

# 10

## Food Safety Management Systems

### Chapter Overview

Chapter 10 introduces students to the fundamentals of managing risks and hazards within the flow of food.

### Learning Objectives

- 10-1** Explain what a food safety management system is and list the food safety programs that must be in place for it to be effective
- 10-2** Define active managerial control, identify how it can be achieved, and list the steps for implementing it
- 10-3** Summarize the FDA's public health interventions for controlling the common risk factors for foodborne illness
- 10-4** Identify the basis for an effective HACCP system and summarize the seven HACCP principles
- 10-5** Describe how to prepare for, respond to, and recover from a crisis
- 10-6** Summarize the process for responding to a foodborne-illness outbreak
- 10-7** Define imminent health hazards, list examples, and describe the proper response to them

### Opening Case Study

#### 1. What did the manager do right?

He did get the guest's contact information and asked when the guest first became sick. He also did not admit responsibility or liability for the guest's illness.

#### 2. What did he do wrong?

He failed to take the guest seriously or express concern. He also should have asked when and where the guest sought medical attention, what the diagnosis was, and what treatment was received. He failed to ask what other food was eaten by the guest. He also should have documented the information he received from the guest on an incident report form.

## Chapter Breakdown

Page 194

### 10.1 Food Safety Management Systems

#### Resources

PowerPoint Slide 4

#### Reinforce and Review:

- A food safety management system is a group of procedures and practices intended to prevent food-borne illness. It does this by actively controlling risks and hazards throughout the flow of food.

#### Key Terms

- **Food safety management system:** Group of programs, procedures, and measures designed to prevent foodborne illness by actively controlling risks and hazards throughout the flow of food.

#### Knowledge Check Answers

1. A food safety management system is a group of practices and procedures intended to prevent food-borne illness. It does this by actively controlling risks and hazards throughout the flow of food.
2. The following programs must be in place to establish a food safety management system:
  - Personal hygiene program
  - Food safety training program
  - Supplier selection and specification program
  - Quality control and assurance program
  - Cleaning and sanitation program
  - Standard operating procedures (SOPs)
  - Facility design and equipment maintenance program
  - Pest control program

## Chapter Breakdown

**Pages 195 to 203****10.2 Active Managerial Control**

### Resources

PowerPoint Slides 5 to 8

### Reinforce and Review:

- It is the manager's responsibility to actively control the risk factors for foodborne illness. This is called active managerial control. It can be achieved by incorporating specific actions and procedures into the operation to prevent foodborne illness.
- The FDA provides specific recommendations for controlling the common risk factors for foodborne illness. These are known as public health interventions. They are designed to protect public health.
- HACCP is based on identifying significant biological, chemical, or physical hazards at specific points within a product's flow. Once identified, the hazards can be prevented, eliminated, or reduced to safe levels.
- A HACCP plan is based on seven basic principles. These principles are the seven steps that outline how to create a HACCP plan.

### Key Terms

- **Active managerial control:** Food safety management system designed to prevent foodborne illness by addressing the five most common risk factors identified by the Centers for Disease Control and Prevention (CDC).
- **HACCP:** Food safety management system based on the idea that if significant biological, chemical, or physical hazards are identified at specific points within a product's flow through the operation, they can be prevented, eliminated, or reduced to safe levels.
- **HACCP plan:** Written document based on HACCP principles describing procedures a particular operation will follow to ensure the safety of food served. See *HACCP*.
- **Critical control points (CCPs):** In a HACCP system, the points in the process where you can intervene to prevent, eliminate, or reduce identified hazards to safe levels.

### Knowledge Check Answers

1. Here are the five steps for implementing active managerial control:
  - Identify Risks. Find and document the potential foodborne illness risks in your operation. Then, identify the hazards that can be controlled or eliminated.
  - Monitor. Food will be safe if managers monitor critical activities in the operation. So, make note of where employees must monitor food safety requirements.
  - Corrective action. Take the appropriate steps to correct improper procedures or behaviors.
  - Management oversight. Verify that all policies, procedures, and corrective actions are followed.
  - Training. Ensure employees are trained to follow procedures and retrained when necessary.
  - Re-evaluation. Periodically assess the system to make sure it is working correctly and effectively.

