITION SERVICES

- Standards for purchasing and receiving food
- Maintain clean and functional work areas
- IPC Oversight of policies and procedures
- Cleaning, disinfection, and sanitation practices
- Compliance with local health department regulations
- Infection Prevention and Control education for staff

The SPICE logo is located in the bottom right corner of the slide. It consists of the word "SPICE" in a bold, sans-serif font, followed by a stylized grey diamond shape with a white cross inside.

IP KITCHEN INSPECTION: 10 KEY AREAS AT A GLANCE

1. Receiving and storage areas are clean and organized
2. Workspaces and preparation areas are clean
3. Equipment is clean and properly maintained
4. Food is stored in ways that prevent cross contamination
5. Fridge and freezer logs are complete and action plans are present on those that have out of range entries
6. Staff are able to demonstrate Hazard Analysis Critical Control Point (HACCP) procedures for testing and evaluating safety of food

<https://www.fda.gov/food/guidanceregulation/haccp/>

The SPICE logo is located in the bottom right corner of the slide. It consists of the word "SPICE" in a bold, sans-serif font, followed by a stylized grey diamond shape with a white cross inside.

IP KITCHEN INSPECTION: 10 KEY AREAS AT A GLANCE

7. Safety measures for serving food are clearly visible
8. No apparent evidence of cross contamination in kitchen workflow
9. Life safety and staff hygiene equipment is clearly labeled and functional
10. Staff are visibly healthy and can speak to work restriction requirements



STORAGE AND RECEIVING

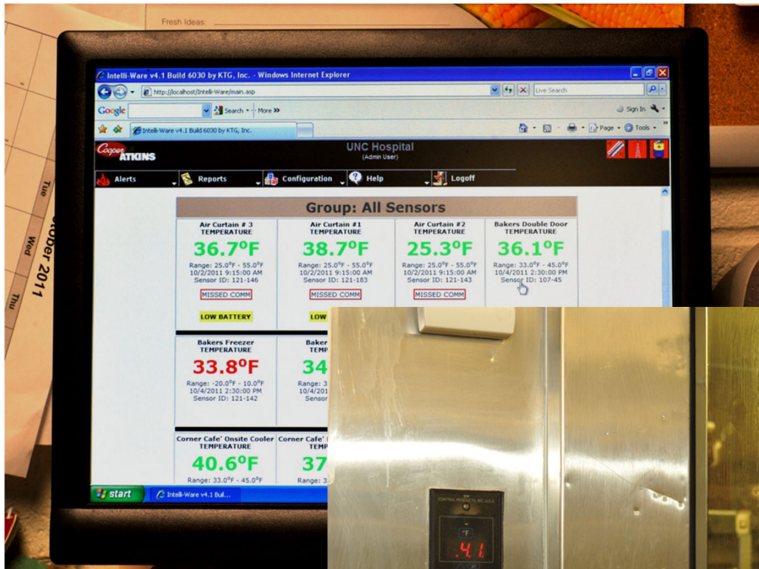
- Containers and waste boxes are broken down and disposed of quickly
- Food storage areas are clean with items not found within 6 inches from floor and 18 inches from ceiling (allowed to have slatted bottom shelf)
- Food is inspected and approved when it is brought into the facility.
 - Ensure logs of testing are kept and staff know criteria for accepting and rejecting product to prevent problems from intrinsic contamination.





PREVENTING CROSS CONTAMINATION AND HAZARDOUS TEMPERATURES

- Facility refrigerators and freezers are properly monitored with complete logs.
- Out of range temperatures have documentation of action.
- Cooked foods must be stored above raw foods
- Raw animal foods should be separated from raw ready to eat foods during storage, preparation, holding, and display
- All foods should be properly wrapped or covered



Each item labeled and properly covered for cold storage

No raw uncooked animal foods stored with ready to eat foods



FOOD SAFETY PROCEDURES

- ▶ Staff thoroughly wash all raw unprocessed fruits and vegetables under running water before use
- ▶ Staff discard any food that comes out of broken packages or swollen cans or has an abnormal appearance or odor.
- ▶ Foods are cooked and held at proper temperatures
- ▶ Individual portions of food once served are discarded.
- ▶ Unwrapped foods are protected with sneeze guards.
- ▶ Single service articles are discarded after one use.

