

# Food Safety in a Changing World

Jamie Stamey, MS, RD, LDN, CFSP

## Introduction

In a post-September 11<sup>th</sup> United States, “safety” has become a major focus of nearly every sector – from government to industry to consumers. <sup>1, 2, 3, 4</sup> While most foodservice operators have started to address basic food safety plans to prevent unintentional contamination, such as time-temperature abuse or cross-contamination, many facilities may not be adequately prepared to deal with the renewed threat of deliberate contamination <sup>1, 2</sup> or the malicious tampering of food products.

Food offers the perfect vehicle for large-scale terrorist attacks <sup>5, 6</sup>. In fact, small-scale cases of food bioterrorism have already occurred in the United States. In 1984, a religious cult in the Pacific Northwest sprayed cultured *Salmonella* bacteria on a salad bar, resulting in over 750 reported cases of illness. <sup>7</sup> Malicious tampering has also occurred in other products, including arsenic-laced Chilean grapes and in non-food products like pain reliever capsules. <sup>1, 5</sup>

## CDC

The Centers for Disease Control and Prevention (CDC) have categorized many foodborne pathogens as potential weapons in a bioterrorism attack. <sup>5, 8</sup> The names of such “bio-weapons” may sound surprisingly familiar. *Salmonella*. *E. coli*. *Botulinum*. *Shigella*. These organisms can cause foodborne illness in their natural state when food is not prepared properly or contaminated by improper handling. However, they can also be introduced deliberately into a food or water supply to cause harm. <sup>1, 5, 8</sup> Chemicals can also be used for deliberate contamination. Pesticides and cleaning agents are just a few of the chemical agents readily available at most food-related facilities. <sup>2, 3</sup>

## Resources for Healthcare Foodservice Operators

Healthcare foodservice operators need a positive, proactive, risk-based management approach to assess and prevent food exposure to both unintentional and malicious contamination. On December 17, 2003 the Food and Drug Administration and US Department of Health and Human Services released “Guidance for Industry -- Retail Food Stores and Food Service Establishments: Food Security Preventive Measures Guidance” <sup>2</sup> and on March 21, 2003, “Guidance for Industry: Food Producers, Processors, and Transporters: Food Security Preventive Measures Guide”. <sup>3</sup> Both documents provide important direction in evaluation and implementation of such preventive measures. <sup>2, 3</sup>

Every foodservice operation needs a food safety plan that includes standard operating procedures and incorporates Hazard Analysis Critical Control Points (HACCP) principles for hazard analysis, prevention, monitoring and verifying security in the following areas <sup>1, 2, 3</sup>:

1. Vendor assurance and recall strategy
2. Facility security and restricted access
3. Employee screening, supervision and training
4. Foodservice operations throughout the ‘flow of food’

## **Vendor Assurance and Recall Strategy**

As part of your foodservice-distributor relationship, include a predetermined system for the inclusion of your facility in a rapid communication and recall notification plan should contamination of the food supply occur. Identify primary and back-up contacts within your organization that can be reached 24 hours a day, 7 days a week. Request that the distributor include a plan that provides for food security throughout transportation. Delivery trucks and loading docks should be secured and monitored during delivery. Foods should never be left unattended.

## **Facility Security and Restricted Access**

Secure the building by securing doors, windows, ventilation systems, utility rooms and roof openings. All hazardous materials should be secured and routinely inventoried. Restrict entry of unauthorized staff, vendors and visitors from food and chemical storage, food preparation and food holding areas. Employ strict policies on checking in and out visitors, distribution and collection of visitor badges and the requirement for proof of identity.

## **Employee Screening, Supervision and Training**

Background screening should be used for all personnel; full-time, part-time, contract, seasonal, temporary and volunteer staff require equal scrutiny. Employees should be required to wear identification. This identification should be collected upon termination or resignation. Daily work assignments should be available to supervisors to determine who should be on premises. Staff should be allowed access only to areas essential to perform their required tasks. Unscheduled employees, staff relatives and friends should be excluded from the workplace. Personal items including clothing, lunch containers, bags, backpacks, packages and medications should be stored away from food storage and production areas. Employees play a very important role in helping to prevent breaches that would allow for deliberate attacks. Incorporate food security awareness into initial and on-going training programs for ALL employees and volunteers. Make sure to:

- Train staff on how to prevent, identify, report and respond to actual or suspicious actions or threats.
- Involve staff in food security planning and provide periodic reminders of its importance.
- Train employees, supervisors and managers to watch for unusual or suspicious behavior in internal and external staff, visitors and clients.

