

Protein Power Hour



*Home Grilling
#AloneTogether*



Moderator



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Executive Director

Partnership for Food Safety Education

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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!



Continuing Education Units

One-hour CEU available from ANFP, CDR & NEHA

- Download certificate from sidebar now
- Follow-up email within 24 hours
- Download at fightbac.org under “Events” tab and “Webinar Recordings” within 24 hours



Message from Dr. Mindy Brashears



Dr. Mindy Brashears
Deputy Under Secretary for
Food Safety

U.S. Department of Agriculture

www.fsis.usda.gov



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.

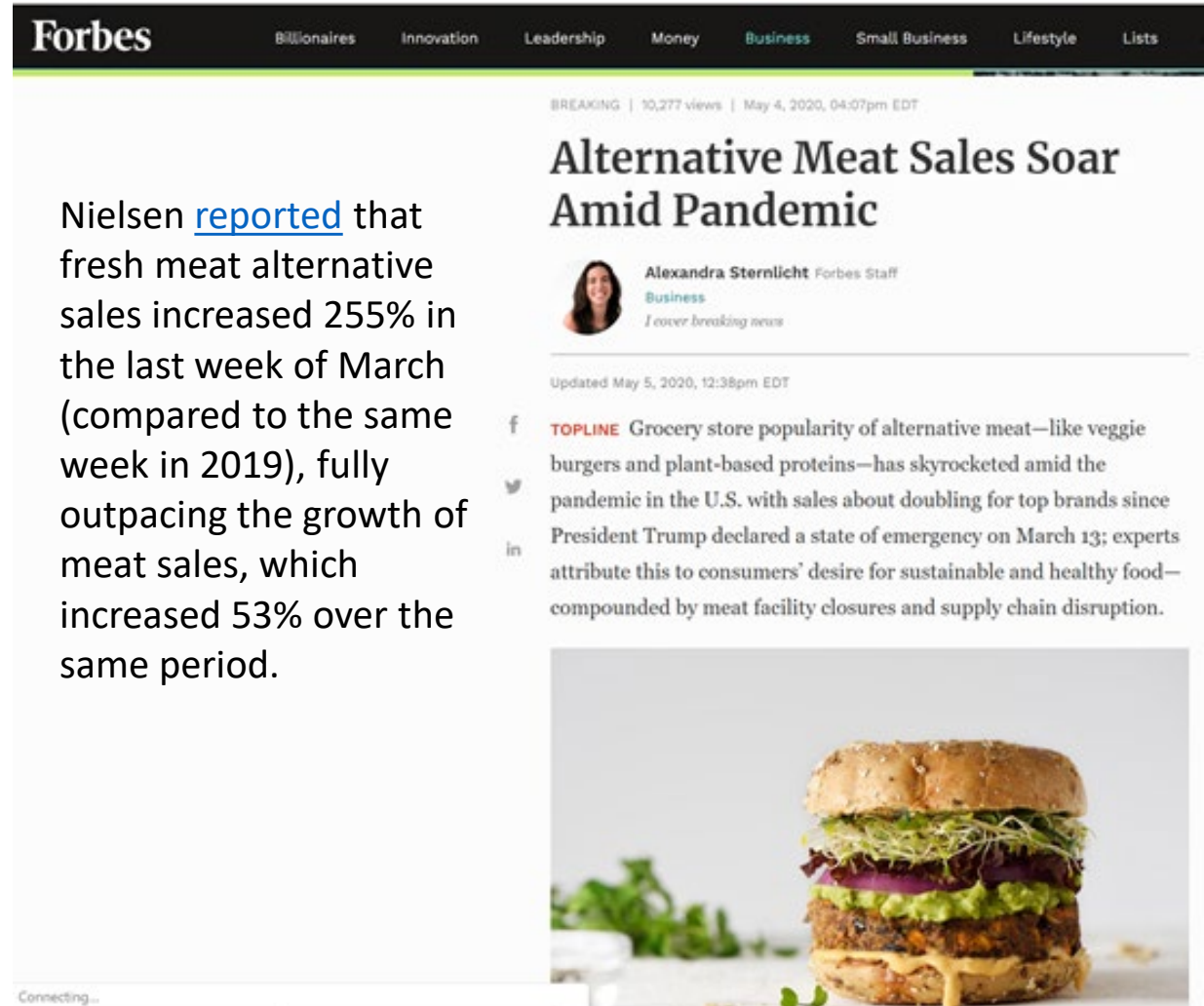
26% eating breakfast more



18% grilling outside more



FIELD AGENT™



The image is a screenshot of a Forbes article titled "Alternative Meat Sales Soar Amid Pandemic" by Alexandra Sternlicht. The article is dated May 4, 2020, and has 10,277 views. The text states that Nielsen reported a 255% increase in fresh meat alternative sales in the last week of March compared to the same week in 2019, outpacing the 53% growth in meat sales. A social media share bar is visible below the text, and a photo of a burger is at the bottom.

Forbes Billionaires Innovation Leadership Money **Business** Small Business Lifestyle Lists

BREAKING | 10,277 views | May 4, 2020, 04:07pm EDT

Alternative Meat Sales Soar Amid Pandemic

Alexandra Sternlicht Forbes Staff
Business
I cover breaking news

Updated May 5, 2020, 12:38pm EDT

TOPLINE Grocery store popularity of alternative meat—like veggie burgers and plant-based proteins—has skyrocketed amid the pandemic in the U.S. with sales about doubling for top brands since President Trump declared a state of emergency on March 13; experts attribute this to consumers' desire for sustainable and healthy food—compounded by meat facility closures and supply chain disruption.

Connecting...

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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.

