

Protein Power Hour



*Home Grilling
#AloneTogether*



Moderator



Shelley Feist
Executive Director

Partnership for Food Safety Education

sfeist@fightbac.org

www.fightbac.org



Today

- Protein foods
- CDC FoodNet data
- Poultry overview with Dr. Ashley Peterson
- Meat overview with Dr. KatieRose McCullough
- Recent research on consumer handling of meat and poultry
- Questions for our experts
- Great consumer tools for grilling season
- Invitation to today's YouTube ***Some Like It Hot*** event!



Housekeeping



To ask a question, please use the question box on the right of the screen.



After the webinar, you will receive a brief survey. Please fill it out.
Help us improve!



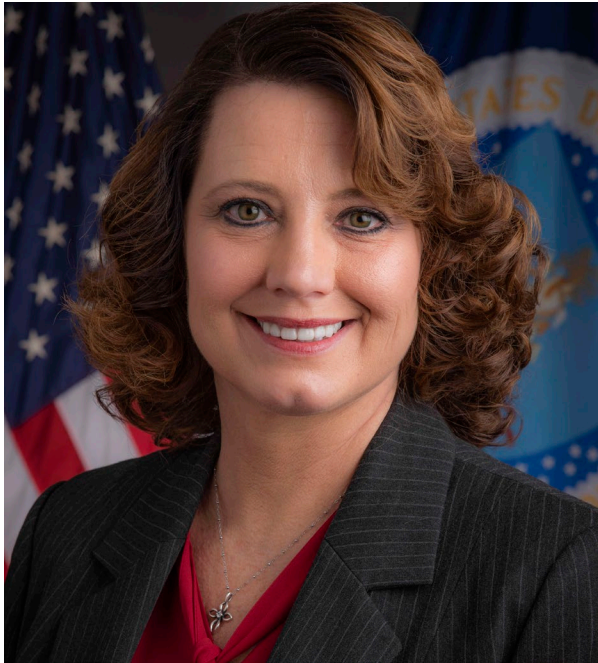
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Message from Dr. Mindy Brashears



Dr. Mindy Brashears
Deputy Under Secretary for
Food Safety

U.S. Department of Agriculture

www.fsis.usda.gov



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Today's Protein Stars



Poultry



Beef



Pork



Plant-based



A Few Insights

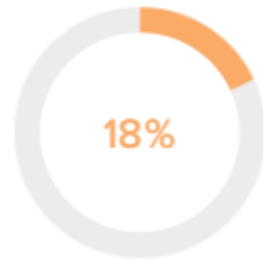
Data

48% of respondents said they're snacking more since the coronavirus outbreak.

26% eating breakfast more



18% grilling outside more



FIELD AGENT



The screenshot shows a Forbes article from May 4, 2020. The headline is "Alternative Meat Sales Soar Amid Pandemic" by Alexandra Sternlicht. The article text states: "Nielsen reported that fresh meat alternative sales increased 255% in the last week of March (compared to the same week in 2019), fully outpacing the growth of meat sales, which increased 53% over the same period." Below the text is a photo of a burger with a plant-based patty, avocado, and purple onions.



MMWR FoodNet Data 2019

CDC Report on Foodborne Disease Trends Shows Need for Better Prevention Strategies

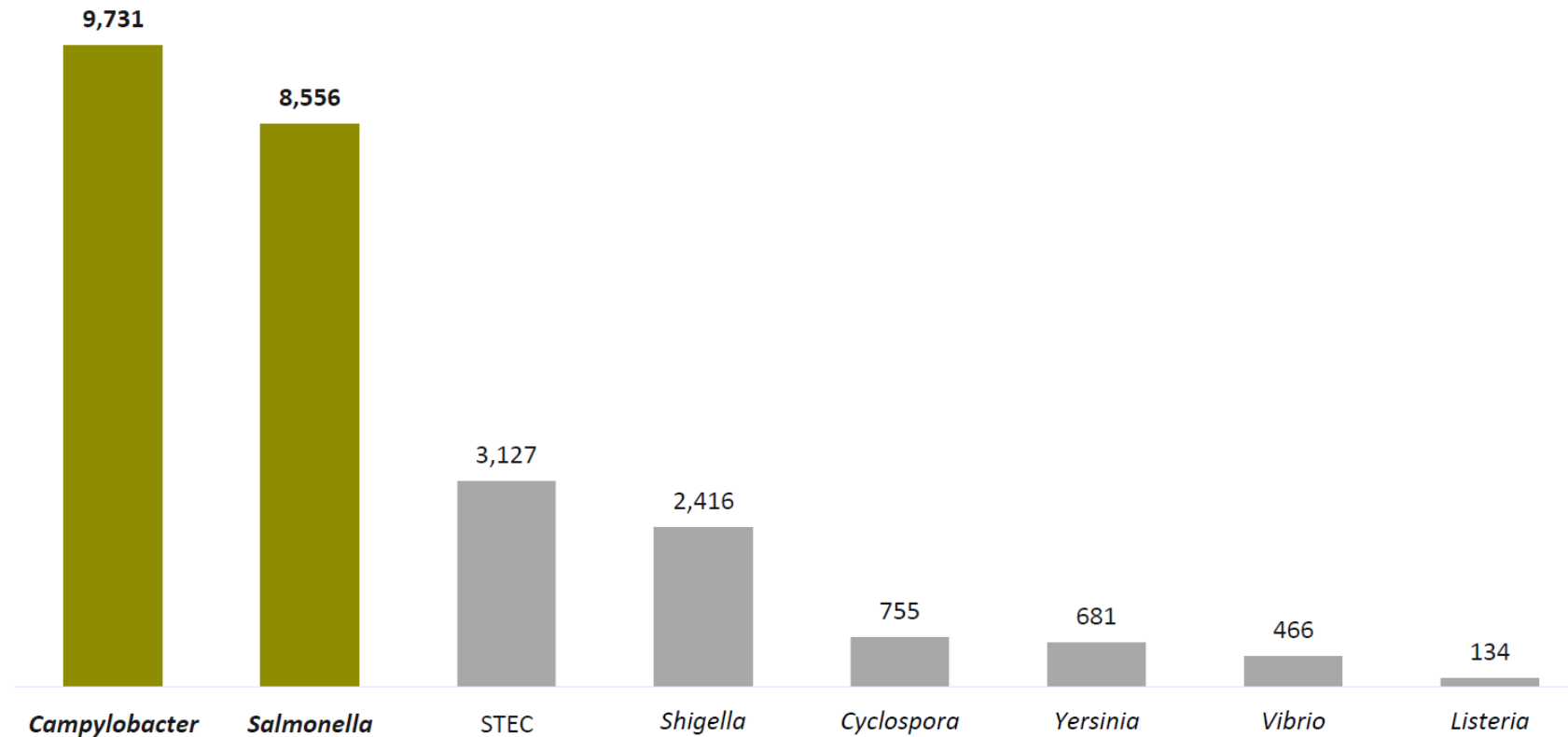


- Progress has stalled in controlling foodborne pathogens in the United States. [Foodborne Diseases Active Surveillance Network](#) (FoodNet).
- [Campylobacter](#) and [Salmonella](#) remain the most reported infections in FoodNet. Chicken is an important source of Salmonella infections.



