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Outbreak of Shiga Toxin-Producing Escherichia coli O157 Infection Associated with a Restaurant

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# POPULATION HEALTH DIVISION

SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH  
CITY & COUNTY OF SAN FRANCISCO, CALIFORNIA

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## **Outbreak of Shiga Toxin-Producing *Escherichia coli* O157 Infection Associated with a Restaurant**

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December 23, 2013



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## Summary

Between Friday, August 23 and Monday, August 26, 2013, the San Francisco Department of Public Health Communicable Disease Control Unit (SFDPH-CDCU) received eight reports of laboratory-confirmed *Escherichia coli* (*E. coli*) O157 infection in San Francisco residents with no apparent familial, household, or geographic relationship. This number of reports represented a marked increase over the background incidence of *E. coli* O157 in San Francisco of less than 1 case per month. The eight reports were received from three clinical laboratories. Case-patient residences were geographically dispersed throughout San Francisco but suggested moderate to high socioeconomic status. CDCU initiated standard follow-up interviews with all case-patients. While no common exposures or demographic characteristics were immediately apparent, cases tended to be younger, salad-eating, local-market shoppers.

On August 26, SFDPH requested assistance from the California Emerging Infections Program (CEIP), and an investigation was initiated to ascertain the source of infections and prevent further illnesses. The California Department of Public Health Microbial Diseases Laboratory (MDL) was asked to prioritize Pulse-Field Gel Electrophoresis (PFGE) testing of *E. coli* isolates from San Francisco and the surrounding counties. On August 28, 2013, a Health Alert (Appendix A) was sent to local clinicians notifying them of the observed increase in cases, recommending increased testing for symptomatic patients, reminding them of the reporting requirement, and requesting forwarding of *E. coli* O157 isolates to the SFDPH Public Health Laboratory.

Case-patients were re-interviewed with a detailed hypothesis-generating questionnaire (Appendix B). The hypothesis-generating questionnaire identified a common restaurant and dates of exposure: Burma Superstar restaurant on August 16 and 17. On August 30, a letter from the Health Officer was delivered to Burma Superstar with requirements and recommendations for conducting an investigation (Appendix C). Burma Superstar fully cooperated with the investigation and with SFDPH recommendations. On August 30, a joint press statement was issued by SFDPH and Burma Superstar in order to update and inform the public (Appendix D). Based on our preliminary investigation, no new cases, and full cooperation by the restaurant owner and staff, we did not recommend restaurant closure.

A total of 22 case-patients were identified (13 confirmed and 9 probable—defined in methods). A case-control study and a dining group level cohort study were initiated to identify suspect food items. A garlic noodle dish was associated with illness, but a potential mechanism (such as food ingredient, food handling, or food handler) was not identified. An Environmental Health Branch (EHB) inves-

tigation resulted in recommendations for the restaurant that included improved handwashing and food handling, as well as a requirement for Food Safety training. Although the outbreak was self-limited, lessons learned from this response may improve SFDPH's response to future similar events.

## 1 Methods

### 1.1 Epidemiologic investigation

#### 1.1.1 Case definitions Used for Analysis

Case definitions were finalized subsequent to identification of the outbreak strain by PFGE and Multiple Locus Variable-number tandem repeat Analysis (MLVA).

**Confirmed:** A confirmed case was defined as *E. coli* O157 infection with PFGE XbaI pattern EXHX01.0124/ EXHA26.0332 or MLVA pattern A.<sup>1</sup> in a San Francisco resident or visitor to San Francisco with illness onset between August 16, 2013 and September 5, 2013.

**Probable:** A probable case was defined as *E. coli* O157 infection or Shiga toxin-positive stool in a San Francisco resident or visitor to San Francisco with illness onset between August 16, 2013 and September 5, 2013; or a patient with diarrheal illness (defined as 3 or more loose stools in a 24 hour period) who was epidemiologically-linked to a confirmed case; or a patient with diarrheal illness or hemolytic-uremic syndrome (HUS) who ate food purchased from Burma Superstar on August 16 or 17, 2013.

**Suspect:** During the outbreak investigation, a suspect case was defined as a San Francisco resident or visitor to San Francisco with acute diarrheal illness including bloody diarrhea with an onset between August 16, 2013 and September 5, 2013, with pending laboratory studies, or with *E. coli* O157 disease but a non-outbreak MLVA or PFGE pattern.

#### 1.1.2 Case finding:

Cases were identified via Confidential Morbidity Report (CMR) to SFDPH-CDCU, standard laboratory reporting to CEIP surveillance officers, and active search of the California Reportable Disease Information Exchange (CalREDIE). Additional cases

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<sup>1</sup>In general, PFGE and MVLA patterns are not always concordant; in this outbreak they were concordant

were identified via self-report or physician-report to SFDPH-CDCU or SFDPH Environmental Health Branch (SFDPH-EHB), or were identified via other known ill contacts.

### **1.1.3 Case interviews:**

Cases were interviewed using a standardized hypothesis-generating questionnaire (Appendix B) which collected basic demographic and clinical information and a 72-hour food history. For specific food items of interest (lettuce, other leafy greens, fresh tomatoes, strawberries, cantaloupe, beef) identified through standard follow-up interviews, purchase location, date, and brand/type was collected. Case-patients were also questioned regarding farmer's market, grocery store, and restaurant exposures, including restaurants named by other case-patients. The questionnaire concluded with a "shot-gun" list of 164 common food items.

### **1.1.4 Statistical methods and analytic approach**

A common restaurant and dates of exposure (Burma Superstar restaurant on August 16 and 17) were identified among three case-patients during hypothesis-generating interviews. A case-control study to identify suspect food items was promptly initiated. Anyone who ate at Burma Superstar and met the definition of a confirmed, probable or suspect case was eligible for inclusion in the study as a case. Controls consisted of non-ill meal companions identified by cases; five individuals who were initially identified as controls reported symptoms and were reclassified as cases. Cases and controls were interviewed using a standardized questionnaire (Appendix E) which collected information on clinical characteristics, date and time of the purchase of the suspect meal, whether patrons ate in the restaurant or picked up the food for takeout, and specific food items consumed. Descriptive statistics were performed using Microsoft Excel 2007. Case-control and dining group study data were entered into a Microsoft Access 2007 database and analyzed using SAS 9.3.

Binomial probabilities were used to assess the likelihood that a particular food item was associated with illness. All case-patient dining groups were included in this analysis and a background consumption fraction was estimated from restaurant records of the number of menu items sold on August 16 and 17. Binomial *p*-values were calculated comparing the proportion of case-patient dining groups who consumed a menu item to the background consumption fraction. Saturday-specific and takeout-specific *p*-values were also calculated.

Restaurant management provided register receipts for all food purchases on Saturday, August 17. A dining group-level cohort study was conducted among Saturday case-patients. A dining group was defined as a group of persons who

consumed a meal and shared a single check at Burma Superstar (either takeout or dine-in) on August 16 or 17. Case-patient dining groups contained at least one case (confirmed or probable). Unaffected dining groups consisted of all remaining dining groups among whom no illnesses were reported. Attack proportions, risk ratios, and chi-square  $p$ -values were calculated.

