



## INVESTIGATION OF A FOODBORNE OUTBREAK

This form is used to report foodborne disease outbreak investigations to CDC. 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 **two parts**: Part 1 asks for the minimum data needed and Part 2 asks for additional information. For this investigation to be counted in the CDC annual summary, Part 1 must be completed. **We encourage you to complete as much of Part 1 and Part 2 as you can.**

**Fax completed form to DPHHS Communicable Disease Program (800) 616-7460.**

CDC USE ONLY _____
STATE USE ONLY _____

### Part 1: Required Information

<b>1. Location of Exposure:</b> State: _____ <input type="checkbox"/> Multi-state exposure  County: _____ <input type="checkbox"/> Multi-county exposure  <i>List other states/counties in Comments, bottom of this page</i>	<b>2. Dates:</b> Date first case became ill: _____ / _____ / _____ <div style="text-align: center; margin-left: 100px;">                     Month      Day      Year                 </div> Date of first known exposure: _____ / _____ / _____ <div style="text-align: center; margin-left: 100px;">                     Month      Day      Year                 </div> Date of last known exposure: _____ / _____ / _____ <div style="text-align: center; margin-left: 100px;">                     Month      Day      Year                 </div> <i>Please send epidemic curve, if available.</i>	<b>3. Numbers of Cases Exposed:</b>  Lab-confirmed cases: _____ (A)  Probable cases: _____ (B)  Estimated total ill: _____ <i>(If greater than sum of A+B)</i>						
<b>4. Approximate Percentage of Total Cases in Each Age Group:</b>  <1 year: _____%      20-49 yrs: _____% 1-4 yrs: _____%      ≥ 50 yrs: _____%  5-19 yrs: _____%	<b>5. Sex:</b> (Estimated percent of total cases)  Male: _____%  Female: _____%	<b>6. Investigation Methods:</b> (Check all that apply)  <input type="checkbox"/> Interviews of cases only investigation <input type="checkbox"/> Case-control study <input type="checkbox"/> Cohort study <input type="checkbox"/> Food preparation review <input type="checkbox"/> Food product traceback  <input type="checkbox"/> Factory or production plant <input type="checkbox"/> Source investigation (farm, marine estuary, etc.) <input type="checkbox"/> Environment / food sample cultures						
<b>7. Implicated Food(s):</b> (based on Reasons listed in Item 15 on page 3)  _____ _____ _____ _____  <input type="checkbox"/> Could not be determined	<b>8. Etiology:</b> (Name the bacteria, virus, parasite, or toxin. Include specific details on toxin or organism, such as phage type, virulence factors, molecular fingerprinting, antibiogram, metabolic profile. Criteria for confirmed etiologies are defined in MMWR 1996 / Vol. 45 / ss-5 / Appendix B.)  <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%;">Etiology</th> <th style="width: 33%;">Serotype (if avail.)</th> <th style="width: 33%;">Other Characteristics</th> </tr> </thead> <tbody> <tr> <td style="height: 40px;"> </td> <td> </td> <td> </td> </tr> </tbody> </table> <input type="checkbox"/> Etiology undetermined <input type="checkbox"/> More than one etiology (Please list in Comments)  Isolated/identified from (check all that apply): <input type="checkbox"/> Patient specimen(s) <input type="checkbox"/> Food specimen(s) <input type="checkbox"/> Environment specimen(s) <input type="checkbox"/> Food worker specimen(s)		Etiology	Serotype (if avail.)	Other Characteristics			
Etiology	Serotype (if avail.)	Other Characteristics						
<b>9. Contributing Factors:</b> (See list on page 2, check all that apply)  <input type="checkbox"/> Contributing factors unknown  Contamination Factor: <input type="checkbox"/> C1 <input type="checkbox"/> C2 <input type="checkbox"/> C3 <input type="checkbox"/> C4 <input type="checkbox"/> C5 <input type="checkbox"/> C6 <input type="checkbox"/> C7 <input type="checkbox"/> C8 <input type="checkbox"/> C9 <input type="checkbox"/> C10 <input type="checkbox"/> C11 <input type="checkbox"/> C12 <input type="checkbox"/> C13 <input type="checkbox"/> C14 <input type="checkbox"/> C15 (describe in Comments) <input type="checkbox"/> N/A  Proliferation/Amplification Factor (bacterial outbreaks only): <input type="checkbox"/> P1 <input type="checkbox"/> P2 <input type="checkbox"/> P3 <input type="checkbox"/> P4 <input type="checkbox"/> P5 <input type="checkbox"/> P6 <input type="checkbox"/> P7 <input type="checkbox"/> P8 <input type="checkbox"/> P9 <input type="checkbox"/> P10 <input type="checkbox"/> P11 <input type="checkbox"/> P12 (describe in Comments) <input type="checkbox"/> N/A  Survival Factor (microbial outbreaks only): <input type="checkbox"/> S1 <input type="checkbox"/> S2 <input type="checkbox"/> S3 <input type="checkbox"/> S4 <input type="checkbox"/> S5 (describe in Comments) <input type="checkbox"/> N/A	<b>10. Agency reporting this outbreak:</b>  _____  <b>Contact Person:</b> NAME: _____ TITLE: _____ PHONE NO: _____ FAX NO: _____ E-MAIL: _____  <b>Date of completion of this form:</b> _____ / _____ / _____ <div style="text-align: center; margin-left: 100px;">                     Month      Day      Year                 </div> <input type="checkbox"/> Initial Report <input type="checkbox"/> Updated Report <input type="checkbox"/> Final Report <input type="checkbox"/> Additional data suggests this is not a foodborne outbreak							
Was food-worker implicated as the source of contamination? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, please check <b>only one</b> of following: <input type="checkbox"/> laboratory and epidemiologic evidence <input type="checkbox"/> epidemiologic evidence (w/o lab confirmation) <input type="checkbox"/> lab evidence (w/o epidemiologic confirmation) <input type="checkbox"/> prior experience makes this the likely source (please explain in Comments)								