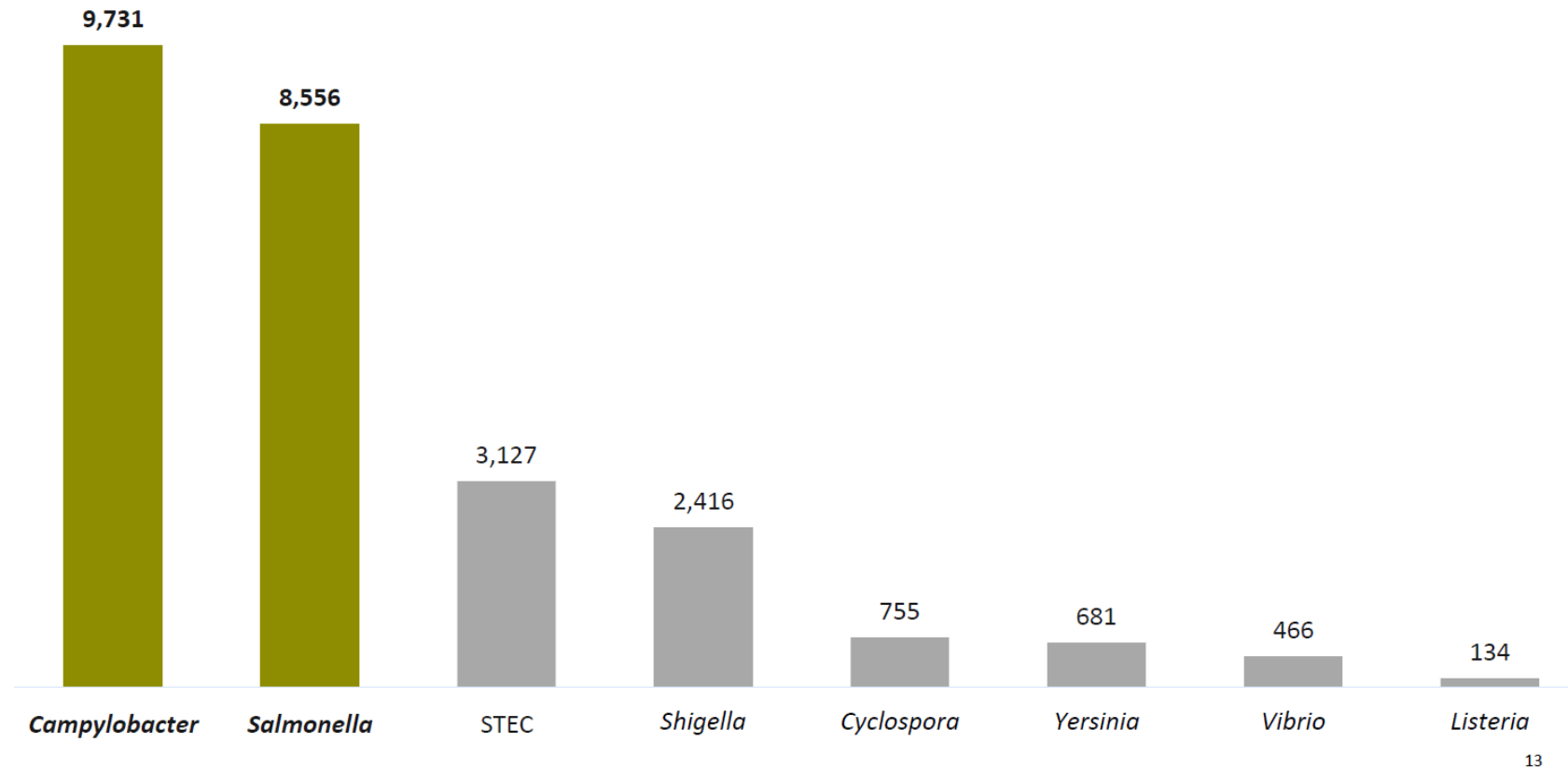


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MMWR FoodNet Data 2019

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%)



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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%)



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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

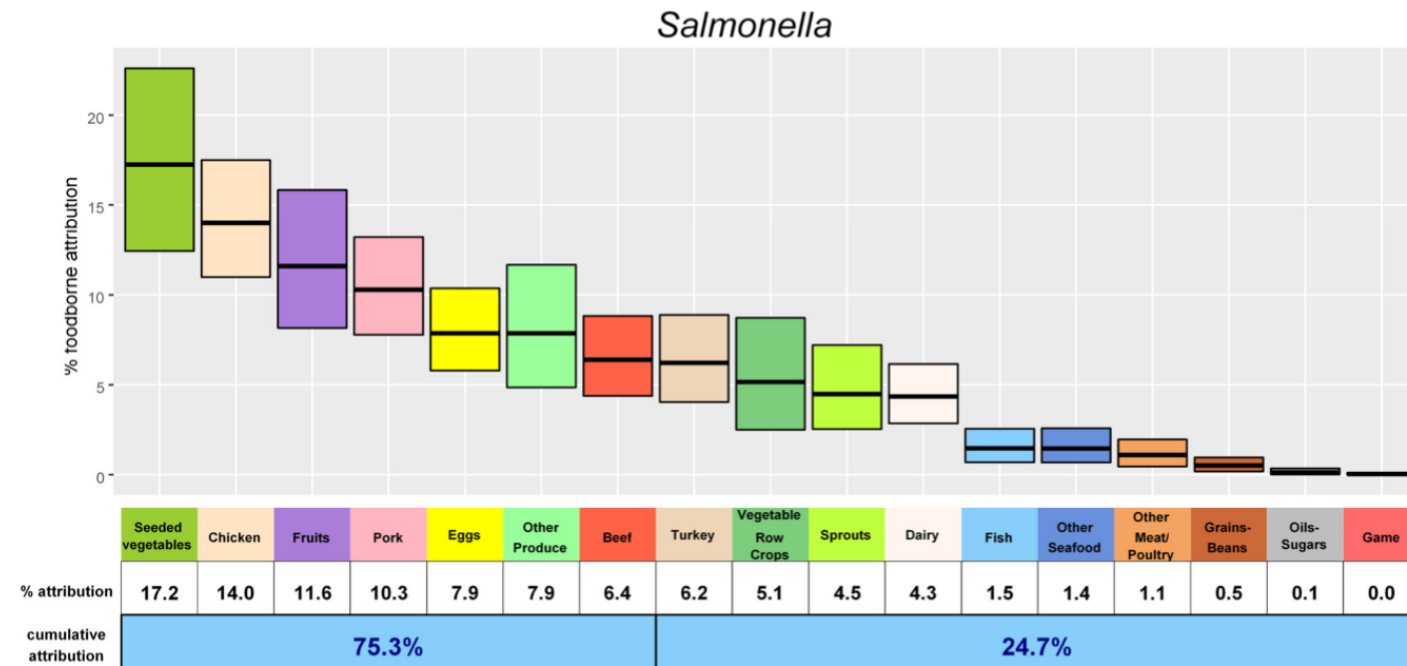
National Chicken Council

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).

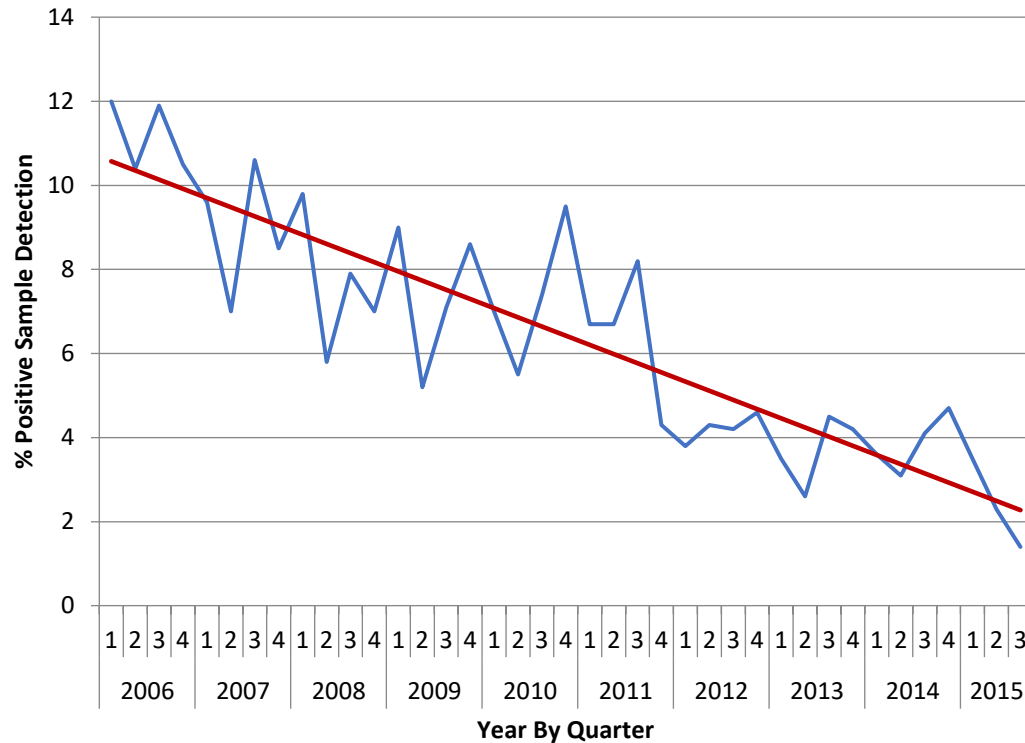


Performance Standards — What are they?