## 1.2 Environmental Investigation

Once Burma Superstar was identified as a potential exposure site for the outbreak, inspectors from the Environmental Health Branch, Food Safety Program, began an on-site investigation on August 29. The environmental investigation included interviews with the restaurant's owner, manager and staff, and an onsite inspection. EHB issued an inspection report with violations and required corrections, observation of preparation of key menu items such as garlic noodles, and review of pertinent documentation. Documentation reviewed included food safety certification, employee work schedules from August 16-18, the employee sick leave log, and a list of menu items sold on the dates of potential exposure. Although SFDPH did not recommend closure, coinciding with their press statement, the restaurant closed voluntarily from August 31 to September 1, 2013.

All 31 Burma Superstar employees who worked August 16, 17, or 18 were interviewed (in English, Mandarin, Cantonese, Spanish, or Burmese). One stool sample was obtained from each employee. Invoices were obtained for produce items sold to the restaurant during the dates of potential exposure, in order to facilitate trace back of suspect raw garnish items.

Two confirmed case-patients did not eat at Burma Superstar. Once interviews were conducted with individuals who tested positive for the *E. coli* outbreak strain but who did not eat at Burma Superstar, additional restaurants and retail vendors were identified as potential sources of exposure. CEIP staff investigated whether a wholesale produce vendor that supplied Burma Superstar may also have supplied these facilities with common produce items.

## 1.3 Laboratory Investigation

SFDPH, CDPH, and CEIP staff followed-up with laboratories and medical providers to ensure specimens from potential cases were forwarded to the appropriate local Public Health Laboratory for confirmation; confirmed isolates were sent to the Microbial Diseases Laboratory (MDL) for PFGE and MLVA. In addition, SFDPH Public Health Laboratory performed cultures of 31 stool specimens provided by restaurant employees to determine if any of them were potentially infectious.



## 2 Results

### 2.1 Epidemiologic Investigation

Twenty-six patients were identified that met a case definition: 13 meeting the confirmed case definition, 9 meeting the probable case definition, and 4 meeting the suspect case definition. Of the nine probable cases, five were dining partners of confirmed cases who reported diarrhea when interviewed for the case-control study; two had antibiotic exposure prior to stool collection, were culture negative and later developed HUS; two had bloody diarrhea after eating at the suspect restaurant but no stool was collected. The four suspect cases were determined to have PFGE and MLVA patterns that were different from the outbreak strain, were excluded from the final analysis, and are not considered to be part of this outbreak. Of the 22 cases (confirmed and probable), 20 (91%) reported eating at Burma Superstar on August 16 or 17, 2013. Thirteen were San Francisco County residents, six were residents of neighboring health jurisdictions, and three were out-of-state residents.

The epidemic curve is depicted in Figure 1. Diarrhea onset dates ranged from August 18 to August 24. The peak of illness onset (August 19) corresponds with the expected incubation period for *E. coli* following an exposure on August 16 or 17. Among those eating food purchased from Burma Superstar, median incubation period was 3 days (range, 1 to 6 days); median duration of illness was 5 days (range 2 to 12 days). Two confirmed cases with an illness onset of August 23 and 24 may have been secondary to a household contact; however, both ate the suspect meal as well.

Basic demographic and clinical information was available for all 22 confirmed and probable case-patients. Median age of case-patients was 29 years (range, 1 to 66 years); 55% were female. Clinical characteristics are summarized in Table 1. Overall, seven (32%) were hospitalized and four (18%) developed HUS. No deaths occurred. Common symptoms included diarrhea (100%), bloody diarrhea (77%), abdominal cramps (82%), and fever (32%). Six case-patients received antibiotics, two of whom developed HUS. Additionally, one household contact of a confirmed case developed diarrhea on September 12, 2013 and was hospitalized with HUS. The patient's stool specimen grew *E. coli* O157 matching the outbreak PFGE pattern. This individual was likely a secondary case, but did not meet the formal case definition because of a late date of illness onset and is not included in this analysis.

#### 2.1.1 Case-control study results

The initial 13 case-patients identified 27 well meal companions for Burma Superstar meals on August 16 and 17; 22 were reachable for control interview. Of these,

55% (12/22) reported gastrointestinal symptoms following the suspect meal and were ineligible as controls. One ultimately met the confirmed case definition; five met the probable case definition; six were excluded from the case control study because they had mild symptoms or were symptomatic prior to the suspect meal.

Nineteen of 20 case-patients who ate at Burma Superstar and 10 controls completed the interview. Results of the case-control study are summarized in Table 2. Sixty-eight percent (13/19) of cases ordered takeout. Seventy-four percent (14/19) of cases consumed garlic noodles, a dish that contained raw garnishes of scallions and cucumbers, but 70% of controls also ate this dish. Because meals were shared family-style with most persons tasting some of every dish, cases and controls reported very similar food item intake. No single menu item was found to be statistically significantly associated with illness by the case-control study.

### 2.1.2 Dining-group level analysis

Because the case-control study was indeterminate, using purchasing receipts, we compared dining groups that had a case-patient to dining groups that did not have a case-patient. The dining group binomial analysis is presented in Table 3. The 19 interviewed cases (confirmed and probable) represented 12 case-patient dining groups, 8 of which dined on August 17. Fifty-eight percent (7/12) ordered takeout. The background prevalence of ordering takeout among all dining groups was 25% (54/217) (binomial,  $p = 0.013$ ; Table 3). Sixty-seven percent (8/12) of case-patient dining groups ordered garlic noodles compared to 10% (21/217) of all dining groups (binomial,  $p < 0.0001$ ).

Among those who dined on Saturday, August 17, 63% (5/8) of case-patient dining groups ordered takeout compared to 23% (49/209) of unaffected dining groups ( $p = 0.021$ ). Sixty-three percent (5/8) of case-patient dining groups ordered garlic noodles compared to 8% (14/209) of unaffected dining groups ( $p < 0.0001$ ). Other items commonly consumed by cases were not significantly associated with illness. For example, the Tea Leaf Salad was ordered by 58% (5/8) of case-patient dining groups and 64% (134/209) of control dining groups ( $p = 0.687$ ). Nearly all case-patient dining groups ordered a dish containing raw scallions.

Food specific attack proportions for patrons that ate on August 17 are summarized in Table 4. The attack proportion among dining groups eating garlic noodles on August 17 was 24% compared to 2% among those not ordering garlic noodles ( $RR = 15.6$ ;  $p < 0.0001$ ). The attack proportion was also high among groups ordering sesame chicken (25%), however all these groups also ordered garlic noodles. Groups ordering takeout were five times more likely to develop illness ( $p = 0.036$ ) and groups ordering garlic eggplant, a dish containing raw scallions, were six times more likely to develop illness ( $p = 0.072$ ).

## 2.2 Environmental Investigation

The SFDPH-EHB inspectors identified the need for formal Food Safety training. Inspectors also identified several violations for food handling practices that could result in contamination or cross-contamination of food items. These violations included inadequate handwashing practices and inadequate sink facilities. Employees generally worked in all areas of the restaurant and prepared dine-in and takeout meals. A single food handler prepared the garlic noodle dish, however additional employees added the raw garnishes prior to serving. All food handlers reported no illness or knowledge of illness among coworkers and residents in their personal household(s). Invoices obtained by SFDPH-EHB did not reveal any common produce items between Burma Superstar and the markets/restaurants frequented by the two confirmed cases who did not eat at Burma Superstar. Trace-back of produce items did not reveal a source of infection/contamination.