**Comments:** \_\_\_\_\_

This questionnaire is authorized by law (Public Health Service Act, 42 USC §241). Although response to the questions asked is voluntary, cooperation of the patient is necessary for the study and control of disease. Public reporting burden for this collection of information is estimated to average 15 minutes per response. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to PHS Reports Clearance Officer, Rm 721-H, Humphrey Bldg, 200 Independence Ave. SW, Washington, DC 20201; ATTN: PRA, and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

The following codes are to be used to fill out Part 1 (question 9) and Part 2 (question 15).

**Contamination Factors:<sup>1</sup>**

- 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 enteritidis* 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 – leads to contamination of vehicle (e.g., cutting boards)
- C14 - Storage in contaminated environment – 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:<sup>1</sup>**

- S1 - Insufficient time and/or temperature during 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, eclairs)
- 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.

<sup>2</sup> 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.

**Part 2: Additional Information** (Please complete as much as possible)

<b>11. Numbers of:</b>			<b>12. Incubation Period:</b>		<b>13. Duration of Acute Illness Among Those Who Recovered:</b>																													
<b>OUTCOME / SYMPTOM</b>	<b>Cases with Outcome / Symptom</b>	<b>Total cases for whom you have information available</b>	(circle appropriate units)		(circle appropriate units)																													
Healthcare Provider Visit			Shortest: _____	(Hours, days)	Shortest: _____	(Hours, days)																												
Hospitalization			Longest: _____	(Hours, days)	Longest: _____	(Hours, days)																												
Death			Median: _____	(Hours, days)	Median: _____	(Hours, days)																												
Vomiting			<input type="checkbox"/> Unknown		<input type="checkbox"/> Unknown																													
Diarrhea			* Use the following terms, if appropriate, to describe other common characteristics of cases: <table style="width:100%; margin-top: 10px;"> <tr> <td style="width:33%;">anaphylaxis</td> <td style="width:33%;">descending paralysis</td> <td style="width:33%;">myalgia</td> </tr> <tr> <td>arthralgia</td> <td>flushing</td> <td>paresthesia</td> </tr> <tr> <td>bradycardia</td> <td>headache</td> <td>septicemia</td> </tr> <tr> <td>bullous skin lesions</td> <td>hemolytic uremic syndrome (HUS)</td> <td>sore throat</td> </tr> <tr> <td>bradycardia</td> <td>hypotension</td> <td>tachycardia</td> </tr> <tr> <td>cough</td> <td>itching</td> <td>thrombocytopenia</td> </tr> <tr> <td>coma</td> <td>jaundice</td> <td>temperature reversal</td> </tr> <tr> <td>diplopia</td> <td>lethargy</td> <td>urticaria</td> </tr> <tr> <td></td> <td></td> <td>wheezing</td> </tr> </table>					anaphylaxis	descending paralysis	myalgia	arthralgia	flushing	paresthesia	bradycardia	headache	septicemia	bullous skin lesions	hemolytic uremic syndrome (HUS)	sore throat	bradycardia	hypotension	tachycardia	cough	itching	thrombocytopenia	coma	jaundice	temperature reversal	diplopia	lethargy	urticaria			wheezing
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Bloody stools																																		
Feverish																																		
Abdominal cramps																																		
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**14. If Cohort Investigation Conducted:**