2. Here is a summary of the seven HACCP Principles:

**Principle 1: Conduct a Hazard Analysis**

First, identify and assess potential hazards in the food you serve. Start by looking at how food is processed in your operation. Look at your menu and identify items that are processed like this. Next, identify the TCS food. Determine where food safety hazards are likely to occur for each TCS food. They can come from biological, chemical, or physical contaminants.

**Principle 2: Determine Critical Control Points (CCPs)**

Find the points in the process where the identified hazard(s) can be prevented, eliminated, or reduced to safe levels. These are the **critical control points (CCPs)**. Depending on the process, there may be more than one CCP.

**Principle 3: Establish Critical Limits**

For each CCP, establish minimum or maximum limits. These limits must be met to prevent or eliminate the hazard, or to reduce it to a safe level.

**Principle 4: Establish Monitoring Procedures**

Once critical limits have been created, determine the best way for your operation to check them. Make sure the limits are consistently met. Identify who will monitor them and how often.

**Principle 5: Identify Corrective Actions**

Identify steps that must be taken when a critical limit is not met. These steps should be determined in advance.

**Principle 6: Verify That the System Works**

Determine if the plan is working as intended. Evaluate it on a regular basis. Use your monitoring charts, records, hazard analysis, etc., and determine if your plan prevents, reduces, or eliminates identified hazards.

**Principle 7: Establish Procedures for Record Keeping and Documentation**

Maintain your HACCP plan and keep all documentation created when developing it.

**CLASSROOM ACTIVITY: Plan for a Plan**

LO: 10-4 Identify the basis for an effective HACCP system and summarize the seven HACCP principles

Materials: HACCP Planners or blank sheets of paper

1. Divide students into small groups and assign each group a food.
2. Ask students to imagine each group is a different food service operation that needs to develop a HACCP program for their group's assigned food.
3. Give each group a HACCP Planner. Ask students to develop the seven components of a HACCP plan and record them in the middle column of their planner.
4. Instruct students to rotate or trade their completed HACCP Planner with another group. Students should review the other group's plan and provide feedback in the Reviewer column of the Planner.
5. Ask groups to return the HACCP Planners to their original owners.
6. Give students time to review and discuss the feedback with their group members.

Instructor note: This activity can be done with blank sheets of paper if you are unable to print the HACCP Planner. You could also share copies of HACCP Planner electronically with students.

## Chapter Breakdown

Pages 203 to 212

10.3 Crisis Management

### Resources

PowerPoint Slides 9 to 15

### Reinforce and Review:

- Prepare for a crisis before one occurs. Start with a written plan that focuses on preparation, response, and recovery. For each of these phases, the plan should identify resources needed and procedures to be followed.
- Each crisis management plan needs to be customized to the operation. A good way to ensure your plan achieves what you need is to test it once it is complete. The results will help you identify potential gaps or problems.

### Key Terms

- **Imminent health hazard:** A significant threat or danger to health that requires immediate correction or closure to prevent injury.

### Knowledge Check Answers

1. Here is a summary of the process for responding to a foodborne illness complaint:

When a customer calls to report a foodborne illness:

- Take the complaint seriously and express concern.
- Do not admit responsibility or accept liability.
- Ask for general contact information. Ask about the food that was eaten and when the person first became sick. Ask the person to describe symptoms.
- Complete a foodborne illness incident report form.

If there are similar customer complaints of foodborne illness:

- Contact the crisis management team.
- Identify common food items to determine the potential source of the complaint.
- Contact the regulatory authority to assist with the investigation if an outbreak is suspected.

If the suspected food is still in the operation:

- Set aside the suspected product and identify it to prevent further sale. Include a label with "Do Not Use" and "Do Not Discard."
- Log information about the product, including a description, product date, and lot number. The sell-by date and pack size should also be recorded.
- If possible, obtain samples of the suspect food from the customer.

If the suspected outbreak is caused by a sick staff member:

- Maintain a list of food handlers scheduled at the time of the suspected contamination. Interview them about their health status.
- Exclude the suspect staff member from the operation following requirements.

If the regulatory authority confirms your operation is the source of the outbreak:

- Cooperate with the regulatory authority to resolve the crisis.
- Provide appropriate documentation, including temperature logs, HACCP documents, staff files, etc.

2. An imminent health hazard is defined as a significant threat or danger to health that requires immediate correction or closure to prevent injury. If there is a significant risk to the safety or the security of your food, service must be stopped. Then the local regulatory authority must be notified. Spoiled or contaminated food must be thrown out, along with food in packaging that is not intact. Examples of imminent health hazards include power outages, fire, flood, water interruption, and sewage backup.

