What did the 2015-2016 Deli data collection find out about foodborne illness risk factors and Food Safety Management Systems?

In the 2015-2016 Retail Food Store Deli data collection of the National Retail Risk Factor Study, the highest out-of-compliance foodborne illness risk factor was improper holding time/temperature. This risk factor was comprised of four data items outlined in the Retail Food Store Data Collection Form.

A key message from the Deli data collection was that Food Safety Management Systems (FSMS) were the strongest predictor of the compliance status of risk factors. A FSMS refers to a specific set of actions and/or procedures to help achieve active managerial control. While FSMS vary across the retail and food service industry, the consistent components include the purposeful implementation of procedures, training, and monitoring. You can find more information on FSMS here.

For establishments with well-developed FSMS, the average number of data items out-of-compliance was reduced, resulting in a reduced occurrence of foodborne illness risk factors. These preliminary findings suggest that FSMS are a promising tool in reducing foodborne illness risk factors.

For the improper holding time/temperature risk factor, FSMS had the strongest impact on data item 8 which involves date marking and disposition, which is one of the primary controls in the FDA Food Code for growth of Listeria Monocytogenes (Listeria), a pathogen of major concern in delis.

What is Listeria monocytogenes and why is controlling it important?

Listeria is a pathogenic bacterium that causes Listeriosis - a serious infection that primarily affects pregnant women and newborns... adults aged 65 or older... and people with weakened immune systems.
CDC estimates Listeria is the 3rd leading cause of death from foodborne illness. An estimated 1,600 people get listeriosis each year, 1,500 are hospitalized, and about 260 die. People most at risk for infection include pregnant women and their newborns, adults aged 65 or older, and people with weakened immune systems. Listeria is ubiquitous in the environment and can be found in moist environments, soil and decaying vegetation.

Listeria is persistent in retail food environments and can grow in refrigeration temperatures below 1°C (33.8°F), which makes this organism a problem for the food industry. This makes date marking and disposition the primary prevention factor for Listeria in the retail environment. The Food Code specifies ready-to-eat, time/temperature control for safety (TCS) food prepared in a food establishment and held longer than a 24 hour period shall be marked to indicate the date or day by which the food is to be consumed on the premises, sold, or discarded when held at a temperature of 5°C (41°F) or less for a maximum of 7 days.

How are States Addressing Date Marking and Disposition in their Food Codes?
State, Local, Tribal, and Territorial jurisdictions should strive to adopt and enforce both the date marking and disposition provisions in the Food Code to reduce Listeria.

The data contained in this map was collected by the Association of Food and Drug Officials (AFDO) under contract to the U.S. Food and Drug Administration.
Call to Action for Regulators: Assisting Industry with Food Safety Management Systems in Delis to Reduce *Listeria Monocytogenes* (continued)

**What can regulators do to assist industry with FSMS to reduce Listeria?**

FSMS are a promising practice to reduce foodborne illness risk factors. Regulators should take action to encourage the development, evaluation, and maintenance of FSMS. Here are some actions regulators can take:

- Adopt the most current version of the FDA Food Code and enforce the Date Marking and Disposition provisions.
- Assess date marking during an inspection. The Person in Charge (PIC) should be asked to describe the methods used to identify what their date marking and disposition procedure is for ready-to-eat, time/temperature control for safety food. The regulatory authority must be aware of food products that are listed as **exempt from date marking**.
- Encourage industry to train their staff. Evaluate facility training programs during your inspection and take time during inspections to educate while you regulate.
- Emphasize Date Marking and Disposition provisions, interventions, and systems utilized by retail food establishments in regulator training. There is a [fact sheet](http://www.fda.gov/retailfoodriskfactorstudy) available.
- Understand, identify, and evaluate date marking and disposition systems in place in each establishment. How do the manager/food employees handle situations when they discover prepared food that has been stored in the walk-in cooler or other refrigeration unit without date marking or that has expired dates?
- Explain the importance of the date marking and disposition provisions to control Listeria to the PICs in their jurisdictions.

**Resources**

The FDA Food Code is the primary resource for compliance and enforcement of food safety provisions, and guidance for the reduction of Listeria in retail food establishments. Below is a list of links to specific pages in the Food Code and its Annexes to assist regulatory authorities in this effort to control Listeria at retail and foster FSMS. The annexes are provided specifically to assist the regulatory authority to apply the provisions of the Food Code uniformly and effectively. These resources can provide tremendous assistance to those charged with applying Food Code provisions.

- Date Marking provision
- Disposition provision
- Annex 2 – References
- Annex 3 – Public Health Reasons/Administrative Guidelines
- Annex 4 – Management of Food Safety Practices - Achieving Active Managerial Control of Foodborne Illness Risk Factors
- Annex 5 – Conducting Risk-based Inspections
- Annex 7 – Model Forms, Guides, and other Aides

Below is a list of other federal resources available that can be used to assist in the development of FSMS in Delis. We encourage regulators to utilize and share these and other available resources to make progress towards the prevention of foodborne illness risk factors.

- **Industry Call to Action: Utilizing FSMS to Reduce Listeria Risk Factors**
- FDA Bad Bug Book
- FDA Materials on Sanitation Concerns with Commercial Deli Slicers
- FDA Advice for Retailers on Listeria
- FDA Food Code Reference System (use keyword: 'date marking')
- CDC Advice on Listeria
- FDA Retail Food Protection Industry Educational Material on Date Marking
- Foodborne Illness Video Testimonials [Listeriosis]
- FDA Retail Food Protection Industry Educational Material [general]
- USDA-FSIS Guidance for Controlling *monocytogenes* in Retail Delicatessens
- FDA Office of Training and Educational Development (OTED) training courses
- FDA Office of Partnerships Funding Opportunities for Retail Food Programs
- [www.foodsafety.gov](http://www.foodsafety.gov)
- CDC - 4 Takeaways for Retail Delis

**Questions?**

For more information visit our website at: [http://www.fda.gov/retailfoodriskfactorstudy](http://www.fda.gov/retailfoodriskfactorstudy)