**Event-specific Attack Rate** = \_\_\_\_\_ / \_\_\_\_\_ x 100 = \_\_\_\_\_ %

# of exposed cases                      # of exposed individ. for whom you have illness info.

**15. Implicated Food(s):** (Please provide known information.)

Name of Food	Main Ingredients	Contaminated Ingredient	Reason(s) Suspected (see below)	Method of Preparation (see list on page 2)
<i>e.g., lasagna</i>	<i>pasta, sauce, eggs, beef</i>	<i>eggs</i>	<i>4</i>	<i>M1</i>

Food vehicle could not be determined

Reason Suspected (choose all that apply):

1 - Statistical evidence from epidemiological investigation 2 - Laboratory evidence (e.g., identification of agent in food) 3 - Compelling supportive information	4 - Other data (e.g., same phage type found on farm that supplied eggs) 5 - Specific evidence lacking but prior experience makes this likely source
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<p><b>16. Where was Food Prepared?</b> (Check all that apply)</p> <table style="width:100%;"> <tr> <td><input type="checkbox"/> Restaurant or deli</td> <td><input type="checkbox"/> Prison, jail</td> </tr> <tr> <td><input type="checkbox"/> Day care center</td> <td><input type="checkbox"/> Private home</td> </tr> <tr> <td><input type="checkbox"/> School</td> <td><input type="checkbox"/> Picnic</td> </tr> <tr> <td><input type="checkbox"/> Church, temple, etc.</td> <td><input type="checkbox"/> Fair, festival, other temporary/mobile service</td> </tr> <tr> <td><input type="checkbox"/> Camp</td> <td><input type="checkbox"/> Contaminated food imported into U.S.</td> </tr> <tr> <td><input type="checkbox"/> Caterer</td> <td><input type="checkbox"/> Commercial product, served without further preparation</td> </tr> <tr> <td><input type="checkbox"/> Grocery store</td> <td><input type="checkbox"/> Other (please describe) _____</td> </tr> <tr> <td><input type="checkbox"/> Hospital</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Workplace cafeteria</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Nursing home</td> <td></td> </tr> </table>	<input type="checkbox"/> Restaurant or deli	<input type="checkbox"/> Prison, jail	<input type="checkbox"/> Day care center	<input type="checkbox"/> Private home	<input type="checkbox"/> School	<input type="checkbox"/> Picnic	<input type="checkbox"/> Church, temple, etc.	<input type="checkbox"/> Fair, festival, other temporary/mobile service	<input type="checkbox"/> Camp	<input type="checkbox"/> Contaminated food imported into U.S.	<input type="checkbox"/> Caterer	<input type="checkbox"/> Commercial product, served without further preparation	<input type="checkbox"/> Grocery store	<input type="checkbox"/> Other (please describe) _____	<input type="checkbox"/> Hospital		<input type="checkbox"/> Workplace cafeteria		<input type="checkbox"/> Nursing home		<p><b>17. Where was Food Eaten?</b> (Check all that apply)</p> <table style="width:100%;"> <tr> <td><input type="checkbox"/> Restaurant or deli</td> <td><input type="checkbox"/> Nursing home</td> </tr> <tr> <td><input type="checkbox"/> Day care center</td> <td><input type="checkbox"/> Prison, jail</td> </tr> <tr> <td><input type="checkbox"/> School</td> <td><input type="checkbox"/> Private home</td> </tr> <tr> <td><input type="checkbox"/> Church, temple, etc.</td> <td><input type="checkbox"/> Picnic</td> </tr> <tr> <td><input type="checkbox"/> Camp</td> <td><input type="checkbox"/> Fair, festival, or mobile location</td> </tr> <tr> <td><input type="checkbox"/> Grocery Store</td> <td><input type="checkbox"/> Other (please describe) _____</td> </tr> <tr> <td><input type="checkbox"/> Hospital</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Workplace cafeteria</td> <td></td> </tr> </table>	<input type="checkbox"/> Restaurant or deli	<input type="checkbox"/> Nursing home	<input type="checkbox"/> Day care center	<input type="checkbox"/> Prison, jail	<input type="checkbox"/> School	<input type="checkbox"/> Private home	<input type="checkbox"/> Church, temple, etc.	<input type="checkbox"/> Picnic	<input type="checkbox"/> Camp	<input type="checkbox"/> Fair, festival, or mobile location	<input type="checkbox"/> Grocery Store	<input type="checkbox"/> Other (please describe) _____	<input type="checkbox"/> Hospital		<input type="checkbox"/> Workplace cafeteria	
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<p><b>18. Other Available Info:</b></p> <input type="checkbox"/> Unpublished agency report (please attach) <input type="checkbox"/> Epi-Aid <input type="checkbox"/> Publication (please reference) _____ <input type="checkbox"/> Not available	<p><b>19. Remarks:</b> Briefly describe important aspects of the outbreak not covered above (e.g., restaurant closure, product recall, immunoglobulin administration, economic impact, etc.)</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>
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**Fax completed form to DPHHS Communicable Disease Program (800) 616-7460.**