SPICE 

HOLDING AND SERVING PREPARED FOOD

- ▶ Cold food must be refrigerated to keep temperature less than 5°C (41°F)
- ▶ Frozen food must remain frozen at -18°C (0°F)
- ▶ Hold hot food, for serving, at above 60° C/140°F (or higher)

AVOID THE DANGER ZONE (41°F – 135°F) – temperature range for rapid multiplication of virtually all bacteria associated with foodborne disease

Cooked food must be cooled from 135°F to 41°F within 6 hours

- ▶ 135°F - 70°F in 2 hours (rapid cool)
- ▶ 70°F – 41°F in 4 hours

APIC Text of Infection Control and Epidemiology 4th Edition

SPICE 

HACCP SAFETY MEASURES FOR SERVING

- ▶ Visualize that prepared food is transported to other areas in closed food carts or covered containers within proper time limit.
- ▶ Observe that food is served with clean tongs, scoops, forks, spoons, spatulas, or gloves to avoid direct contact with food.
- ▶ When checking temperatures on foods ensure that thermometers are cleaned appropriately before and after temp.
- ▶ Ask how foods prepared to be served at a later time are cooked, chilled, and reheated.
- ▶ Staff should be interviewed on process for cooling potentially hazardous foods (i.e. use of blast chiller)

SPICE



Food at service counter covered and labeled for time to discard.



SPICE

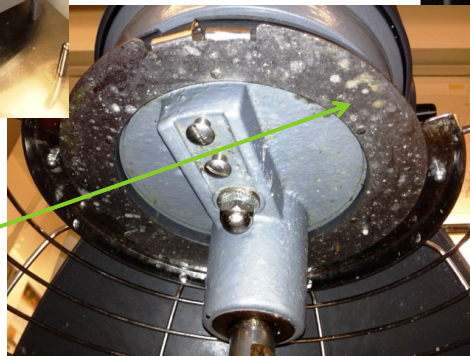
CLEAN AND PROPERLY MAINTAINED EQUIPMENT

- ▶ Color coded cutting boards are used then washed and sanitized in between uses
- ▶ Clean equipment not in use is covered.
- ▶ All food grinders, choppers, and mixers should be taken apart, cleaned, sanitized, completely dried, and reassembled after each use.
- ▶ Dishwashers should be drained and flushed daily. Make sure it maintains a final sanitizing rinse of 180°F and wash water of 150°F
- ▶ The exterior of the ice machines are cleaned daily.
- ▶ All serving carts are sanitized. Ensure carts that collect soiled trays are sanitized as well.

SPICE



Looks clean at a glance but look more closely to ensure all parts of machines are cleaned



Clean equipment stored away from food. Color coded cutting boards.

