

# Salmonella Enteritidis Illness Outbreak Associated with Raw, Breaded Chicken, 2018

## After-Action Review Report 2018-10

March 19, 2020

### Overview

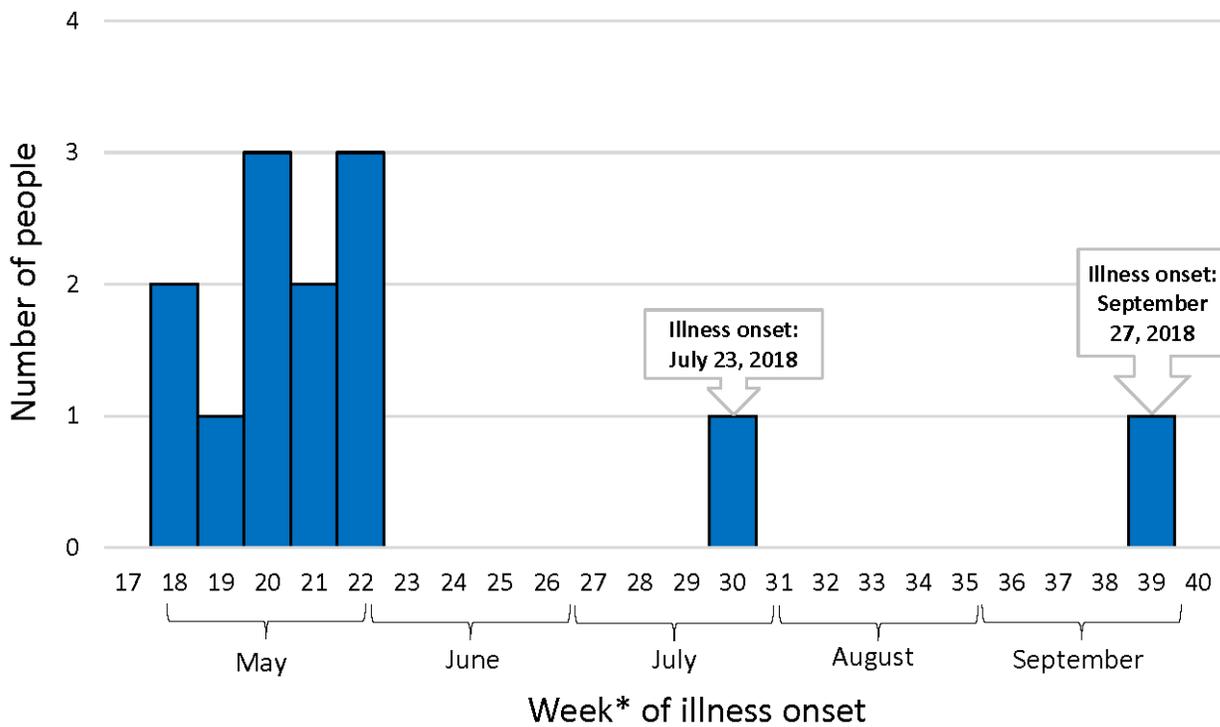
During May–September 2018, public health officials in Wisconsin, Minnesota, and the Food Safety and Inspection Service (FSIS) investigated an outbreak of 13 *Salmonella* Enteritidis illnesses linked to raw, breaded chicken products obtained primarily from multiple locations of Food Pantry A; one ill person obtained the products from Grocery Store B. For both firms, the products were sourced from Establishment C. The products were breaded and may have appeared to be cooked. After receipt, Food Pantry A and Grocery Store B repackaged the products in packaging that did not include indications that the chicken was raw or cooking instructions. The absence of this information may have led to inadequate cooking by consumers. On June 1, 2018, Wisconsin and Minnesota officials issued press releases about the outbreak investigation. Three samples of raw, breaded chicken products obtained from ill people tested positive for the outbreak strain of *Salmonella* Enteritidis. Public health officials educated Food Pantry A and Grocery Store B personnel regarding the importance of safe handling and cooking instructions on the packaging of raw chicken products. FSIS is developing educational materials for food recovery operations, including promotion of proper product labeling.

### Epidemiology

- On May 31, 2018, the Wisconsin Division of Public Health notified FSIS of a cluster of *Salmonella* Enteritidis infections (see Table 1 and Figure 1 for epidemiologic details).
- Molecular subtyping techniques were used to assess the relatedness of bacterial isolates and determine the outbreak strain.
- All 13 ill people consumed breaded chicken products obtained from either Food Pantry A (12 person) or from Grocery Store B (1 person).
  - Of the 13 ill people, 11 (85%) had onset dates in May 2018 (Figure 1).
  - The ill person with the illness onset date of July 23, 2018 (Figure 1) reported obtaining the raw, breaded chicken products from Grocery Store B.
  - The ill person with the illness onset date of September 27, 2018 (Figure 1) reported obtaining the raw, breaded chicken products from Food Pantry A in July 2018 and storing them in the freezer.

**Table 1.** Characteristics of ill people—*Salmonella* Enteritidis illness outbreak associated with raw, breaded chicken, 2018.