## 2.3 Laboratory Investigation

*E. coli* O157 (presumed H7) was isolated from 17 of 26 case-patients. Thirteen isolates had the PFGE pattern combination EXHX01.0124/EXHA26.0332, the outbreak strain. All 13 isolates also had MVLA pattern A. Four suspect cases had different PFGE patterns and were determined to not be associated with the outbreak. Stool specimens from three probable cases were culture negative for *E. coli*, presumably due to antibiotic exposure prior to specimen collection. Each of the 31 food workers submitted one valid stool specimen for testing. All 31 food worker stool specimens were culture negative for *E. coli* O157.

## 3 Discussion

*E. coli* O157 is present in the feces of cattle, and is spread to other food items such as meat and produce by direct contamination of food or water, irrigation, and cross-contamination of food items [1]. Person-to-person spread by the fecal-oral route is also common, due to the low infectious dose. The most common transmission route for *E. coli* O157 outbreaks in the United States is foodborne, with beef and various raw produce items being the most commonly associated foods. An epidemiologic study of *E. coli* O157 outbreaks in the United States from 1982 to 2002 revealed that produce-related outbreaks occurring in restaurants were associated with cross-contamination approximately half the time. The remainder involved produce that was contaminated before its arrival at the restaurant [2].

The etiologic agent of the current outbreak was *E. coli* O157 with PFGE pattern EXHX01.0124/EXHA26.0332 (MLVA pattern A). The outbreak involved 13

confirmed cases and 9 probable cases with illness onset between August 18 and August 23, 2013. Epidemiologic investigation revealed the point source of the outbreak to be Burma Superstar restaurant, with 20 out of 22 case-patients dining in the restaurant on either August 16 or 17. The risk of illness among dining groups ordering garlic noodles on August 17 was 15 times the risk among groups who did not order garlic noodles. This suggests that some mechanism associated with that dish on August 16 and 17 may have contributed to this outbreak. The specific ingredient of the noodle dish that may have contained *E. coli* was not definitively identified, though raw garnishes were considered. Environmental investigation revealed hand washing violations and potential cross-contamination but no ill food handlers were identified. We could not explain the increased risk of illness among patrons ordering takeout.

Potential routes of transmission for this outbreak included cross-contamination of food on the restaurant premises, or at a wholesale food facility that supplied the restaurant. However, trace back of produce items did not conclusively lead to a source of infection/contamination, a common outcome in this sort of outbreak investigation. Testing of employees also did not reveal a food worker infected with *E. coli* O157; however, testing occurred approximately two weeks after the exposure date, and a potentially ill or shedding employee may have already recovered by the time the stool sample was collected.

Strengths of the epidemiologic investigation include the relatively prompt identification of Burma Superstar as a source of the outbreak based on a hypothesis-generating questionnaire, and detailed subsequent interviews that allowed for case-control analyses of specific menu items. The principal limitation of the epidemiologic investigation was its relatively small sample size, which made findings of statistical significance less likely. In addition, a case-control study using well meal companions is less well-suited to an investigation of a “family-style” restaurant, where all dining companions are likely to sample the same dishes. This limitation was overcome by the addition of a dining group-level analysis and a cohort study using register receipts

Strengths of the environmental investigation include the detailed inspection and thorough observation of food handling practices at the restaurant during repeated visits over a period of several weeks. The environmental investigation was limited by the relatively short exposure period (two days) and the lag time before case-patient stool culture results became available and the outbreak was identified. Because of this lag time, a potential source of cross-contamination or a potentially ill food handler may no longer have been present at the time the restaurant was inspected.

## 4 Recommendations

This *E. coli* O157 outbreak was self-limited, with exposures and subsequent illness onsets occurring during an approximately one-week period in August 2013. Although the outbreak came to public health attention rapidly, and epidemiologic and environmental investigations were initiated promptly, the resulting control measures are not likely to have influenced the course of the outbreak. The Environmental Health Branch investigation of Burma Superstar revealed several violations that were corrected. Resulting requirements for the restaurant include installation of separate handwashing and food preparation sinks, improved routine handwashing and sanitizing by staff, and managers' participation in formal Food Safety training.

Several actions taken by SFDPH and the CEIP during this outbreak may have contributed to the success of the investigation, and may be useful strategies in future outbreaks. The prompt issuing of a Health Alert for community providers may have enhanced case finding, allowing for a more robust epidemiologic investigation and the exclusion of affected individuals from sensitive occupations or settings. The association of HUS with *E. coli* O157 was observed in this outbreak [3]. Future *E. coli* case-finding health alerts should include a reminder to avoid antibiotic administration because of the increase risk of HUS.

## References

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## 5 Figures and Tables

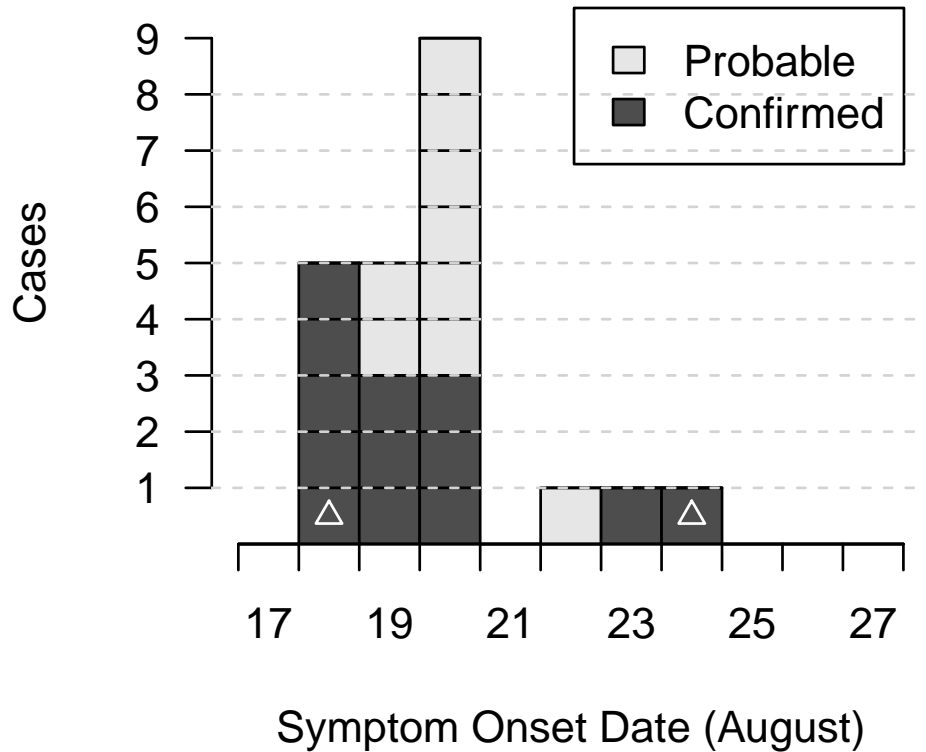


Figure 1: Epidemiological Curve: Foodborne Outbreak of E. coli O157 associated with Burma Superstar Restaurant, August, 2013, San Francisco, California.  $\Delta$  = cases that did not eat at restaurant

