

Expert Elicitation Survey

Attributing Foodborne Illness Across Foods

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Demographic Questionnaire

1. Name: _____

2. Highest degree granted: _____

3. Field in which highest degree was granted: _____

4. Number of years working professionally in fields related to food safety: _____

5. Has your food safety career been mainly in:

private industry

government

academia

other (please describe)

6. Is there anyone else you feel should complete this survey? Please list name and contact information (if available):

Pathogen Expertise

For each of the following pathogens, indicate your level of expertise on a scale of 1-5 by circling the appropriate number:

example

1 2 3 4 5

1 = low (e.g., no direct experience, anecdotal knowledge only)

3 = medium (e.g., some direct experience, but wide reading)

5 = high (e.g., primary focus of my professional work)

1. *Campylobacter* spp. 1 2 3 4 5

2. *Escherichia coli* O157:H7 1 2 3 4 5

3. *Listeria monocytogenes* 1 2 3 4 5

4. *Salmonella nontyphoidal* 1 2 3 4 5

5. *Shigella* spp. 1 2 3 4 5

6. *Vibrio* spp. 1 2 3 4 5

7. *Yersinia enterocolitica* 1 2 3 4 5

8. *Cryptosporidium parvum* 1 2 3 4 5

9. *Cyclospora cayetanensis* 1 2 3 4 5

10. Norwalk-like virus 1 2 3 4 5

11. *Toxoplasma gondii* 1 2 3 4 5

Food Category Expertise

For each of the following broad food categories, indicate your level of food safety-related professional experience on a scale of 1-5 by circling the appropriate number:

example

1 2 3 4 5

1 = low (e.g., no direct experience, anecdotal knowledge only)

3 = medium (e.g., some direct experience, but wide reading)

5 = high (e.g., primary focus of my professional work)

1. Seafood

1 2 3 4 5

2. Eggs

1 2 3 4 5

3. Produce

1 2 3 4 5

4. Beverages (not water)

1 2 3 4 5

5. Dairy

1 2 3 4 5

6. Breads and Bakery

1 2 3 4 5

7. Game

1 2 3 4 5

8. Beef

1 2 3 4 5

9. Poultry

1 2 3 4 5

10. Pork

1 2 3 4 5

11. Luncheon/Other Meats

1 2 3 4 5

12. Other

1 2 3 4 5

Food List

Food Category	Specific foods included in category
Seafood	finfish, molluscan shellfish, other seafood, seafood dishes
Eggs	eggs, egg dishes
Produce	fruits, vegetables, produce dishes
Beverages (not water)	juices, other beverages
Dairy	milk, cheese, ice cream, other dairy
Breads and Bakery	bread, bakery
Game	wild game
Beef	ground beef, other beef, beef dishes
Poultry	chicken, turkey, other poultry, poultry dishes
Pork	ham, other pork, pork dishes
Luncheon/Other Meats	luncheon meats, other meats, other meat dishes
Other (excluding water)	all other foods

Source: Food categories are based on classification used in Center for Science in the Public Interest, "Outbreak Alert! Closing the Gaps in Our Federal Food-Safety Net" Sept. 2002.

Please note that for our purposes none of the food categories, including the "Other" category, include **water**. We recognize that it may not always be clear when a food fits into one of these categories. Please use your best judgment. This exercise is intended to elicit the best judgment available. This may be one of the factors that affects your high and low estimate.

Illnesses Caused by Pathogen z

Food Category	Percent of U.S. Foodborne Cases in a Typical Year			
	Likely to be a source?	Best Estimate	Low Estimate	High Estimate
Seafood	N			
shellfish	N			
Eggs	N			
Beverages (not water)	N			
Dairy	Y	10%	5%	40%
Breads and Bakery	N			
Game	Y	65%	55%	90%
Beef	N			
Poultry	N			
Pork	N			
Luncheon/ Other Meats	Y	20%	5%	25%
Other	Y	5%	0%	10%
		100%		

Step 1. Indicate whether this food category is likely to be associated with foodborne disease caused by Pathogen z. Mark Y for yes or N for no.