## **Foodservice Operations Throughout the Flow of Food**

Food vulnerability can be assessed and preventive measure instituted by grouping foods into three main categories.

Pre-packaged foods that will be sold in their original package in a cafeteria or convenience store location should be:

- stored in a secure location to prevent tampering;
- inspected prior to display or service for signs of adulteration;
- and monitored during display to prevent manipulation.

Foods prepared or packaged on site should be prepared using a HACCP-based plan, including:

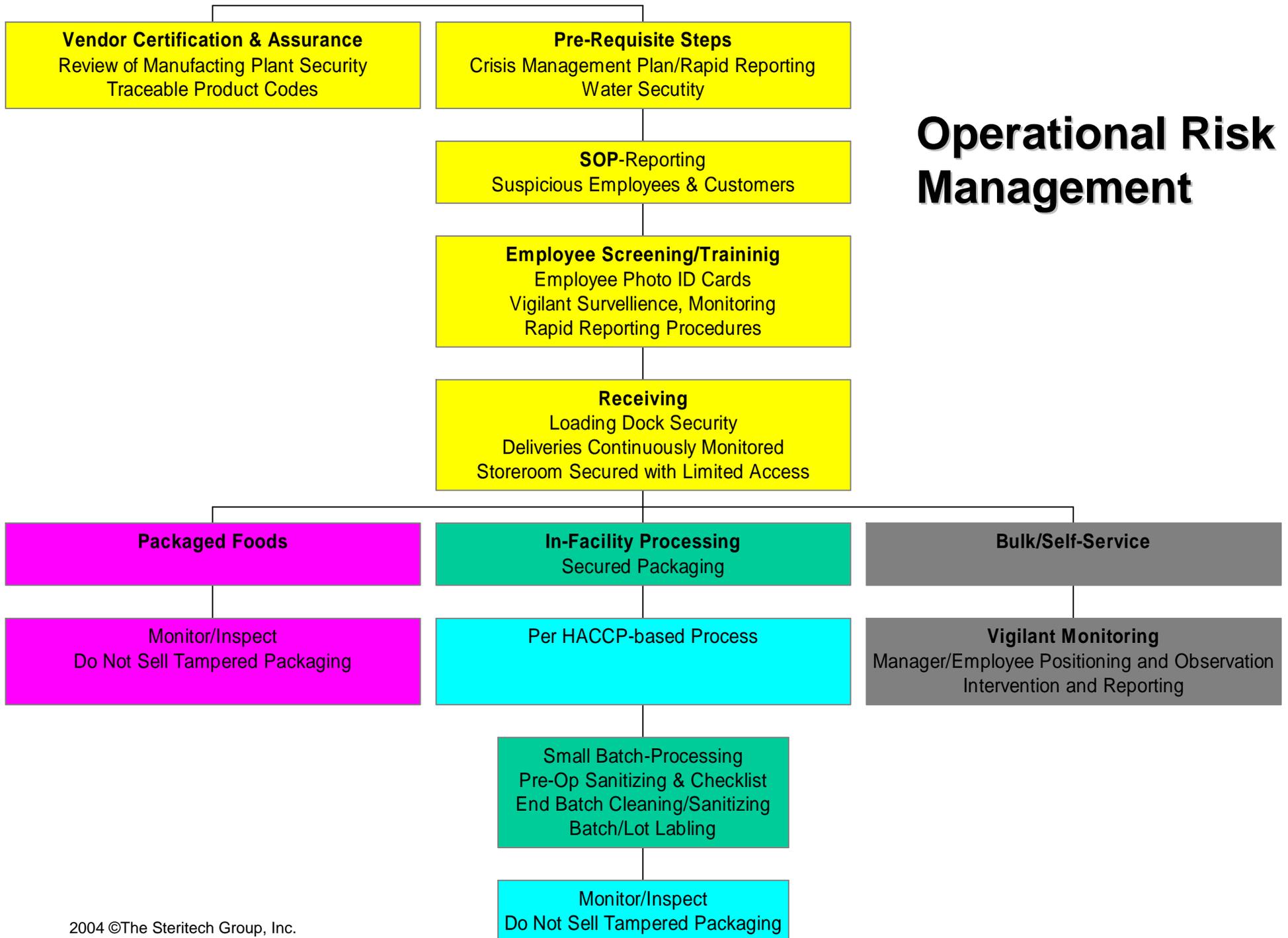
- secure storage of ingredients and packaging materials to prevent contamination;
- pre-operation cleaning and sanitizing of food contact surfaces;
- batch-processing in small quantities with end-batch cleaning and sanitizing;
- and labeling of product batch and lot for identification in the event of recall; and secured and monitored during storage, display and service to prevent post-production contamination.

