



An effective cleaning and sanitation management system in  
foodservice

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CEO/Founder

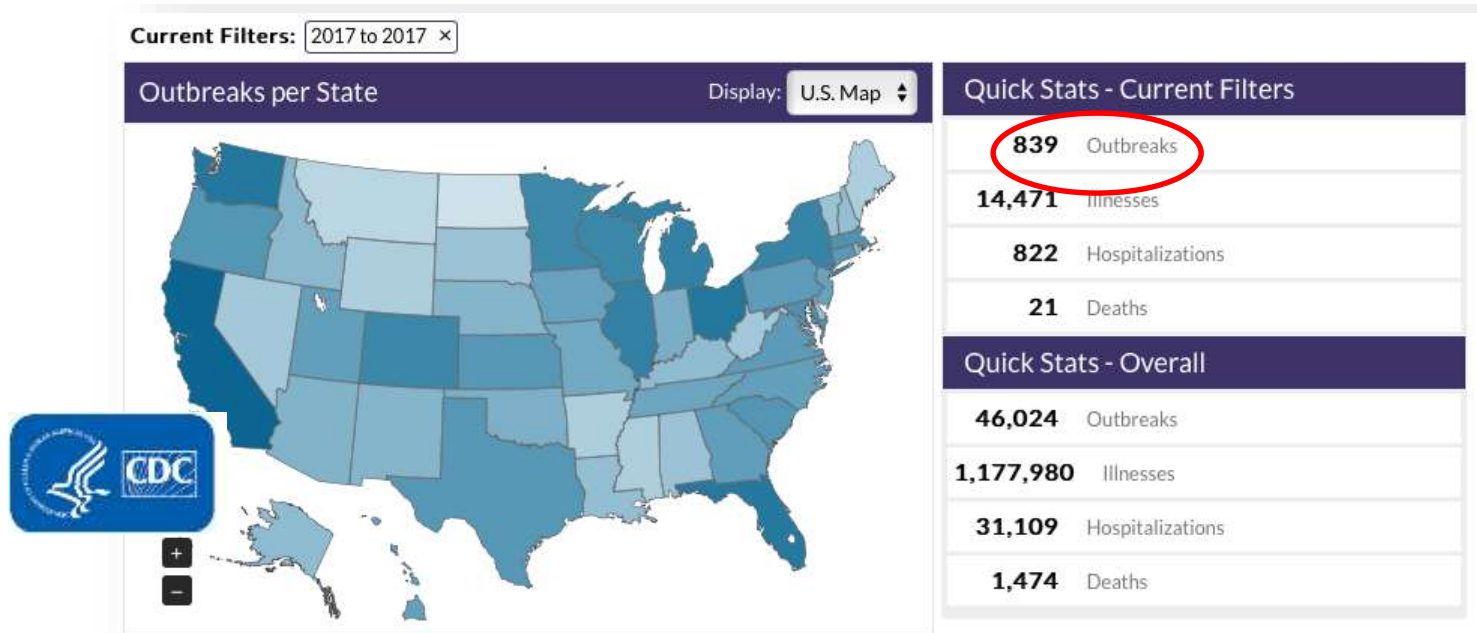
*IN THE BUSINESS OF PREVENTION*

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# A NEED FOR MORE CONTROL IN RETAIL FOODSERVICE ESTABLISHMENTS

## ALL FOODBORNE DISEASE OUTBREAKS IN THE UNITED STATES- 2017



Source: National Outbreak Reporting System (NORS)



