

LESSON 9

Managing Food Safety—Putting It All Together

GOAL

To understand that the food-service industry uses two management tools to ensure food safety: Active Managerial Control and HACCP (Hazard Analysis Critical Control Point).

OBJECTIVES

- To describe Active Managerial Control and how it assists in providing safe food.
- To identify how Active Managerial Control helps a food establishment pass the health inspection.
- To describe four principles of an HACCP plan and give an example of each.

TEACHER BACKGROUND INFORMATION

Lesson 9 covers

1. Active Managerial Control: Using the five most important risk factors to identify hazards
2. The HACCP System: Background, definitions, principles, advantages

Approximate time to teach lesson: 50–60 min.

Definitions

Active Managerial Control—A proactive approach that anticipates and addresses food-safety issues before they become concerns by having a system in place to make sure potential food-safety issues are monitored. It identifies procedures to control the five most important food-service risk factors as identified by the Centers for Disease Control and Prevention.

corrective action—Action that is taken if the critical limit is not met.

Critical Control Point (CCP)—A point along the path of food flow that if not controlled might result in the food becoming unsafe to eat.

critical limit—The measurable aspect of the CCP.

HACCP (Hazard Analysis Critical Control Point)—Pronounced “hass’-ip,” it is a prevention-based system of identifying and controlling hazards to maintain the safest food possible by purchasing through service.

hazard analysis—The process of determining where hazards may occur in the food flow if care is not taken to prevent or control them.

The food-service industry has responded to consumer concerns about unsafe food by adopting new practices and controls to ensure that the food an establishment serves is safe. Two programs for managing food safety are Active Managerial Control and HACCP (Hazard Analysis Critical Control Point, pronounced “hass’-ip”).

Food-service jobs held by high school students are likely to be entry-level positions that do not involve the development of food-safety systems. However, they will encounter the food-service establishment's system for managing food safety.

Lesson 9 starts with a student activity that uses a copy of the form used by Idaho Environmental Health Specialists to inspect food-service establishments, the Food Establishment Inspection Report. This activity provides an opportunity for students to think about concepts covered in previous lessons. The students will fill in items 1–26 on the form. Items 27–49 will not be used due to time limitations.

If less relevant for your class, the section on HACCP can be covered very briefly. (Occupational classes may want to spend more time on HACCP.)

Active Managerial Control

According to the *Idaho Food Safety and Sanitation Manual* (chapter 12, page 82), food operations are expected to develop Active Managerial Control in their establishments to prevent foodborne disease. This means identifying all possible sources of foodborne illness that could occur in the establishment and developing food-safety programs, standard operating procedures, and training to address the hazards. This can be done by implementing an HACCP plan. In Active Managerial Control, the manager takes a hands-on, forward-looking approach to managing food risks rather than waiting for the food inspector, or worse yet, a foodborne illness outbreak, to bring about change.

Active Managerial Control focuses on controlling the five most important risk factors that cause foodborne illness in food-service establishments:

1. Purchasing food from unsafe sources
2. Failing to cook food adequately
3. Holding food at incorrect temperatures
4. Using contaminated equipment
5. Practicing poor personal hygiene

These five factors were identified by the Centers for Disease Control and Prevention by reviewing foodborne illness caused by food-service establishments.

Food-service managers need to consider their specific operation with regard to the five risk factors; to identify operations where controls are needed to assure safe food; to create policies, procedures, and training to ensure that workers know what to do; to monitor their businesses to ensure that procedures are being followed; and to evaluate employee and food-service performances to verify the actual effectiveness of those procedures.

Development of HACCP

In the 1960s, the Pillsbury Company and NASA (National Aeronautics and Space Administration) developed the HACCP control system to ensure food safety for the first manned space missions. The program focused on preventing hazards that could cause foodborne illnesses by applying science-based controls, from raw material to finished products. Many food companies subsequently adopted HACCP; since 1996, the food-service industry has increasingly adopted it too, specifically in the meat-processing sector.

What is HACCP?

An HACCP plan involves identifying hazards (chemical, biological, physical) at specific points during food handling and identifying how they can be prevented, eliminated, or reduced to a safe level. There are seven sequential steps to developing a full HACCP plan. These are described below as background, but for the students' lesson, they have been condensed to four principles.