Step 2. For categories marked yes, give the percent of Pathogen z-related cases caused by eating this food. Start with the food category with which you are most familiar.* Repeat for other boxes. Make sure the "best estimates" column sums to 100%.

Step 3. Start with the food category that you've said has the *highest* percent of Pathogen z cases (Game in this example). Give *low and high estimates* (5th and 95th percentiles of cases). Repeat for the other "best estimates."

* Please understand that we are talking about the food whose consumption directly caused the illness, not the food that caused the contamination. For example, someone may become ill by eating a salad that was contaminated when it was prepared on a cutting board that was earlier used to cut raw beef. We are asking you to report the illness caused by eating this contaminated salad as an illness associated with eating produce.

These columns do not need to add to 100%.

Illnesses Caused by Pathogen z

Step 4. Answer the questions below.

Questions:

1. What information did you principally rely on to fill out this table? (list all that apply)

general knowledge

your own research or clinical experience

specific journal articles, data sets, or other specific professional publications. Please list:

Smith, et al (2001)

Feel free to use which ever sources of information you feel are most reliable.

2. Please give your best estimate of the *total* number of foodborne cases of illness caused by this pathogen in a typical year. Provide a brief description of your reasoning.

650 The outbreak data shows roughly 500 cases per year if you take

the average of the last five years. I know that this does not account for

sporadic incidences, which my clinical experience suggests is quite significant.

3. Is there a factor other than the type of food that determines whether a food is associated with illnesses caused by this pathogen? For example, for listeria, it may be that illnesses are associated with refrigerated foods regardless of whether the food is dairy or poultry.

For pathogen z, diseases are associated with refrigerated foods regardless of the

food category.

Campylobacter spp.

Food Category	Percent of U.S. Foodborne Cases in a Typical Year			
	Likely to be a source?	Best Estimate	Low Estimate	High Estimate
Seafood				
Eggs				
Produce				
Beverages (not water)				
Dairy				
Breads and Bakery				
Game				
Beef				
Poultry				
Pork				
Luncheon/ Other Meats				
Other				

100%

Questions:

1. What information did you principally rely on to fill out this table? (list all that apply)

general knowledge

your own research or clinical experience

specific journal articles, data sets, or other specific professional publications. Please list:

2. Please give your best estimate of the *total* number of foodborne cases of illness caused by this pathogen in a typical year. Provide a brief description of your reasoning.

3. Is there a factor other than the type of food that determines whether a food is associated with illnesses caused by this pathogen? For example, for listeria, it may be that illnesses are associated with refrigerated foods regardless of whether the food is dairy or poultry.

Escherichia coli O157:H7

Food Category	Percent of U.S. Foodborne Cases in a Typical Year			
	Likely to be a source?	Best Estimate	Low Estimate	High Estimate
Seafood				
Eggs				
Produce				
Beverages (not water)				
Dairy				
Breads and Bakery				
Game				
Beef				
Poultry				
Pork				
Luncheon/ Other Meats				
Other				

100%

Questions:

1. What information did you principally rely on to fill out this table? (list all that apply)

general knowledge

your own research or clinical experience

specific journal articles, data sets, or other specific professional publications. Please list:

2. Please give your best estimate of the *total* number of foodborne cases of illness caused by this pathogen in a typical year. Provide a brief description of your reasoning.

3. Is there a factor other than the type of food that determines whether a food is associated with illnesses caused by this pathogen? For example, for listeria, it may be that illnesses are associated with refrigerated foods regardless of whether the food is dairy or poultry.