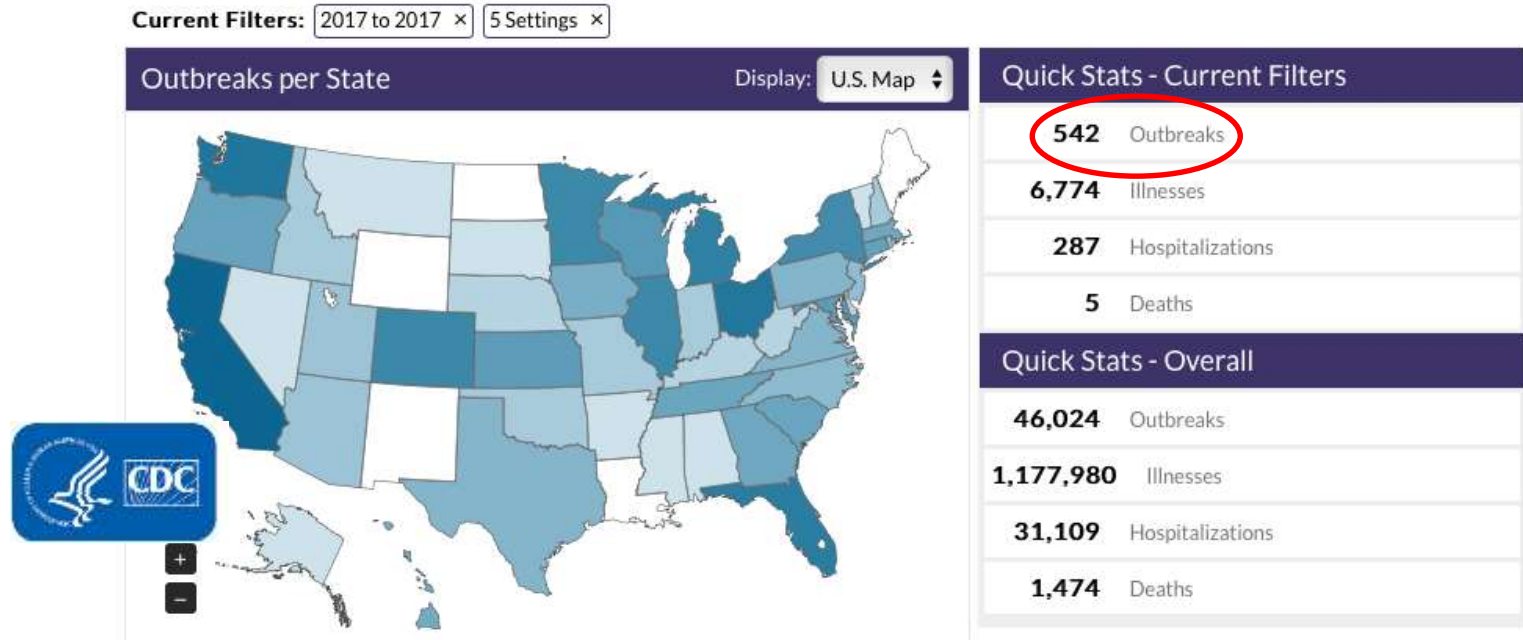
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# A NEED FOR MORE CONTROL IN RETAIL FOODSERVICE ESTABLISHMENTS

MORE THAN 60% OF ALL FOODBORNE DISEASE OUTBREAKS IN THE UNITED STATES ARE CAUSED BY RESTAURANTS- 2017



Source: National Outbreak Reporting System (NORS)



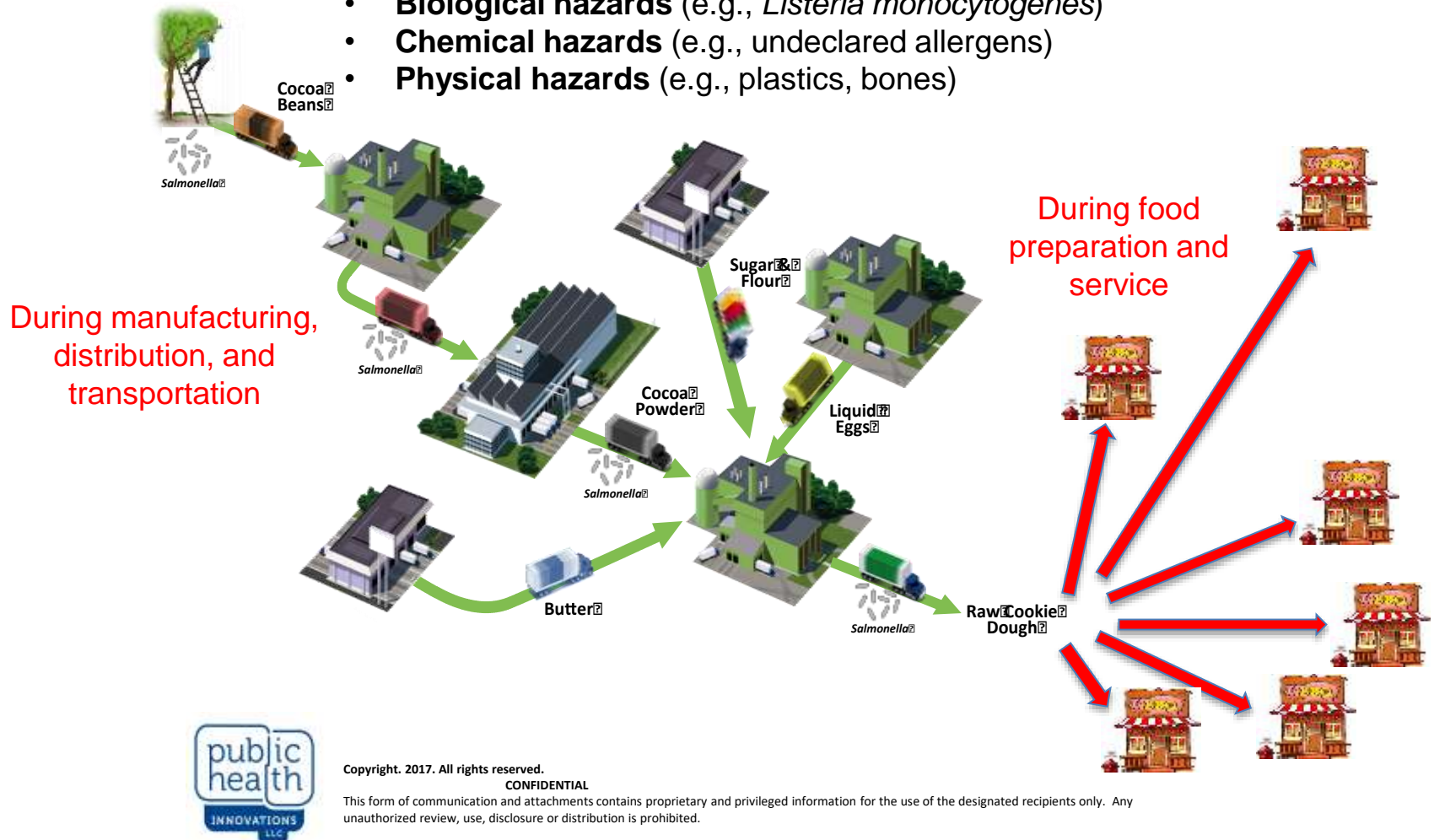
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# ALL FOODBORNE DISEASE OUTBREAKS FROM RESTAURANTS ARE CAUSED BY SUPPLY CHAIN FOOD SAFETY HAZARDS OR DURING RESTAURANT FOOD PREP/SERVICE