1. **Analyze Hazards.** Identifies the potential hazards associated with a food and the measures to control them. The hazard could be biological, such as a microbe; chemical, such as a pesticide; or physical, such as glass or metal fragments.
2. **Identify Each Critical Control Point.** The point in a food's production—from its raw state through processing to consumption by the consumer—at which a potential hazard can be controlled or eliminated. Examples include receiving, preparation, cooking, and cooling.
3. **Establish Preventive Measures with Critical Limits for Each Control Point.** An example using a cooked food might include setting the minimum cooking temperature and time required to ensure the elimination of any harmful microbes.
4. **Establish Procedures to Monitor Each Critical Control Point.** Such procedures might include determining how and by whom cooking time and temperatures should be monitored.
5. **Establish Corrective Actions to Be Taken When Monitoring Shows That a Critical Limit Has Not Been Met.** For example, reprocessing or disposing of food if the minimum cooking temperature is not met.
6. **Establish Procedures to Verify That the System Is Working Properly.** For example, testing time-and-temperature recording devices to verify that a cooking unit is working properly.
7. **Establish Effective Record Keeping to Document the HACCP System.** This would include records of hazards and their control methods, the monitoring of each critical control point, and the action taken to correct potential problems.

For *RSFS*, we will use the simplified HACCP approach described in the *Idaho Food Safety and Sanitation Manual*.

MATERIALS NEEDED

When is HACCP Required?

The *Idaho Food Code* (3-502.11) requires food processors to use HACCP or another quality assurance plan. Food-service establishments are not required to use HACCP unless they

- Smoke or cure meat for preservation purposes
- Use food additives to preserve food
- Employ reduced oxygen packaging on site
- Maintain a tank of live molluscan shellfish (clams, oysters, mussels) for consumption
- Custom process meat
- Package unpasteurized juice for sale without a warning label

In addition, federal legislation mandates that a HACCP plan is required for any schools that participate in the National School Lunch Program and/or School Breakfast Program and that accept USDA commodity goods.

However, the *Idaho Food Safety and Sanitation Manual* encourages all food-service establishments to utilize the HACCP plan.

Advantages of HACCP

The HACCP system offers useful approaches to controlling food safety:

- It focuses on identifying and preventing food hazards before they occur, rather than reacting to them after they have caused a problem.
- It is based on sound science.
- HACCP places responsibility for ensuring food safety on the food-service establishment.

Additional Related Activities Not Included in the Lesson

After discussing food-service inspection, you may wish to show students the “Dirty Dining” report by MSNBC’s *Dateline*, where the health inspection reports on the ten biggest fast food chains are reviewed; the video is approximately 13.5 min and aired June 9, 2010 (<http://www.nbcnews.com/id/3473728#.WnEF1oeumUk>). *Dateline* did a similar report in 2003, updated in 2005 (http://www.nbcnews.com/id/7159895/ns/dateline_nbc-consumer_alert#.WnEEN4eumUk).

- Copies of “You’re the Inspector: A Safe, Celebratory Meal for the Football Team” activity page and the “Food Establishment Inspection Report” form for each student. A master for the activity page is provided at the end of the lesson. The inspection report form is a PDF on the website.



ACTIVITY

YOU'RE THE INSPECTOR
A SAFE, CELEBRATORY MEAL FOR THE FOOTBALL TEAM

- ▶ Rate the Sandwiches n More catering club on the **26 Risk Factors and Interventions**
- ▶ Use the Food Establishment Inspection Report form 2 - middle section of the form
- ▶ Fill in or circle the rating according to the information in the story.

Y = yes, in compliance
 N = no, not in compliance
 N/O = not observed
 N/A = not applicable

(Slide 1) **Lesson 9**
Managing Food Safety—Putting It All Together

Start this lesson with the following activity to get students thinking about how food safety should be managed.

(Slide 2) **You're the Inspector: A Safe, Celebratory Meal for the Football Team.** Provide each student with a copy of the “You're the Inspector: A Safe, Celebratory Meal for the Football Team” activity and “Food Establishment Inspection Report” form. Students have learned food-safety concepts in the previous eight lessons. Ask them to read the story and then rate the members of the Sandwiches n More catering club on the 26 RISK FACTORS AND INTERVENTIONS using the Food Establishment Inspection Report (the middle section of the form). Use the boxes to the left of each RISK FACTOR by filling in or circling the rating according to the information in the story:

- Y = yes, in compliance**
- N = no, not in compliance**
- N/O = not observed**
- N/A = not applicable**

The students will refer to their ratings throughout much of this lesson.

MANAGING FOOD SAFETY

- ▶ Inspection is a once-a-year snapshot of how the establishment is doing
- ▶ For day-to-day food safety, two management tools:

(Slide 3) **Inspection Is a Once-A-Year Snapshot of How the Establishment Is Doing.** For day-to-day food safety, two management tools are used: Active Managerial Control and Hazard Analysis Critical Control Point (HACCP).