Listeria monocytogenes

Food Category	Percent of U.S. Foodborne Cases in a Typical Year			
	Likely to be a source?	Best Estimate	Low Estimate	High Estimate
Seafood				
Eggs				
Produce				
Beverages (not water)				
Dairy				
Breads and Bakery				
Game				
Beef				
Poultry				
Pork				
Luncheon/ Other Meats				
Other				

100%

Questions:

1. What information did you principally rely on to fill out this table? (list all that apply)

general knowledge

your own research or clinical experience

specific journal articles, data sets, or other specific professional publications. Please list:

2. Please give your best estimate of the *total* number of foodborne cases of illness caused by this pathogen in a typical year. Provide a brief description of your reasoning.

3. Is there a factor other than the type of food that determines whether a food is associated with illnesses caused by this pathogen? For example, for listeria, it may be that illnesses are associated with refrigerated foods regardless of whether the food is dairy or poultry.

Salmonella nontyphoidal

Food Category	Percent of U.S. Foodborne Cases in a Typical Year			
	Likely to be a source?	Best Estimate	Low Estimate	High Estimate
Seafood				
Eggs				
Produce				
Beverages (not water)				
Dairy				
Breads and Bakery				
Game				
Beef				
Poultry				
Pork				
Luncheon/ Other Meats				
Other				

100%

Questions:

1. What information did you principally rely on to fill out this table? (list all that apply)

general knowledge

your own research or clinical experience

specific journal articles, data sets, or other specific professional publications. Please list:

2. Please give your best estimate of the *total* number of foodborne cases of illness caused by this pathogen in a typical year. Provide a brief description of your reasoning.

3. Is there a factor other than the type of food that determines whether a food is associated with illnesses caused by this pathogen? For example, for listeria, it may be that illnesses are associated with refrigerated foods regardless of whether the food is dairy or poultry.

Shigella

Food Category	Percent of U.S. Foodborne Cases in a Typical Year			
	Likely to be a source?	Best Estimate	Low Estimate	High Estimate
Seafood				
Eggs				
Produce				
Beverages (not water)				
Dairy				
Breads and Bakery				
Game				
Beef				
Poultry				
Pork				
Luncheon/ Other Meats				
Other				

100%

Questions:

1. What information did you principally rely on to fill out this table? (list all that apply)

general knowledge

your own research or clinical experience

specific journal articles, data sets, or other specific professional publications. Please list:

2. Please give your best estimate of the *total* number of foodborne cases of illness caused by this pathogen in a typical year. Provide a brief description of your reasoning.

3. Is there a factor other than the type of food that determines whether a food is associated with illnesses caused by this pathogen? For example, for listeria, it may be that illnesses are associated with refrigerated foods regardless of whether the food is dairy or poultry.

Vibrio spp.

Food Category	Percent of U.S. Foodborne Cases in a Typical Year			
	Likely to be a source?	Best Estimate	Low Estimate	High Estimate
Seafood				
Eggs				
Produce				
Beverages (not water)				
Dairy				
Breads and Bakery				
Game				
Beef				
Poultry				
Pork				
Luncheon/ Other Meats				
Other				

100%

Questions:

1. What information did you principally rely on to fill out this table? (list all that apply)

general knowledge

your own research or clinical experience

specific journal articles, data sets, or other specific professional publications. Please list:

2. Please give your best estimate of the *total* number of foodborne cases of illness caused by this pathogen in a typical year. Provide a brief description of your reasoning.

3. Is there a factor other than the type of food that determines whether a food is associated with illnesses caused by this pathogen? For example, for listeria, it may be that illnesses are associated with refrigerated foods regardless of whether the food is dairy or poultry.

Yersinia enterocolitica

Food Category	Percent of U.S. Foodborne Cases in a Typical Year			
	Likely to be a source?	Best Estimate	Low Estimate	High Estimate
Seafood				
Eggs				
Produce				
Beverages (not water)				
Dairy				
Breads and Bakery				
Game				
Beef				
Poultry				
Pork				
Luncheon/ Other Meats				
Other				

100%

Questions:

1. What information did you principally rely on to fill out this table? (list all that apply)

general knowledge

your own research or clinical experience

specific journal articles, data sets, or other specific professional publications. Please list:

2. Please give your best estimate of the *total* number of foodborne cases of illness caused by this pathogen in a typical year. Provide a brief description of your reasoning.