- 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%



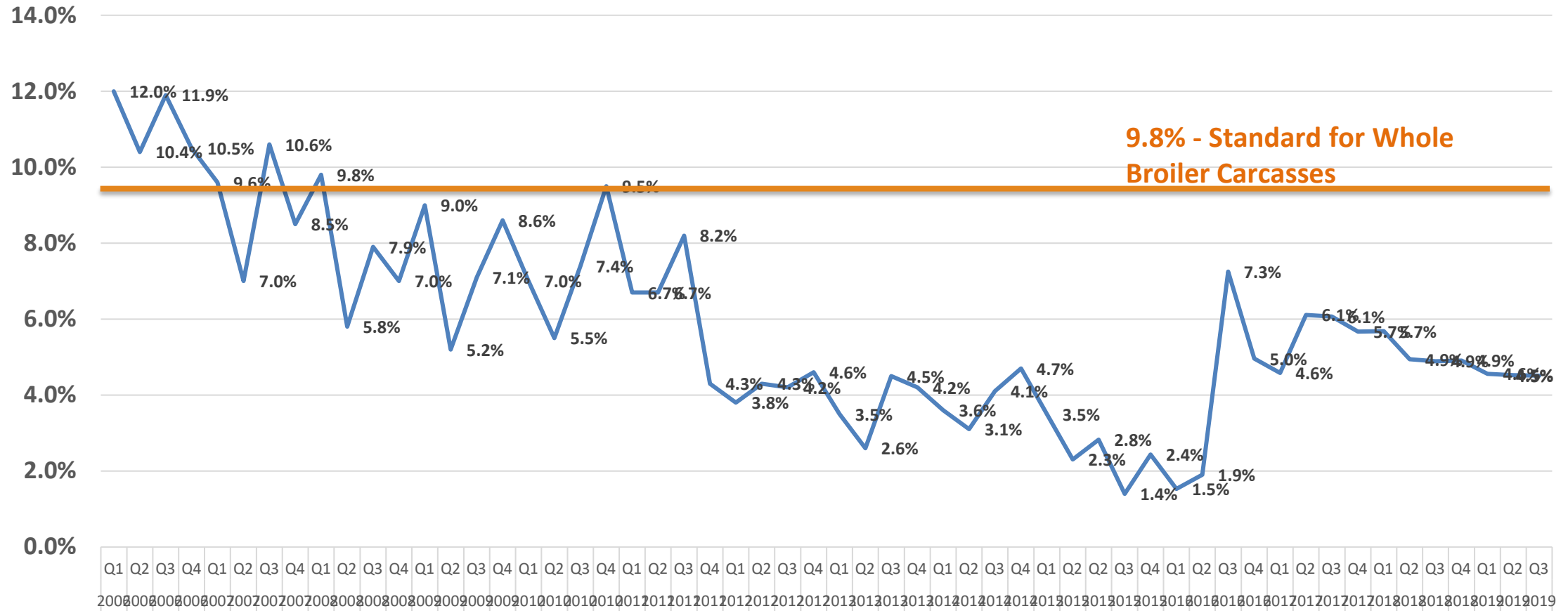
Performance Standards — What are they?

PART	<i>SALMONELLA</i>	<i>CAMPYLOBACTER</i>
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%

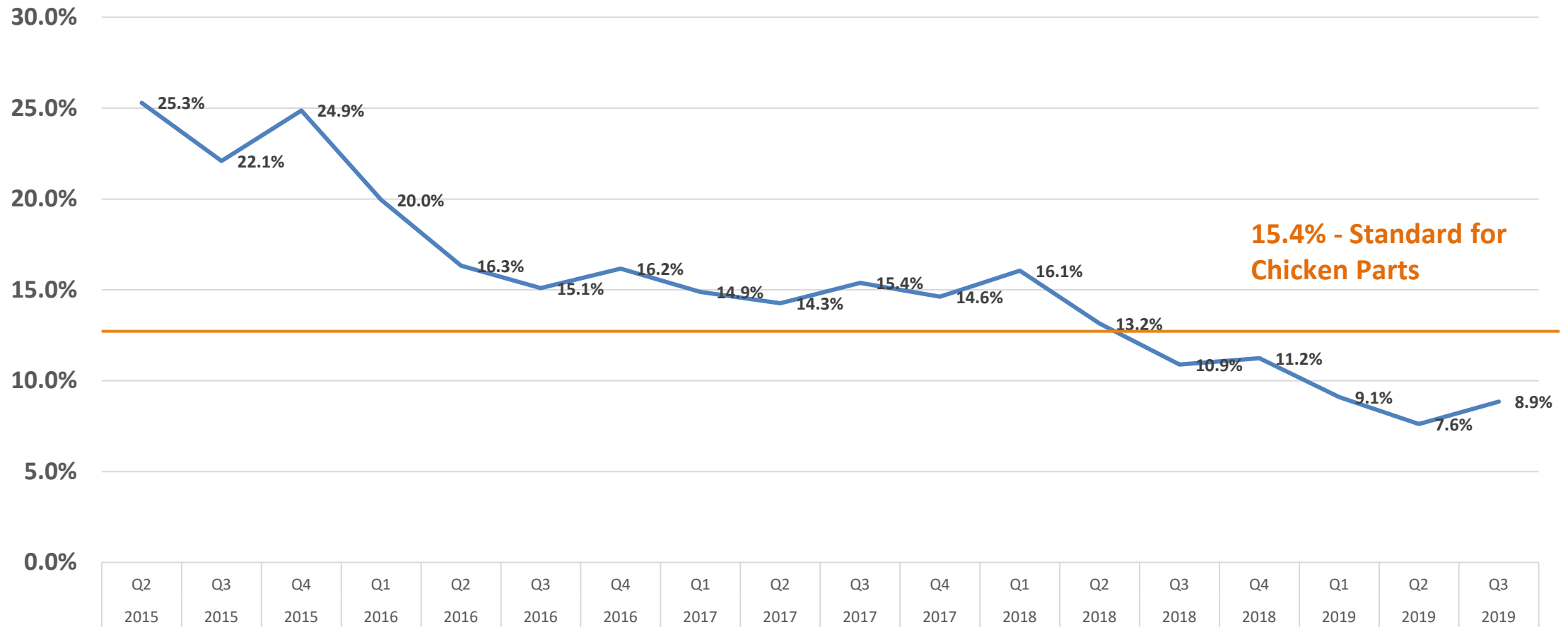
- July 2016, new performance standard implemented for *Salmonella* and *Campylobacter* on chicken parts and comminuted poultry