MMWR FoodNet Data 2019

As usual, *Campylobacter* and *Salmonella* led in number of infections



MMWR FoodNet Data 2019

Incidence rates increased for all pathogens



Pathogen	2019	2019 vs. 2016–2018	
	Incidence Rate	% Change	(95% CI)
<i>Campylobacter</i>	19.5	+13%	(+5% to +21%)
<i>Salmonella</i>	17.1	+5%	(-1% to +12%)
Shiga toxin-producing <i>E. coli</i> (STEC)	6.3	+34%	(+14% to +58%)
<i>Shigella</i>	4.8	+7%	(-17% to +37%)
<i>Yersinia</i>	1.4	+153%	(+102% to +217%)
<i>Vibrio</i>	0.9	+79%	(+47% to +117%)
<i>Listeria</i>	0.27	+1%	(-19% to +27%)
<i>Cyclospora</i>	1.5	+1,209%	(+708% to +2,020%)



MMWR FoodNet Data 2019

Among the top 6 *Salmonella* serotypes, the incidence rate significantly decreased for two and increased for one



Serotype	2019	2016–2018	
	Incidence Rate	% Change	(95% CI)
Enteritidis	2.6	-4%	(-17% to +11%)
Newport	1.4	-12%	(-27% to +7%)
Typhimurium	1.3	-13%	(-24% to -1%)
Javiana	1.1	-7%	(-26% to +17%)
I 4,[5],12:i:-	0.7	-28%	(-44% to -8%)
Infantis	0.5	+69%	(+31% to +118%)



MMWR FoodNet Data 2019

**STEC O157 cases significantly decreased,
non-O157 STEC cases significantly increased**

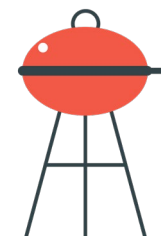


2016–2018

Serogroup	% Change	(95% CI)
O157	-20%	(-34% to -3%)
non-O157	+35%	(+18% to +56%)



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Guest Speaker



Dr. Ashley Peterson
Senior Vice President, Scientific and
Regulatory Affairs

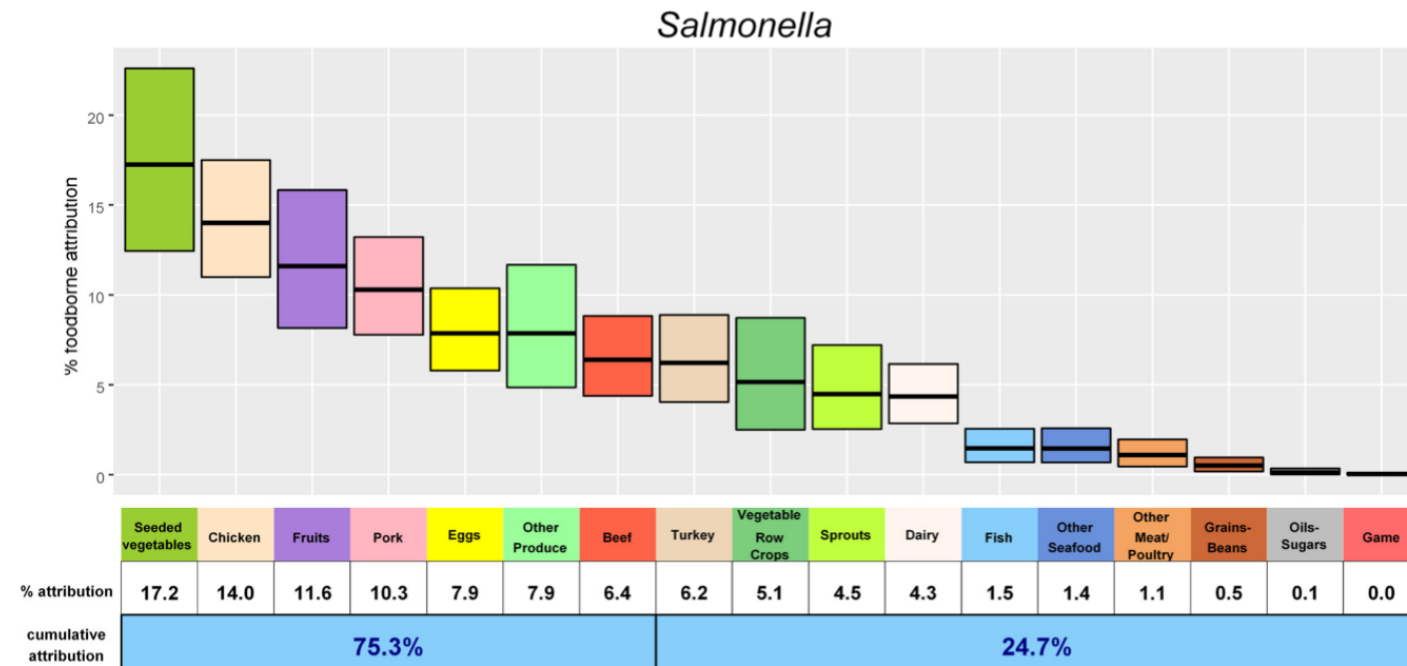
National Chicken Council

www.nationalchickencouncil.org



Concerns with *Salmonella* (2019 IFSAC Report)

Figure 2: Estimated percentage of foodborne *Salmonella* illnesses (with 90% credibility intervals) for 2017, in descending order, attributed to each of 17 food categories, based on multi-year outbreak data,* United States. Click here to download relevant data.



*Based on a model using outbreak data that gives equal weight to each of the most recent five years of data (2013 – 2017) and exponentially less weight to each earlier year (1998 – 2012).

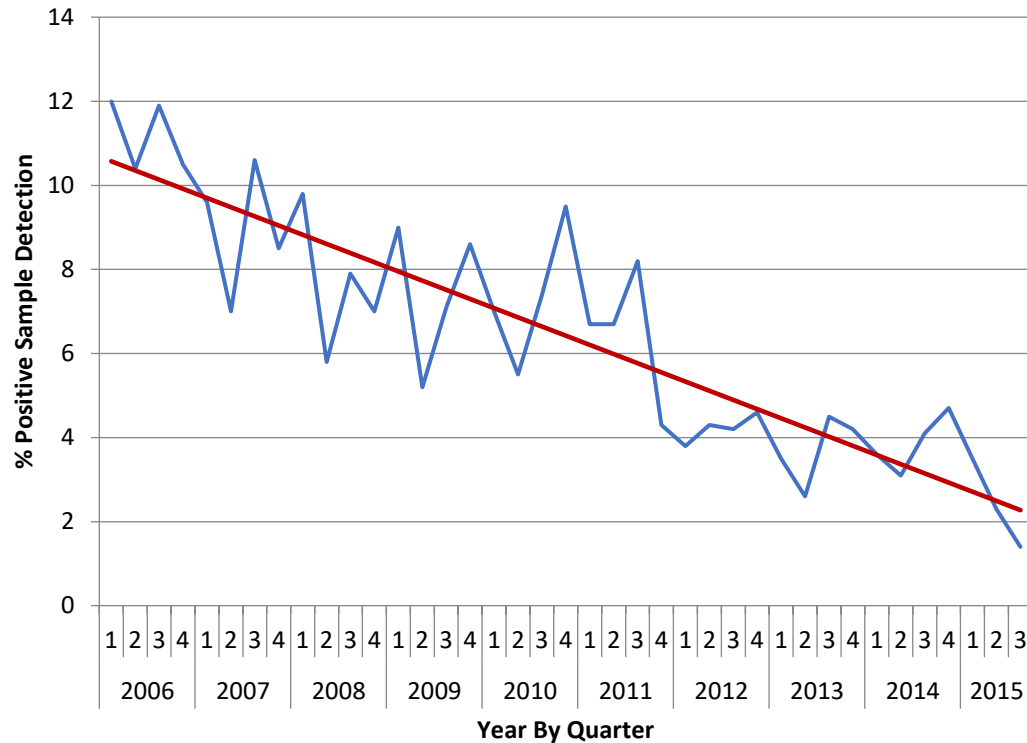


Performance Standards – What are they?

- A performance standard is a metric FSIS uses to evaluate potential presence of pathogens on poultry and other FSIS-regulated products.
- Established after a baseline is established and Healthy People 2020 goals are considered
- This metric is qualitative only. It determines presence or absence only. It does not indicate how much of the pathogen is present (or the serotype when it comes to *Salmonella*).
- Performance standards can be met by proper sanitary dressing procedures, antimicrobial application, temperature controls, etc.
- While they are not “enforceable” per se, failure to meet a performance standard can cause increased regulatory scrutiny



Performance Standards – What are they?