Table 1: Clinical characteristics of confirmed and probable cases ( $n = 22$ )

| Clinical characteristics        | Number | (Percent) |
|---------------------------------|--------|-----------|
| Diarrhea                        | 22     | (100.0)   |
| Abdominal cramps                | 18     | (81.8)    |
| Bloody diarrhea                 | 17     | (77.3)    |
| Fever                           | 7      | (31.8)    |
| Hospitalization                 | 7      | (31.8)    |
| Antibiotics                     | 5      | (22.7)    |
| Hemolytic-uremic syndrome (HUS) | 4      | (18.1)    |
| HUS and received antibiotics    | 2      | (9.1)     |

Table 2: Meal companion case-control study: Menu items consumed (Case/control definitions are final definitions after reclassification)

| Menu Item      | Cases        |      | Controls     |      | OR (95% CI)      | <i>p</i> -value |
|----------------|--------------|------|--------------|------|------------------|-----------------|
|                | ( $n = 19$ ) | (%)  | ( $n = 10$ ) | (%)  |                  |                 |
| Any noodle     | 17           | (89) | 7            | (70) | 3.64 (0.50–26.8) | 0.187           |
| Garlic noodle  | 14           | (74) | 7            | (70) | 1.20 (0.22–6.53) | 0.832           |
| Any salad      | 15           | (79) | 7            | (70) | 1.61 (0.28–9.20) | 0.593           |
| Tea leaf salad | 13           | (68) | 6            | (60) | 1.44 (0.29–7.10) | 0.650           |
| Any rice       | 10           | (56) | 8            | (80) | 0.31 (0.05–1.94) | 0.196           |
| Coconut rice   | 8            | (42) | 6            | (60) | 0.49 (0.10–2.31) | 0.359           |

Table 3: Dining group binomial analysis: Food items ordered

|                             | Case-patient Dining Groups |                                     |                                    | All restaurant dining groups  |                             |   |  | Binomial <i>p</i> value |                            |                           |
|-----------------------------|----------------------------|-------------------------------------|------------------------------------|-------------------------------|-----------------------------|---|--|-------------------------|----------------------------|---------------------------|
|                             | All<br>( <i>n</i> = 12)    | Saturday<br>Only<br>( <i>n</i> = 8) | Takeout<br>only<br>( <i>n</i> = 7) | Saturday<br>( <i>n</i> = 217) | Friday<br>( <i>n</i> = 226) | Dine-in<br>(Satur-<br>day)<br>( <i>n</i> = 163) | Takeout<br>(Satur-<br>day)<br>( <i>n</i> = 54) | All <sup>a</sup>        | Saturday<br>groups<br>only | Takeout<br>groups<br>only |
|                             | (%)                        | (%)                                 | (%)                                | (%)                           | (%)                         | (%)   | (%)  |                         |                            |                           |
| Takeout                     | 58.3                       | 62.5                                | 100                                | 24.9                          | N/A                         | 0.0   | 100  | 0.034                   | 0.021                      | N/A                       |
| Garlic Noodles              | 66.7                       | 62.5                                | 57.0                               | 9.7                           | 6.2                         | 9.8   | 9.3  | 0.000                   | 0.000                      | 0.002                     |
| Tea Leaf Salad <sup>b</sup> | 58.3                       | 62.5                                | 50.0                               | 64.1                          | 55.8                        | 65.6  | 59.3   | 0.951                   | 0.687                      | 0.810                     |
| Sesame Chicken <sup>c</sup> | 25.0                       | 25.0                                | 43.0                               | 3.7                           | 8.0                         | 1.8   | 9.3  | 0.075                   | 0.033                      | 0.021                     |
| Coconut rice                | 50.0                       | 50.0                                | 43.0                               | 61.3                          | N/A                         | 63.2  | 55.6   | 0.935                   | 0.846                      | 0.854                     |
| Garlic Eggplant             | 16.7                       | 25.0                                | 29.0                               | 5.1                           | 3.5                         | 3.7   | 9.3  | 0.658                   | 0.059                      | 0.133                     |
| Samusa Soup                 | 8.3                        | 0.0                                 | 13.0                               | 18.4                          | 14.6                        | 21.5  | 9.3  | 0.930                   | 1.000                      | 0.540                     |

<sup>a</sup> *p*-values in this column calculated using the most conservative prevalence estimate

<sup>b</sup> Tea Leaf Salad “maybe” responses (*n* = 2) are not included as “Yes”

<sup>c</sup> All case-patient dining groups ordering sesame chicken also ordered garlic noodles

Table 4: Dining group-level cohort study for Saturday, August 17, 2013

|                 | Number of dining groups<br>that ordered food item |       |                             | Number of dining groups<br>that did not order food item |       |                             | <i>RR</i> | <i>p</i> -<br>value |
|-----------------|---|-------|-----------------------------|---|-------|-----------------------------|-----------|---------------------|
|                 | Ill   | Total | Attack<br>proportion<br>(%) | Ill   | Total | Attack<br>proportion<br>(%) |           |                     |
| Takeout         | 5   | 54    | (9.26)                      | 3   | 163   | (1.84)                      | 5.03      | 0.036               |
| Garlic Noodles  | 5   | 21    | (23.8)                      | 3   | 196   | (1.53)                      | 15.6      | 0.000               |
| Garlic Eggplant | 2   | 11    | (18.2)                      | 6   | 206   | (2.91)                      | 6.24      | 0.072               |
| Tea Leaf Salad  | 5   | 139   | (3.60)                      | 3   | 78    | (3.85)                      | 0.94      | 1.000               |
| Sesame Chicken  | 2   | 8     | (25.0)                      | 6   | 209   | (2.87)                      | 8.71      | 0.021               |
| Coconut rice    | 4   | 132   | (3.03)                      | 4   | 85    | (4.71)                      | 0.64      | 0.073               |



## **Appendix**

**A: Health Alert**

**B: Hypothesis generating questionnaire**

**C: Health Officer letter**

**D: Joint Press Statement**

**E: Case-control study questionnaire**

**F: R function and code for epidemic curve**

# Appendix A

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## Health Alert

August 28, 2013

### Surveillance for *E. coli* O157

**SITUATION:** Eight cases of presumptive *Escherichia coli* O157 have been reported to the San Francisco Department of Public Health (SFDPH) during the past week. All of the reported cases have presented with bloody diarrhea, and one has progressed to hemolytic-uremic syndrome (HUS). SFDPH is working with the California Department of Public Health (CDPH) and the California Emerging Infections Program (CEIP) to monitor the spread of disease, confirm the *E. coli* strain(s) involved, gather information from clinicians and interviews with patients, and determine whether the cases may be linked or share a common source. To date the cases have not been linked to each other or to a common source.

In order to identify any additional cases of *E. coli* O157 in San Francisco residents, SFDPH is conducting surveillance for illnesses that may be related to the outbreak.

#### **ACTIONS REQUESTED OF CLINICIANS and LABORATORIES:**

1. **Remain alert** for adult or pediatric patients who have HUS or acute onset of bloody diarrhea.
2. **Obtain stool samples for culture** from patients with bloody diarrhea and **test those specimens** for *E. coli* O157 as well as other suspect pathogens.
3. **Report** cases of HUS or Shiga toxin-producing *E. coli* (STEC) including *E. coli* O157 immediately (within 1 hour) to SFDPH Communicable Disease Control Unit (415) 554-2830.
4. Clinical laboratories should **send *E. coli* O157 isolates to SFDPH Laboratory** for confirmation and further characterization. Do not send specimens directly to CDPH or CDC. For laboratory-related questions, please call the SFDPH Laboratory at (415) 554-2800.