ACTIVE MANAGERIAL CONTROL

- ▶ Identifies possible sources of foodborne illness, and develops procedures to prevent hazards
- ▶ Requires a forward-looking approach

1. (Slide 4) **Active Managerial Control.** Food establishments in Idaho are expected to develop Active Managerial Control to prevent foodborne disease. The manager and the cooks work together to identify all possible sources of foodborne illness that could occur in the establishment and to develop food-safety programs, standard operating procedures, and training to prevent the identified hazards. An HACCP plan, which will be discussed in some detail in this lesson, is one way to implement Active Managerial Control.

In Active Managerial Control, the food-service manager takes a hands-on, forward-looking approach to managing food risks, rather than waiting for the food inspector, or worse yet, a foodborne illness outbreak, to bring about change.

ACTIVE MANAGERIAL CONTROL

Identifies procedures to control the five most common risk factors that cause foodborne illness:

1. Food obtained from unsafe sources
2. Failing to cook food adequately
3. Food held at incorrect temperatures
4. Food prepared using contaminated equipment
5. Food prepared/served by employees having poor personal hygiene

(Slide 5) The manager identifies procedures to control the five most common risk factors that cause foodborne illness:

1. Food obtained from unsafe sources
2. Food inadequately cooked
3. Food held at incorrect temperatures
4. Food prepared using contaminated equipment
5. Food prepared/served by employees having poor personal hygiene

The Idaho Food Establishment Inspection Report form is based on the five most common risk factors that cause foodborne illness.



(Slide 6) Each risk factor is further described by referring to the “You’re the Inspector: A Safe, Celebratory Meal for the Football Team” activity. Ask students to use their activity ratings to identify issues encountered by the Sandwiches n More catering club that illustrate the five most common risk factors.



(Slide 7) **RISK FACTOR 1: Food Purchased or Obtained from Unsafe Sources**

- **Inspection Report Item 8: Food obtained from approved source — Y** The use of deer sausage in the lasagna casserole would have been a violation of the *Idaho Food Code* because the source is not an approved one. Fortunately, the club did not use it.
- **Inspection Report Item 9: Receiving temperature/condition — N/O** This was not observed during the inspection visit.
- **Inspection Report Item 10: Records: shellstock tags, parasite destruction, required HACCP plan — N/A** These items do not apply to the club’s food preparation.

(Slide 8) **RISK FACTOR 2: Failing to Cook Food Adequately**

- **Inspection Report Item 15: Proper cooking, time, and temperature – Y** Jim measured the temperature of the lasagna casseroles; the two that had not reached the required temperature were put back in the oven.

(Slide 9) **RISK FACTOR 3: Food Held at Incorrect Temperatures**

- **Inspection Report Items 16: Reheating for hot holding, 17: Cooling, 18: Hot holding, and 19: Cold holding — all are N/A** The lasagna casseroles were prepared earlier in the day and held in the refrigerator until it was time to cook them. Further probe this issue by asking students what the food inspector should have asked about the cooling process. The inspector should have asked, “At what time did this lasagna start to cool?,” “How did you cool this product?,” or “What methods did you use to cool this product?” As a follow-up, the inspector might ask, “Using your process, how long does it take to cool this food item to 41°?” The Sandwiches n More members should be able to answer these questions.
- **Inspection Report Item 20: Date marking and disposition — Y** The club date-marked their lasagna casseroles after making them earlier in the day. Date marking was not necessary, since they planned to hold the cooled casseroles for less than 24 hrs, but it is good practice.



FIVE RISK FACTORS
SANDWICHES 'N MORE INSPECTION REPORT

Risk Factor 4: Food prepared using contaminated equipment

Item	Response	Comments
1. Food prepared using contaminated equipment	Y	
2. Food prepared using contaminated equipment	Y	
3. Food prepared using contaminated equipment	Y	
4. Food prepared using contaminated equipment	Y	
5. Food prepared using contaminated equipment	Y	
6. Food prepared using contaminated equipment	Y	
7. Food prepared using contaminated equipment	Y	
8. Food prepared using contaminated equipment	Y	
9. Food prepared using contaminated equipment	Y	
10. Food prepared using contaminated equipment	Y	
11. Food prepared using contaminated equipment	Y	
12. Food prepared using contaminated equipment	Y	
13. Food prepared using contaminated equipment	Y	
14. Food prepared using contaminated equipment	Y	
15. Food prepared using contaminated equipment	Y	
16. Food prepared using contaminated equipment	Y	
17. Food prepared using contaminated equipment	Y	
18. Food prepared using contaminated equipment	Y	
19. Food prepared using contaminated equipment	Y	
20. Food prepared using contaminated equipment	Y	