- 1996 HACCP regulations promulgated performance standards for *Salmonella*
 - 20% for Salmonella on whole broiler carcasses
- A few years later, the industry had met the performance standard on whole birds
- In 2011, FSIS reduced the performance standard for *Salmonella* to 9.8%



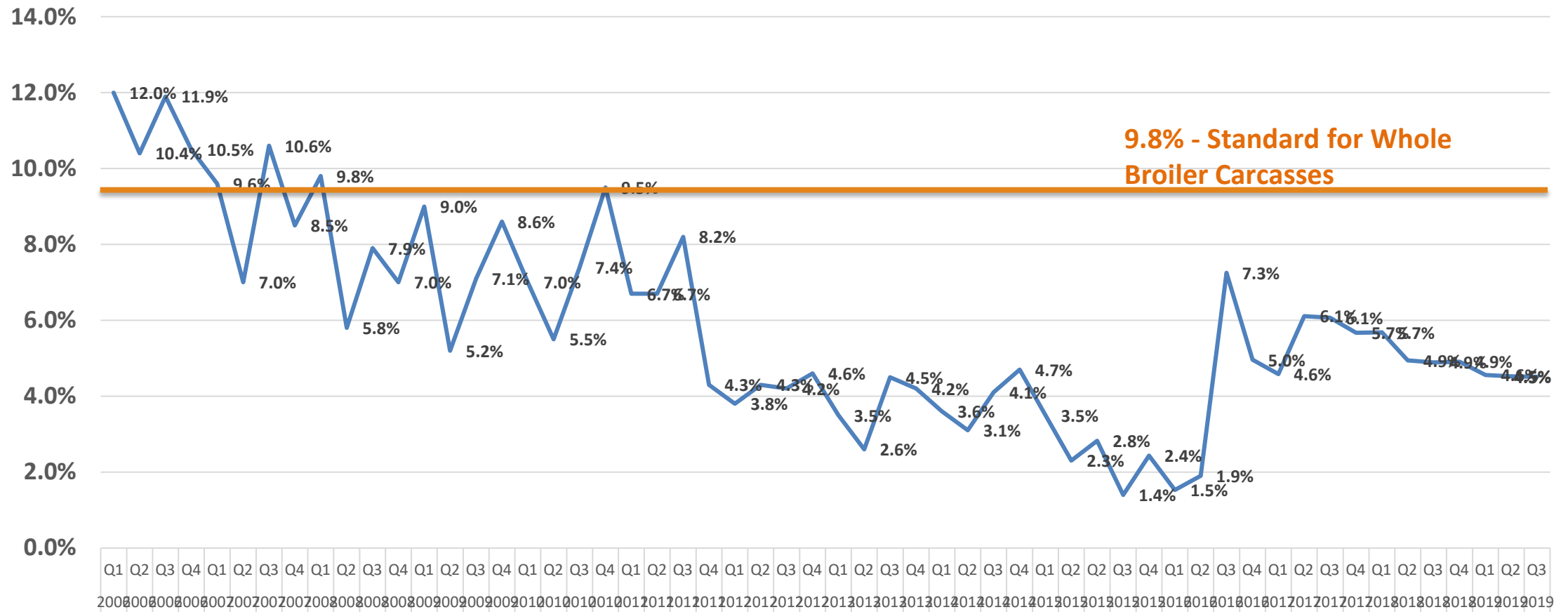
Performance Standards – What are they?

PART	SALMONELLA	CAMPYLOBACTER
Whole broilers	9.8%	15.7%
Whole turkeys	7.1%	5.4%
Chicken parts	15.4%	7.7%
Comminuted chicken	25%	1.9%
Comminuted turkey	13.5%	1.9%

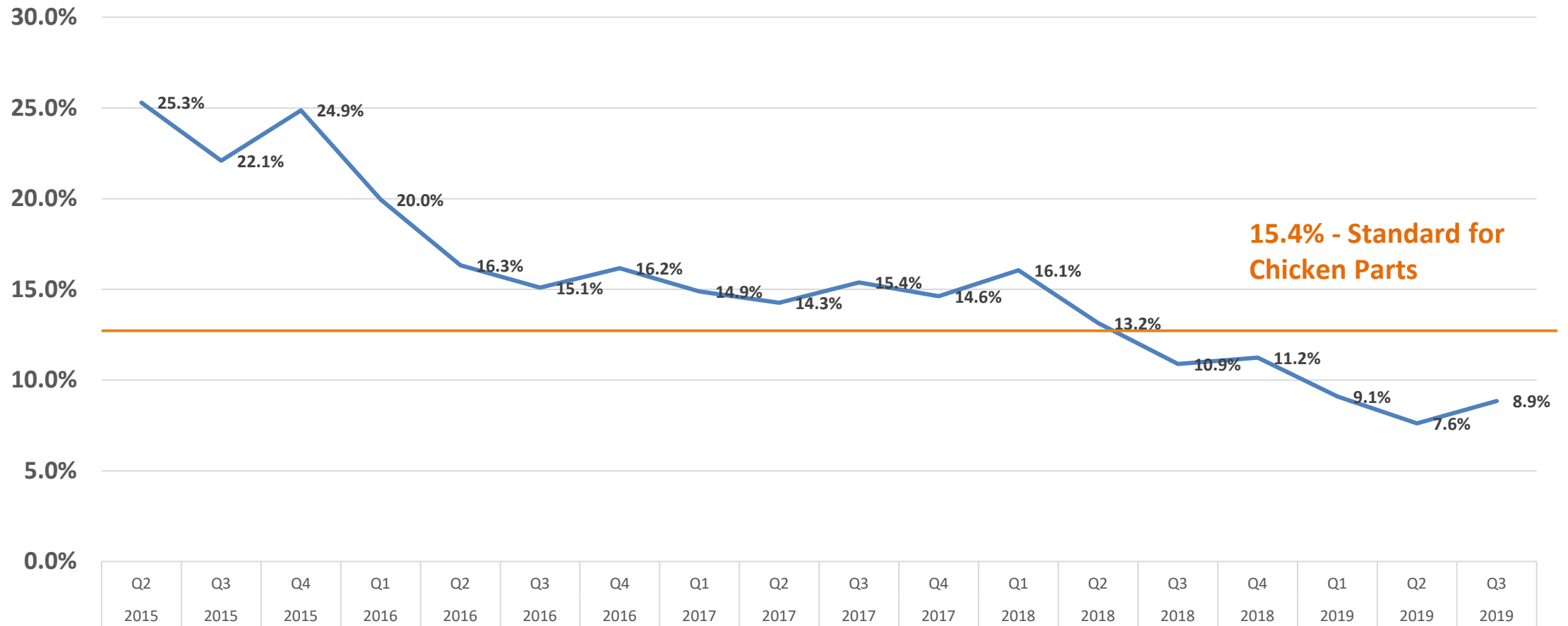
- July 2016, new performance standard implemented for *Salmonella* and *Campylobacter* on chicken parts and comminuted poultry