#### **ADDITIONAL RESOURCES:**

SFDPH: <http://sfdph.org/cdcp>

CDPH: <http://www.cdph.ca.gov/HealthInfo/discond/Pages/EscherichiacoliO157H7.aspx>

CDC: <http://www.cdc.gov/mmwr/PDF/rr/rr5812.pdf>

<http://www.cdc.gov/ecoli/index.html>

For clinical or general questions please call SFDPH Communicable Disease Control Unit at (415) 554-2830. For laboratory-related questions only, please call the SFDPH Laboratory at (415) 554-2800.

**Health Alert:** Conveys the highest level of importance; warrants immediate action or attention.

**Health Advisory:** Provides important information for specific incident or situation; may not require immediate action.

**Health Update:** Provides updated information regarding an incident or situation; unlikely to require immediate action.

**COVER SHEET FOR HYPOTHESIS GENERATING QUESTIONNAIRE Appendix B**  
**CLUSTER: SAN FRANCISCO E. COLI 0157**

|                                 |  |                    |  |
|---------------------------------|--|--------------------|--|
| <b>Name (Last, First)</b>       |  |                    |  |
| <b>DOB (mm/dd/yyyy)</b>         |  | <b>Age (years)</b> |  |
| <b>Onset Date (mm/dd/yyyy)</b>  |  | <b>County</b>      |  |
| <b>Home Phone</b>               |  |                    |  |
| <b>Work Phone</b>               |  |                    |  |
| <b>Mobile Phone</b>             |  |                    |  |
| <b>Parent's Name (if child)</b> |  |                    |  |

**INTRODUCTION:**

Hello, my name is \_\_\_\_\_ and I'm calling from the \_\_\_\_\_ Health Department. I'm calling because you were (your child was) recently diagnosed with E coli 0157, which is the bacteria that made you (your child) so sick. Unfortunately, there have been several other people sick in your county with the same bacteria. We need your help to determine what may have caused this outbreak of diarrhea. The information you provide is compared with others who have similar illnesses to identify common sources. I realize that you have already talked to someone from \_\_\_\_\_ County health department, but I would really like to talk to you more in detail about your (your child's) illness and foods that you (your child) may have eaten before becoming sick. This will take at least 15 minutes. Is this a good time to ask you questions? (If yes, skip to the next paragraph)

If "no": Is there a better time when I can call? (If yes, reschedule):

Date: \_\_\_\_\_ Time: \_\_\_\_\_ am/pm  
 Phone number: \_\_\_\_\_

If still "no": Mr.(Ms.) \_\_\_\_\_, we really need your help to find out what is causing these illnesses so that we can prevent more people from getting sick. All your answers will be kept confidential, and I will try to keep the interview as short as possible.

If still "no": Well, thank you very much.

IF YES: Thank you very much! The way this works best is if you look for things that are going to help you remember where and what you (your child) may have eaten, such as your calendar, grocery and restaurant receipts, checkbook entries, credit card statements, or anything else. I will be asking about foods that you (your child) may have consumed in the 7 days before you (your child) became ill. I can wait for you to get these items before beginning the interview.

Call log:

| Staff Initials | Date (mm/dd/yyyy) | Time | Phone called | Outcome of Call | Comments |
|----------------|-------------------|------|--------------|-----------------|----------|
|                |                   |      |              |                 |          |
|                |                   |      |              |                 |          |
|                |                   |      |              |                 |          |
|                |                   |      |              |                 |          |
|                |                   |      |              |                 |          |
|                |                   |      |              |                 |          |

**Calendar for August - October**

| August |    |    |    |    |    |    | September                 |    |    |    |    |    |    | October   |    |    |    |    |    |    |
|--------|----|----|----|----|----|----|---------------------------|----|----|----|----|----|----|---|----|----|----|----|----|----|
| Su     | Mo | Tu | We | Th | Fr | Sa | Su                        | Mo | Tu | We | Th | Fr | Sa | Su  | Mo | Tu | We | Th | Fr | Sa |
|        |    |    |    | 1  | 2  | 3  | 1                         | 2  | 3  | 4  | 5  | 6  | 7  |   |    | 1  | 2  | 3  | 4  | 5  |
| 4      | 5  | 6  | 7  | 8  | 9  | 10 | 8                         | 9  | 10 | 11 | 12 | 13 | 14 | 6   | 7  | 8  | 9  | 10 | 11 | 12 |
| 11     | 12 | 13 | 14 | 15 | 16 | 17 | 15                        | 16 | 17 | 18 | 19 | 20 | 21 | 13  | 14 | 15 | 16 | 17 | 18 | 19 |
| 18     | 19 | 20 | 21 | 22 | 23 | 24 | 22                        | 23 | 24 | 25 | 26 | 27 | 28 | 20  | 21 | 22 | 23 | 24 | 25 | 26 |
| 25     | 26 | 27 | 28 | 29 | 30 | 31 | 29                        | 30 |    |    |    |    |    | 27  | 28 | 29 | 30 | 31 |    |    |
|        |    |    |    |    |    |    | Holidays: 9/2 – Labor Day |    |    |    |    |    |    | Holidays: 10/14 – Columbus Day<br>10/31 - Halloween |    |    |    |    |    |    |

**HYPOTHESIS GENERATING QUESTIONNAIRE FOR SAN FRANCISCO *E. coli* 0157 cluster**  
**VERSION 1: 08/28/13**

**Section 1: Interviewer information (Questions 1-2 to be completed by interviewer prior to questionnaire administration)**

1. PulseNet ID: \_\_\_\_\_ 2. Local ID#: \_\_\_\_\_
3. Date of Interview: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ (if unknown, enter 99/99/9999)  
*M M D D Y Y Y Y*
4. Interviewer Information Name: \_\_\_\_\_ Contact phone number: (\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_  
 Agency or Organization: \_\_\_\_\_
5. Respondent was:  Self  Parent  Spouse  Other (Specify): \_\_\_\_\_

**Section 2: DEMOGRAPHIC DATA: I'd like to begin by asking a few questions about yourself (your child) and your household.**

1. What are your state, county, and zip code? State abbr. \_\_\_\_\_ County \_\_\_\_\_ Zip Code \_\_\_\_\_
2. Birthdate \_\_\_\_\_ / \_\_\_\_\_ (if unknown, enter 99/9999)  
*M M Y Y Y Y*
3. Sex:  Male  Female  Unknown
4. Hispanic or Latino origin?  Yes  No  Unknown
5. How would you describe your race?  
 White  Black/ African American  American Indian/Alaska Native  
 Native Hawaiian/Other Pacific Islander  Other (specify): \_\_\_\_\_  
 Asian, specify \_\_\_\_\_  Unknown

