

Electronic
Foodborne
Outbreak
Reporting
System

# **Investigation of a Foodborne Outbreak**

This form is used to report foodborne disease outbreak investigations to CDC. It is also used to report *Salmonella* Enteritidis and *E. coli* O157:H7 outbreak investigations involving any mode of transmission. A foodborne outbreak is defined as the occurrence of two or more cases of a similar illness resulting from the ingestion of a common food in the United States. This form has 6 parts. Part 1 asks for the minimum or basic information needed and must be completed for the investigation to be counted in the CDC annual summary. Part 2 asks for additional information for any foodborne outbreak, while Parts 3 – 6 ask for information concerning specific vehicles or etiologies. Please complete as much of all parts as possible.

CDC Use Only	
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State Use Only

Part 1: Basic Information							
1. Report Type		3. Dates			4. Loc	cation of Exposure	
		Please enter as many dates as possible			-		
A.	~ 1				Report	ting state	
☐ Please check if this a f	inai report	Date first case became ill	1/_	/	If multi	iple states involved:	
			Month	Day Year		osure occurred in multiple states	
B.		Date last case became ill//			☐ Exposure occurred in single state, but cases		
☐ Please check if data do						in multiple states	
FOODBORNE outbreak		Date first known exposure / / / Year			Other s	tates:	
2. Number of Case	es	Data last known avnosur	·a /	/			
		Date last known exposure//			Reporting county		
Lab-confirmed cases	(A)				If multiple counties involved:		
Including	secondary cases					☐ Exposure occurred in multiple counties	
Probable cases(B	<u>)</u>				1	osure occurred in one county, but cases	
Including	secondary cases				resided in multiple counties		
					Other counties:		
Estimated total ill(If greater than sun	m A + P)						
5. Approximate Pe		6. Sex (Estimated percent of Interviews of only cases					
Cases in Each Age Group		the total cases)	views of only cases preparation review	-			
<1 year % 20-40	) vrc %	□ Investigation at fact					
<1 year% 20-49 1-4 yrs% ≥50 y 5-19 yrs% Unkn	rs%	Male%   Investigation at ractory of			r		
5-19 yrs% Unkn	own%	Female % (farm, marine estuary, et			c.)		
		☐ Food prod		product traceback			
0 I	□ Environment / food sampl			cultures			
8. Implicated Food(s): (Please provide known information) Name of Food Main Ingredient(s) Contaminated Ingredient(s) Reason(s) Suspected Method of Preparation							
			icit(s)	(See codes just belo		(See attached codes)	
e.g., Lasagna	e.g., Pasta, sauce, eggs, beef	e.g., Eggs		e.g., 4		e.g., M1	
1)							
2)							
3)							
☐ Food vehicle undete							
Reason Suspected (List a	above all that apply	)					

4 - Other data (e.g., same phage type found on farm that supplied eggs)

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3 - Compelling supportive information

1 - Statistical evidence from epidemiological investigation

Public reporting burden of this collection of information is estimated to average 20 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to CDC/ATSDR Reports Clearance Officer; 1600 Clifton Road NE, MS D-74, Atlanta, Georgia 30333; ATTN: PRA (0920-0004).

2 - Laboratory evidence (e.g., identification of agent in food) 5 - Specific evidence lacking but prior experience makes it likely source