- **Biological hazards** (e.g., *Listeria monocytogenes*)
- **Chemical hazards** (e.g., undeclared allergens)
- **Physical hazards** (e.g., plastics, bones)



# Preventing foodborne disease outbreaks cost less than managing them

## Hepatitis A Outbreak at Chi-Chi's, 2003

In November 2003, a Chi-Chi's restaurant in Monaca, Pennsylvania caused the death of four people and sickened hundreds of others, including high school students who passed it on to others. The cause was hepatitis A-infected green onions that were imported from Mexico. According to the CDC, this was the largest outbreak in U.S. history of hepatitis A, a virus caused through contact with feces. The restaurant chain no longer exists.



**One Instance of Foodborne Illness Caused by a Restaurant will cost That Business \$75,000<sup>1</sup>**

**The reputational costs of a foodborne illness can drive a company out of business**

<sup>1</sup> The National Restaurant Association



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# Preventing foodborne disease outbreaks cost less than managing them

## John Hopkins University Study



- A single foodborne disease outbreak cost between \$3968 to \$2.6 Million each restaurant for all restaurant types studied
- These cost amounted to 0.3% to 101% of a restaurants annual profits and revenue
- *Listeria* outbreaks were the most costly



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# FOODSERVICE BUSINESSES CAN PREVENT FOODBORNE DISEASE OUTBREAKS BY ESTABLISHING A **FOOD SAFETY MANAGEMENT PROGRAM**



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# Food Safety Management Program