Total number of ill people and states of residence	13 ill people from 2 states (6 from Wisconsin, 7 from Minnesota)
Estimated illness onset date range	May 2–September 27, 2018
Age range (median) in years	1–80 (54)
Percent female	46
Number of reported hospitalizations	8
Number of reported deaths	0



**Figure 1.** People infected with the outbreak strain of *Salmonella* Enteritidis associated with raw, breaded chicken, 2018, by week of illness onset (n=13).

\*Morbidity and Mortality Weekly Report week number

### Environmental Assessment

- State and FSIS officials assessed operations at Food Pantry A and determined:
  - The products in question were raw, breaded chicken products that had been donated to Food Pantry A.
  - The products were pre-browned and may have appeared from the outside to be cooked.
  - The original packaging of the products contained labeling with indications that the product was raw, cooking instructions (including the instruction to not microwave), and ingredient information.
  - Food Pantry A repackaged the products into packages that did not include labeling with indications that it was raw, cooking instructions, or ingredient information.
  - Food safety training for Food Pantry A workers was inadequate.
- Minnesota officials visited Grocery Store B and determined that, similar to operations at Food Pantry A, Grocery Store B repackaged the products into packages that did not include labeling with indications that it was raw, cooking instructions, or ingredient information.
- Two ill people reported microwaving the repackaged, raw, breaded chicken products. Microwave ovens can cook products unevenly and may leave products only partially cooked.

### Traceback

- State and FSIS officials separately visited Food Pantry A to conduct traceback investigations and determined that Establishment C in Wisconsin donated the raw, breaded chicken products to Food Pantry A.
  - Though officials were able to determine the source of the donated products, insufficient recordkeeping at Food Pantry A regarding the repackaged products made traceback challenging.
- Minnesota officials visited Grocery Store B and determined that Establishment C was the source of the raw, breaded chicken products.

### Product Sampling

- Wisconsin officials collected two and Minnesota officials collected one non-intact (opened packaging) raw, breaded chicken samples from the homes of ill people; these three samples tested positive for the outbreak strain of *S. Enteritidis*.
- Per its [Policy on Use of Results from Non-FSIS Laboratories](#) (FSIS Directive 10,000.1), FSIS assessed and accepted these results from Wisconsin and Minnesota.

### Industry, Public Health, and Regulatory Actions

- [Wisconsin](#) and [Minnesota](#) officials issued news releases on June 1, 2018, warning consumers to cook raw, breaded chicken products from Food Pantry A to a minimum internal temperature of 165°F.
- Food Pantry A issued an [announcement](#) on June 1, 2018, informing customers that chicken from Food Pantry A needed to be cooked thoroughly to 165°F.
- FSIS and officials in Wisconsin and Minnesota conducted educational outreach at Food Pantry A regarding the importance of proper handling and labeling of raw chicken products. FSIS officials informed Food Pantry A that uncooked products are required to be labeled with safe handling instructions.
- Minnesota officials informed Grocery Store B personnel that raw chicken products need to be appropriately labeled.

## Lessons Learned and Related Policy Actions

### *Proper labeling of raw poultry that may appear fully cooked*

- The lack of safe handling and cooking instructions on the packaging of raw, breaded chicken product repackaged by Food Pantry A and Grocery Store B may have led to inadequate cooking by consumers, resulting in illnesses. Lack of adequate worker training and lack of recordkeeping at Food Pantry A may have been additional contributing factors. Meat and poultry products, including those distributed by food recovery operations, must have proper labeling. Certain products, such as raw, breaded poultry products that may appear to be fully cooked, should include cooking instructions. In response to [previous outbreaks](#) associated with raw poultry that may have appeared to be fully cooked (e.g. stuffed chicken), FSIS has developed guidance regarding cooking instructions (see [Draft FSIS Compliance Guideline for Controlling \*Salmonella\* and \*Campylobacter\* in Raw Poultry](#) [pages 92–95]). FSIS is developing educational materials for food recovery operations, including promotion of proper product labeling.

### *Communication between partners*

- State and FSIS officials conducted separate traceback investigations during this outbreak investigation. Although this separate approach was successful for determining the source of the implicated products, conducting investigations jointly is ideal. Collaborative outbreak investigations can promote more effective response, facilitate more rapid sharing of investigative information, reduce duplication of effort, make effective use of funding, and decrease the burden on industry.

## Helpful Links

- [Wisconsin](#) and [Minnesota](#) news releases, June 1, 2018
- Food Pantry A [announcement](#), June 1, 2018
- [FSIS Directive 10,000.1, Policy on Use of Results from Non-FSIS Laboratories](#)
- Outbreak review: [Outbreaks of Salmonellosis in Minnesota \(1998 through 2006\) Associated with Frozen, Microwaveable, Breaded, Stuffed Chicken Products](#) (Journal of Food Protection, Vol. 71, No. 10, 2008, pages 2153–60).
- FSIS After-Action Review Report 2015-11/2015-12: [Salmonella Enteritidis Illness Outbreaks Associated with Raw, Frozen, Stuffed Chicken Products, 2015](#)
- [Draft FSIS Compliance Guideline for Controlling \*Salmonella\* and \*Campylobacter\* in Raw Poultry](#)
- Conference for Food Protection [Comprehensive Resource for Food Recovery Programs](#)

*Last Modified May 20, 2020*