FIVE RISK FACTORS
SANDWICHES 'N MORE INSPECTION REPORT

Risk Factor 5: Food prepared/served by employees having poor personal hygiene

Item	Response	Comments
1. Food prepared/served by employees having poor personal hygiene	Y	
2. Food prepared/served by employees having poor personal hygiene	Y	
3. Food prepared/served by employees having poor personal hygiene	Y	
4. Food prepared/served by employees having poor personal hygiene	Y	
5. Food prepared/served by employees having poor personal hygiene	Y	
6. Food prepared/served by employees having poor personal hygiene	Y	
7. Food prepared/served by employees having poor personal hygiene	Y	
8. Food prepared/served by employees having poor personal hygiene	Y	
9. Food prepared/served by employees having poor personal hygiene	Y	
10. Food prepared/served by employees having poor personal hygiene	Y	
11. Food prepared/served by employees having poor personal hygiene	Y	
12. Food prepared/served by employees having poor personal hygiene	Y	
13. Food prepared/served by employees having poor personal hygiene	Y	
14. Food prepared/served by employees having poor personal hygiene	Y	
15. Food prepared/served by employees having poor personal hygiene	Y	
16. Food prepared/served by employees having poor personal hygiene	Y	
17. Food prepared/served by employees having poor personal hygiene	Y	
18. Food prepared/served by employees having poor personal hygiene	Y	
19. Food prepared/served by employees having poor personal hygiene	Y	
20. Food prepared/served by employees having poor personal hygiene	Y	

REMAINING ITEMS
SANDWICHES 'N MORE INSPECTION REPORT

Item	Response	Comments
1. Certification	Y	
2. Exclusion, restriction, and reporting	Y	
3. Eating, tasting, drinking, or tobacco use	Y	
4. Discharge from eyes, nose, and throat	Y	
5. Returned/reservice of food	Y	
6. Clean hands, properly washed	Y	
7. Hand-washing facilities	Y	
8. Bare-hand contact with ready-to-eat foods	Y	
9. Hand-washing facilities	Y	
10. Hand-washing facilities	Y	
11. Hand-washing facilities	Y	
12. Hand-washing facilities	Y	
13. Hand-washing facilities	Y	
14. Hand-washing facilities	Y	
15. Hand-washing facilities	Y	
16. Hand-washing facilities	Y	
17. Hand-washing facilities	Y	
18. Hand-washing facilities	Y	
19. Hand-washing facilities	Y	
20. Hand-washing facilities	Y	

- **Inspection Report Item 21: Time as a public health control** — Y Although the club expects the football team to eat all of the lasagna casseroles before the four-hour time limit in the Danger Zone is reached, Sara prepared labels to indicate when the casseroles would have to be discarded.

(Slide 10) **RISK FACTOR 4: Food Prepared Using Contaminated Equipment**

- **Inspection Report item 11: Food segregated, separated, and protected** — Y The cutting board used earlier for casserole preparation was washed and sanitized before salad preparation.
- **Inspection Report item 12: Food-contact surfaces cleaned and sanitized** — Y The food-preparation sink was cleaned and sanitized before members washed the salad items.

(Slide 11) **RISK FACTOR 5: Food Prepared/Served By Employees Having Poor Personal Hygiene**

- **Inspection Report Item 5: Clean hands, properly washed** — Y All club members washed their hands in a hand-wash sink at appropriate times.
- **Inspection Report Item 6: Bare-hand contact with ready-to-eat foods** — Y The club members used gloves and tongs to avoid bare-hand contact with ready-to-eat foods.
- **Inspection Report Item 7: Hand-washing facilities** — Y A separate hand-wash sink was used.

(Slide 12) **Remaining Inspection Report Items**

- **Inspection Report Item 1: Certification** — Y The students had passed the *Ready, Set, Food Safe* certification test.
- **Inspection Report Item 2: Exclusion, restriction, and reporting** — Y Club members did not have any illness that excluded them from food preparation.
- **Inspection Report Item 3: Eating, tasting, drinking, or tobacco use** — Y No club members carried out these actions during food preparation.
- **Inspection Report Item 4: Discharge from eyes, nose, and throat** — Y Club members were healthy.
- **Inspection Report Item 13: Returned/reservice of food** — Y Food was served on a buffet table with a plan to discard the leftovers, if any. (*Idaho Food Code* section 3-306.14 requires that food that has been served to a consumer may not be re-served to others. Reuse of buffet food is not permitted.)