All SOP's and Recipes Based on the Most Current FDA Food Code

**What/Why**

**Code**

**How/When**





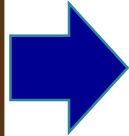
# Food Safety Management Program

## Facilities designed for cleaning and sanitation



# Food Safety Management Program

## Facilities Designed for Food Safety



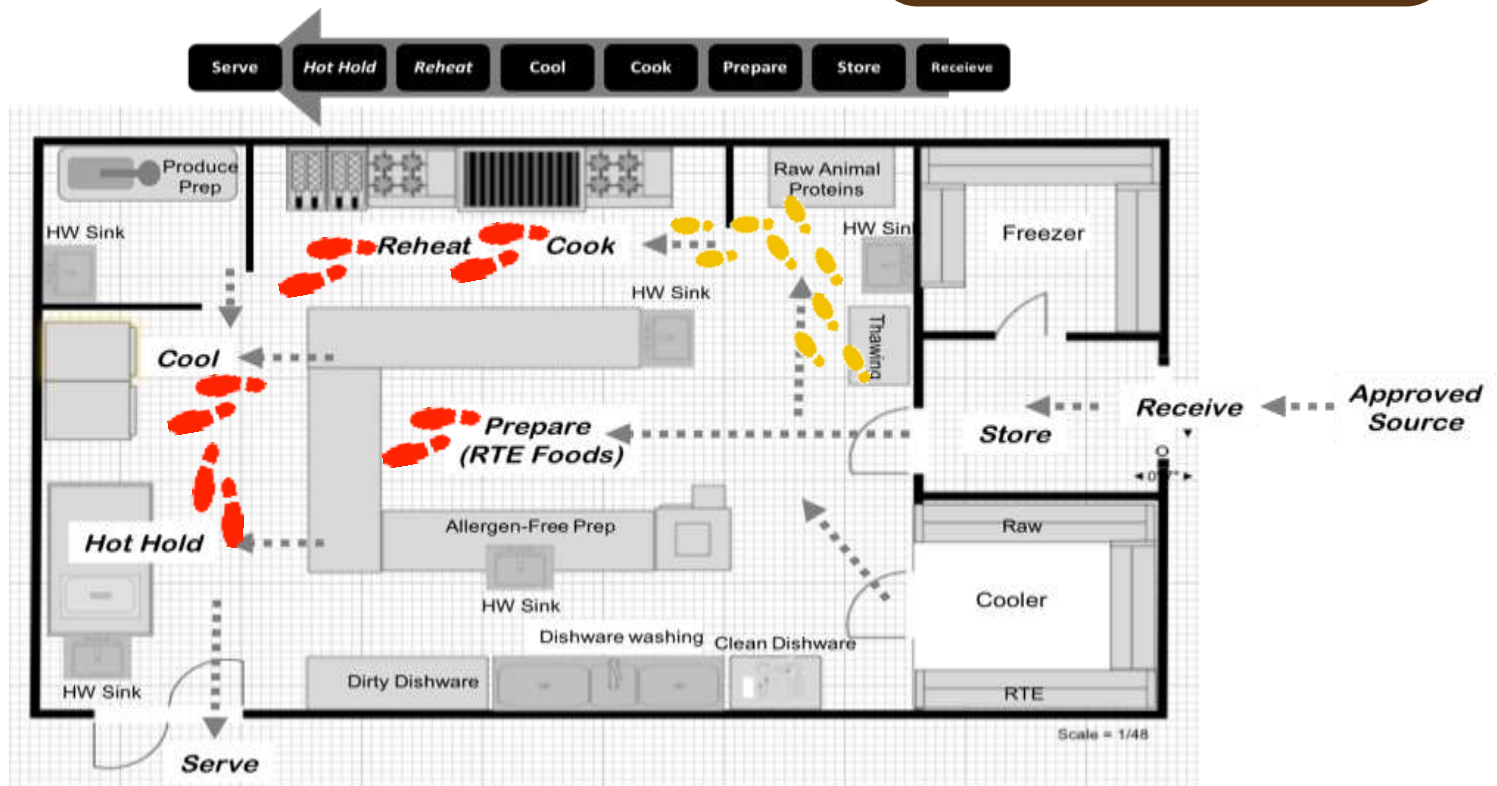
Procedures and facility design follows the flow of food, from the establishments receiving door to the customer.



# Food Safety Management Program

## Facilities Designed for Food Safety

E.g., segregate raw animal protein prep from RTE food prep



# Food Safety Management Program

All Training Based on the Most Current FDA Food Code and Company Cleaning and Sanitation SOP's/Recipes



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# Food Safety Management Program

A KEY TO EFFECTIVE FOOD SAFETY MANAGEMENT SYSTEMS IS FOOD SAFETY OPERATIONAL KNOWLEDGE AT ALL LEVELS

**Owners**



**Food Safety  
Management via  
Process HACCP**



All training based on the most  
current FDA Food Code and  
company SOP's/recipes

**ServSafe**



**Specific to  
Menu**

**Food Handler**



**Monitoring to  
ensure Active Managerial  
Control**



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# THE FOOD SAFETY MANAGEMENT PROGRAM MUST IMPLEMENT **FOOD SAFETY MANAGEMENT SYSTEMS** (FROM FARM TO FORK) THAT CONTROL ALL HAZARDS THAT LEAD TO OUTBREAKS

## The Best Means to Prevent a Foodborne Disease Outbreak



Corporate HQ

A **Food Safety Management Program** in a retail food business that is focused on the continuous identification of hazards and the implementation of **Food Safety Management Systems (FSMSs)** to prevent these hazards is the most important means to proactively ensure food safety in a food business



**For example:**

Supplier food safety management system  
Process HACCP system based food prep system  
Monitoring and corrective active system

**Cleaning and sanitation management system**

### Food Safety Management Systems

#### A Food Safety Management System is:

- A group of programs, procedures, and measures for preventing foodborne illness
- Designed to actively control risks and hazards throughout the flow of food

#### Two systematic and proactive approaches

- Active managerial control
- Hazard Analysis Critical Control Point (HACCP)

### Food Code

U.S. Public Health Service

U.S. FOOD & DRUG ADMINISTRATION

2017



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# THE FOOD SAFETY MANAGEMENT PROGRAM MUST IMPLEMENT A **CLEANING AND SANITATION MANAGEMENT SYSTEM** THAT CONTROLS ALL HAZARDS THAT LEAD TO OUTBREAKS



## Cleaning

- The complete removal of food soil using appropriate detergent chemicals under recommended conditions.

## Sanitizing

- To adequately treat cleaned surfaces by a process effective in destroying vegetative cells of pathogens, and in substantially reducing numbers of other undesirable microorganisms.