Current *Salmonella* Performance — Whole Birds

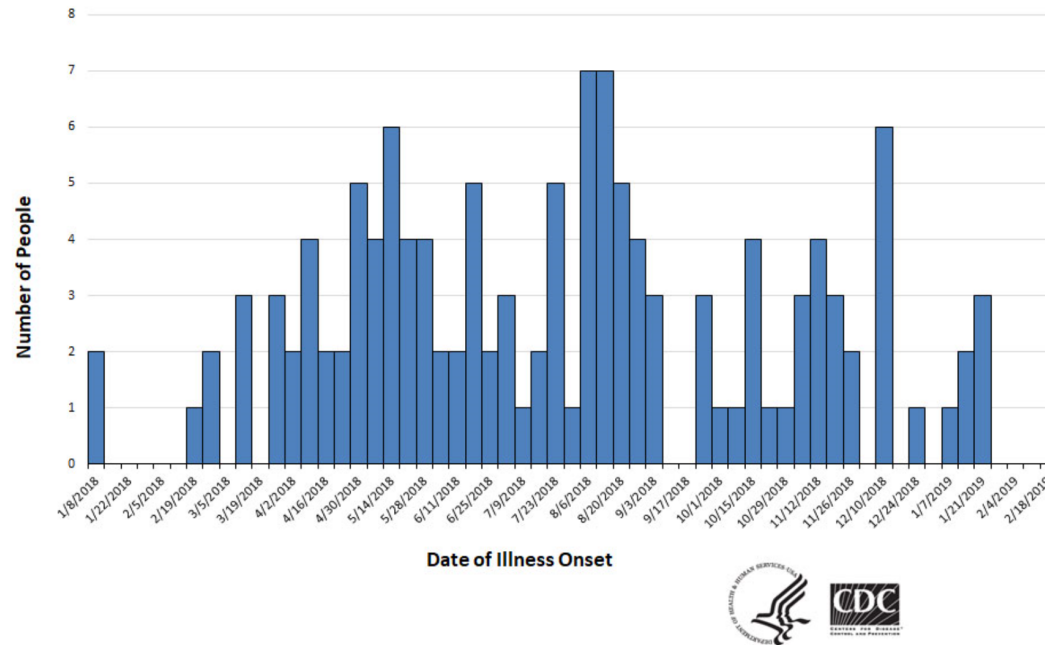


Current *Salmonella* Performance — Parts



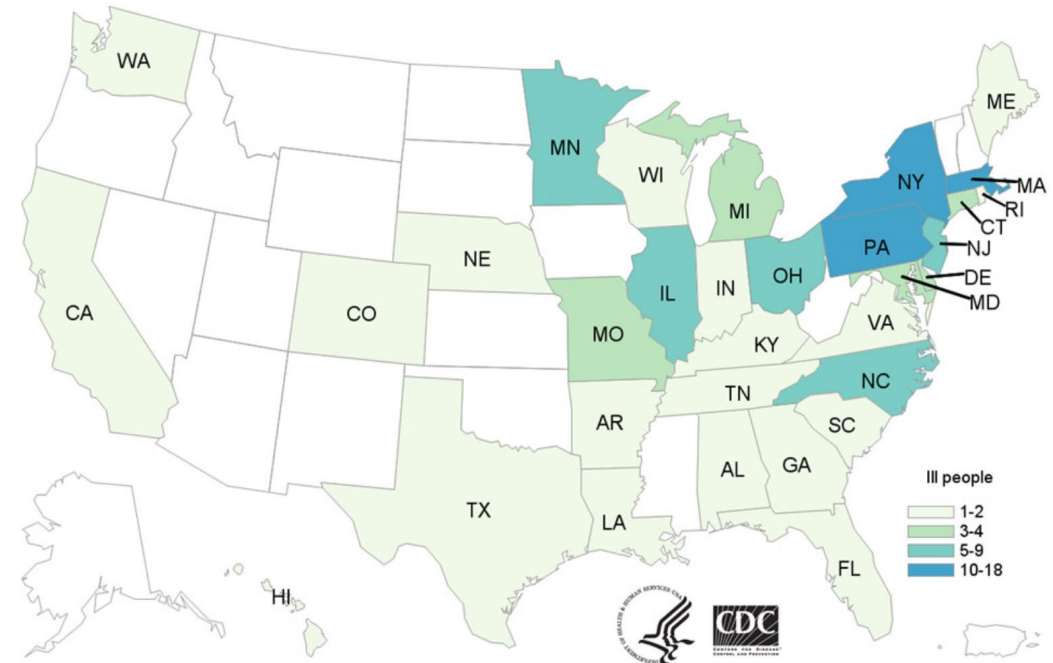
Salmonella Infantis Outbreak Overview

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



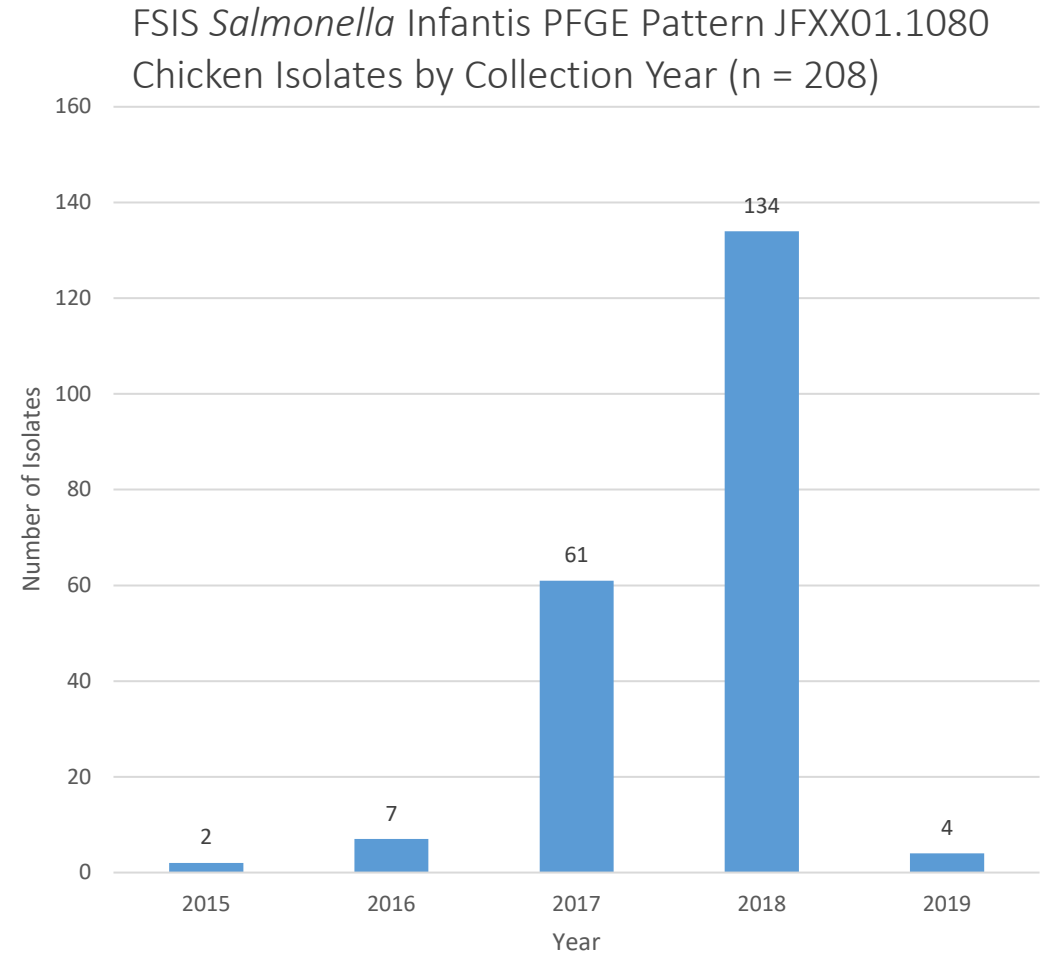
*n=129 for whom information was reported as of February 19, 2019. Some illness onset dates have been estimated from other reported information.

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* 026

Ground Beef – *Salmonella* Dublin

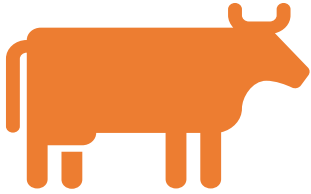
Northfork Bison – *E. coli* O103 and O121