**Section 3: CLINICAL INFORMATION: Now I have a few questions about your (your child's) illness.**

1. What date did you first feel sick? \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ (if unknown, enter 99/99/9999)  
*M M D D Y Y Y Y*
- | Yes                      | Maybe                    | No                       | Don't Know               | Did/Were you (your child)   |
|--------------------------|--------------------------|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 2. Have any diarrhea (defined as at least 3 loose stools in 24 hours)   |
|                          |                          |                          |                          | 2a. What day did it start _____ / _____ / _____ (if unknown, enter 99/99/9999)<br><i>M M D D Y Y Y Y</i>  |
|                          |                          |                          |                          | 3. Have bloody stool/diarrhea?  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 4. Hospitalized overnight or longer?  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 4a. When were you admitted? _____ / _____ / _____ (if unknown, enter 99/99/9999)<br><i>M M D D Y Y Y Y</i>  |
|                          |                          |                          |                          | 4b. When were you discharged? _____ / _____ / _____ (if unknown, enter 99/99/9999)<br><i>M M D D Y Y Y Y</i>  |
|                          |                          |                          |                          | <input type="checkbox"/> Still hospitalized   |
|                          |                          |                          |                          | 4c. Name of hospital: _____   |
|                          |                          |                          |                          | 5. Have hemolytic uremic syndrome (HUS) or kidney failure?  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 6. Have any close contact with anyone with diarrhea or vomiting?  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 6a. Who? _____  |
|                          |                          |                          |                          | 6b. When was this person ill <input type="checkbox"/> less than 24 hours before you<br><input type="checkbox"/> ≥ 24 hours before you<br><input type="checkbox"/> Unknown |
|                          |                          |                          |                          | 7. How many days total were you sick? _____ days (enter 999 if unknown) or <input type="checkbox"/> Still ill <input type="checkbox"/> Case is deceased                   |

**Section 4: EVENTS, PLACES, TRAVEL:** Next, I would like to ask you about any events, places, or traveling you (your child) did in the 7 days before you (your child's) illness.

| Yes                      | Maybe                    | No                       | Don't Know               | Did you (your child)  |
|--------------------------|--------------------------|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 1. Attend any events or large gatherings the week before your illness? (e.g., school events, athletic events, fairs, festivals, church events, temple events, wedding receptions, showers, clubs, office parties, picnic, parties, etc.?) |
|                          |                          |                          |                          | Type of event: _____<br>a. Location (cross-streets, city): _____<br>b. Date: _____<br>c. Other ill attendees (describe who, how many): _____<br>d. Foods eaten: _____   |
|                          |                          |                          |                          | Type of event: _____<br>a. Location (cross-streets, city): _____<br>b. Date: _____<br>c. Other ill attendees (describe who, how many): _____<br>d. Foods eaten: _____   |
| Yes                      | Maybe                    | No                       | Don't Know               | Did you (your child)  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 2. Travel outside county of residence?  |
|                          |                          |                          |                          | a. Place: _____<br>b. Dates of travel: _____ to _____<br>c. Other ill travelers (describe who, how many): _____   |

**Comments:**

\* If the case spent **the entire 7 days** before illness onset outside the US, please be sure countries and travel dates are noted and skip to the end of the interview (page 10).  
 \* If the case spent **only part of the 7 days** before illness onset outside the US, please complete the remainder of the interview collecting information only for exposures and foods purchased or eaten in the US.

**Section 5: FOOD ALLERGIES & SPECIAL DIETS:** Now I have a few questions about food allergies and any special diets you (your child) may follow.

| Yes                      | Maybe                    | No                       | Don't Know               | Did you (your child) have:   |
|--------------------------|--------------------------|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 1. Any allergies that prevent you from eating a certain food(s)?   |
|                          |                          |                          |                          | 1a. What foods? <input type="checkbox"/> milk <input type="checkbox"/> eggs <input type="checkbox"/> peanuts <input type="checkbox"/> tree nuts <input type="checkbox"/> fish<br>Please check all that apply. <input type="checkbox"/> soy <input type="checkbox"/> wheat <input type="checkbox"/> shellfish <input type="checkbox"/> other: _____ |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 2. Vegetarian or vegan diet?   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 3. Special or restricted diet (medical, weight-loss, religious, cultural, etc.)?   |
|                          |                          |                          |                          | 3a. Please describe: _____<br><input type="checkbox"/> Unknown   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 4. Any vitamins, nutritional or herbal supplements, such as teas, tablets, and pills, etc.?  |
|                          |                          |                          |                          | 4a. Please describe Type, variety, brand: _____<br><input type="checkbox"/> Unknown Store: _____   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 5. Are there foods that you (your child) do NOT like or NEVER eat?   |
|                          |                          |                          |                          | 5a. What foods? _____  |

**Comments:**

| Section 6: SOURCES OF FOOD AT HOME: Now I have a few questions about where the food came from that you (your child) ate at home in the 7 days before your (your child's) illness began. |                          |                          |                          |   |
|---|--------------------------|--------------------------|--------------------------|---|
| Yes   | Maybe                    | No                       | Don't Know               | In the 7 days before the illness began, did you (your child) eat any foods from any of the following types of stores:   |
| <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>1. Farmer's Markets, roadside stands, or open-air markets?</b>   |
|   |                          |                          |                          | 1a. Name: _____   |
|   |                          |                          |                          | 1b. Location (address, city, state): _____  |
|   |                          |                          |                          | 1c. Items purchased: _____  |
|   |                          |                          |                          | 1d. Date of purchase: _____   |
| <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>2. Grocery stores or supermarkets?</b>   |
|   |                          |                          |                          | 2a. Name: _____   |
|   |                          |                          |                          | 2b. Location (address, city, state): _____  |
|   |                          |                          |                          | 2c. Shopper card #: _____   |
| <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>3. Warehouse stores such as Costco or Sam's Club?</b>  |
|   |                          |                          |                          | 3a. Name: _____   |
|   |                          |                          |                          | 3b. Location (address, city, state): _____  |
|   |                          |                          |                          | 3c. Shopper card #: _____   |
| <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>4. Health food stores or Co-ops?</b>   |
|   |                          |                          |                          | 4a. Name: _____   |
|   |                          |                          |                          | 4b. Location (address, city, state): _____  |
|   |                          |                          |                          | 4c. Shopper card #: _____   |
| <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>5. Ethnic specialty markets (Mexican, Asian, or Indian groceries)?</b>   |
|   |                          |                          |                          | 5a. Name: _____   |
|   |                          |                          |                          | 5b. Location (address, city, state): _____  |
|   |                          |                          |                          | 5c. Shopper card #: _____   |
| <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>6. Other stores?</b>   |
|   |                          |                          |                          | 6a. Name: _____   |
|   |                          |                          |                          | 6b. Location (address, city, state): _____  |
|   |                          |                          |                          | 6c. Shopper card #: _____   |
| <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>7. May we have permission to retrieve purchases based on your shopper card/sticker information? This information will be kept confidential and only be used by public health officials to help with this outbreak investigation.</b> |
|   |                          |                          |                          | <i>For cases who have a Safeway, Vons, or Pavilions shopper card:</i>   |
|   |                          |                          |                          | In order to obtain your purchase history from _____ (store name), we will need a signed consent form. May I please have your email address or a fax number so I can send the form to you?<br>Email address or fax #: _____              |
| Yes   | Maybe                    | No                       | Don't Know               | In the 7 days before the illness began, did you (your child) eat any foods from any of the following restaurants?   |
| <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>8. Burma Superstar?</b>  |
|   |                          |                          |                          | 8a. Address, city, state: _____   |
|   |                          |                          |                          | 8b. Meal eaten: _____   |
|   |                          |                          |                          | 8c. Did you eat the tea leaf salad? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown   |
|   |                          |                          |                          | 8d. Date of meal: _____   |
| <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>9. Super Duper Burgers?</b>  |
|   |                          |                          |                          | 9a. Address, city, state: _____   |
|   |                          |                          |                          | 9b. Meal eaten: _____   |
|   |                          |                          |                          | 9c. Date of meal: _____   |