Current *Salmonella* Performance – Whole Birds

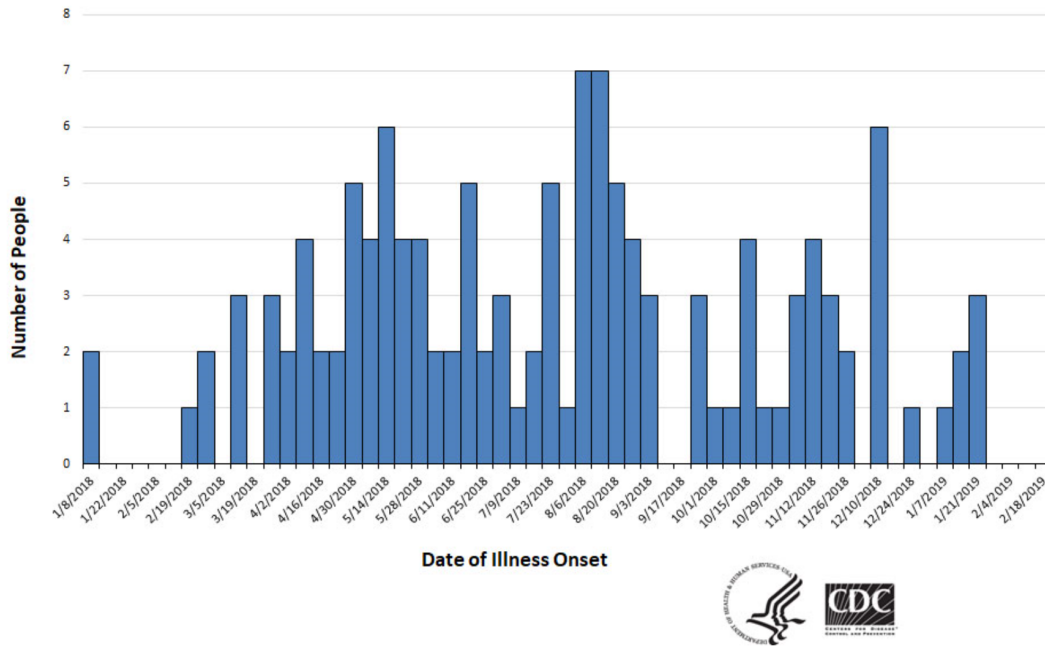


Current *Salmonella* Performance – Parts



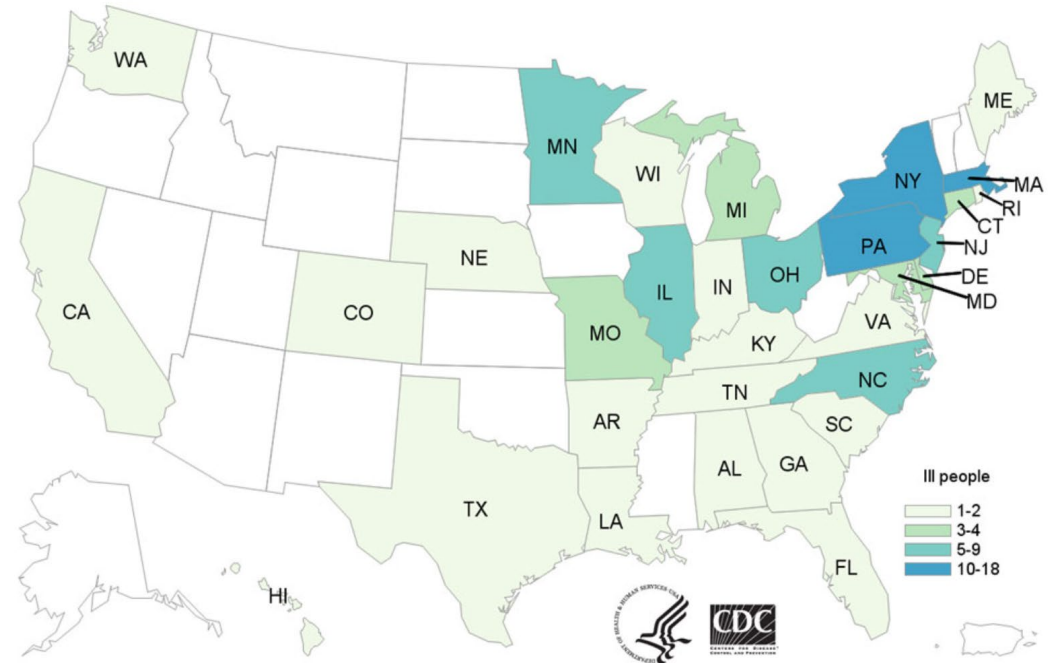
Salmonella Infantis Outbreak Overview

People infected with the outbreak strain of *Salmonella* Infantis by date of illness onset*



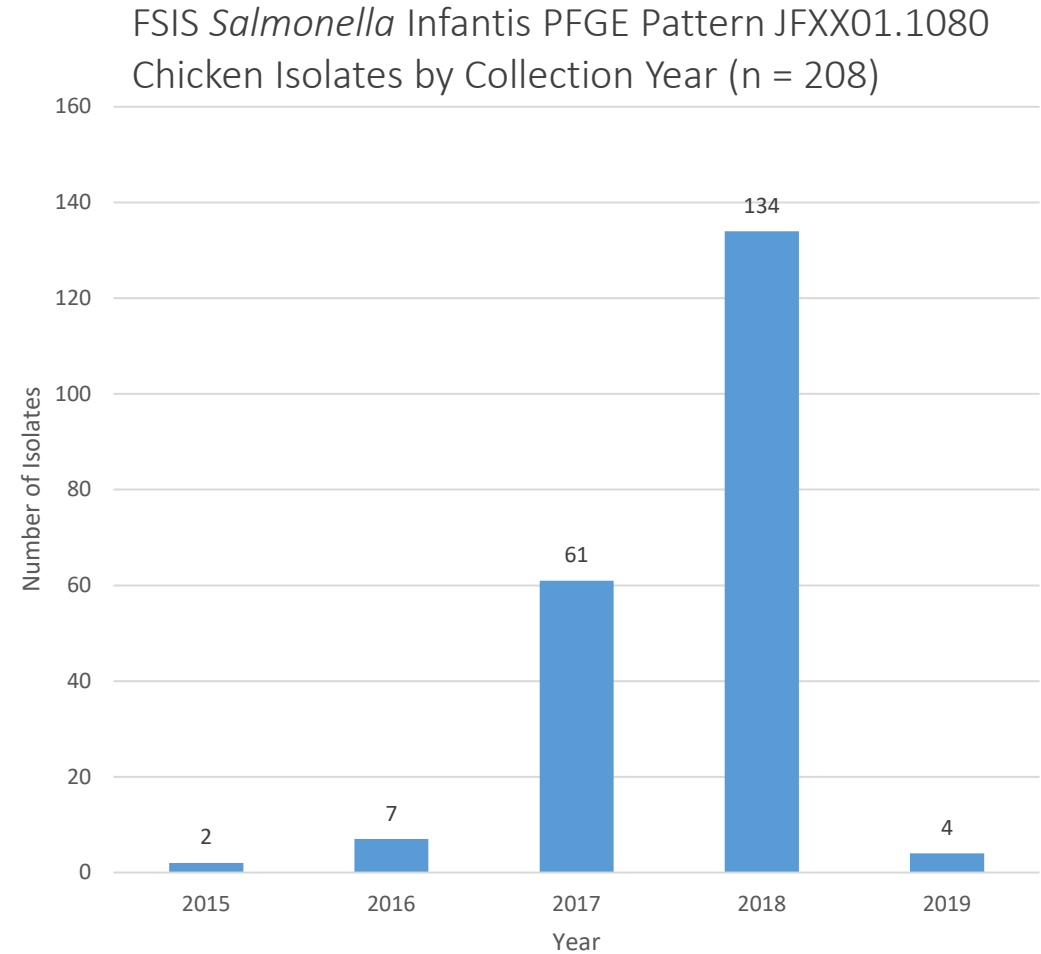
*n=129 for whom information was reported as of February 19, 2019. Some illness onset dates have been estimated from other reported information.

People infected with the outbreak strain of *Salmonella* Infantis, by state of residence, as of February 19, 2019 (n=129)



Salmonella Infantis Outbreak Overview

- CDC ended the outbreak investigation on February 21, 2019
- Outbreak Demographics
 - 129 cases
 - 32 states
 - Age range: <1 to 105 years
 - Median age: 42 years
 - 69% female
 - 25 hospitalizations
 - 1 death
- Outbreak strain found in 76 slaughter/processing establishments
- Though the investigation is “closed” the industry remains committed to working together to determine potential sources



Guest Speaker



Dr. Katie Rose McCullough
Director, Regulatory and Scientific
Affairs

North American Meat Institute

www.meatinstitute.org



2018-2019 Meat and Poultry Outbreaks

Ground Turkey – *Salmonella* Schwarzengrund

Pork Products – *Listeria monocytogenes*

Raw Chicken – *Salmonella* Infantis

Ground Beef – *Salmonella* Newport

Deli Ham – *Listeria monocytogenes*

Ground Beef – *E. coli* O26

Ground Beef – *Salmonella* Dublin

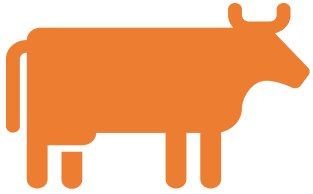
Northfork Bison – *E. coli* O103 and O121

Deli Meats and Cheeses – *Listeria monocytogenes*

Ground Beef – *E. coli* O103



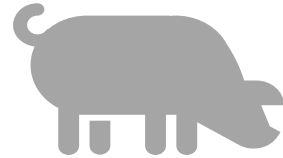
Pathogens of Concern



Beef

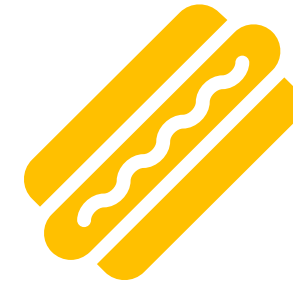
Salmonella

STEC



Pork

Salmonella



Further Processed Meat

Listeria monocytogenes

Salmonella



Where Did Performance Standards Come From?