*Will prevent cross contamination of foods-  
one of the top five risk factors that cause  
Foodborne Disease Outbreaks*

# The Focus today: A cleaning and sanitation management system + value

**One of the most important food safety management systems in foodservice establishments is the cleaning and sanitation management system, which should include:**

- 1) The proper chemistry that will clean and sanitize surfaces to remove hazards quickly,
- 2) The proper tools to effectively clean foodservice environments that don't add to cross-contamination risk,
- 3) Effective procedures that can be executed properly
- 4) Trained employees who are empowered to perform the procedures correctly and at the proper times, and
- 5) A monitoring/corrective action-based process to prevent cross-contamination risk during foodservice operations



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# THE FOOD SAFETY MANAGEMENT PROGRAM MUST IMPLEMENT A **CLEANING AND SANITATION MANAGEMENT SYSTEM** THAT CONTROLS ALL HAZARDS THAT LEAD TO OUTBREAKS

**A NEED FOR ENVIRONMENTAL CONTROL OF PATHOGENS IN RETAIL  
FOODSERVICE ESTABLISHMENTS**

E.g., transmission occurs  
via employee  
contaminating hands  
while using a restroom  
then touches surfaces in  
kitchen



E.g., other employees  
touch these same  
handles and then prep  
RTE foods (even with  
gloves on)



**Address all factors that contribute to the spread of norovirus and other pathogens from  
employees to surfaces and then surfaces to employees and food**



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# Food Safety Management Systems

All Company SOP's/Recipes are Validated (for ability to execute) and Verified via Monitoring

Must be  
capable of  
execution  
AND  
must be  
verified daily



## 4 Management of Food Safety Practices – Achieving Active Managerial Control of Foodborne Illness Risk Factors

1. ACTIVE MANAGERIAL CONTROL
2. INTRODUCTION TO HACCP
3. THE HACCP PRINCIPLES
4. THE PROCESS APPROACH – A PRACTICAL APPLICATION OF HACCP AT RETAIL TO ACHIEVE ACTIVE MANAGERIAL CONTROL
5. FDA RETAIL HACCP MANUALS
6. ADVANTAGES OF USING THE PRINCIPLES OF HACCP
7. SUMMARY
8. ACKNOWLEDGMENTS
9. REFERENCES

1. ACTIVE MANAGERIAL CONTROL
- (a) What is the ultimate goal of operator's and regulator's of retail food and food service establishments and what is presently being done to achieve this goal?

The common goal of operators and regulators of retail and food service establishments is to produce safe, quality food for consumers. Since the advent of regulatory oversight of retail and food service operations, regulatory inspectors have emphasized the recognition and correction of food safety violations that exist at the time of the inspection. Thus, violations have traditionally been handled through re-inspections or enforcement actions such as fines, suspension of permits, or closures. Operators of retail and food service establishments routinely respond to inspection findings by correcting violations, but often do not implement proactive systems of control to prevent violations from recurring. While this type of inspection and enforcement system has done a great deal to improve basic sanitation and to upgrade facilities in the United States, it emphasizes reactive rather than proactive measures to food safety. Additional measures must be taken as the part of operators and regulators to better

Source: 4 – Management of Food Safety Practices – Achieving Active Managerial Control of Foodborne Illness Risk Factors  
549

# A cleaning and sanitation management system

ADDITIONAL REQUIREMENTS NECESSARY TO REDUCE CROSS CONTAMINATION  
MUST BE IN PLACE

Proper glove use



Remove  
Wash/sanitize hands  
add gloves

Double hand wash

First in restroom



Again in kitchen



All hand wash  
includes final  
sanitize step



Wash, rinse,  
sanitize

These barriers between hands and surfaces are important components of a health policy due to the common issues in compliance, i.e. a team member may not report an illness or injury to the PIC, the employee may be asymptomatic or the PIC may not notice a team members illness



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A cleaning and sanitation management system must address contributing factors of microbial cross contamination

## How do we know a surface has been cleaned and sanitized properly

- Does the sanitizer kill all foodborne pathogens
- Does the sanitizer kill pathogens quickly (too much time reduces compliance)
- Does the sanitizer have a means to ensure it remains effective during storage
- Are employees cleaning a surface with a cleaning agent before sanitizing it



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# A cleaning and sanitation management system must address contributing factors of microbial cross contamination



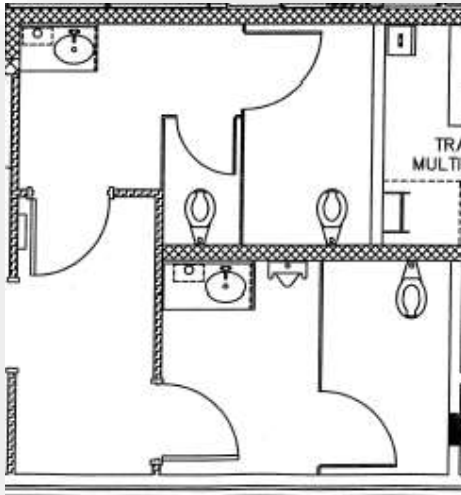
## **Microbial Sources**

- ☐ What customers bring into the store
- ☐ Supplier deliveries (vendor entry)
- ☐ Working sick employees
- ☐ Restroom use
- ☐ Pest
- ☐ Raw foods
- ☐ Condiments and food service area