| Yes                      | Maybe                    | No                       | Don't Know               | In the 7 days before the illness began, did you (your child) eat any foods from any of the following restaurants?        |
|--------------------------|--------------------------|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>10. Los Coyotes?</b>  |
|                          |                          |                          |                          | 10a. Address, city, state: _____<br>10b. Meal eaten: _____<br>10c. Date of meal: _____                                   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>11. Subway?</b>   |
|                          |                          |                          |                          | 11a. Address, city, state: _____<br>11b. Meal eaten: _____<br>11c. Date of meal: _____                                   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>12. Tutti Melon?</b>  |
|                          |                          |                          |                          | 12a. Address, city, state: _____<br>12b. Meal eaten: _____<br>12c. Date of meal: _____                                   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>13. Bistro Aix?</b>   |
|                          |                          |                          |                          | 13a. Address, city, state: _____<br>13b. Meal eaten: _____<br>13c. Date of meal: _____                                   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>14. Other restaurant?</b>   |
|                          |                          |                          |                          | 14a. Name of restaurant: _____<br>14b. Address, city, state: _____<br>14c. Meal eaten: _____<br>14d. Date of meal: _____ |
| <b>Comments:</b>         |                          |                          |                          |  |

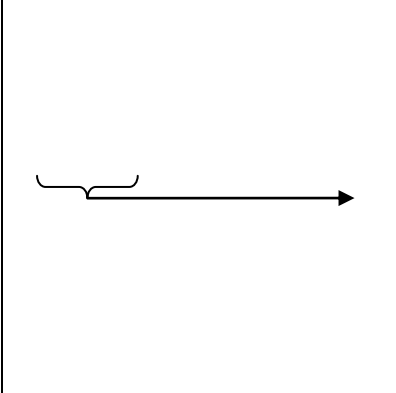
**Section 7: OPEN-ENDED FOOD HISTORY:** I am now going to ask you what you (your child) ate and drank in the 2 days before you (your child) got sick. I know that it has been a while, and some of this will be difficult to remember, but take your time and do the best you can.

| Days before illness onset: 0 (only ask about meals before onset) | Meal      | Ate at Home | Ate outside (specify location) | Foods and Drinks (List name of item, all ingredients, and how prepared) |
|--|-----------|-------------|--------------------------------|---|
| Date:  | Breakfast |             |                                |   |
| Day of week:   | Lunch     |             |                                |   |
|  | Dinner    |             |                                |   |
|  | Snacks    |             |                                |   |
|  | Drinks    |             |                                |   |

| Days before illness onset: 1 | Meal      | Ate at Home | Ate outside (specify location) | Foods and Drinks (List name of item, all ingredients, and how prepared) |
|------------------------------|-----------|-------------|--------------------------------|---|
| Date:                        | Breakfast |             |                                |   |
| Day of week:                 | Lunch     |             |                                |   |
|                              | Dinner    |             |                                |   |
|                              | Snacks    |             |                                |   |
|                              | Drinks    |             |                                |   |

| Days before illness onset: 2 | Meal      | Ate at Home | Ate outside (specify location) | Foods and Drinks (List name of item, all ingredients, and how prepared) |
|------------------------------|-----------|-------------|--------------------------------|---|
| Date:                        | Breakfast |             |                                |   |
| Day of week:                 | Lunch     |             |                                |   |
|                              | Dinner    |             |                                |   |
|                              | Snacks    |             |                                |   |
|                              | Drinks    |             |                                |   |

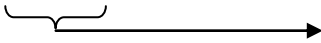
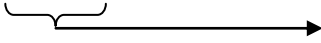
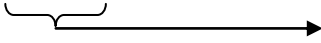
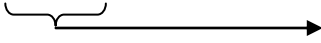
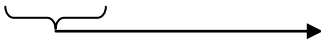
**Section 8. FRESH VEGETABLES AND FRUITS:** Now I have some questions about fresh vegetables and fruits that you (your child) might have eaten raw or undercooked in the 7 days before your (your child's) illness began. This does not include canned items. These foods could have been eaten alone or as part of a dish. I am only interested in vegetables and fruits that are not grown at home. As I read each item, please answer as yes, no, may have eaten, or can't remember eating the food in the 7 days before you (your child) got sick. First, I am going to ask about different types of lettuce.

| Yes  | Maybe                    | No                       | Don't Know               | In the 7 days before the illness began, did you (your child) eat any:  |                       |
|--|--------------------------|--------------------------|--------------------------|--|-----------------------|
| <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>1. Lettuce, such as in a salad, on a sandwich or burger, or as a garnish at home?</b>   |                       |
|  |                          |                          |                          | 1a. Type of lettuce: _____   |                       |
|  |                          |                          |                          | 1b. Place purchased from (names, address, city): _____<br>_____  |                       |
|  |                          |                          |                          | 1c. Purchase Date: _____   | 1d. Date eaten: _____ |
|  |                          |                          |                          | 1e. Brand: _____   |                       |
|  |                          |                          |                          | 1f. Packaging: <input type="checkbox"/> Bagged <input type="checkbox"/> Clamshell <input type="checkbox"/> Head/Loose <input type="checkbox"/> Unknown |                       |
|  |                          |                          |                          | 1g. Was it organic? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown  |                       |
|  |                          |                          |                          | 1h. Do you still have the receipt? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown                           |                       |
|  |                          |                          |                          | 1i. Any leftover product? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown                                    |                       |



| Yes                      | Maybe                    | No                       | Don't Know               | In the 7 days before the illness began, did you (your child) eat any:   |
|--------------------------|--------------------------|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>2. Lettuce outside of your home, including friends' homes, gatherings, restaurants such as delis, fast food restaurants, take-out or home delivery meals, or any facilities such as hospitals, schools, etc.?</b>  |
|                          |                          |                          |                          | 2a. Type of lettuce: _____<br>2b. Was it organic? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown<br>2c. Location where eaten (names, address, city): _____<br>_____<br>2d. Date eaten: _____   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>3. Romaine lettuce?</b>  |
|                          |                          |                          |                          | 3a. Prepackaged or loose? <input type="checkbox"/> Bagged <input type="checkbox"/> Clamshell <input type="checkbox"/> Head/Loose <input type="checkbox"/> Unknown   |
|                          |                          |                          |                          | 3b. If eaten <u>at home</u> , what was the: <input type="checkbox"/> Not applicable (did not eat <u>at home</u> )<br>Brand: _____<br>Was it organic? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown<br>Place purchased from (names, address, city): _____<br>Purchase date: _____ Date eaten: _____<br>Do you still have the receipt? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown<br>Any leftover product? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown |
|                          |                          |                          |                          | 3c. If eaten <u>outside the home</u> , where? <input type="checkbox"/> Not applicable (did not eat <u>outside the home</u> )<br>Was it organic? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown<br>Location where eaten (names, address, city): _____<br>_____  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>4. Iceberg lettuce?</b>  |
|                          |                          |                          |                          | 4a. Prepackaged or loose? <input type="checkbox"/> Bagged <input type="checkbox"/> Clamshell <input type="checkbox"/> Head/Loose <input type="checkbox"/> Unknown   |
|                          |                          |                          |                          | 4b. If eaten <u>at home</u> , what was the: <input type="checkbox"/> Not applicable (did not eat <u>at home</u> )<br>Brand: _____<br>Was it organic? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown<br>Place purchased from (names, address, city): _____<br>Purchase date: _____ Date eaten: _____<br>Do you still have the receipt? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown<br>Any leftover product? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown |
|                          |                          |                          |                          | 4c. If eaten <u>outside the home</u> , where? <input type="checkbox"/> Not applicable (did not eat <u>outside the home</u> )<br>Was it organic? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown<br>Location where eaten (names, address, city): _____<br>_____  |
| Yes                      | Maybe                    | No                       | Don't Know               | In the 7 days before the illness began, did you (your child) eat any:   |

