

Food Safety Management Systems: Controlling Risks to Keep Food Safe



ServSafe
National Restaurant Association



Introduction

Businesses have an ethical obligation to protect the well-being of their customers. For the \$800 billion foodservice industry, those customers number in the millions, with 60% of adults in the United States eating at table-service restaurants and fast food operations at least once a week.¹ Consistently delivering safe and quality food products to these consumers is a monumental task, but failure to do so can have disastrous consequences.

Annually in the United States, the Centers for Disease Control and Prevention (CDC) estimates that 1 in 6 people are sickened by foodborne diseases, 128,000 individuals are hospitalized, and 3,000 people die as a result of foodborne illness complications². Children, the elderly and immunocompromised individuals are most susceptible to foodborne disease. The economic burden from health losses due to foodborne illness is estimated at nearly \$80 billion yearly³.

More than 50% of foodborne illness outbreaks that occur each year, according to CDC, are associated with food from restaurants⁴. In incidents involving a single location of food preparation, the Atlanta-based health agency reported that restaurants accounted for 485 outbreaks (65%) and 4,780 illnesses (44%) in 2014⁴.

Researchers, in an investigation of restaurant-associated outbreaks conducted from 1998-2013, identified 9,788 restaurant-associated outbreaks nationwide, with a median of 620 outbreaks per year⁵. Norovirus, the leading cause of foodborne illness outbreaks nation-wide, was responsible for 46% of the 3,072 outbreaks associated with a single, confirmed etiology.

The most commonly reported contributing factors in restaurant-associated outbreaks were activities associated with food handling and preparation practices.





Treasure Mined

Over the past several years, CDC has identified [five major risk factors](#) related to food safety practices in the retail food industry that contribute to foodborne illness. The most commonly cited factors are: poor personal hygiene; inadequate cooking; contaminated equipment and surfaces; improper food holding/ time and temperature; and food obtained from unsafe sources.

In today's heightened food safety environment, marked by public calls for greater regulatory oversight at local, state, and federal levels, it is imperative for foodservice establishments to actively monitor trends in food preparation practices and behaviors that can contribute to foodborne illness.

To this end, a comprehensive study — “*Report on the Occurrence of Foodborne Illness Risk Factors in Fast Food and Full-Service Restaurants, 2013-2014*”¹⁶ — provides industry stakeholders with a treasure trove of tangible and useful data.

Released last year by the Food and Drug Administration (FDA) as part of an ongoing analysis that will conclude in 2023, the initial phase of observational study was conducted at restaurants throughout the country. Employing a standardized data collection tool, trained data collectors observed and recorded food safety practices of retail food management and staff during normal business hours.

For the purpose of the study, the participants were divided into two segments — full-service restaurants and fast food restaurants — based on how customers ordered and were served their meals. Restaurants chosen for the study conducted a substantial amount of on-site food preparation, a key criterion in the selection process. In total, 425 fast food restaurants and 396 full-service restaurants were randomly selected to participate in the survey.

A candid snapshot from the report revealed that inadequate cooking was the least most commonly

occurring risk factor found in both types of restaurants. Conversely, poor personal hygiene and improper holding time and temperature were the most common out-of-compliance risk factors in fast food and full-service restaurants, underscoring the need for continued education and better controls in foodservice establishments.

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The extensive report was prepared by the FDA National Retail Team with contributions from cooperating federal agencies and groups, local state, and tribal regulatory partners, and food service managers at participating restaurants. Within its pages, the insightful report conveys the importance of food safety management systems, [certified food protection managers](#), and targeted intervention strategies in controlling unsafe food safety practices and behaviors.



Strong Safety Predictor

In light of current foodborne illness data, restaurants — ranging from national franchises to local, single unit operators — are widely urged to adopt a more proactive stance in managing food safety practices and behaviors.

Food safety management systems (FSMS) — typically defined as a set of actions (e.g., policies, training and monitoring) that aid foodservice establishments in achieving active managerial control (AMC) — provide industry with grounded measures and actions to take on a more proactive approach.

“Research indicates that our strongest predictor of lower occurrence of out-of-compliance risk factors, shown through food safety behaviors/practices within a restaurant, is really having the presence of well-developed food safety management systems,” says Glenda R. Lewis, Director of the Retail Food Protection Staff in FDA’s Center for Food Safety and Applied Nutrition (CFSAN).

Statistics from “Report on the Occurrence of Foodborne Illness Risk Factors, 2013-2014” specified that restaurants with a well-developed FSMS averaged fewer out-of-compliance risk factors and food safety practices than operations with a non-existent system⁷.

The presence of a well-developed FSMS can reverberate throughout a foodservice organization in a number of ways with far-reaching and measureable impacts.

“FSMS provides industry with the foundation for developing a food safety culture within their operation,” Lewis states. “Employees can have a clear understanding of the importance of safe food practices and behaviors that they need to do within that operation while really understanding their critical roles and responsibilities to ensure those practices are implemented.”