<b>9. Etiology:</b> (Name the bacteria, virus, parasite, or toxin. If available, include the serotype and other characteristics such as phage type, virulence factors, and metabolic profile. Confirmation criteria available at <a href="http://www.cdc.gov/foodborneoutbreaks/guide-fd.htm">http://www.cdc.gov/foodborneoutbreaks/guide-fd.htm</a> or MMWR2000/Vol. 49/SS-						
factors, and metabolic profile. Confi	rmation criteria availabl	le at http://www.cdc.gov/1	oodborneoutbreaks/gui	ide_fd.htm or MMWR2000/Vol. 49/SS-		
Etiology		Serotype	Other Characteris (e.g., phage type)	Stics Detected In (See codes just below)		
1)	□ Confirmed	Бегосурс	(e.g., phage type)	(See codes just below)		
2)	□ Confirmed					
3) Confirmed						
□ Etiology undetermined						
Detected In (List above all that appl	y)					
1 - Patient Specimen(s)	3 -Environment	specimen(s)				
2 - Food Specimen(s)	4 - Food Worke	er specimen(s)				
10. Isolate Subtype						
State Lab ID PFGE	(PulseNet designation	on) PFGE (PulseNet	designation)			
1)	(					
2)						
3)						
11. Contributing Factors (C	heck all that apply. See	attached codes and explai	nations)			
□ Contributing factors unknown						
Contamination Factor						
$\Box$ C1 $\Box$ C2 $\Box$ C3 $\Box$ C4 $\Box$ C5 $\Box$ C6 $\Box$ C7 $\Box$ C8 $\Box$ C9 $\Box$ C10 $\Box$ C11 $\Box$ C12 $\Box$ C13 $\Box$ C14 $\Box$ C15 (describe in Comments) $\Box$ N/A						
Proliferation/Amplification Factor (bacterial outbreaks only)						
$\square P1 \ \square P2 \ \square P3 \ \square P4 \ \square P5 \ \square P6 \ \square P7 \ \square P8 \ \square P9 \ \square P10 \ \square P11 \ \square P12 (describe in Comments) \ \square \ N/A$						
Survival Factor (microbial outbreaks only)						
$\square S1 \square S2 \square S3 \square S4 \square S5 (describe in Comments) \square N/A$						
□ Was food-worker implicated as the source of contamination? □ Yes □ No						
If yes, please check <b>only one</b> of following						
☐ laboratory and epidemiologic evidence						
□ epidemiologic evidence (w/o lab confirmation)						
□ lab evidence (w/o epidemiologic evidence)						
□ prior experience makes this the likely source (please explain in Comments)						

		Par	t 2: Addi	tiona	l Information			
12. Symptoms, Signs and Outcomes				13. Ir	cubation Period	14. Dura	14. Duration of Illness	
Feature	Cases with	Total cases for		(C	Circle appropriate units)	(Among th	nose who recovered)	
	outcome/	you have info	ormation			(Circle ap)	propriate units)	
Healthcare provider	feature	available		Shorte	` ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '			
visit				Longe		Shortest_	(Hours, Days)	
Hospitalization				Median(Hours, Days)		Longest		
Death				□ Unk	known	Median		
Vomiting						□ Unknow	/n	
Diarrhea			_					
Bloody stools					he following terms, if app	ropriate, to descr	ibe other common	
Fever				charac	cteristics of cases			
Abdominal cramps					Anaphylaxis	Headache	Tachycardia	
HUS or TTP					Arthralgia	Hypotension	Temperature reversal	
Asymptomatic					Bradycardia	Itching	Thrombocytopenia	
*					Bullous skin lesions Coma	Jaundice Lethargy	Urticaria Wheezing	
*					Cough	Myalgia	wheezing	
*					Descending paralysis			
	1	1			Diplopia	Septicemia		
					Flushing	Sore throat		
15. If Cohort Inves	tigation Co	nducted:						
Attack	rate* =	/			x 100 a have illness information	=%		
	Expose	ed and ill Total n	umber exposed for	whom you	have illness information			
					hicle. The numerator is the num			
			nplicated vehicle	e. If the v	vehicle is unknown, then the att			
<b>16. Location Wher</b> (Check all that apply)	e Food was	s Prepared			(Check all that apply)	osure or wne	re Food Was Eaten	
□Restaurant or deli	□ Nurcina l	home			11 3/	☐ Nursing Home		
□ Restaurant or deli □ Nursing home □ Day care center □ Prison, jail				□ Day care center □ Prison, jail				
☐ School ☐ Private home					☐ Private home			
☐ Office setting ☐ Workplace, not cafeteria				_				
□ Workplace cafeteria □ Wedding reception				-	☐ Wedding Reception			
☐ Banquet Facility ☐ Church, temple, etc				1	☐ Church, temple, etc.			
□ Picnic □ Camp				☐ Picnic	□ Camp			
	□ Caterer □ Contaminated food imported into U.S.			•	☐ Grocery Store ☐ Hospital			
-	☐ Grocery Store ☐ Hospital			☐ Fair, festival, temporary/ mobile service				
☐ Fair, festival, other temporary/ mobile services ☐ Commercial product, served without further preparation					☐ Unknown or undetermined	1		
_		further preparat	ion		☐ Other (Describe)		<del></del>	
☐ Unknown or undeterm	ined							
☐ Other (Describe)								
18. Trace back  ☐ Please check if trace back conducted								
1 I lease check if trace	Jack Collude	icu						
Source to which trace back led:								
Source Location of Source Comments								
			State	Country				