Self-service and bulk displayed items should be secured during storage of ingredients to prevent contamination and monitored in a proactive fashion to prevent tampering or other malicious actions to this most vulnerable product during display.

Take the necessary steps to implement a well-planned and tightly controlled security plan at your facility. This plan should take into account a heightened awareness of product vulnerability at all stages.<sup>1, 2, 3, 4</sup> Once under your control, food should be protected in a secured facility with well-screened and trained staff that can provide effective, vigilant monitoring. By establishing and prioritizing food safety and security guidelines for food receiving, storage, preparation, holding and service, you can guard against deliberate contamination of the food supply within your operation. A proactive plan is a safe guard.

1. Food Safety Issues: Terrorist Threats to Food. Guidance for Establishing and Strengthening Prevention and Response Systems. WHO 2002, [www.who.int/fsf](http://www.who.int/fsf).
2. Guidance for Industry, Retail Food Stores and Food Service Establishments: Food Security Preventive Measures Guidance, FDA, December 17, 2003, [www.cfsan.fda.gov](http://www.cfsan.fda.gov).
3. Guide for Industry Food Producers, Processors, Transporters and Retailers: Food Security Preventive Measures Guidance. FDA, March 2003, [www.cfsan.fda.gov](http://www.cfsan.fda.gov).
4. Cody, M. Response to Bio-terrorism, ADA, Dec. 2001.
5. Sobel, J Threat of biological terrorist attack on the U.S. food supply: The CDC perspective, Lancet, March 9, 2002 359: 874-80.
6. Henderson, D. Bioterrorism as a Public Health Threat, Emerging Infectious Diseases, CDC July-Sept 1998
7. A large community outbreak of salmonellosis caused by intentional contamination of restaurant salad bars. T. J. Torok; R. V. Tauxe; R. P. Wise; J. R. Livengood; R. Sokolow; S. Mauvais; K. A. Birkness; M. R. Skeels; J. M. Horan; L. R. Foster. *JAMA*. 1997;278:389-395..
8. The Centers for Disease Control and Prevention, Emergency Preparedness and Response. [www.bt.CDC.gov](http://www.bt.CDC.gov)

# Operational Risk Management



## Food Security Check List

### **Vendor Assurance:**

Can your food distributor(s) provide the following documentation?

- Supplier certification of manufacturing plant security (GMP certification)
- Documentation of traceable product codes for all stock
- Food distributor plan to inspect inbound shipments for tampering or counterfeiting
- Food distributor plan to prevent tampering or counterfeiting of on site products
- Food distributor plan to secure delivery trucks during transportation and delivery
- Policy requiring proper identification and background screens of delivery personnel
- Rapid communication and recall notification plan that involves your key facility staff in the event of a local, regional or national food recall

### **Standard Operating Procedures:**

Does your facility have a procedure that addresses the following?

#### **Employees**

- Background screening for all paid and volunteer candidates
- Policy requiring proper identification of personnel at all times
- Policy restricting personal items in food storage or preparation areas
- Employee training plan
  - o prevention, identification, reporting and response to product tampering and counterfeiting
  - o monitoring and reporting of staff with suspicious behavior
- Policy requiring collection of all identification, keys, uniforms and deletion of computer passwords and access codes of employees who have left your hire.
- Daily posted work assignments to identify scheduled staff

#### **Facility Access**

- Restricted or escorted entry of all non-scheduled foodservice personnel, vendors, visitors, maintenance or contract individuals and requirement for proper identification
- Limited or restricted access to food storage and holding areas

#### **HACCP Planning**

- Crisis management and recall plan for responding to food-related emergencies
  - o Batch labeling for rapid identification and recall
  - o Securing and isolating suspicious products
  - o Media communication plan
- Pre-operation cleaning and sanitizing of equipment and food contact surfaces
- HACCP-based procedures to identify risks, prevent or control and monitor for deliberate contamination throughout the flow of food

### **Routine and Random Monitoring:**

Does your facility have routine, as well as random, checks of the following?

- Building security and access to ventilation and water supply
- Hazardous material inventory (cleaning and sanitizing chemicals, pesticides, food allergens)
- Loading dock security before and during receiving
- Storeroom security, stock inventory, invoice reconciling and inspection for tampered or counterfeited stock
- Vigilant monitoring of customer self-service and public food display areas