Lewis, who oversees the Retail Food Protection Staff and Interstate Travel Program at CFSAN, notes that FSMS can also serve as the groundwork for instituting food quality standards that can yield operational savings for cost-conscious restaurants. One such example, according to the FDA administrator, would involve vigilantly storing items at proper holding temperatures, thereby reducing food spoilage and waste. Yearly, the U.S. restaurant industry generates about 11.4 million tons of food waste at a cost of roughly \$25 billion⁸.





Underlying Cause

A robust FSMS can significantly [reduce cross-contamination risks](#) in restaurants that are caused by unsanitary surfaces and equipment, according to Betty Zakeri, a technical services consultant at Mérieux NutriSciences, a leading international network of accredited food testing and consulting laboratories offering menu labeling services to the restaurant industry.

“The lower risk of cross-contamination,” she declares, “lowers the risk of customers and (foodservice) employees getting sick from foodborne pathogens.”

From more effective contamination controls to more diligent recordkeeping, industry groups and regulators extol the many benefits of an effectual FSMS. In certain quarters, inadequate FSMS are thought to contribute to the worldwide burden of foodborne disease⁹. Despite the obvious value of FSMS, a sizeable percentage of restaurants are reluctant to implement them.

Don't think everything needs to be perfect the first time around. This is a process that can be built upon over time to help make improvements.

Unlike HACCP and HARPC, FSMS is not mandated by federal agencies, nor is it compulsory under local health department policies. William Weichelt, Director of Food Safety & Industry Relations for the National Restaurant Association, the country's largest foodservice trade association, believes this is the chief underlying cause behind the resistance.

“FSMS is something that is above and beyond what is currently required (in restaurants). As such, there might be some natural push back on implementing a new system,” he says. “Additionally, not all restaurants have quality assurance departments or food safety specialists on staff, so the level of knowledge to implement a management system may not be there.”

For restaurants that are strongly interested in implementing a management system, Weichelt advises: “Start down this path slowly and identify areas that you would like to see better control or where you feel your operation is at a higher risk. Begin by implementing [standard operating procedures](#) that can be monitored to collect data for continuous improvements. Also, don't think everything needs to be perfect the first time around. This is a process that can be built upon over time to help make improvements.”

Restaurants often point to a lack of resources as a major obstacle in implementing a well-developed FSMS. LeAnn B. Chuboff, Vice President of Technical Affairs for the Safe Quality Food Institute (SQFI), a leading Global Food Safety Initiative (GFSI) Certification Program Owner, laments this unfortunate, though all too common, quandary.

Chuboff, who possesses three decades of foodservice experience specializing in supply chain food safety and quality assurance, says on-site managers can take novel actions to help their superiors see that FSMS, despite operational constraints, is a worthwhile investment.

“Food safety is a shared responsibility. One thing they can do is save articles on recent outbreaks, regardless of the type of foodservice operation, and give them to senior management,” she offers. By doing so, managers can underline the importance of FSMS and illustrate that restaurants — whether they are full service or quick service — share common and costly safety risks.



Elements for Success

Food safety management systems are not one-size-fits-all; they vary across the restaurant industry. Several elements, however, such as certified food protection managers, standard operating procedures (SOPs), recipe cards, allergen management, purchase specifications, equipment and facility design and maintenance, and monitoring procedure, are common components found in effective systems.

Certified food protection managers (CFPM), individuals who have demonstrated proficient knowledge in food safety practices by passing a nationally-recognized credentialing exam, are an integral part of FSMS. Research has shown that the presence of a CFPM results in improved inspection scores at restaurants¹⁰. Moreover, highly engaged CFPMs are paramount to realizing AMCs.

Zakeri, who possesses years of experience in conducting audits at restaurants, notes that, in many respects, foodservice managers are recognized as mentors whose handling of various responsibilities, such as “receiving, cooking, cooling, washing, serving, and pest control,” are watched by staffers.

Credentialed managers, in facilitating dynamic AMCs, are normally charged with completing required paperwork, providing education and training, teaching reports how to identify hazards, and reinforcing positive behavior, such as the initiation of corrective actions by employees. Ultimately, achieving AMC within a foodservice operation involves the [continuous identification and proactive prevention of food safety hazards](#)⁶.





Food Safety Culture Club

All food safety programs should be enfolded in a positive food safety culture to fulfill their objectives. A [food safety culture](#) is described as a behavioral-based system consisting of policies, practices and procedures that represent the way in which an organization recognizes and practices proper food safety¹¹.

Lewis says a food safety culture starts at the top with senior managers who must be prepared to be peppered with questions from inquisitive employees, such as: “Why do we have to keep food hot?” “Why do we have to keep it cold?” “Why do we need to cool food within a certain time-frame?”

During this all-important give and take, managers and supervisors must be steadfast and patient, ever mindful that no question is too big, too small, or too inconsequential in fostering a food safety culture.

Communication, Lewis stresses, is essential in securing employee buy-in when implementing FSMS within a food safety culture. She encourages management teams to engage workers and [solicit their support in developing FSMS](#), such as creating SOPs related to their specific work functions. In a sustainable food safety culture, employees at all levels should be empowered to lead or initiate positive change¹². Active employee engagement also enhances employee retention.

