### 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.

### Part 1: Required Information

<table>
<thead>
<tr>
<th>1. Location of Exposure:</th>
<th>2. Dates:</th>
<th>3. Numbers of Cases Exposed:</th>
</tr>
</thead>
<tbody>
<tr>
<td>State: _____</td>
<td>Date first case became ill: _____ / _____ / _____</td>
<td>Lab-confirmed cases: _____ (A)</td>
</tr>
<tr>
<td>County: _____</td>
<td>Date of first known exposure: _____ / _____ / _____</td>
<td>Probable cases: _____ (B)</td>
</tr>
<tr>
<td>List other states/counties in Comments, bottom of this page</td>
<td>Date of last known exposure: _____ / _____ / _____</td>
<td>Estimated total ill: _____</td>
</tr>
</tbody>
</table>

#### 4. Approximate Percentage of Total Cases in Each Age Group:

- <1 year: _____%  
- 1-4 yrs: _____%  
- 5-19 yrs: _____%  
- 20-49 yrs: _____%  
- >50 yrs: _____%  

#### 5. Sex: (Estimated percent of total cases)

- Male: _____%  
- Female: _____%  

#### 6. Investigation Methods: (Check all that apply)

- Interviews of cases only  
- Case-control study  
- Cohort study  
- Food preparation review  
- Food product traceback  

#### 7. Implicated Food(s): (based on Reasons listed in Item 15 on page 3)

- _____  
- _____  
- _____  
- _____  
- _____  

- Could not be determined

#### 8. Etiology: (Name the bacteria, virus, parasite, or toxin. If available, include details such as phage type, virulence factors, molecular fingerprinting, antibiogram, metabolic profile.)

<table>
<thead>
<tr>
<th>Etiology</th>
<th>Serotype (if avail.)</th>
<th>Other Characteristics (if avail.)</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

-Confirmed*  
-Suspected  
-Unknown etiology  
-Multiple etiologies (list in Comments)

*see criteria at [http://www.cdc.gov/ncidod/dbmd/outbreak/](http://www.cdc.gov/ncidod/dbmd/outbreak/) or MMWR2000/Vol 49/SS-1/Appendix B

#### 9. Contributing Factors: (See list on page 2, check all that apply)

- Contributing factors unknown

- Contamination Factor:
  - C1  
  - C2  
  - C3  
  - C4  
  - C5  
  - C6  
  - C7  
  - C8  
  - C9  
  - C10  
  - C11  
  - C12  
  - C13  
  - C14  
  - C15 (describe in Comments)  
  - N/A

- Proliferation/Amplification Factor (bacterial outbreaks only):
  - P1  
  - P2  
  - P3  
  - P4  
  - P5  
  - P6  
  - P7  
  - P8  
  - P9  
  - P10  
  - P11  
  - P12 (describe in Comments)  
  - N/A

- Survival Factor (microbial outbreaks only):
  - S1  
  - S2  
  - S3  
  - S4  
  - S5 (describe in Comments)  
  - N/A

-Was food-worker implicated as the source of contamination? Yes  
-No

If yes, please check only one of following:

- laboratory and epidemiologic evidence  
- epidemiologic evidence (w/o lab confirmation)  
- lab evidence (w/o epidemiologic confirmation)  
- prior experience makes this the likely source (please explain in Comments)

#### 10. Agency reporting this outbreak:

<table>
<thead>
<tr>
<th>Contact Person:</th>
<th>Phone No:</th>
<th>Fax No:</th>
<th>E-mail:</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAME:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TITLE:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHONE No:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FAX NO:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E-MAIL:</td>
<td></td>
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</tr>
</tbody>
</table>

Date of completion of this form: _____ / _____ / _____

- Initial Report  
- Updated Report  
- Final Report  
- Additional data suggests this is not a foodborne outbreak

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

### Contamination Factors:
- **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 – 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:
- **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:
- **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:
- **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

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## Part 2: Additional Information

### 11. Numbers of:

<table>
<thead>
<tr>
<th>OUTCOME / SYMPTOM</th>
<th>Cases with Outcome / Symptom</th>
<th>Total cases for whom you have information available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthcare Provider Visit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospitalization</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Death</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vomiting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diarrhea</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bloody stools</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fever</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abdominal cramps</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 12. Incubation Period:

- Shortest: _____ (Hours, days)
- Longest: _____ (Hours, days)
- Median: _____ (Hours, days)

### 13. Duration of Acute Illness Among Those Who Recovered:

- Shortest: _____ (Hours, days)
- Longest: _____ (Hours, days)
- Median: _____ (Hours, days)

* Use the following terms, if appropriate, to describe other common characteristics of cases:
- anaphylaxis
- arthralgia
- bradycardia
- bullous skin lesions
- bradycardia
- cough
- coma
- diplopia
- nausea
- abdominal cramps
- anaphylaxis
- descending paralysis
- myalgia
- paresthesia
- flushing
- headache
- hypotension
- jaundice
- lethargy
- myalgia
- paresthesia
- septicemia
- sore throat
- tachycardia
- thrombocytopenia
- temperature reversal
- urticaria
- wheezing

### 14. If Cohort Investigation Conducted:

Event-specific Attack Rate = # ill / total # of persons for whom you have illness info. x 100 = _____ %

### 15. Implicated Food(s):

<table>
<thead>
<tr>
<th>Name of Food</th>
<th>Main Ingredients</th>
<th>Contaminated Ingredient</th>
<th>Reason(s) Suspected</th>
<th>Method of Preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>e.g., lasagna</td>
<td>pasta, sauce, eggs, beef</td>
<td>eggs</td>
<td>4</td>
<td>M1</td>
</tr>
</tbody>
</table>

- 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

### 16. Where was Food Prepared?

- Check all that apply:
  - Restaurant or deli
  - Day care center
  - School
  - Church, temple, etc.
  - Camp
  - Caterer
  - Grocery store
  - Hospital
  - Workplace cafeteria
  - Nursing home

### 17. Where was Food Eaten?

- Check all that apply:
  - Restaurant or deli
  - Day care center
  - School
  - Church, temple, etc.
  - Camp
  - Grocery Store
  - Hospital
  - Workplace cafeteria
  - Nursing home
  - Prison, jail
  - Private home
  - Picnic
  - Fair, festival, or mobile location
  - Other (please describe)

### 18. Other Available Info:

- Check all that apply:
  - Unpublished agency report (please attach)
  - Epi-Aid
  - Publication (please reference)
  - Not available

### 19. Remarks:

Briefly describe important aspects of the outbreak not covered above (e.g., restaurant closure, product recall, immunoglobulin administration, economic impact, etc.)

State Health Departments: Please FAX this document to Foodborne and Diarrheal Diseases, DBMD, CDC, at (404) 639-2205.