19. Recall	20. Available Reports (Please attach)				
☐ Please check if any food product recalled	☐ Unpublished agency report				
Recall Comments	☐ Epi-Aid report				
	☐ Publication (please reference if not attached)				
21. Agency reporting this outbreak	22. Remarks Briefly describe important aspects of the outbreak not covered above				
	(e.g., restaurant closure, immunoglobin administration, economic impact, etc)				
Contact person:					
Name					
Title					
PhoneFax					
E-mail					
Part 3	3: School Questions				
1. Did the outbreak involve a single or multiple s					
□ Single					
☐ Multiple ( <i>If yes</i> , number of schools )					
2. School characteristics (for all involved students in all involved st	involved schools)				
a. Total approximate enrollment	,				
(number of students)					
☐ Unknown or Undetermined					
b. Grade level(s) (Please check all grades affected)					
□ Preschool					
☐ Grade School (grades K-12)					
· ·	□3rd □4th □5th □6th □7th □8th □9th □10th □11th □12th				
☐ College/University/Technical School					
☐ Unknown or Undetermined					
c. Primary funding of involved school(s)					
□ Public □ Private □ Unknown or Undetermined					
3. Describe the preparation of the implicated	4. How many times has the state, county or local health				
item:	department inspected this school cafeteria or kitchen in the				
☐ Heat and serve (item mostly prepared or cooked	12 months before the outbreak?*				
off-site, reheated on-site)	□ Once				
□ Served a-la-carte □ Twice					
☐ Serve only (preheated or served cold) ☐ More than two times					
□ Cooked on site using primary ingredients □ Not inspected					
□ Provided by a food service management company □ Unknown or Undetermined					
☐ Provided by a fast food vendor					
□ Provided by a pre-plate company  5. Does the school have a HACCP plan in place for th					
☐ Part of a club/ fundraising event	school feeding program?*				
☐ Made in the classroom ☐ Yes					
☐ Brought by a student/teacher/parent	□ No				
□ Other □ Unknown or Undetermined					
☐ Unknown or Undetermined	*If there are multiple schools involved, please answer according to the most affected school				

6. Was implicated food item provided to the	TOXY				
school through the National School	If Yes, Was the implicated food item donated/purchased				
Lunch/Breakfast Program?	by:  □ USDA through the Commodity Distribution Program				
□ Yes	☐ Purchased commercially by the state/school authority				
□ No	□ Other				
☐ Unknown or Undetermined	□ Unknown or Undetermined				
Part	4: Ground Beef				
1. What percentage of ill persons (for whom information is av	ailable) ate ground beef raw or undercooked?%				
2. Was ground beef case ready? (Ground beef that comes from ☐ Yes	n a manufacturer packaged for sale and not altered or repackaged by the retailer)				
□ No					
☐ Unknown or Undetermined					
3. Was the beef ground or reground by the retailer?					
□ Yes □ No					
☐ Unknown or Undetermined					
If yes, was anything added to the beef during grinding (e.g.	shop trim or any product to alter the fat				
content)					
	ode of Transmission coli or Salmonella Enteritidis only)				
1. Mode of Transmission (for greater than 50% of cases)	con or summeness Editorial only)				
Select one:					
□ Food					
□ Person to person					
☐ Swimming or recreational water					
□ Drinking water					
□ Contact with animals or their environment					
□ Unknown or Undetermined					
_					
	litional Egg Questions				
1. Were Eggs: (Check all that apply)					
□ in-shell, un-pasteurized?					
□ in-shell, pasteurized?					
□ liquid or dry egg product?	1.0				
□ stored with inadequate refrigeration during or after sale?					
□ consumed raw?					
□ consumed undercooked?					
□ pooled?					
2. If eggs traced back to farm, was Salmonella Ent	eritidis found on the farm?				
□ Yes					
□ No					
☐ Unknown or Undetermined					
Comment:					