- **Inspection Report Item 14: Discarding/reconditioning unsafe food** — Y The bun dropped on the floor was discarded.
- **Inspection Report Item 22: Consumer advisory for raw or undercooked food** — N/A Time/temperature control for safety food: no raw or undercooked food was served.
- **Inspection Report Item 23: Pasteurized foods used, avoidance of prohibited foods** — N/A Football players are not a highly susceptible population.
- **Inspection Report Item 24: Additives/approved, unapproved** — N/A No additives.
- **Inspection Report Item 25: Toxic substances properly identified, stored, used** — Y Bleach was in its original container and stored in a separate cupboard for nonfood items.
- **Inspection Report Item 26: Compliance with variance and HACCP plan** — N/A No variances were in effect for Sandwiches n More.

2. HACCP

- a. (Slide 13) **Definition of HACCP (Hazard Analysis Critical Control Points).**

(Slide 14) The definition of HACCP: A prevention-based system for identifying biological, chemical, or physical food hazards and implementing procedures to control them.

- b. (Slide 15) **Background of HACCP Development.** NASA, the National Aeronautics Space Administration, developed a system to ensure that the astronauts' food was safe. This process is called HACCP (pronounced "hass'-ip").

- c. **Definitions.** Before discussing the HACCP principles, three definitions that are associated with HACCP are needed:

- (Slide 16) **Critical Control Point (CCP).** A CCP is a point along the path of food flow that, if not controlled, might result in the food becoming unsafe to eat. For example, there are five easily identifiable critical control points in most food establishments: cooking temperatures, cooling times, holding temperatures, reheating temperatures, and personal hygiene practices.
- (Slide 17) **Critical Limit.** A critical limit is the measurable aspect of the CCP. For example, the critical limit for the cooking temperature of a hamburger patty is 155°F for 15 sec.
- (Slide 18) **Corrective Action.** A corrective action is what can be done if the critical limit is not met. For example,

HACCP
FOOD SAFETY MANAGEMENT TOOL

HACCP DEFINITION

▶ A system for identifying food hazards, and

BACKGROUND OF HACCP

CRITICAL CONTROL POINT (CCP) DEFINITION

▶ A CCP is a point in the path of food flow, that if not controlled, might result in unsafe food

▶ Five easily identifiable CCPs in most food establishments:

1. Cooking temperatures
2. Cooling times
3. Holding temperatures
4. Reheating temperatures
5. Personal hygiene practices

CRITICAL LIMIT DEFINITION

▶ A critical limit is the measurable aspect

CORRECTIVE ACTION DEFINITION

▶ A corrective action is what can be done if the critical limit is not met

• For example, if the hamburger patty is measured to be only 130°F, the corrective action would be to continue cooking it

if the hamburger patty is measured to be only 135°F, the corrective action would be to continue cooking it.

- d. (Slide 19) **Principles of HACCP.** Although there are seven principles or steps that make up the full HACCP system, the *Idaho Food Safety and Sanitation Manual* has simplified it to four, which can be used to develop Active Managerial Control:
1. Identify what aspects of your establishment need critical control points.
 2. Identify the critical limits for those points.
 3. Identify what corrective actions can be taken if a critical limit is not met.
 4. Document the action.

Each of these principles might be different for each establishment, but the following scenarios provide some examples.

FOUR HACCP PRINCIPLES
For food service in Idaho, HACCP has 4 steps:

- 1 Identify critical control points
- 2 Identify the critical limits for those points
- 3 Identify corrective actions
- 4 Document action

LETTUCE SALAD
EXAMPLE 1

Situation. Sandwiches n More made a freshly prepared salad for the football team. The salad ingredients were refrigerated after purchase, washed in a clean and sanitized sink, then chopped and mixed. The salad was prepared just before service.

1. Identify Critical Control Points

- ▶ Washing the salad ingredients before preparation
- ▶ Personal hygienic practices of the person assigned to make the salad



- (Slide 20) **Lettuce Salad (Example 1).** Sandwiches n More made a freshly prepared salad for the football team. The salad ingredients were refrigerated after purchase, washed in a clean and sanitized sink, then chopped and mixed. The salad was prepared just before service. In this case, the critical control points include
 - Washing the salad ingredients before preparation
 - The personal hygienic practices of the person assigned to make the salad

LETTUCE SALAD
EXAMPLE 1

Situation. Sandwiches n More made a freshly prepared salad for the football team. The salad ingredients were refrigerated after purchase, washed in a clean and sanitized sink, then chopped and mixed. The salad was prepared just before service.