SPICE



Look up under the hood to inspect for grease



Covered clean equipment not in use

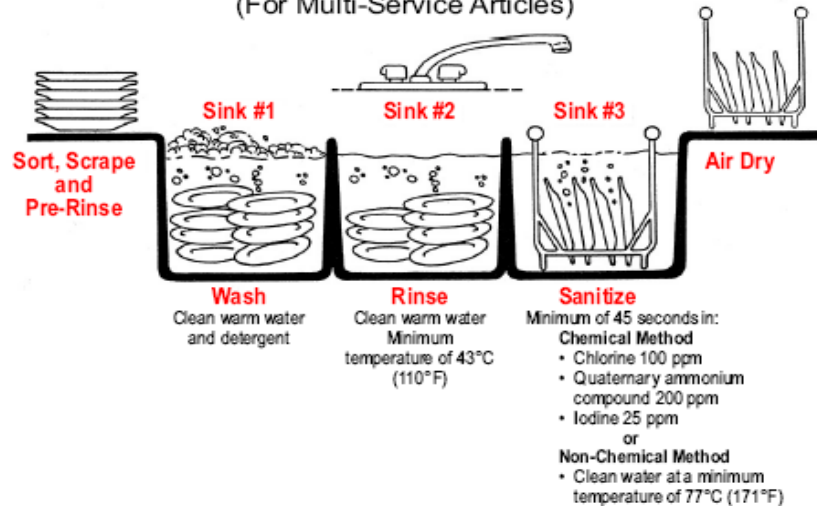


Automatic Washer-150°F wash for 20s, 180°F rinse for 10s

3-SINK METHOD OF MANUAL WARE WASHING AND SANITIZING

3-Sink Dishwashing Method

(For Multi-Service Articles)



<http://www.wdgpulichealth.ca/?q=node/435>

www.wdghu.org

SPICE

What about ice??

- Use only potable water to manufacturer ice
- Store ice in a covered ice bin, keep covered when not in use
- Hand hygiene prior to scooping
- Use non-breakable scoop
 - Never store in or on top of bin
 - Clean and sanitize daily (dish machine)
- No food or beverages on top of bin
- Frequently clean the ice bin
- Ice used to display cold foods is not to be used for any other purpose



SPICE

HEALTH OF FOOD SERVICE STAFF

- ▶ All food services employees must be free of active or communicable diseases (skin lesions, boils, gastrointestinal or respiratory infection) and able to speak to procedure for refraining from work if they become sick.
- ▶ Food Handlers with diarrhea must be removed from duty until they are asymptomatic.
- ▶ Individuals identified as chronic carriers of salmonella or shigella are not permitted to work in food services.
- ▶ Ensure that your facility and/or contracted service has an Infection Control Employee Health Services Policy that defines which illnesses prohibit staff from working and the process for returning to work.

SPICE

PERSONNEL POLICIES FOOD SERVICE STAFF

- There must be a clear distinction of hand washing sinks versus food preparation sinks.
- Fingernail polish or artificial fingernails may not be worn when working with food unless wearing intact gloves
- No jewelry except for a plain ring such as a wedding band may be worn while preparing food
- Shall wear clean outer clothing to prevent contamination of food, equipment, utensils, linen, and single-service and single use articles



Food Code 2009 and 2013

SPICE

A KITCHEN INSPECTION IS NOT THE ONLY IMPORTANT PIECE

- ▶ Education
- ▶ Collaboration with Food Services Management
- ▶ Formal oversight process
 - ▶ Risk Assessment and reporting to Infection Control Committee
- ▶ Performance Improvement /Continuous Readiness Mindset
 - ▶ IPC inspections provide Food Services staff with good opportunity to practice for regular CDPH inspections
 - Consistency of policies and procedures



TIPS FOR IPC EDUCATION FOR FOOD SERVICES STAFF

- ▶ Educate Food Services Staff
 - ▶ Upon Hire
 - ▶ Annually
 - ▶ As needed based on survey or assessment results
- ▶ Tailor IPC material to Food Services Staff – focus on rationale for preventative steps
- ▶ Discuss basic general principles of IPC as they relate to patient food services
 - ▶ Hand Hygiene
 - ▶ Cleaning and Disinfection
 - ▶ Standard Precautions



TIPS FOR STRENGTHENING POLICIES AND PROCEDURES

- ▶ Incorporate food services specific issues in policies
 - ▶ Care and Maintenance of Vending Machines / Ice Machines
- ▶ Ensure food handling policies are consistent with facility IPC principles and policies
- ▶ Ensure policy for restriction of ill food service workers is incorporated into EHS and IPC policy
- ▶ Ensure facilities has proper policy for care and maintenance of food services equipment

SPICE 

IMPORTANT LINKS

FDA Food Code

<http://www.fda.gov/Food/GuidanceRegulation/RetailFoodProtection/FoodCode/default.htm>

HACCP Guidelines – FDA Food Guide Annex 5

<http://www.fda.gov/Food/GuidanceRegulation/RetailFoodProtection/FoodCode/ucm089302.htm>

SPICE 

QUESTIONS....

*FOOD
SAFETY
FOR
EVERYONE*



SPICE 