Deli Meats and Cheeses – *Listeria monocytogenes*

Ground Beef – *E. coli* O103



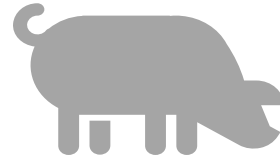
Pathogens of Concern



Beef

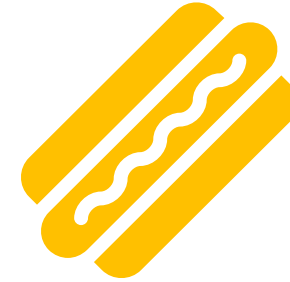
Salmonella

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*

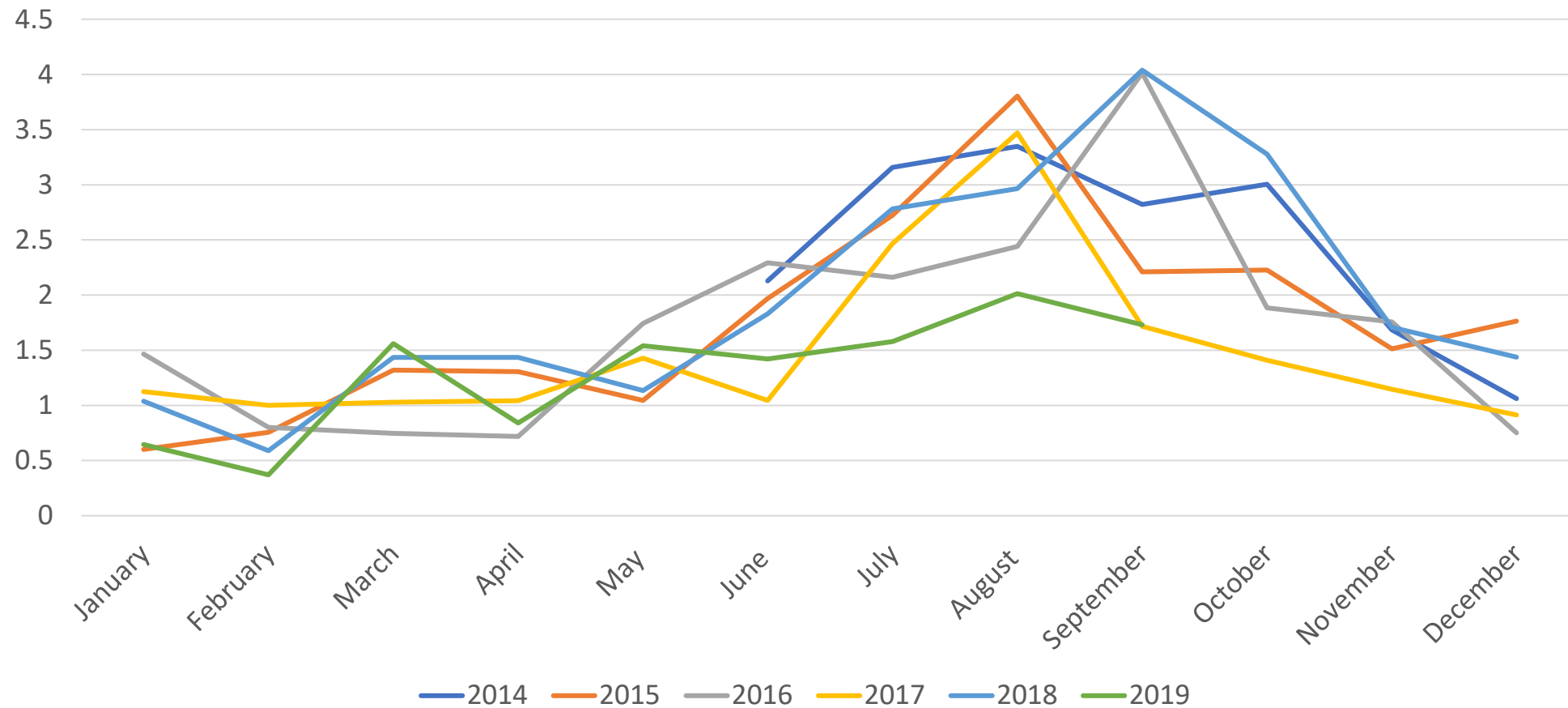


Proposed Beef Standard

- **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.

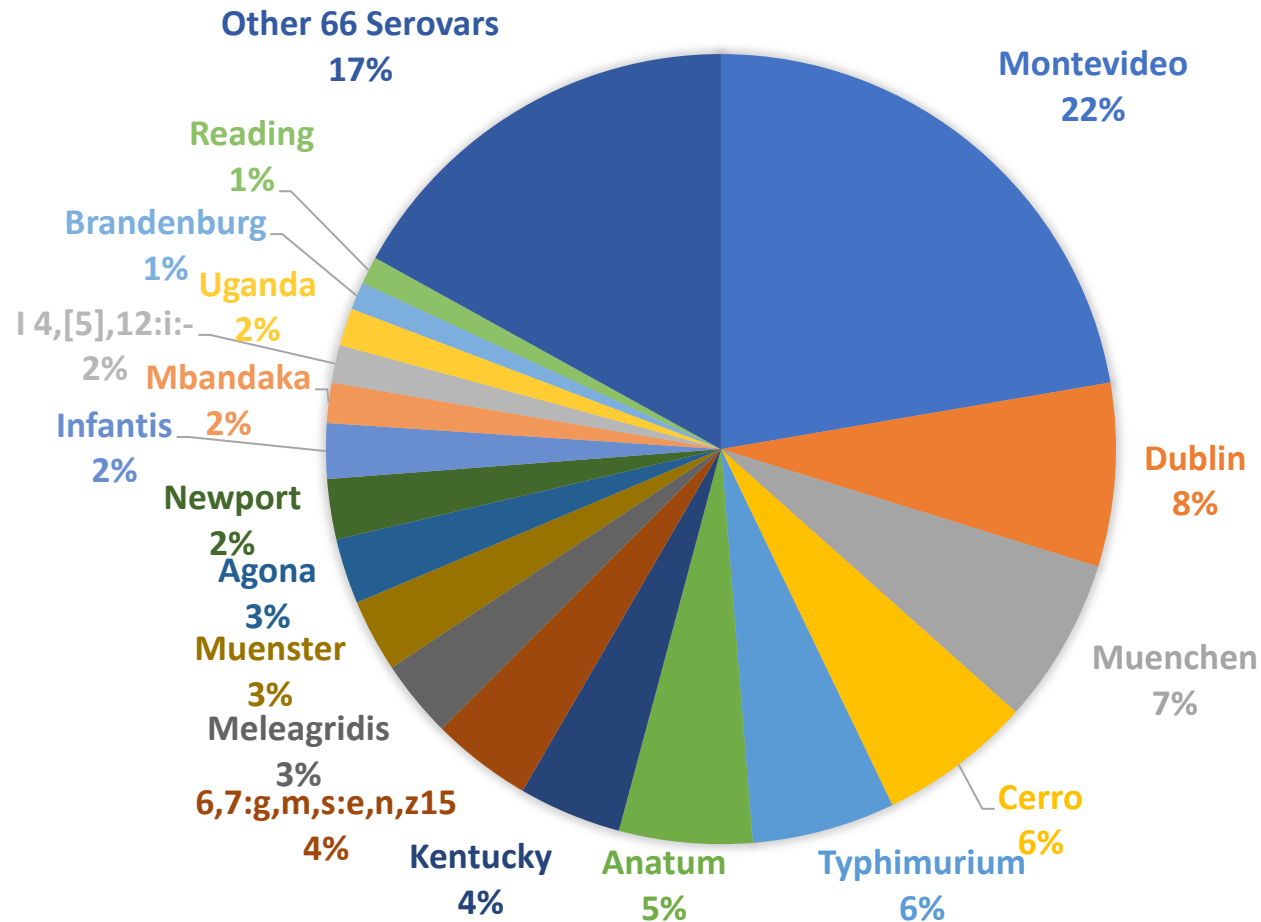


Ground Beef Sampling Program Salmonella Prevalence



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. 14,[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

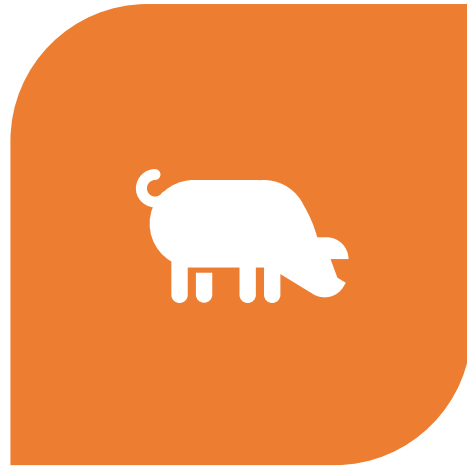
12. Newport - 24

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.

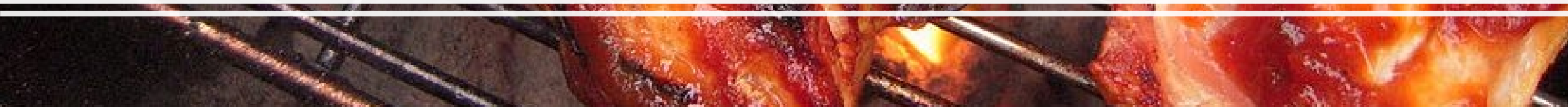


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Consumer Research



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

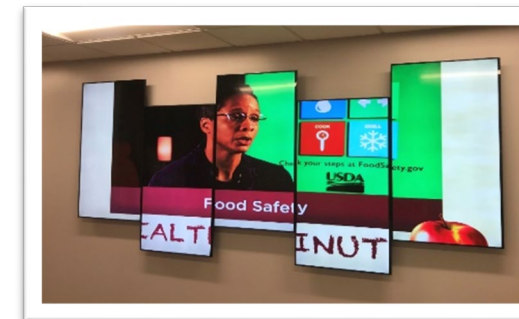
Year 2: CLEAN (study complete)

- 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)