1. Identify Critical Control Points

- ▶ Washing the salad ingredients before preparation
- ▶ Personal hygienic practices of the person assigned to make the salad




(Slide 21) The manager determines that the following critical limits must be met: the food-preparation sink must be cleaned and sanitized before washing the salad ingredients and no bare-hand contact with the salad ingredients. The manager also instructs staff members to discard the salad if the critical limits are not met (corrective action).

LASAGNA CASSEROLES
EXAMPLE 2

Situation. Because of student member schedules, the Sandwiches n More catering club decided to prepare the four lasagna casseroles in the morning, and hold them in the refrigerator until late afternoon, when they would be baked.

1. Identify Critical Control Points

- ▶ Casseroles are cooled quickly
- ▶ Casseroles are safely cooked



- (Slide 22) **Lasagna (Example 2).** Because of student member schedules, the Sandwiches n More catering club decided to prepare the four lasagna casseroles in the morning and hold them in the refrigerator until late afternoon, when they would be baked. In this case, there might be several critical control points, but two that clearly stand out are that the casseroles must be cooled quickly and safely cooked.


LASAGNA CASSEROLES
EXAMPLE 2

2. Set Critical Limits

- ▶ Cool completed casseroles from 135°F to 70°F within 2 hours and 70°F to 41°F or less in 4 more hours
- ▶ Cook casseroles to a minimum internal temperature of 165°F for 15 seconds, tested with a thermometer

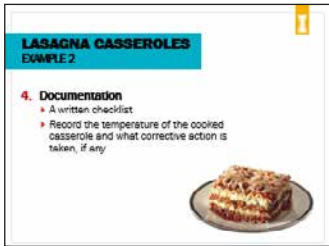
3. Corrective Action

- ▶ If the cooling critical limit is not met, use an ice bath
- ▶ If the cooking critical limit is not met, continue cooking until correct endpoint is met



(Slide 23) The *Idaho Food Code* requires that the completed casseroles be cooled from 135°F to 70°F within 2 hrs and 70°F to 41°F or less in 4 more hrs. The casseroles must be cooked to a minimum internal temperature of 165°F for 15 sec (requirement for stuffed pasta), based on a thermometer test.

Corrective Action. If these limits are not met, corrective steps could include cooling the casserole more rapidly with the use



of an ice bath and shallow pans and continuing to reheat the lasagna to make sure that it meets the proper temperature.

(Slide 24) **Document Action.** Once the critical limits are identified and steps are taken to correct them, the next thing to do is to implement a procedure to check that these Active Managerial Controls are being met. The most effective way to do this is to establish a program of documenting what is taking place. A written checklist to record the critical limits, such as temperatures, is useful.

- e. (Slide 25) **Advantage of Using HACCP System.** HACCP focuses on identifying and preventing food hazards before they occur, rather than reacting to them after they have become a problem.

(Slide 26) **UNDERSTANDING CHECK**

(Slide 27) **Question:** How does a food-service manager practice Active Managerial Control?
Answer: Identifies possible food risks in the establishment and develops a plan for eliminating or reducing them to a safe level.

(Slide 28) **Question:** What are the five most common risk factors for foodborne illness as identified by the Centers for Disease Control and Prevention?

- Answer:**
1. Food from unsafe sources
 2. Food inadequately cooked
 3. Food held at incorrect temperatures
 4. Food prepared using contaminated equipment
 5. Food prepared/served by employees having poor personal hygiene

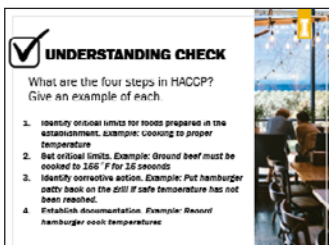
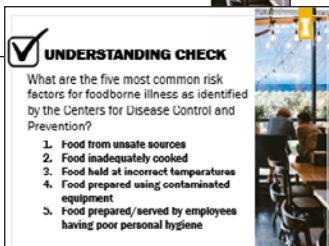
(Slide 29) **Question:** What are the four steps in HACCP? Give an example of each.

- Answer:**
1. Identify critical limits for foods prepared in the establishment. Example: Cooking to the proper temperature.
 2. Set critical limits. Example: Ground beef must be cooked to 155°F for 15 sec.
 3. Identify corrective action. Example: Put hamburger patty back on the grill if safe temperature has not been reached.
 4. Establish documentation. Example: Record hamburger cooking temperatures.

Although having an HACCP system in place is not required for all food establishments, it is a proactive step towards reducing or eliminating foodborne illness.

(Slides 30–35) **I Will Survive (3:42)**

This song is an excellent summary of the course. It mentions cooking food thoroughly, using a food thermometer, defrosting



ACTIVITY

I WILL SURVIVE

I'd listen to the news and I'd be petrified
Another foodborne outbreak, I'd be all torn up inside
But then I spent so many nights
Worried about what I just ate
Could I be next?
Did I have poisons on my plate?