## End of Chapter

Page 213

Discussion Questions

### 1. What types of food safety programs must be in place as a foundation for a food safety management system?

The following programs are a foundation for a food safety management system:

- Personal hygiene program
- Food safety training program
- Supplier selection and specification program
- Quality control and assurance program
- Cleaning and sanitation program
- Standard operating procedures (SOPs)
- Facility design and equipment maintenance program
- Pest control program

### 2. What are some ways to achieve active managerial control?

There are many ways to achieve active managerial control in the operation. According to the Food and Drug Administration (FDA), you can use simple tools such as training programs, manager supervision, and the incorporation of SOPs. Active managerial control can also be achieved through more complex solutions, such as a HACCP program. Monitoring is critical to the success of active managerial control. Food will be safe if managers monitor critical activities in the operation. Managers must take the necessary corrective action when required. They must also verify that the actions taken to control the risk factors for foodborne illness are actually working.

### 3. Summarize the activities involved in the first HACCP principle “Conduct a Hazard Analysis.”

The first HACCP principle is “Conduct a Hazard Analysis,” in which you must identify and assess potential hazards in the food you serve. Start by looking at how food is processed in your operation. Many types of food are processed in similar ways. Here are some common processes:

- Prepping and serving without cooking (salads, cold sandwiches, etc.)
- Prepping and cooking for same-day service (grilled chicken sandwiches, hamburgers, etc.)
- Prepping, cooking, holding, cooling, reheating, and serving (chili, soup, pasta sauce with meat, etc.)

Look at your menu and identify items that are processed like this. Next, identify the TCS food. Determine where food safety hazards are likely to occur for each TCS food. They can come from biological, chemical, or physical contaminants.

### 4. Under what conditions might a regulatory authority allow an operation to continue operating in the event of a water or electrical interruption?

The regulatory authority may allow an operation to continue operating in the event of a water or electrical interruption under the following conditions:

- The operation has a written emergency operating plan approved in advance by the regulatory authority.
- An immediate corrective action is taken to prevent, eliminate, or control any food safety risk and imminent health hazard associated with the interruption.
- The regulatory authority is informed upon implementing the emergency operating plan.

**Page 214**

**Apply Your Knowledge**

## Trouble at Nathan’s

### 1. What is wrong with how Nathan handled the crisis?

Here is what was wrong with the way Nathan handled the crisis: Nathan forgot that, despite his best efforts, a foodborne illness or other crisis could still occur. He was not prepared for it. One of his most obvious problems was that he had no communication with the media. He also failed to communicate with his key audiences, which included both his staff and his customers.

### 2. What should have been done differently?

In addition to his HACCP program, Nathan needed a crisis management program. He should have started by developing a crisis management team, which would have certainly included his chef and general manager. Nathan certainly could have benefitted from having a crisis communication plan. This would have included a trained spokesperson, as well as a list of media responses that could have been used in the event of an outbreak. He also needed a plan for communicating with his staff and customers. He should not have relied on the media alone to get the word out. The press should not have access to staff. They should be directed by staff to the designated spokesperson.

## Maria's Challenge

### 1. What did Maria do wrong?

Here is what Maria did wrong:

- She started by identifying CCPs.
- She determined that the critical limit for grilled hamburgers was cooking them to 150°F (66°C) for 15 seconds.
- She determined that critical limits would be monitored by checking for doneness using feel and color.
- She failed to determine how to verify whether the HACCP plan was working as intended.
- She failed to include record keeping in her HACCP plan.

### 2. What should she have done differently?

Maria could have done the following:

- She should have started creating her HACCP program by conducting a hazard analysis.
- She should have established the correct critical limit for grilled hamburgers. This would include cooking them to 155°F (68°C) for 17 seconds.
- She should have identified a method for determining if her HACCP program was working as intended. This might have included checking records to determine if critical limits were being met and CCPs were actually being controlled.
- She should have identified records that should be kept. These would be important when verifying whether the HACCP program was working as intended.

## Page 215

## Study Questions

1. C. To actively control risks and hazards throughout the flow of food
2. B. Equipment that is contaminated
3. B. It must be based on a written plan
4. D. Corrective action
5. B. Wearing single-use gloves when handling ready-to-eat food
6. B. Complete an incident report
7. A. Water backs up from a floor drain and comes in contact with food in dry storage.