**Restrooms**

# A cleaning and sanitation management system must address contributing factors of microbial cross contamination

## Restrooms



- Customers/employees contaminate facilities
- Employees perform sanitation but transfer the cleaning tools back into the kitchen environment
- Employees clean dinning room and kitchen with same tools



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# A cleaning and sanitation management system must address contributing factors of microbial cross contamination

**Kitchen areas**

**Restrooms**

**Separate and exclude**

**Use color coded cleaning tools**

**Use Dirty water buckets separate from clean water**

**Store tools properly to prevent cross contamination**

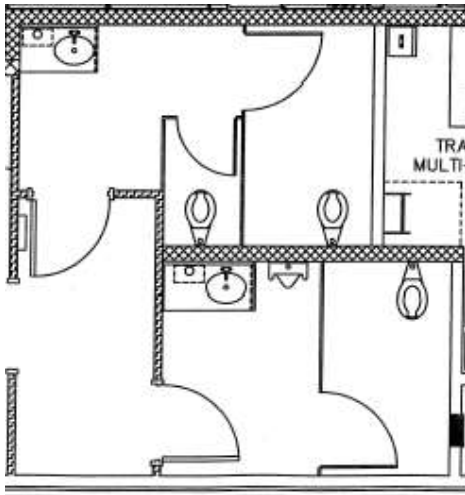


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A cleaning and sanitation management system must address contributing factors of microbial cross contamination

**ALWAYS WASH AND SANITIZE HANDS**



**Restrooms**



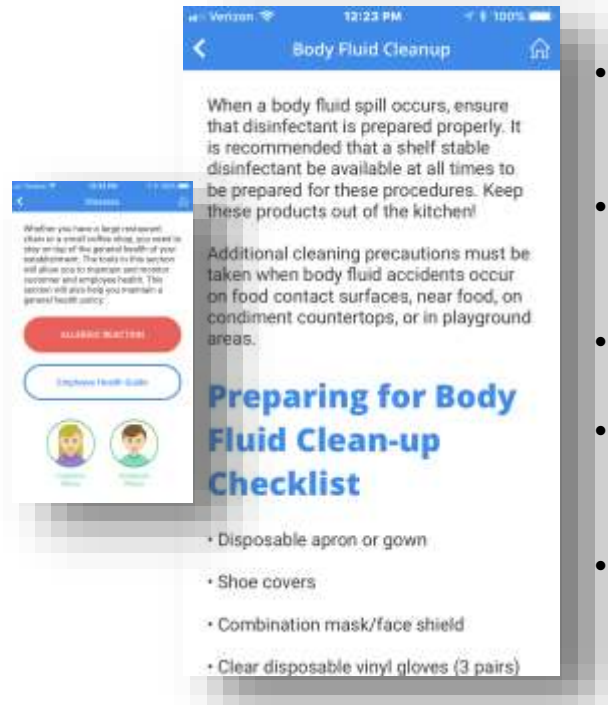
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# A cleaning and sanitation management system must address contributing factors of microbial cross contamination



- Sick people
- Bodily fluid spills
- Power outages
- Boil water notices
- Pest infestation
- Natural disaster



## The risk

- Employee or customer vomits in establishment
- Employee and/or cleaning tools contaminated by *Norovirus*
- *Norovirus* contaminates food
- Most food contact surface sanitizers do not kill *Norovirus*
- Large foodborne disease outbreak

Not just norovirus

ADDITIONAL STEPS NECESSARY TO REDUCE THE TRANSMISSION OF NOROVIRUS TO FOODS AS PART OF THE CLEANING AND SANITATION MANAGEMENT SYSTEM



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# A cleaning and sanitation management system must address contributing factors of microbial cross contamination