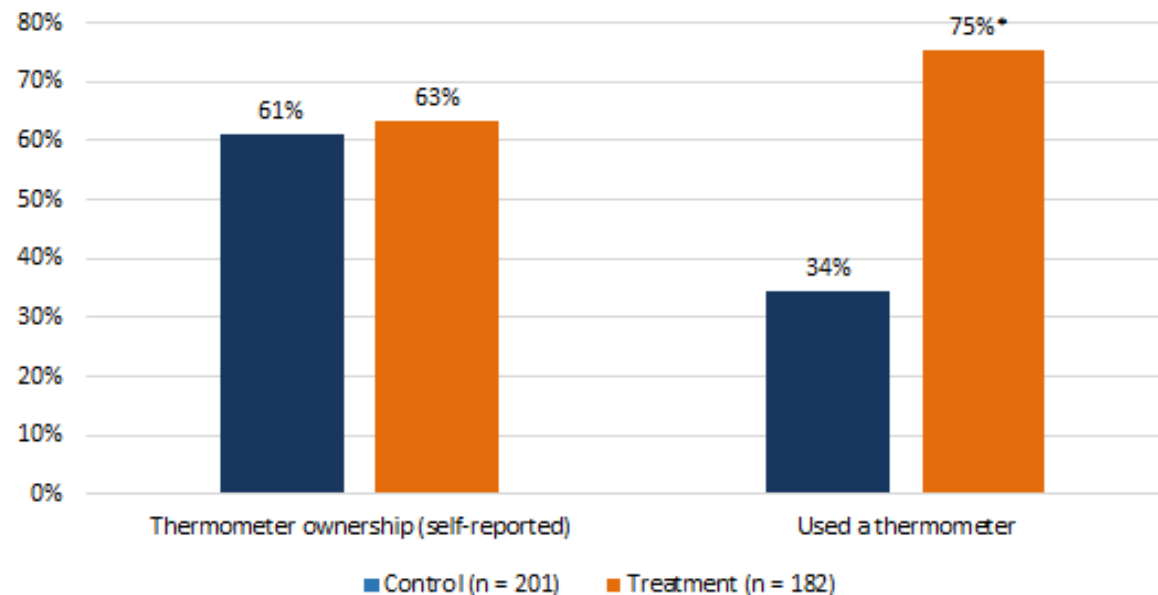
- Primary outcome: safe preparation of not ready-to-eat (NRTE) frozen food
- Participants prepare frozen chicken and a side with frozen corn
- Experimental component to evaluate news story on food safety playing in waiting room



USDA Observational Research

Take-aways related to meat and poultry

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

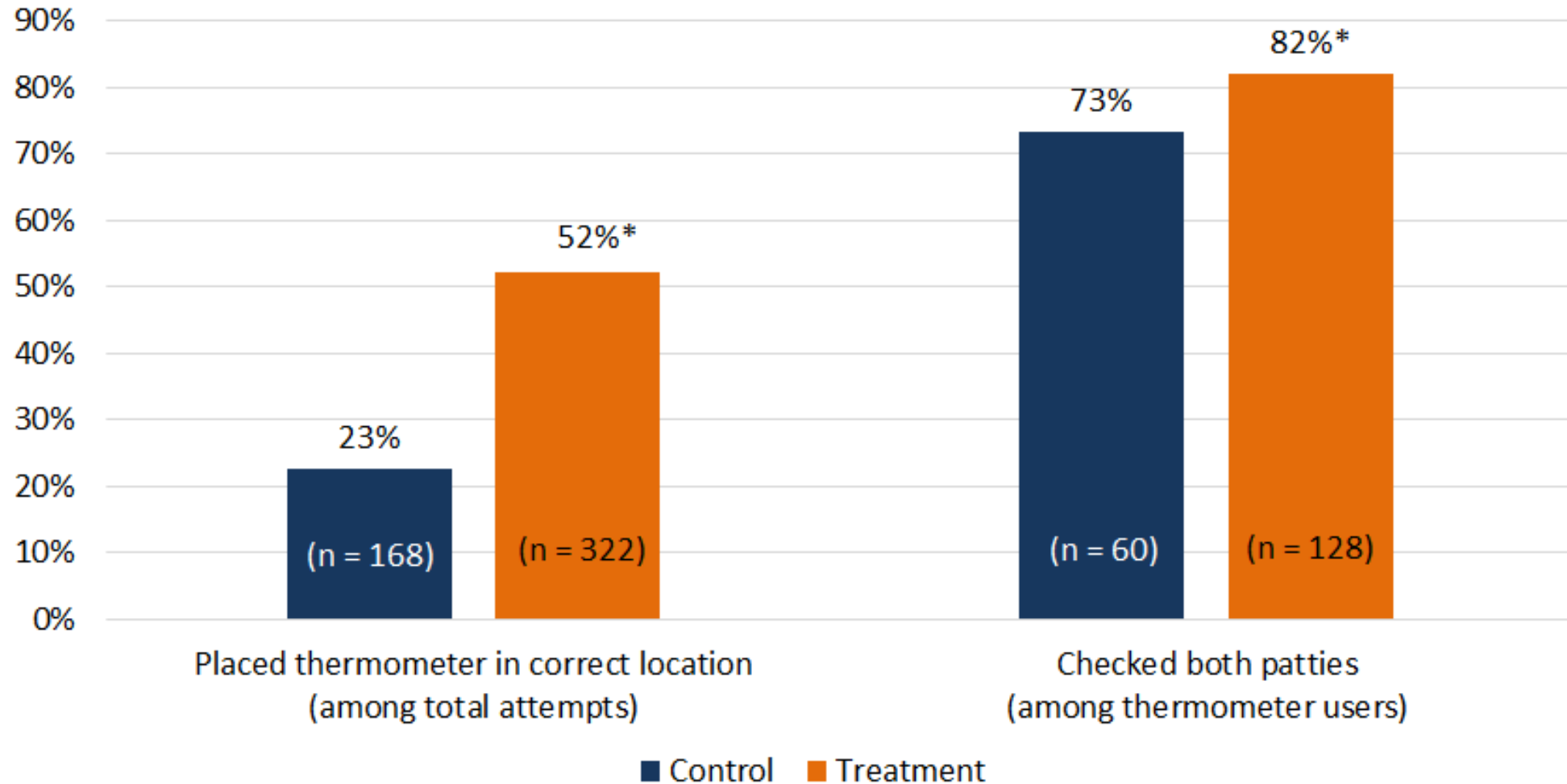


* Differences between two groups statistically significant at $p < .001$.

Results are preliminary, please do not distribute.

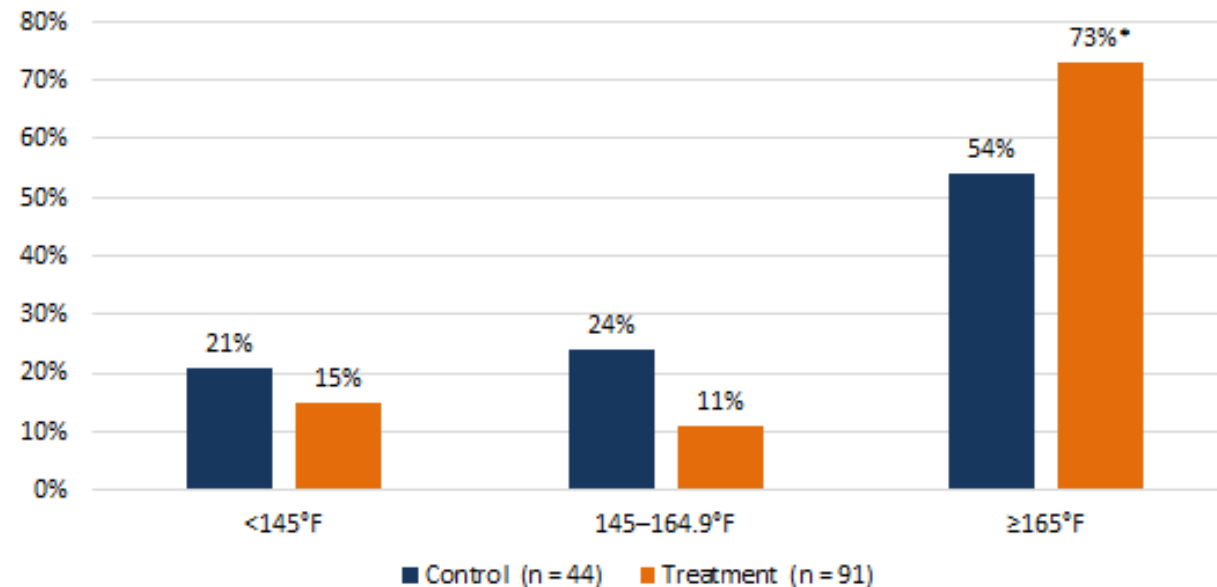


USDA Observational Research



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.