### Contamination Factors: 1

- C1 Toxic substance part of tissue (e.g., ciguatera)
- C2 Poisonous substance intentionally added (e.g., cyanide or phenolphthalein added to cause illness)
- C3 Poisonous or physical substance accidentally/incidentally added (e.g., sanitizer or cleaning compound)
- C4 Addition of excessive quantities of ingredients that are toxic under these situations (e.g., niacin poisoning in bread)
- C5 Toxic container or pipelines (e.g., galvanized containers with acid food, copper pipe with carbonated beverages)
- C6 Raw product/ingredient contaminated by pathogens from animal or environment (e.g., Salmonella Enteriditis in egg, Norwalk in shellfish, E. coli in sprouts)
- C7 Ingestion of contaminated raw products (e.g., raw shellfish, produce, eggs)
- C8 Obtaining foods from polluted sources (e.g., shellfish)
- C9 Cross-contamination from raw ingredient of animal origin (e.g., raw poultry on the cutting board)
- C10 Bare-handed contact by handler/worker/preparer (e.g., with ready-to-eat food)
- C11 Glove-handed contact by handler/worker/preparer (e.g., with ready-to-eat food)
- C12 Handling by an infected person or carrier of pathogen (e.g., Staphylococcus, Salmonella, Norwalk agent)
- C13 Inadequate cleaning of processing/preparation equipment/utensils B leads to contamination of vehicle (e.g., cutting boards)
  - C14 Storage in contaminated environment B leads to contamination of vehicle (e.g., store room, refrigerator)
  - C15 Other source of contamination (please describe in Comments)

### Proliferation/Amplification Factors:<sup>1</sup>

- P1 Allowing foods to remain at room or warm outdoor temperature for several hours (e.g., during preparation or holding for service)
  - P2 Slow cooling (e.g., deep containers or large roasts)
  - P3 Inadequate cold-holding temperatures (e.g., refrigerator inadequate/not working, iced holding inadequate)
  - P4 Preparing foods a half day or more before serving (e.g., banquet preparation a day in advance)

  - P5 Prolonged cold storage for several weeks (e.g., permits slow growth of psychrophilic pathogens)
    P6 Insufficient time and/or temperature during hot holding (e.g., malfunctioning equipment, too large a mass of food)
  - P7 Insufficient acidification (e.g., home canned foods)
  - P8 Insufficiently low water activity (e.g., smoked/salted fish)
  - P9 Inadequate thawing of frozen products (e.g., room thawing)
  - P10 Anaerobic packaging/Modified atmosphere (e.g., vacuum packed fish, salad in gas flushed bag)
  - P11 Inadequate fermentation (e.g., processed meat, cheese)
  - P12 Other situations that promote or allow microbial growth or toxic production (please describe in Comments)

### Survival Factors:1

- S1 Insufficient time and/or temperature during initial cooking/heat processing (e.g., roasted meats/poultry, canned foods, pasteurization)
  - S2 Insufficient time and/or temperature during reheating (e.g., sauces, roasts)
  - S3 Inadequate acidification (e.g., mayonnaise, tomatoes canned)
  - S4 Insufficient thawing, followed by insufficient cooking (e.g., frozen turkey)
  - S5 Other process failures that permit the agent to survive (please describe in Comments)

# Method of Preparation:<sup>2</sup>

- M1 Foods eaten raw or lightly cooked (e.g., hard shell clams, sunny side up eggs)
- M2 Solid masses of potentially hazardous foods (e.g., casseroles, lasagna, stuffing)
- M3 Multiple foods (e.g., smorgasbord, buffet)
- M4 Cook/serve foods (e.g., steak, fish fillet)
- M5 Natural toxicant (e.g., poisonous mushrooms, paralytic shellfish poisoning)
- M6 Roasted meat/poultry (e.g., roast beef, roast turkey)
- M7 Salads prepared with one or more cooked ingredients (e.g., macaroni, potato, tuna)
- M8 Liquid or semi-solid mixtures of potentially hazardous foods (e.g., gravy, chili, sauce)
- M9 Chemical contamination (e.g., heavy metal, pesticide)
- M10 Baked goods (e.g., pies, éclairs)
- M11 Commercially processed foods (e.g., canned fruits and vegetables, ice cream)
- M12 Sandwiches (e.g., hot dog, hamburger, Monte Cristo)
- M13 Beverages (e.g., carbonated and non-carbonated, milk)
- M14 Salads with raw ingredients (e.g., green salad, fruit salad)
- M15 Other, does not fit into above categories (please describe in Comments)
- M16 Unknown, vehicle was not identified
- <sup>1</sup> Frank L. Bryan, John J. Guzewich, and Ewen C. D. Todd. Surveillance of Foodborne Disease III. Summary and Presentation of Data on Vehicles and Contributory Factors; Their Value and Limitations. Journal of Food Protection, 60; 6:701-714, 1997.
- Weingold, S. E., Guzewich JJ, and Fudala JK. Use of foodborne disease data for HACCP risk assessment. Journal of Food Protection, 57; 9:820-830, 1994.