1996 Pathogen Reduction: HACCP System Final Rule → Performance Standards

- No est. can have a prevalence of *Salmonella* greater than the baseline
- Calculated separately for each product category
- Following HACCP implementation, FSIS said they would require “establishments meet the standard *consistently over time as a condition of maintaining inspection*” – original intent



Previous Beef Standard

- Ground Beef – 5 Positives out of a 53 Samples
- Cow/Bull – 2 Positives out of 58 Carcass Sample*
- Steer/Heifer – 1 Positive out of 82 Carcass Samples*

**Carcass sampling was suspended in 2011*

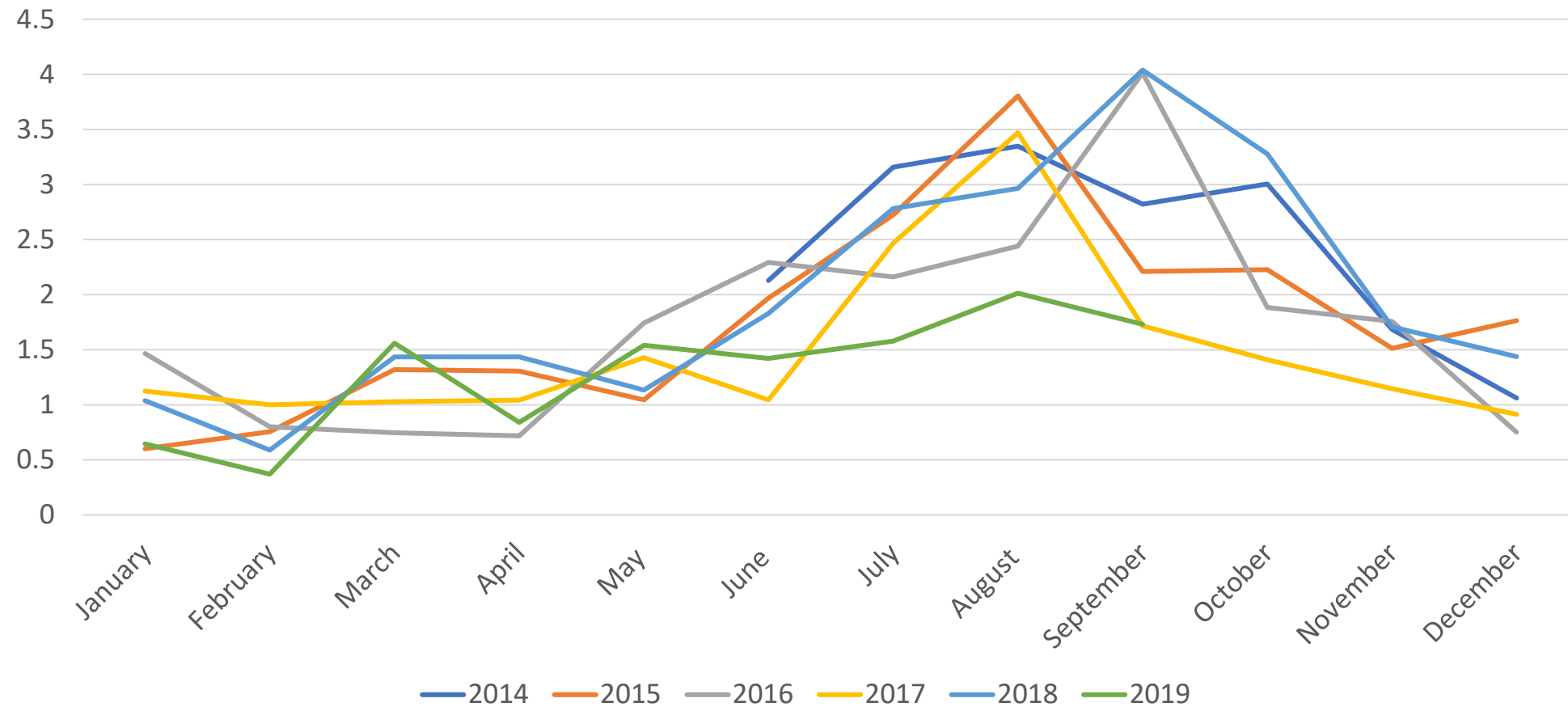


Proposed Beef Standard

- **52 Week Moving Window**
- Categorization based on **most recent 48** samples taken in window
- **0–2 positives** results in “**meeting**” standards categorization
- **3+ positives** results in “**not meeting**” the standards categorization
- If at least 48 samples are not pulled, results in an “N/A” categorization
- Collect ↑ in higher volume est. and ↓ in lower volume est.

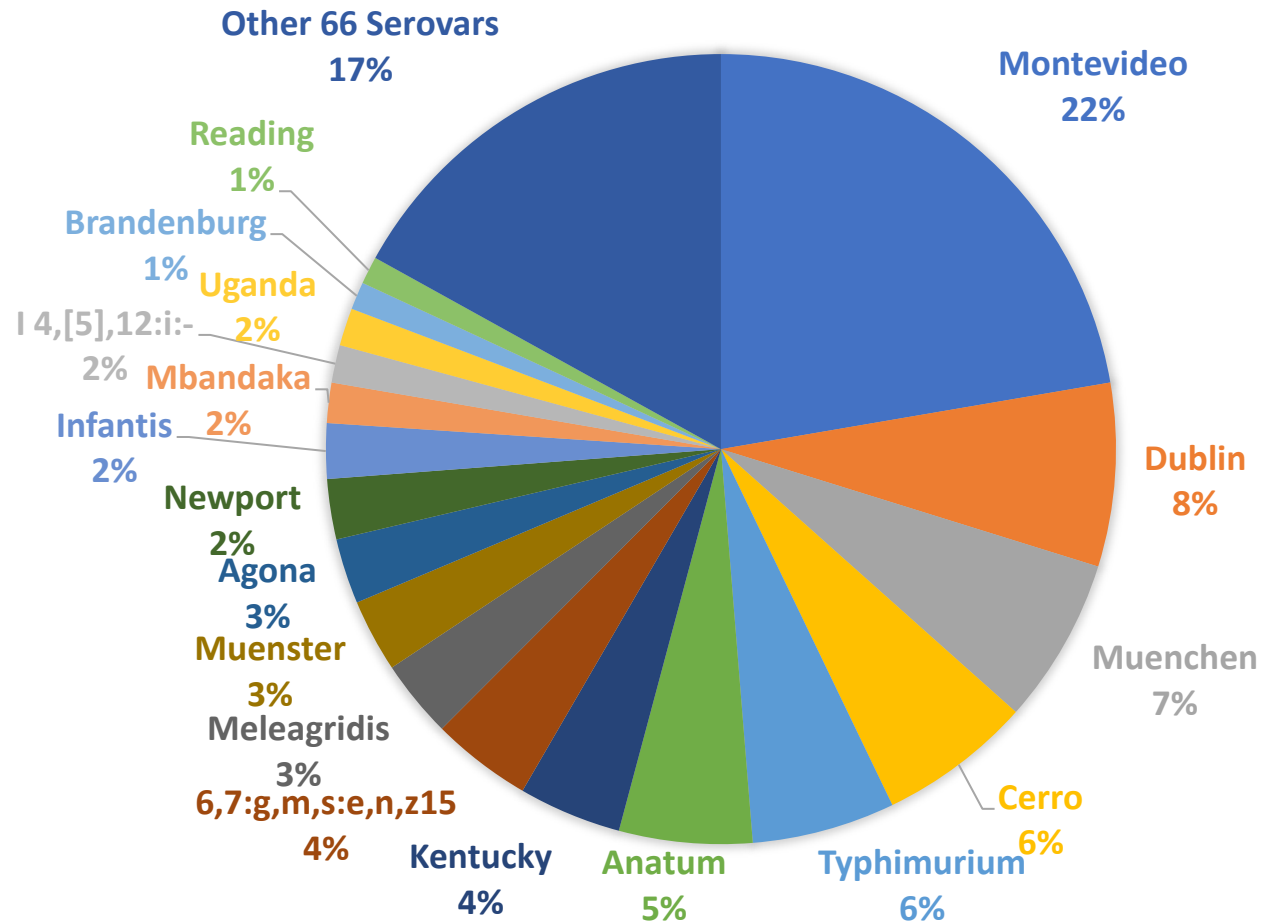


Ground Beef Sampling Program Salmonella Prevalence



Percentage of Ground Beef *Salmonella* Positives by Serovar

(JUNE 2014 – JUNE 2019)