But now I'm back
From cyberspace
Determined that I won't become a foodborne illness case
I've learned some simple steps
To keep my food all safe for me
And if you do the same
You'll raise your life expectancy



ACTIVITY

I WILL SURVIVE

I've got a sign, on my fridge door
Saying go away bacteria
Cause you're not welcome anymore
Listeria don't scare me nor does that nasty E. coli
Hey Salmonella?
Did you think I'd lay down and die?
Oh no, not if I will survive
Oh as long as I am careful with my food I'll stay alive

Cause I've got all my safety plans
I disinfect and wash my hands
And I'll survive, I will survive
Hey, hey



ACTIVITY

I WILL SURVIVE

I pointed my web browser to fightbac.org
I learned that microbes pose a danger
Though they are too small to see
So I spent a couple nights
Gettin' myself into the know
And now I take the steps
That don't allow those bugs to grow
I cook my meats and poultry through

A thermometer is handy to show me just how well I do
I defrost food in the fridge
And promptly refrigerate
When you're dealing with food pathogens
There's not much time to wait



food safely, and the importance of refrigeration. It also mentions specific pathogens, which were discussed in previous lessons. The “take home” message from this song is that foodborne illness can be prevented if the necessary precautions are taken.

I WILL SURVIVE (“I Will Survive” by Gloria Gaynor)

I'd listen to the news and I'd be petrified
Another foodborne outbreak, I'd be all torn up inside
But then I spent so many nights
Worried about what I just ate
Could I be next?
Did I have poisons on my plate?
But now I'm back
From cyberspace
Determined that I won't become a foodborne illness case
I've learned some simple steps
To keep my food all safe for me
And if you do the same
You'll raise your life expectancy

I've got a sign
On my fridge door
Saying go away bacteria
Cause you're not welcome anymore
Listeria don't scare me nor does that nasty *E. coli*
Hey *Salmonella*?
Did you think I'd lay down and die?
Oh no, not I
I will survive
Oh as long as I am careful with my food I'll stay alive
Cause I've got all my safety plans
I disinfect and wash my hands
And I'll survive, I will survive
Hey, hey

I pointed my web browser
to fightbac.O R G
I learned that microbes pose a danger
Though they are too small to see
So I spent a couple nights
Gettin' myself into the know
And now I take the steps
That don't allow those bugs to grow
I cook my meats and poultry through
A thermometer is handy to show me just how well I do
I defrost food in the fridge
And promptly refrigerate
When you're dealing with food pathogens
There's not much time to wait

ACTIVITY

I WILL SURVIVE

I've got a sign
On my fridge door
Sayin' go away
bacteria
Cause you're not
welcome
anymore
Listeria don't scare
me nor does that
nasty *E. coli*
Hey *Salmonella*?
Did you think I'd lay
down and die?

Oh no, not I!
I will survive
Oh as long as I
am careful with
my food I'll stay
alive
Cause I've got all
my safety plans
I disinfect and
wash my hands
And I'll survive, I
will survive



ACTIVITY


I WILL SURVIVE

There's a sign
On my fridge door
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bacteria
Cause you're not
welcome anymore
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down and die?



ACTIVITY

I WILL SURVIVE



Oh no, not I!
I will survive
Oh as long as I am
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And I'll survive, I
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Cause I've got all my safety plans
I disinfect and wash my hands
And I'll survive, I will survive
I will survive

REFERENCES

- Fight Bac! Partnership for Food Safety Education. <http://www.fightbac.org/>. Accessed 28 August 2019.
- Food and Drug Administration. *HACCP: A State of the Art Approach to Food Safety*. FDA Backgrounder, October 2001. <http://vm.cfsan.fda.gov/~lrd/bghaccp.html>.
- Idaho Department of Health and Welfare. *Idaho Food Safety and Sanitation Manual*. Third Edition. Boise: Idaho Department of Health and Welfare, 2005. http://healthandwelfare.idaho.gov/Portals/0/Medical/LicensingCertification/IdahoFoodSafetyManual_2005.pdf.
- Idaho Department of Health and Welfare, Food Protection Program. *Food Establishment Inspection Report*.
- National Restaurant Association Educational Foundation. *ServSafe Essentials*. Fifth Edition. Upper Saddle River, NJ: Prentice Hall, 2008. <http://vm.cfsan.gov/~lrd/bghaccp.html>.