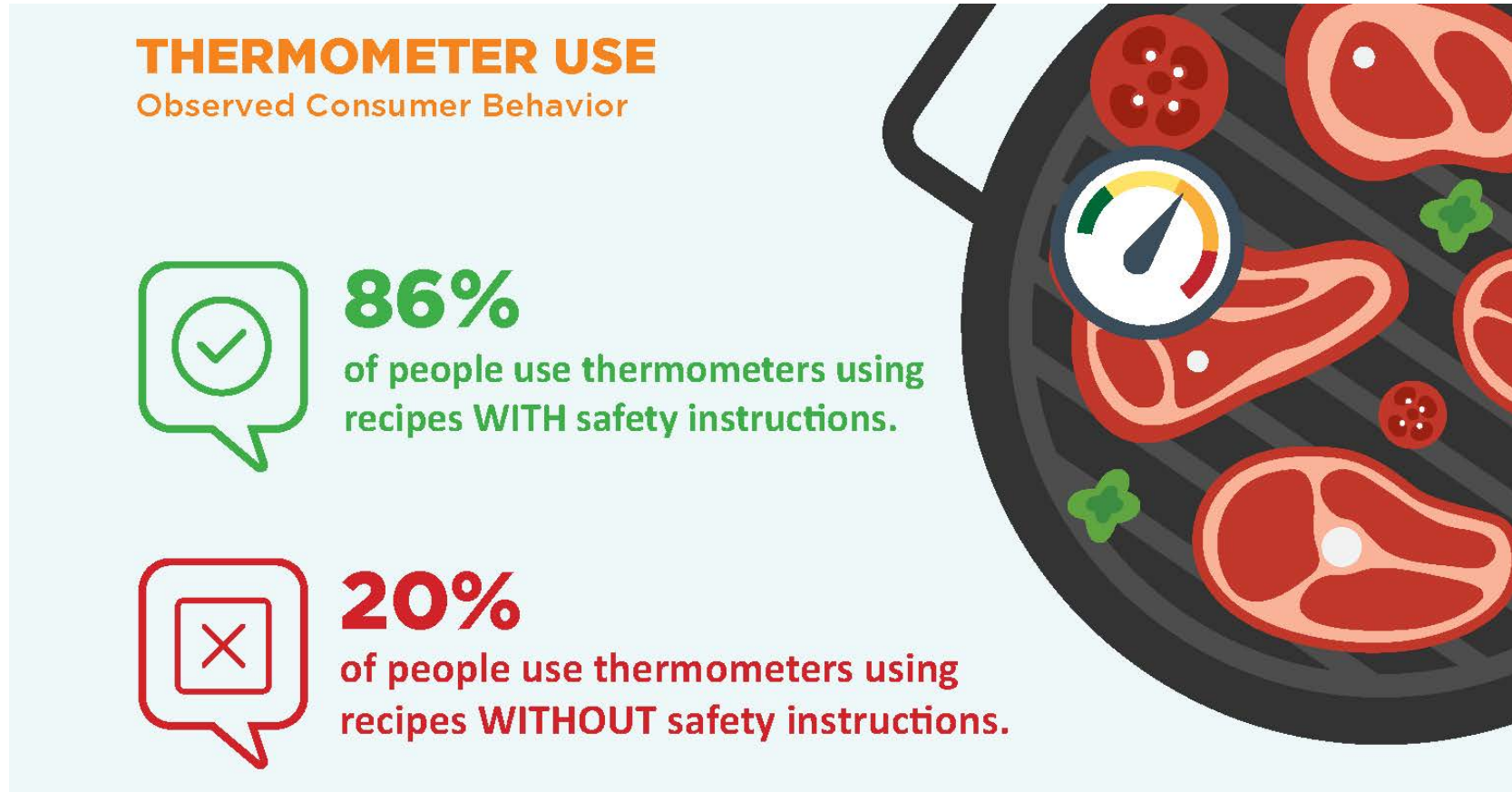
* Differences between two groups statistically significant at $p = .008$.

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!



 **SAFE**
RECIPE
STYLEGUIDE



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!](#)

Don't
WING IT
PRACTICE SAFE POULTRY HANDLING

DON'T TOUCH

FACT:
Salmonella causes one million foodborne illnesses in the United States each year, with 19,000 hospitalizations and 380 deaths.² Even one drop of raw poultry juice could contain enough *Campylobacter*—a common food-related germ—to cause illness.³

SCIENCE:
Poultry cross-contamination can occur from two major pathways:
1. Directly from raw poultry to products that will not receive further heat treatment (ready-to-eat foods).
2. Indirectly via work surfaces, hands, or other objects. Rinsing poultry increases the chances of spreading raw juices around the kitchen.

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

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


For safety and quality it's best to buy poultry products before the "sell by" date marked on the package.

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](#) -




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.




[Brochure for Parents](#)




[Brochure for Seniors](#)




[Food Safe Consumer Recipes](#)



[Folleto Para Los Padres](#)



[Folleto Para Personas Mayores](#)



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!](#)



Safe Recipes Available for Download



Chicken Legs with Glazed Eggplant, Zucchini & Apricot Skewers

Makes 4 Servings

This recipe was developed using the Safe Recipe Style Guide at SafeRecipeGuide.org

Ingredients	Directions
Chicken Legs: 4 whole chicken leg quarters 1½ tsp. salt ½ tsp. freshly ground pepper 1 Tbsp. fresh rosemary, finely chopped 4 garlic cloves, minced 2 Tbsp. olive oil	1. Wash hands with soap and water. 2. Scrub garlic, eggplant, and zucchini with a clean vegetable brush under running water. 3. In a small bowl, combine salt, pepper, rosemary, garlic and olive oil. Crush into a paste by pressing the garlic to the sides and bottom of the bowl with the back of a spoon. 4. Place chicken legs in baking dish and rub all over with garlic rosemary paste, rubbing over and under skin. Do not rinse raw poultry. 5. Wash hands with soap and water after handling uncooked chicken. 6. Cover baking dish and place in refrigerator on the lowest shelf. Allow chicken to marinate for 30 minutes. Do not reuse marinades used on raw foods.
Skewers: ¾ cup balsamic vinegar 2 Tbsp. honey ½ tsp salt ½ tsp freshly ground pepper 1 Tbsp. lemon juice 1 eggplant, sliced into ½ to ¾-inch slices 2 zucchinis, sliced into ½ to ¾-inch slices 8 dried apricots 8 wooden or metal skewers	7. While chicken is marinating, combine balsamic vinegar, honey, ½ teaspoon salt, ½ teaspoon pepper and lemon juice in a small saucepan. Bring to a boil and reduce by half, about 15-20 minutes. If using wooden skewers, soak skewers in water to prevent burning while cooking. 8. Place vegetables and apricots in a large bowl. Pour balsamic glaze over; toss to coat well. String vegetables and apricots onto skewers, alternating between eggplant, zucchini and apricots. Pour any remaining glaze in bowl into saucepan and reheat to boiling. Set aside to cool. 9. Preheat broiler or prepare grill by heating on high for about 10 minutes. Adjust grill or broiler heat to medium high after preheating. Sear or broil chicken on lightly oiled rack. Turn over once until lightly browned, cooking for a total of 6-8 minutes. Continue to cook chicken, moving and turning to avoid burning. 10. Grill or broil chicken about another 20 to 25 minutes, until it reaches an internal temperature of 165°F on a food thermometer. 11. When chicken is halfway done, place vegetable skewers on grill or under broiler. Keep separate from chicken that is not fully cooked. Turn often until vegetables are tender and browned but not falling off skewers, about 15-20 minutes. 12. To serve, place chicken on a clean platter and arrange skewers next to chicken (or remove vegetables from skewers if preferred). Drizzle warm vegetables with remaining reheated honey balsamic glaze.


Get more recipes at www.fightbac.org/saferecipes

Wash hands with soap and water.