Top Overall Serovars for July 2014 - June 2019

MT60 - Beef Manufacturing Trimmings

MT43 - Raw Ground Beef

- 421 Positives
- 61 Serovars

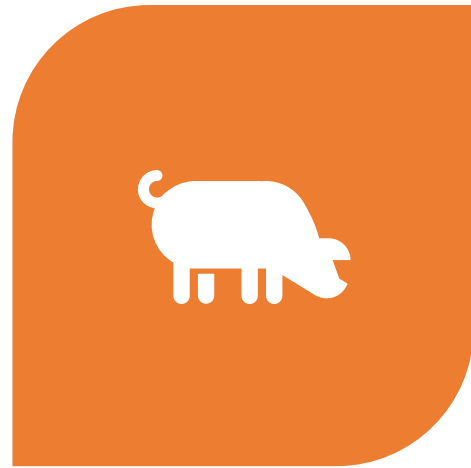
1. Montevideo - 83
2. Dublin - 35
3. Newport - 25
4. Anatum - 22
5. Cerro - 20
6. Infantis - 20
7. Muenster - 19
8. Muenchen - 18
9. Typhimurium - 18
10. l 4,[5],12:i:- - 13
11. Meleagridis - 13
12. Agona - 12
13. Kentucky - 11
14. Give - 10

- 973 Positives
- 84 Serovars

1. Montevideo - 217
2. Dublin - 73
3. Muenchen - 66
4. Cerro - 61
5. Typhimurium 57
6. Anatum - 53
7. Kentucky - 41
8. 6,7:g,m,s:e,n,z15 - 40
9. Meleagridis - 31
10. Muenster - 29
11. Agona - 26
12. Newport - 24
13. Infantis - 22
14. Mbandaka - 16



Upcoming Pork Standard



PARTS



GROUND PRODUCTS



Research

For more information on meat safety,
check out the Foundation's website at
meatpoultryfoundation.org

or

Contact Susan Backus at
sbackus@meatinstitute.org to be
added to our mailing list



Funded by the Beef Checkoff.

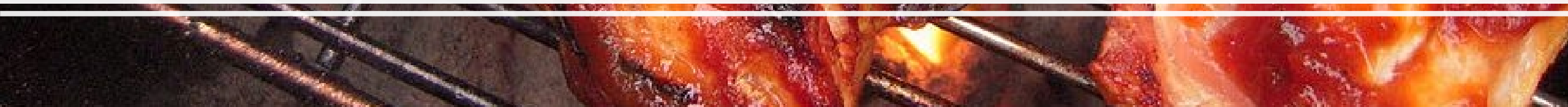


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Consumer Research



Consumer Research

- USDA multi-year observational research
- Safe Recipes – thermometer use



USDA FSIS Consumer Behavior Research

Five-Year Research Plan

Activity	Year 1 FY17 (Complete)	Year 2 FY18 (Complete)	Year 3 FY19 (Complete)	Year 4 FY20	Year 5 FY21
Observational Experiment w/ Microsampling	“Cook” Messages: <ul style="list-style-type: none"> • Food thermometer usage • Pathogen transfer 	“Clean” Messages: <ul style="list-style-type: none"> • If wash/rinse raw chicken before cooking • Pathogen transfer 	“Cook” Messages: <ul style="list-style-type: none"> • Prepare not-ready-to-eat (NRTE) frozen chicken product 	“Clean, Separate, Cook, and Chill” : <ul style="list-style-type: none"> • Prepare hamburgers • Prepare ready-to-eat (RTE) food 	“Separate and Chill” Messages: <ul style="list-style-type: none"> • Intact beef • Leftovers
Focus Groups		Topics focused on consumption of raw/not fully cooked meat & poultry, if wash/rinse poultry before cooking, etc.		Investigate topics gleaned from previous research and any emerging food safety topics	
Nationally Representative Web-based Survey			Questions re: recall/outbreak awareness, message fatigue, food safety info sources, food prep, etc.		Investigate topics gleaned from previous research and any emerging food safety topics



USDA Study Plans: Years 1-3



Year 1: COOK (study complete)

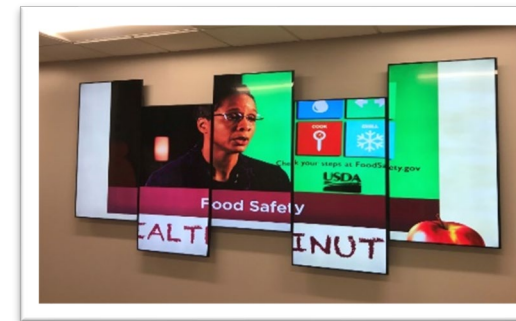
- Primary outcome: thermometer use and cooking to proper internal temp
- Participants prepare turkey patties and chef salad
- Experimental component to evaluate FSIS video on thermometer use

Year 2: CLEAN (study complete)

- Primary outcome: not washing poultry
- Assess extent of cross-contamination due to poultry washing
- Participants prepare spiced chicken thighs and salad
- Experimental component to evaluate FSIS social media messaging

Year 3: COOK (study complete)

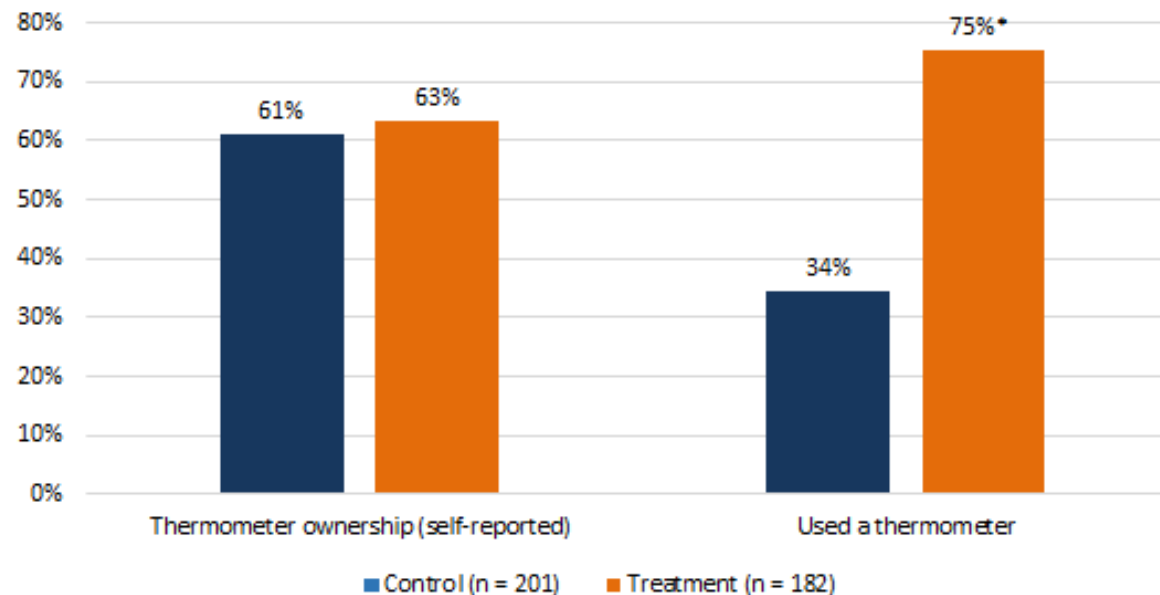
- Primary outcome: safe preparation of not ready-to-eat (NRTE) frozen food
- Participants prepare frozen chicken and a side with frozen corn
- Experimental component to evaluate news story on food safety playing in waiting room