LESSON 9

You're the Inspector: A Safe, Celebratory Meal for the Football Team

Directions. As you learned in Lesson 1, local Environmental Health Specialists annually inspect food service establishments for compliance with the *Idaho Food Code*. The inspection is conducted using the *Food Establishment Inspection Report*.

In this activity, imagine that you are the restaurant inspector. Read the story below and rate *Sandwiches n More* on the 26 RISK FACTORS AND INTERVENTIONS, using the *Food Establishment Inspection Report*. These RISK FACTORS AND INTERVENTIONS (1 to 26) are located in the middle section of the form. Use the boxes to the left of each RISK FACTOR and fill in or circle your rating according to the information in the story:

Y = yes, in compliance

N = no, not in compliance

N/O = not observed

N/A = not applicable

It is not necessary to rate items 27 to 49 at the bottom of the form.



***Sandwiches n More* Prepares a Celebratory Meal for the Football Team**

Your inspection visit to Hells Canyon High School coincides with Sandwiches n More's (a high school catering club) preparation for a celebratory meal for their victorious football team. Six members of the club are in the high school food laboratory preparing food for the evening's dinner.

You start your inspection by washing your hands. Next, you ask club members whether they know the rules of safe food preparation. All the students reply that they have passed the *Ready, Set, Food Safe* certification test. Next, you ask if anyone has been sneezing, coughing, or has a runny nose, or is experiencing fever, vomiting, diarrhea, or jaundice. All the club members report that they are healthy and start on their assigned food-preparation tasks.

Mike and Kim each wash their hands at the hand-wash sink and then clean and sanitize the food-preparation sink. You note that they sanitized the sink with a 100-ppm chlorine bleach solution, which they diluted and tested for proper strength. The bottle of bleach used to prepare the diluted solution was in its original container and stored in the teacher's cupboard with other nonfood items. They begin to wash lettuce, peppers, cucumbers, and tomatoes. After washing the salad ingredients, they

rewash their hands, put on gloves, and begin to chop the salad items. When you ask about the cutting board, Mike says that it was cleaned and sanitized after it was used for casserole preparation earlier in the day.

Sara and Jim remove from the refrigerator several foil containers of lasagna casserole prepared earlier in the day. You check the casserole temperature with a sanitized thermometer and record 35°F; you also note that the containers are labeled with the time and date of preparation. Sara and Jim place the casseroles in preheated ovens. You ask where they obtained the ingredients for the casseroles. Sara explains that even though they had hoped to use some venison sausage made from a deer shot by one of the club members, the sausage hadn't thawed in time, so all the ingredients were purchased at the local grocery store. They wash their hands and go to help Mike and Kim with the salad.

Ashley and Jenna have also washed their hands and are moving the whole wheat buns from the baking pan into cloth-lined baskets for the buffet table. One bun slips out of the tongs used to transfer them and falls on the floor. Jenna tosses it in the trash and, after washing her hands, slices six cherry pie servings, plates them, and leaves them on the buffet table.

Jim measures the temperature by inserting a a sanitized, instant-read thermometer into the center of each casserole dish. Two casseroles read 165°F and two read 150°F. He returns the lower-temperature casseroles to the oven and lets the others rest prior to cutting and plating. Sara prepares labels for each casserole pan that show the time they were removed from the oven.

You can't stay any longer, but you ask the club members what they will do if there is leftover food. Ashley mentions that they are serving a football team and do not expect any leftover food, but if there is, it will be discarded.



Food Establishment Inspection Report

Food Protection Program, Office of Epidemiology and Food Protection
450 West State Street, Boise, Idaho 83702 208-334-5938

Establishment Name, Operator, Address, County, Estab #, EHS/SUR.#, Inspection time, Travel time, Inspection Type, Risk Category, Follow-Up Report, Date

Table with 2 columns: Critical Violations, Noncritical. Rows for # of Risk Factor Violations, # of Repeat Violations, Score, and summary notes.

RISK FACTORS AND INTERVENTIONS (Idaho Food Code applicable sections in parentheses)
The letter to the left of each item indicates that item's status at the inspection.

Main inspection table with columns for Y/N, COS/R, and various risk factors like Demonstration of Knowledge, Employee Health, Good Hygienic Practices, etc.

Table with 8 columns: Item/Location, Temp, Item/Location, Temp, Item/Location, Temp, Item/Location, Temp

GOOD RETAIL PRACTICES (X = not in compliance)

Table with 4 columns: Item, COS, R, Item, COS, R, Item, COS, R, Item, COS, R

OBSERVATIONS AND CORRECTIVE ACTIONS (CONTINUED ON NEXT PAGE)

Person in Charge (Signature), Title, Date, Inspector (Signature), Date, Follow-up: Yes/No