To meet their food safety mission, Chuboff, who previously worked for Long John Silver’s and Boston Market, states companies must have a strong organizational culture. Restaurants, rooted in an established set of values and conforming to industry practices and standards (e.g., OSHA), will, over time, possess the requisite pieces to create a food safety culture, attain AMC and implement FSMS, according to the SQF executive.

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Unknown Existence

A significant part of a well-developed and documented FSMS involves the creation of detailed written food safety policies for employees. Training authorities, however, are quick to caution that the best policies in the world are of little use or value if front-line workers are unaware of their existence.

“Restaurant employees play a major role in keeping food safe, and the only way to ensure they understand their roles is to provide them with necessary training on how to do things,” Weichelt says.

Foodservice businesses can conduct training on their own or partner with a broad spectrum of industry, academic and regulatory resources. [ServSafe®](#), the restaurant industry’s premier provider of educational resources, materials and programs, offers comprehensive food safety training for multi-unit and single-unit restaurants. ServSafe® is administered by the National Restaurant Association.

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Added Confidence

With the deployment of its FSMS, foodservice operations are encouraged to conduct internal or first-party audits by qualified personnel to verify their management systems are working as intended to control hazards.

While excellent internal audit scores are to be applauded, Chuboff says restaurants can reap more confidence in their grades by participating in third-party (GMP) audits or GFSI benchmarked audits (i.e., SQF, BRC, ISO, etc.) that are conducted by unbiased, accredited professionals.

“If you check of your own system and things are working great, you get almost like a blind eye,” she observes. “You think of course it’s great, I created the system and it is working as it should.

Outside auditors validate that what you are doing is working, that’s their job.”

Zakeri, who performs food industry audits under Mérieux NutriSciences Certification, LLC, an independent subsidiary of the Chicago, IL-based food testing and consulting organization, concurs with Chuboff’s reasoned rationale.

“Having another set of eyes in the facility will bring new views to the table that the people in the restaurant may not see,” she says.

As an added benefit, third-party auditors can help keep quality assurance (QA) departments abreast of industry best practices, such as replacing outdated manual processes with new automated technologies.



Straight Statistics

Statistics can paint blunt portraits, and based on the daunting data presented in this white paper, the restaurant industry needs to do more to address poor food safety practices and behaviors that can contribute to foodborne illness. With its proactive facets, food safety management systems — when fully implemented — can place a substantial dent in the cited figures.

Going forward, regulators and industry stakeholders will continue their collaborative efforts to identify causes of poor food safety practices and behaviors in foodservice establishments. The findings will be used to develop and promote cost-effective, evidence-based intervention strategies for the U.S. retail food industry.





Chipotle: Making the Case for Food Safety Culture

For Chipotle Mexican Grill, Inc., a trailblazing fast casual restaurant chain with locations in the U.S., Canada, United Kingdom, France and Germany, food safety extends beyond a collection of programs and processes.

“It’s part of our culture” says Kerry Bridges, Vice President of Food Safety and Quality at Chipotle. “Food safety is built into everything we do so that our customers’ safety is the first and most important standard we hold ourselves to. Our culture does not tolerate any interference, including cost, with this commitment.”

In literature, it has been suggested that food safety culture is composed of five core components: leadership, employee confidence, management support, accountability and sharing of knowledge and information¹³. Within this context, Chipotle — which opened in 1993 with a single restaurant in Denver, CO, and now boasts more than 2,500 locations — endeavors to check every box in its daily operations.

From its Newport Beach, CA, headquarters, Chipotle has cultivated a culture of continuous improvement wherein processes are regularly evaluated to ensure food safety and quality is not compromised. Throughout the chain, food safety performance is a top priority and serves as a review criterion in mandatory job appraisals for senior executives and managers.

Bridges, who joined Chipotle earlier this year after serving as Senior Director of Supplier Food Safety at Walmart, notes that improved training and education helps to ensure that all employees thoroughly understand the company’s high standards and expectations.

“Although we have written procedures, specifications, and training like many organizations, food safety is an intrinsic component in how we interact with one another and, because of this, it has become intuitive for employees,” she says.



Source Materials:

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About the National Restaurant Association: The National Restaurant Association is the largest foodservice trade association in the world — supporting over 500,000 restaurant businesses. In partnership with our state restaurant associations, we work every day to empower all restaurant owners and operators to achieve more than they thought possible.



About ServSafe: ServSafe® is the premier provider of educational resources, materials and programs to help attract and develop a strong industry workforce. The ServSafe program provides food and alcohol safety training and certification to help protect businesses, employees and customers. ServSafe leads the way in providing current and comprehensive educational materials to the restaurant industry. Our complete suite of products (which includes ServSafe Manager, ServSafe Food Handler, ServSafe Alcohol, ServSafe Allergens, and ServSafe Workplace) will help prepare foodservice employees for front-of-house and back-of-house situations.

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