USDA Observational Research

Take-aways related to meat and poultry

Preliminary Results: Thermometer Ownership (Self-Reported) and Use

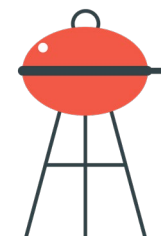
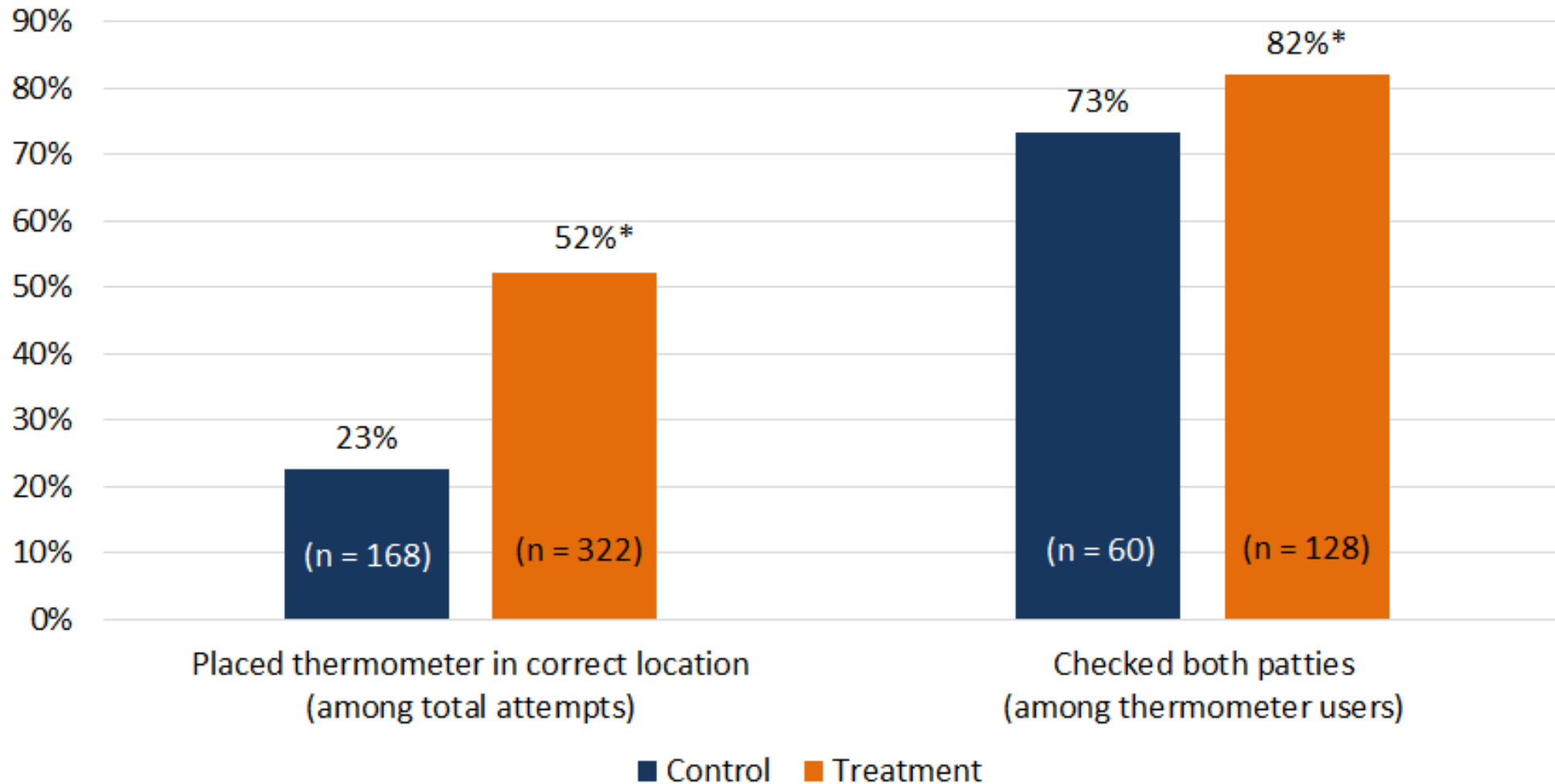


* Differences between two groups statistically significant at $p < .001$.

Results are preliminary, please do not distribute.

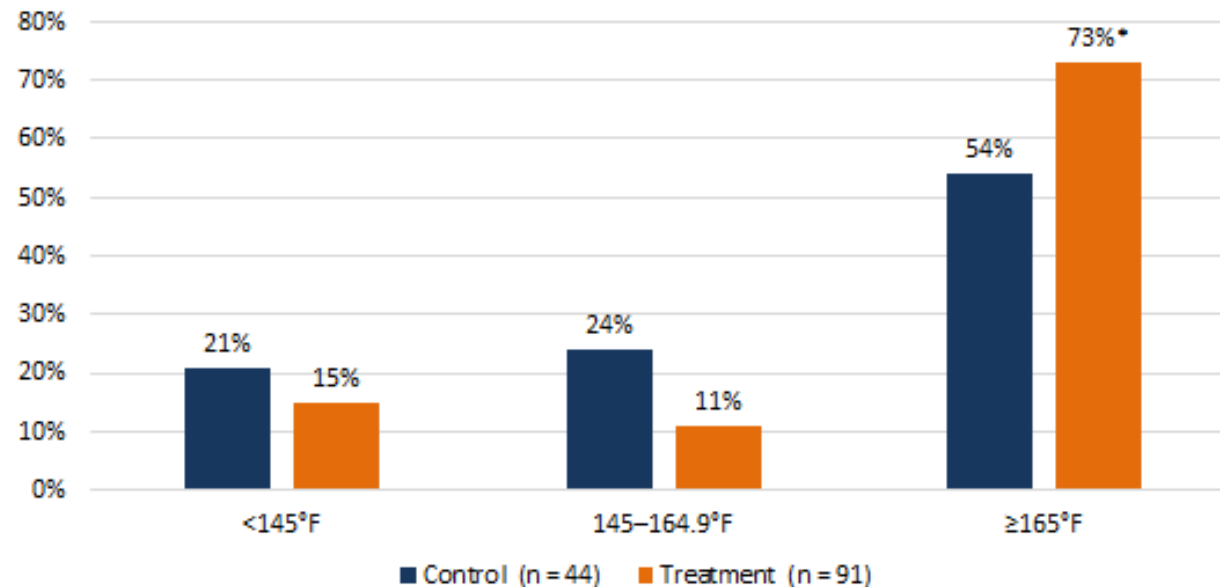


USDA Observational Research



USDA Observational Research

Preliminary Results: Internal Temperature of Patties among Thermometer Users^a



^a Thermometer users (N = 206). Data are not available for 71 participants (25 control and 46 treatment) because participants submerged the data logger.

* Differences between two groups statistically significant at $p = .008$.

Results are preliminary, please do not distribute.



Thermometers with Safe Recipes

Use of thermometers improved dramatically when people were given a recipe that includes safety instructions!

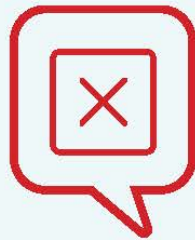
THERMOMETER USE

Observed Consumer Behavior



86%

of people use thermometers using recipes **WITH** safety instructions.



20%

of people use thermometers using recipes **WITHOUT** safety instructions.



Poultry Safe Handling Messages

In Store

- Disinfect shopping cart handle
- Place poultry in plastic bag
- Use hand sanitizer



At Home

- Keep in plastic bag – place in fridge or freezer
- Wash hands before and after handling
- Thaw in the fridge
- Cook to internal temp 165 °F on food thermometer



Tools for Consumer Education

“Don’t Wing It” from Fight BAC!



