Applying HACCP-based Food Safety to your School

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Background

The Center for Disease Control and Prevention (CDC) estimates that annually foodborne illness will cause:

• 1 in 6 Americans (or 48 million people) to get sick
• 128,000 to be hospitalized
• 3,000 deaths

Half of the reported cases of foodborne illnesses occur in children under 15 years of age.
Population in Schools

• Over 30 million children served school meals daily.

• Young children at risk for foodborne illness:
  ▪ Developing immune systems
  ▪ Lower body weight
  ▪ Limited control over their diet
  ▪ Reduced stomach acid production

• Food-related disabilities:
  ▪ Food allergies/intolerances
  ▪ Celiac disease
  ▪ Diabetes
  ▪ PKU
  ▪ Modified texture
Creating a Culture of Food Safety

- Makes food safety part of the conversation
- Well-written and carefully implemented food safety plan can help organize and support a culture of food safety.
Polling Question

How often are you trained on your school’s HACCP-based food safety plan?

• Annually
• Biannually
• Quarterly
• Monthly
• Weekly
• Other
A HACCP-based Food Safety Plan

1. Develop, document, and implement Standard Operating Procedures (SOPs).
2. Identify and document all menu items.
3. Identify and document control measures and critical limits.
4. Establish monitoring procedures.
5. Establish corrective actions.
7. Review and revise.
1. Develop, Document, and Implement SOPs

Standard Operating Procedure (SOPs)
• Step-by-step written instructions
• Cover food safety practices
• Tailor to individual school
• Important for staff to follow

Logs
• Documentation of food safety procedures
2. Identify and Document All Menu Items

Process Approach to HACCP

• Categories based on how many times the menu item moves through the temperature danger zone (TDZ)
<table>
<thead>
<tr>
<th>Process Category</th>
<th>Temperature Danger Zone</th>
<th>Example Foods</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Cook</td>
<td>Food does not go through TDZ</td>
<td><img src="image1.png" alt="Example Food" /> <img src="image2.png" alt="Example Food" /> <img src="image3.png" alt="Example Food" /></td>
</tr>
<tr>
<td>Same Day Service</td>
<td>Food goes through TDZ one time</td>
<td><img src="image4.png" alt="Example Food" /> <img src="image5.png" alt="Example Food" /> <img src="image6.png" alt="Example Food" /></td>
</tr>
<tr>
<td>Complex</td>
<td>Food goes through TDZ two or more times</td>
<td><img src="image7.png" alt="Example Food" /> <img src="image8.png" alt="Example Food" /> <img src="image9.png" alt="Example Food" /></td>
</tr>
</tbody>
</table>
3. Identify and Document Control Measures and Critical Limits

Critical control point (CCP)
• Key point to prevent, eliminate, or reduce a food safety hazard
• Example: Checking the final internal cooking temperature of a beef roast

Critical limit (CL)
• Minimum or maximum limit that must be met to prevent or eliminate the hazard
• Example: Ground beef is 155 °F
Control Measures — No Cook

• Does not go through TDZ
• Cold Holding – 41°F or lower
  • Prevents growth of pathogens

Process 1: NO COOK
Example: Fruit Salad

RECEIVE
Control Measures: Known Source, Receiving Temperatures

STORE
Control Measures: Proper Storage Temperatures, Prevent Cross Contamination, Store away from chemicals

PREPARE
Control Measures: Personal Hygiene, Restrict Ill Employees, Prevent Cross Contamination

CCP: COLD HOLDING
Critical Limit: Hold at 41°F or Below.* Check and record temperatures.