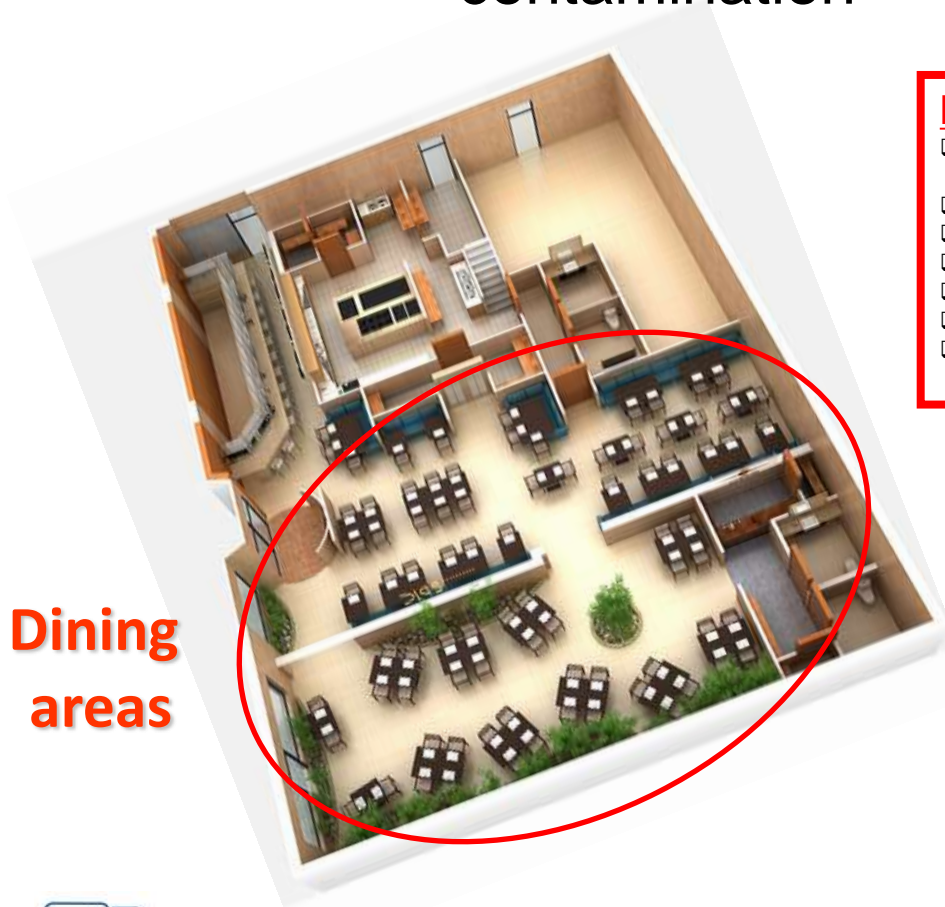
## Body Fluid Clean Up to Prevent Norovirus Spread

Pads used daily to prevent slips and falls  
(like 32 oz. beverage) -*cover spill*  
Always ready when vomiting event occurs -*cover vomit*





# A cleaning and sanitation management system must address contributing factors of microbial cross contamination



**Dining  
areas**

## **Microbial Sources**

- ☐ What customers bring into the store
- ☐ Supplier deliveries (vendor entry)
- ☐ Working sick employees
- ☐ Restroom use
- ☐ Pest
- ☐ Raw foods
- ☐ Condiments and food service area



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# A cleaning and sanitation management system must address contributing factors of microbial cross contamination

*Dirty, reusable cloth towels can be a source of cross-contamination (BoH)...  
and are poor guest experience (FoH)*



# A cleaning and sanitation management system must address contributing factors of microbial cross contamination



*Poor guest  
experience (FoH)*



From **table** to **table**

From **“?”** to **table**



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# A cleaning and sanitation management system must address contributing factors of microbial cross contamination



Use disposable single-use  
wipes with cleaners and  
sanitizers



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# A cleaning and sanitation management system must address contributing factors of microbial cross contamination

**Prep areas**



## **Microbial Sources**

- ☐ What customers bring into the store
- ☐ Supplier deliveries (vendor entry)
- ☐ Working sick employees
- ☐ Restroom use
- ☐ Pest
- ☐ Raw foods
- ☐ Condiments and food service area



# A cleaning and sanitation management system must address contributing factors of microbial cross contamination

*Dirty, reusable cloth towels can be a source of cross-contamination (BoH)*



**Sanitizer strength impossible to maintain in the presence of food soils (e.g., oils, fats, grease on reusable towels)**



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# A cleaning and sanitation management system must address contributing factors of microbial cross contamination

*Dirty, reusable cloth towels can be a source of cross-contamination (BoH)*



Operators Footnote: Results based on online survey among 45 large chain foodservice operators and members, distributed by NRA-QA in June 2018 (MR# 010-030)

Public Health Footnote: Results based on online survey among 35 Public Health Officials, distributed by NACCHO in June 2018 (MR# 010-030)



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# A cleaning and sanitation management system must address contributing factors of microbial cross contamination

*Dirty, reusable cloth towels can be a source of cross-contamination (BoH)*



From **Raw** food prep to **Ready-to-eat** food prep surfaces



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# A cleaning and sanitation management system must address contributing factors of microbial cross contamination

*Clean and sanitize with single-use disposable towels/wipes*



Ready-to-use  
food contact  
cleaner and  
sanitizers can  
help



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A cleaning and sanitation management system must address contributing factors of microbial cross contamination