[Download flyer here!](#)

SCIENCE BEHIND THE MESSAGES

In 2014, chicken was linked to 23 outbreaks, and is the food category responsible for the second-largest number of foodborne illnesses. Contaminated food sickens nearly 48 million people in the United States every year—that’s 1 in 6.¹

There is a great deal of research behind the Don't Wing It Campaign (see page 2).

Refer to this information to help you discuss with consumers and the media the “why” behind the important safe handling behaviors of Don't Wing It.

IN STORE:

- DISINFECT YOUR SHOPPING CART HANDLE**
Use disinfectant wipes on surfaces, especially handlebar and child seat.
Why: 85% of people touch the shopping cart handle directly after handling raw poultry.⁶
Why: 49% had poultry juice on their hands when they touched the cart handle.⁷
- PLACE POULTRY IN PLASTIC BAG**
Use plastic bags provided at meat counter to help avoid contamination in the cart.
Why: Placing raw poultry in a plastic bag reduces the risk of pathogens coming into contact with produce and other grocery items or spreading to your hands and shopping cart.
Why: 23% of chicken packages had high bacteria counts. 7% had campylobacter.⁸
- USE HAND SANITIZER**
Use hand sanitizer after touching raw and packaged poultry if soap and water are not available.
Why: Using hand sanitizer in the store reduces your risk of cross-contamination through touch.

AT HOME:

- PLACE IN THE FRIDGE OR FREEZER**
Keep poultry in plastic bag and place on a low shelf to prevent leakage from contaminating other foods.
Why: 59% of grocery store customers stored poultry without placing in a plastic bag. This common behavior could potentially contaminate any surface poultry touches in the home.
Why: Bacteria can live for days to weeks on refrigerator surfaces that are contaminated with poultry juice.⁹
- WASH HANDS BEFORE AND AFTER HANDLING**
Use warm water and soap to clean hands and surfaces that have potentially come in contact with poultry or its juices.
Why: 90% of consumers cross-contaminated foods during meal preparation.¹⁰

HIGH-RISK GROUPS

- Children:** Children under 4 are nearly 5x times more likely than adults to get bacterial infections from food.⁴
- Seniors:** After the age of 75, many adults have weakened immune systems, increasing the risk of contracting foodborne illness from germs like *Salmonella* and *Campylobacter*.⁵

PAGE 1



“Don’t Wing It” on fightbac.org

FOOD SAFETY BASICS - FOOD POISONING - FOOD SAFETY EDUCATION - HANDS ON - FOR KIDS - FREE RESOURCES - ABOUT US - EVENTS -

Don't WING IT
PRACTICE SAFE POULTRY HANDLING

Welcome to the Don't Wing It consumer campaign main page!
A few simple Do's and Don'ts on Touch and Temp will help you reduce the risk of illness from common germs that can cause foodborne illness like *Salmonella* and *Campylobacter*. Don't Wing It! Practice safe poultry handling at the store and at home.

Keep poultry in the plastic bag and put it on the bottom shelf

Brochure for Parents

Brochure for Seniors

Folleto Para Los Padres

Folleto Para Personas Mayores

Food Safe Consumer Recipes

Don't TOUCH
DON'T TOUCH POULTRY UNTIL YOU'RE READY TO COOK IT

CHECK TEMP
POULTRY IS COOKED TO 165°F
THAW IN THE FRIDGE TO KEEP POULTRY SAFE BELOW 40°F

Consumer Landing Page



Popular Consumer Download

Safe Cooking Guidelines

SAFE MINIMUM INTERNAL TEMPERATURES

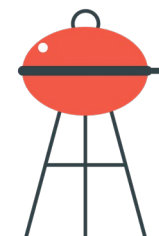
as measured with a food thermometer

Beef, pork, veal and lamb (roast, steaks and chops)	145 ° F with a three-minute “rest time” after removal from the heat source
Ground meats	160 ° F
Poultry (whole, parts or ground)	165 ° F
Eggs and egg dishes	160 ° F, but cook eggs until both the yolk and the white are firm; scrambled eggs should not be runny
Leftovers	165 ° F
Finfish	145 ° F

GUIDELINES FOR SEAFOOD

Shrimp, lobster, crabs	Flesh pearly and opaque
Clams, oysters and mussels	Shells open during cooking
Scallops	Milky white, opaque and firm

[Download chart here!](#)



USDA Meat & Poultry Hotline

Questions about meat, poultry, or egg products, call the hotline!

1-888-MPHotline (1-888-674-6854)

- Open year-round M-F from 10 a.m. to 6 p.m. ET
- English and Spanish
- Email questions to MPHotline.fsis@usda.gov



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Questions?

YouTube Event Today!

Some Like it Hot! — Grilling #AloneTogether YouTube event with Fight BAC!®



Wednesday, May 13
2 p.m. Eastern

- Join us at [Food Safety YouTube channel](#) for grilling and food handling videos running – ready to share!
- 3 p.m. ET, Janice Lopez-Munoz, USDA Meat & Poultry Hotline, takes **live consumer questions** in English and Spanish
- Live event: <https://bit.ly/FoodSafetyYT>



Thank You 2020 Tier II PFSE Partners



For a full list of PFSE Partners, visit www.fightbac.org.



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3. Download at fightbac.org under “Events” tab and “Webinar Recordings” within 24 hours



Thank You!

Dr. Mindy Brashears

U.S. Department of Agriculture

www.fsis.usda.gov



Dr. Ashley Peterson

The National Chicken Council

www.nationalchickencouncil.org



Dr. KatieRose McCullough

North American Meat Institute

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Shelley Feist

Partnership for Food Safety Education

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USDA Observational Research

<https://www.fsis.usda.gov/wps/portal/fsis/topics/food-safety-education/teach-others/download-materials/consumer-research-and-focus-group-testing>



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World Food Safety Day 2020



foodsafetyday.org



Research Appendix: Don't Wing It

1. "Estimates of Foodborne Illness in the United States." Centers for Disease Control and Prevention. 15 July 2016.
2. "Salmonella." Centers for Disease Control and Prevention. 30 Dec. 2016.
3. "Campylobacter." Centers for Disease Control and Prevention. 03 June 2014.
4. CDC. Foodborne Diseases Active Surveillance Network (FoodNet): FoodNet Surveillance Report for 2012 (Final Report). Atlanta, Georgia: U.S.
5. Center for Food Safety and Applied Nutrition. "People at Risk of Foodborne Illness - Food Safety for Older Adults." U.S. Food and Drug Administration Home Page. Center for Food Safety and Applied Nutrition. Sept. 2011.
6. Donelan, A., Chambers, D.H., Chambers, E IV, Godwin, S., and Cates, S. 2016. Consumer poultry handling behaviors in the grocery store and in-home storage. *Journal of Food Protection* 79(4):584-588.
7. Chen, F., Godwin, S., Stone, R., Chambers, D., Donelan, A., Chambers, E IV., and Cates, S. 2014. Evaluation of chicken meat juice on hands, chicken packages, and contact surfaces during and after grocery shopping. *Journal of Food Protection*. 77(A):65.
8. Chen, F., Godwin, S., Green, A., Chowdhury, A., and Stone, R., 2014. Microbiological evaluation of poultry product packages from grocery stores in Nashville, TN. *Journal of Food Protection* 78(A):181.
9. Chen, F., Godwin, S., Frederick, A., Wakefield, M. and Gagula, H. 2015. Survival of salmonella on the kitchen and food packages surfaces contaminated with raw meat juice. *Journal of Food Protection* 78(A):181.
10. Maughan, C., Chambers, E IV, Godwin, S., Chambers, D., Cates, S., and Koppel, K. 2016. Food handling behaviors observed in consumers when cooking poultry and eggs. *Journal of Food Protection* 79(4):970-977.
11. Chicken from Farm to Table." USDA Food Safety and Inspection Service. 24 Mar. 2015.
- 12: Chambers, E IV, Godwin, S. and Maughan, C. 2016. Changes in lighting conditions may negatively impact perception of doneness of cooked turkey patties. *Journal of Food Protection*. 79(A):123.
13. Kosa, K., Cates, SC., Bradley, S., Chambers, E IV. and Godwin, S. 2014. Consumer handling of raw poultry products at home. *Journal of Food Protection* 78(1):180-186