3. Is there a factor other than the type of food that determines whether a food is associated with illnesses caused by this pathogen? For example, for listeria, it may be that illnesses are associated with refrigerated foods regardless of whether the food is dairy or poultry.

Cryptosporidium parvum

Food Category	Percent of U.S. Foodborne Cases in a Typical Year			
	Likely to be a source?	Best Estimate	Low Estimate	High Estimate
Seafood				
Eggs				
Produce				
Beverages (not water)				
Dairy				
Breads and Bakery				
Game				
Beef				
Poultry				
Pork				
Luncheon/ Other Meats				
Other				

100%

Questions:

1. What information did you principally rely on to fill out this table? (list all that apply)

general knowledge

your own research or clinical experience

specific journal articles, data sets, or other specific professional publications. Please list:

2. Please give your best estimate of the *total* number of foodborne cases of illness caused by this pathogen in a typical year. Provide a brief description of your reasoning.

3. Is there a factor other than the type of food that determines whether a food is associated with illnesses caused by this pathogen? For example, for listeria, it may be that illnesses are associated with refrigerated foods regardless of whether the food is dairy or poultry.

Cyclospora cayetanensis

Food Category	Percent of U.S. Foodborne Cases in a Typical Year			
	Likely to be a source?	Best Estimate	Low Estimate	High Estimate
Seafood				
Eggs				
Produce				
Beverages (not water)				
Dairy				
Breads and Bakery				
Game				
Beef				
Poultry				
Pork				
Luncheon/ Other Meats				
Other				

100%

Questions:

1. What information did you principally rely on to fill out this table? (list all that apply)

general knowledge

your own research or clinical experience

specific journal articles, data sets, or other specific professional publications. Please list:

2. Please give your best estimate of the *total* number of foodborne cases of illness caused by this pathogen in a typical year. Provide a brief description of your reasoning.

3. Is there a factor other than the type of food that determines whether a food is associated with illnesses caused by this pathogen? For example, for listeria, it may be that illnesses are associated with refrigerated foods regardless of whether the food is dairy or poultry.

Norwalk-like virus

Food Category	Percent of U.S. Foodborne Cases in a Typical Year			
	Likely to be a source?	Best Estimate	Low Estimate	High Estimate
Seafood				
Eggs				
Produce				
Beverages (not water)				
Dairy				
Breads and Bakery				
Game				
Beef				
Poultry				
Pork				
Luncheon/ Other Meats				
Other				

100%

Questions:

1. What information did you principally rely on to fill out this table? (list all that apply)

general knowledge

your own research or clinical experience

specific journal articles, data sets, or other specific professional publications. Please list:

2. Please give your best estimate of the *total* number of foodborne cases of illness caused by this pathogen in a typical year. Provide a brief description of your reasoning.

3. Is there a factor other than the type of food that determines whether a food is associated with illnesses caused by this pathogen? For example, for listeria, it may be that illnesses are associated with refrigerated foods regardless of whether the food is dairy or poultry.

Toxoplasma gondii

Food Category	Percent of U.S. Foodborne Cases in a Typical Year			
	Likely to be a source?	Best Estimate	Low Estimate	High Estimate
Seafood				
Eggs				
Produce				
Beverages (not water)				
Dairy				
Breads and Bakery				
Game				
Beef				
Poultry				
Pork				
Luncheon/ Other Meats				
Other				

100%

Questions:

1. What information did you principally rely on to fill out this table? (list all that apply)

general knowledge

your own research or clinical experience

specific journal articles, data sets, or other specific professional publications. Please list:

2. Please give your best estimate of the *total* number of foodborne cases of illness caused by this pathogen in a typical year. Provide a brief description of your reasoning.

3. Is there a factor other than the type of food that determines whether a food is associated with illnesses caused by this pathogen? For example, for listeria, it may be that illnesses are associated with refrigerated foods regardless of whether the food is dairy or poultry.