**How do we know a surface has been cleaned and sanitized properly**



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# Digital Food Safety

## Process HACCP Controls

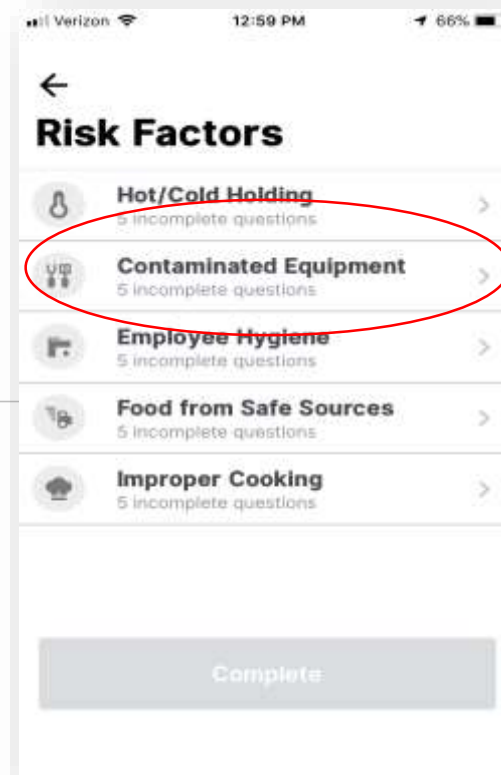
### verified/corrected

### Top 5 Risk Factors

ActiveManager's assessments deal with the top 5 risk factors in restaurant food safety. These are:

1. Hot/Cold Holding
2. Improper Cooking
3. Contaminated Equipment
4. Employee Hygiene
5. Food from Safe Sources

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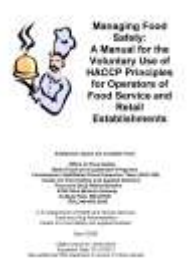
**Process controls  
AND  
PCP's verified daily**



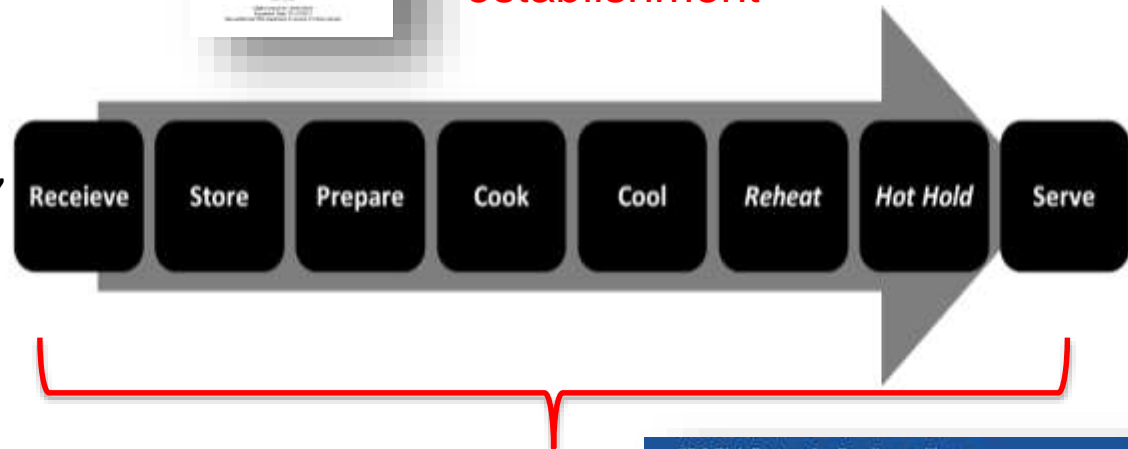
# A Process HACCP Food Safety Management System

## Includes additional “Prerequisite Control Points” (PCPs):

- Physical barriers (e.g., gloves/utensils),
- Personal hygiene standards (hand washing, health policy, excluding sick employees),
- Cleaning and sanitation management system focused on cross contamination prevention



Process HACCP:  
Flow of food prep  
in each  
establishment



Controls at each process and  
checks of PCP's to prevent the  
top five risk factors

### CDC Risk Factors for Foodborne Illness

#### The five most common risk factors responsible for foodborne illness:

- Purchasing food from unsafe sources
- Failing to cook food adequately
- Holding food at improper temperatures
- Using contaminated equipment
- Poor personal hygiene

# Digital Food Safety

## Process HACCP Controls verified/corrected

Use digital system to regularly perform cleanliness checks of surfaces and procedures

The image displays a sequence of five smartphone screens showing the ActiveManager app interface for a sanitizer check. The first screen shows the 'ActiveManager' dashboard with a 'Continue Assessment' button. The second screen, 'Question 2: Check sanitizer solutions', asks to choose a sanitizer container and lists options: 'Bottle of sanitizer', 'Reusable wiper storage pail with sanitizer solution' (checked), and 'Sanitizer solution in the third/fourth compartment sink'. The third screen asks to choose a sanitizer type: 'Chlorine sanitizer (50-200 ppm)', 'Quat (quaternary ammonia) sanitizer (200-400 ppm)', and 'Iodine sanitizer (10-75 ppm)'. The fourth screen, also 'Question 2: Check sanitizer solutions', provides instructions on using a test strip and a text input field for the concentration. The fifth screen, 'Corrective Action', instructs to 'Discard the sanitizer!' and shows two buttons: 'Discarded' and 'Not Discarded'.

For example: verify sanitizer in use is at the proper concentration



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# A cleaning and sanitation management system must address contributing factors of microbial cross contamination

Additional value proposition to the business



Poor guest experience (FoH)



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## Resources from Public Health Innovations



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