Use a food thermometer.

Do not rinse raw poultry.

Wash hands with soap and water after handling uncooked chicken.



Grilled Basil Chicken

Makes 4 Servings

This recipe was developed using the Safe Recipe Style Guide at SafeRecipeGuide.org

Ingredients	Directions
4 boneless chicken breast halves (6 ounces each) 4 tbsp. olive oil 2 Tbsp. olive oil 1 eggplant, sliced 1½ cup balsamic vinegar 1½ cup salt 1½ cup freshly ground pepper	1. Wash hands with soap and water. 2. Gently rub both sides and between under cold running water. 3. For marinade, place eggplant, olive oil, garlic, rosemary, salt and pepper in a blender. Cover and process until well blended. 4. Place chicken breasts in a shallow dish. Coat with marinade. Cover dish. Refrigerate about 1 hour, turning occasionally. Do not use any poultry. 5. Wash hands with soap and water. 6. Place chicken on a preheated grill over medium heat. Do not use marinade used on raw foods. 7. Wash hands with soap and water after handling raw chicken. 8. Grill chicken 6-8 minutes on each side until internal temperature reaches 165°F on food thermometer. 9. Wash hands with soap and water after handling uncooked meat. 10. Brush eggplant with oil and place in a medium bowl with remaining 1½ cup vinegar. Season with salt and pepper. 11. Heat a large heavy skillet, preferably cast iron, over medium-high. When pan is hot, add 2 Tbsp. oil and swirl to coat. Remove chicken from marinade. Cook chicken on each side until browned and cooked through. Do not use marinade used on raw meat.

Get more recipes at www.fightbac.org/saferecipes



Miso-Marinated Short Ribs

Makes 4 Servings

This recipe was developed using the Safe Recipe Style Guide at SafeRecipeGuide.org

Ingredients	Directions
2½ cup miso paste 2½ cup soy sauce 2½ cup rice wine vinegar 2½ cup mirin 2½ cup sake 2½ cup dashi 2½ cup water 2½ cup salt 2½ cup freshly ground pepper	1. Wash hands with soap and water after handling uncooked meat. 2. In a small bowl, mix together miso, soy sauce, rice wine vinegar, mirin, sake and dashi. Pour mixture over ribs. Cover dish. Refrigerate about 1 hour, turning occasionally. Do not use any poultry. 3. Wash hands with soap and water after handling uncooked meat. 4. Place ribs in a medium bowl. Pour oil over ribs. Cover dish. Refrigerate about 1 hour, turning occasionally. Do not use any poultry. 5. Wash hands with soap and water after handling uncooked meat. 6. Place ribs on a preheated grill over medium heat. Do not use marinade used on raw foods. 7. Wash hands with soap and water after handling raw chicken. 8. Grill ribs 6-8 minutes on each side until internal temperature reaches 165°F on food thermometer. 9. Wash hands with soap and water after handling uncooked meat. 10. Brush ribs with oil and place in a medium bowl with remaining 1½ cup vinegar. Season with salt and pepper. 11. Heat a large heavy skillet, preferably cast iron, over medium-high. When pan is hot, add 2 Tbsp. oil and swirl to coat. Remove ribs from marinade. Cook ribs on each side until browned and cooked through. Do not use marinade used on raw meat.

Get more recipes at www.fightbac.org/saferecipes




Mushroom Turkey Burger

Makes 4 Servings

This recipe was developed using the Safe Recipe Style Guide at SafeRecipeGuide.org

Ingredients	Directions
1½ lb. ground turkey 4 whole mushrooms 2 Tbsp. olive oil 1½ cup salt 1½ cup freshly ground pepper	1. Wash hands with soap and water. 2. Gently rub both sides and between under cold running water. 3. Remove the stems from the mushrooms and chop. Place in a medium bowl. Cover and process until well blended. 4. Spray a medium sized pan with cooking spray. Preheat pan over medium high heat. 5. Brown the turkey in the ground turkey. Place the ground turkey in a medium bowl. 6. Wash hands with soap and water after handling uncooked poultry. 7. Add the chopped mushrooms, onion, salt, pepper, salt and pepper to the ground turkey. Mix with hands in a medium bowl. Cover and process until well blended. 8. Cook the turkey and the mushroom mixture in a preheated pan. 9. Wash hands with soap and water after handling uncooked poultry. 10. Cook the turkey and the mushroom mixture in a preheated pan. 11. Wash hands with soap and water after handling uncooked poultry.

Get more recipes at www.fightbac.org/saferecipes



Tangy Grilled Pork Back Ribs

Makes 4 Servings

This recipe was developed using the Safe Recipe Style Guide at SafeRecipeGuide.org

Ingredients	Directions
4 pounds pork back ribs 2 Tbsp. olive oil 2 Tbsp. soy sauce 2 Tbsp. honey 2 Tbsp. vinegar 2 Tbsp. salt 2 Tbsp. freshly ground pepper	1. Wash hands with soap and water. 2. In a small bowl, mix together oil, soy sauce, honey, vinegar, salt and pepper. Pour mixture over ribs. Cover dish. Refrigerate about 1 hour, turning occasionally. Do not use any poultry. 3. Wash hands with soap and water after handling uncooked meat. 4. Place ribs in a medium bowl. Pour oil over ribs. Cover dish. Refrigerate about 1 hour, turning occasionally. Do not use any poultry. 5. Wash hands with soap and water after handling uncooked meat. 6. Place ribs on a preheated grill over medium heat. Do not use marinade used on raw foods. 7. Wash hands with soap and water after handling raw chicken. 8. Grill ribs 6-8 minutes on each side until internal temperature reaches 165°F on food thermometer. 9. Wash hands with soap and water after handling uncooked meat. 10. Brush ribs with oil and place in a medium bowl with remaining 1½ cup vinegar. Season with salt and pepper. 11. Heat a large heavy skillet, preferably cast iron, over medium-high. When pan is hot, add 2 Tbsp. oil and swirl to coat. Remove ribs from marinade. Cook ribs on each side until browned and cooked through. Do not use marinade used on raw meat.

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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!®

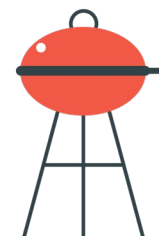


Wednesday, May 13
2 p.m. Eastern

- 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>



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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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USDA Observational Research

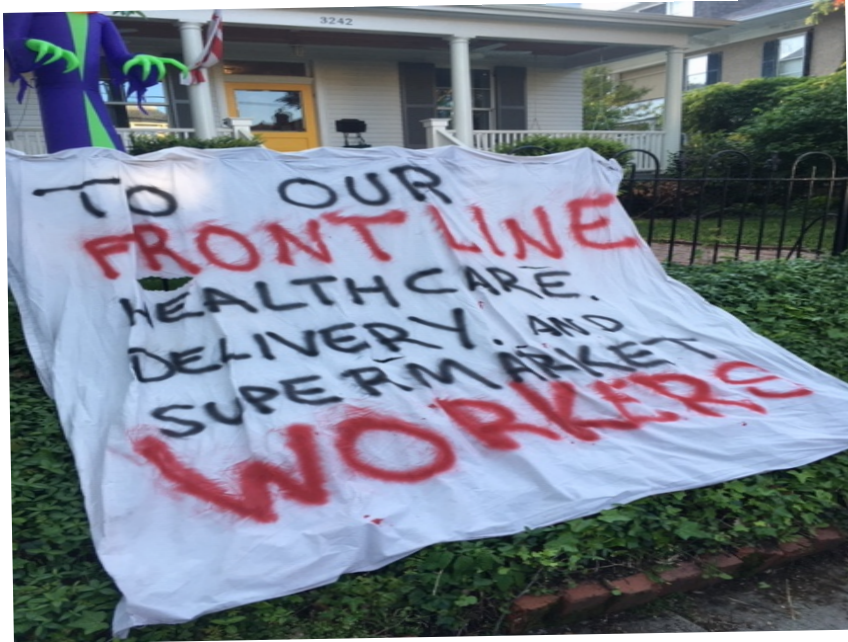
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World Food Safety Day 2020



foodsafetyday.org



Research Appendix: Don't Wing It

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