SERVE
Control Measures: No Bare Hand Contact with Ready to Eat Food, Personal Hygiene, Restrict Ill Employees

*From the 2001 FDA Food Code (as amended August 20, 1993 in the Supplement to the 2001 Food Code).
Control Measures — Same Day Service

- Food goes through the TDZ one time.
- Cook to internal temperature to destroy bacteria
- Hot Holding – $135^\circ$ F or higher
Control Measures — Complex Food Preparation

• Food that goes the TDZ two or more times
• Cook to internal temperature to destroy bacteria
  • 70° F within 2 hours
  • 41° F within additional 4 hours
• Reheat
  • 165° F for 15 seconds within 2 hours
• Hot holding
  • 135° F or higher

<table>
<thead>
<tr>
<th>Process 3: Complex Food Preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Example: Beef and Bean Tamale Pie</strong></td>
</tr>
<tr>
<td><strong>RECEIVE</strong></td>
</tr>
<tr>
<td>Control Measures: Known Source, Receiving Temperatures</td>
</tr>
<tr>
<td><strong>STORE</strong></td>
</tr>
<tr>
<td>Control Measures: Proper Storage Temperatures, Prevent Cross Contamination, Store away from chemicals</td>
</tr>
<tr>
<td><strong>PREPARE</strong></td>
</tr>
<tr>
<td>Control Measures: Personal Hygiene, Restrict Ill Employees, Prevent Cross Contamination</td>
</tr>
<tr>
<td><strong>CCP: COOK</strong></td>
</tr>
<tr>
<td>Critical Limit: Cook to 165°F for at least 15 seconds.* Check and record temperatures.</td>
</tr>
<tr>
<td><strong>CCP: COOL</strong></td>
</tr>
<tr>
<td>Critical Limit: Cool to 70°F within 2 hours and from 70°F to 41°F or lower within an additional 4 hours.* Check and record temperatures.</td>
</tr>
<tr>
<td><strong>CCP: REHEAT</strong></td>
</tr>
<tr>
<td>Critical Limit: Heat to 165°F for at least 15 seconds.* Check and record temperatures.</td>
</tr>
<tr>
<td><strong>CCP: HOT HOLD</strong></td>
</tr>
<tr>
<td>Critical Limit: Hold for hot service at 135°F or higher.* Check and record temperatures.</td>
</tr>
<tr>
<td><strong>SERVE</strong></td>
</tr>
<tr>
<td>Control Measures: No Bare Hand Contact with Ready to Eat Food, Personal Hygiene, Restrict Ill Employees</td>
</tr>
</tbody>
</table>

*From the 2001 FDA Food Code (as amended August 29, 1993 in the Supplement to the 2001 Food Code).
4. Establish Monitoring Procedures

<table>
<thead>
<tr>
<th>Questions to Consider</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>How will you monitor?</td>
<td>Check that the refrigerator temperature is 41 °F or lower.</td>
</tr>
<tr>
<td>When and how often will you monitor?</td>
<td>Two times daily; beginning and end of workday</td>
</tr>
<tr>
<td>Who will be responsible for monitoring?</td>
<td>Cafeteria manager</td>
</tr>
</tbody>
</table>

Keep COLD FOODS at 41 °F or below.
5. Establish Corrective Procedures

Corrective action – what must be done if a CCP is not met

Example Scenario

• Cooler temperature is 46 °F
• Should be 41 °F
• Temperature taken the day before and logged

Corrective action

1. Check a carton of milk.
   • If it registers 42 °F or above, do not serve the milk.
2. Call the manager for replacement milk and equipment repair.
3. If milk temperature is too high, mark all the milk in the cooler as BAD - do not use or discard as instructed.
6. Keep Records

Method for checking and verifying that the food safety plan is working

Examples of records to keep

• SOPs
• Time and temperature logs
• Corrective action records
• Calibration logs
• Training logs
• Receiving logs

Records can show what safety measures were taken in if there is a foodborne illness outbreak.
7. Review and Revise

HACCP plan is a living document!

Review and revise food safety plan

- At least annually
- With changes in facility
  - New equipment
  - New menu items
  - New laws and regulations
- When employees voice issues
- Procedure is not working
Every employee has the opportunity to be a food safety advocate!
Questions?