|                          |                          |                          |                          |                          |  |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <p><b>5. Mixed salad blends?</b></p> <p>5a. What types of lettuce were included? _____</p> <p>5b. How was it packaged? <input type="checkbox"/> Bagged <input type="checkbox"/> Clamshell <input type="checkbox"/> Other <input type="checkbox"/> Unknown</p> <p>5c. What brand was it? _____</p> <p>5d. Was it organic? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown</p> <p>5e. Place purchased from (names, address, city): _____</p> <p>_____</p> <p>5f. Purchase Date: _____ 5g. Date eaten: _____</p> <p>5h. Do you still have the receipt? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown</p> <p>5i. Any leftover product? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown</p>   |
|                          |                          |                          |                          |                          |  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <p><b>6. Fresh spinach?</b></p> <p>6a. Prepackaged or loose? <input type="checkbox"/> Bagged <input type="checkbox"/> Clamshell <input type="checkbox"/> Loose <input type="checkbox"/> Unknown</p> <p>6b. If eaten <u>at home</u>, what was the: <input type="checkbox"/> Not applicable (did not eat <u>at home</u>)</p> <p>Type: <input type="checkbox"/> Baby spinach <input type="checkbox"/> Large leaf spinach <input type="checkbox"/> Mixed/blend of spinach and lettuce</p> <p><input type="checkbox"/> Spinach, unknown if baby or large leaf <input type="checkbox"/> Other <input type="checkbox"/> Unknown</p> <p>Brand: _____</p> <p>Was it organic? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown</p> <p>Place purchased from (names, address, city): _____</p> <p>Purchase date: _____ Date eaten: _____</p> <p>Do you still have the receipt? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown</p> <p>Any leftover product? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown</p> |
|                          |                          |                          |                          |                          |  |
|                          |                          |                          |                          |                          |  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <p><b>7. Other leafy green vegetable (kale, red lettuce, butter lettuce, radicchio, "spring mix", "baby" salad greens, mustard greens, collard greens)?</b></p> <p>7a. Specify Type: _____</p> <p>7b. Prepackaged or loose? <input type="checkbox"/> Bagged <input type="checkbox"/> Clamshell <input type="checkbox"/> Head/Loose <input type="checkbox"/> Unknown</p> <p>7c. If eaten <u>at home</u>, what was the: <input type="checkbox"/> Not applicable (did not eat <u>at home</u>)</p> <p>Brand: _____</p> <p>Was it organic? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown</p> <p>Place purchased from (names, address, city): _____</p> <p>Purchase date: _____ Date eaten: _____</p> <p>Do you still have the receipt? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown</p> <p>Any leftover product? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown</p>   |
|                          |                          |                          |                          |                          |  |
|                          |                          |                          |                          |                          |  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <p><b>8. Fresh tomatoes?</b></p> <p>8a. Type, variety: <input type="checkbox"/> Red Round <input type="checkbox"/> Roma <input type="checkbox"/> Cherry <input type="checkbox"/> Vine-ripe, sold on the vine</p> <p><input type="checkbox"/> Grape <input type="checkbox"/> Other _____ <input type="checkbox"/> Unknown</p> <p>8b. Prepackaged or loose? <input type="checkbox"/> Bagged <input type="checkbox"/> Clamshell <input type="checkbox"/> Loose <input type="checkbox"/> Unknown</p>   |
|                          |                          |                          |                          |                          |  |

|   | <p>8c. If eaten <u>at home</u>, what was the: <input type="checkbox"/> Not applicable (did not eat <u>at home</u>)</p> <p>Brand: _____</p> <p>Was it organic? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown</p> <p>Place purchased from (names, address, city): _____</p> <p>Purchase date: _____ Date eaten: _____</p> <p>Do you still have the receipt? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown</p> <p>Any leftover product? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown</p>                                |                          |                          |            |                          |                          |                          |                          |   |
|--|---|--------------------------|--------------------------|------------|--------------------------|--------------------------|--------------------------|--------------------------|---|
|   | <p>8d. If eaten <u>outside the home</u>, where? <input type="checkbox"/> Not applicable (did not eat <u>outside the home</u>)</p> <p>Locations where eaten (names, address, city): _____</p>  |                          |                          |            |                          |                          |                          |                          |   |
| <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="width:12.5%;">Yes</th> <th style="width:12.5%;">Maybe</th> <th style="width:12.5%;">No</th> <th style="width:12.5%;">Don't Know</th> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table> | Yes   | Maybe                    | No                       | Don't Know | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <p><b>In the 7 days before the illness began, did you (your child) eat any:</b></p>   |
| Yes  | Maybe   | No                       | Don't Know               |            |                          |                          |                          |                          |   |
| <input type="checkbox"/>   | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> |            |                          |                          |                          |                          |   |
|   | <p><b>9. Strawberries?</b></p> <p>9a. If eaten <u>at home</u>, what was the: <input type="checkbox"/> Not applicable (did not eat <u>at home</u>)</p> <p>Brand: _____</p> <p>Was it organic? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown</p> <p>Place purchased from (names, address, city): _____</p> <p>Purchase date: _____ Date eaten: _____</p> <p>Do you still have the receipt? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown</p> <p>Any leftover product? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown</p> |                          |                          |            |                          |                          |                          |                          |   |
|   | <p>9b. If eaten <u>outside the home</u>, where? <input type="checkbox"/> Not applicable (did not eat <u>outside the home</u>)</p> <p>Locations where eaten (names, address, city): _____</p>  |                          |                          |            |                          |                          |                          |                          |   |
| <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="width:12.5%;">Yes</th> <th style="width:12.5%;">Maybe</th> <th style="width:12.5%;">No</th> <th style="width:12.5%;">Don't Know</th> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table> | Yes   | Maybe                    | No                       | Don't Know | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <p><b>10. Cantaloupe?</b></p> <p>10a. If eaten <u>at home</u>, what was the: <input type="checkbox"/> Not applicable (did not eat <u>at home</u>)</p> <p>Brand: _____</p> <p>Was it organic? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown</p> <p>Place purchased from (names, address, city): _____</p> <p>Purchase date: _____ Date eaten: _____</p> <p>Do you still have the receipt? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown</p> <p>Any leftover product? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown</p> |
| Yes  | Maybe   | No                       | Don't Know               |            |                          |                          |                          |                          |   |
| <input type="checkbox"/>   | <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> |            |                          |                          |                          |                          |   |
|   | <p>10b. If eaten <u>outside the home</u>, where? <input type="checkbox"/> Not applicable (did not eat <u>outside the home</u>)</p> <p>Locations where eaten (names, address, city): _____</p>   |                          |                          |            |                          |                          |                          |                          |   |
| <p><b>Comments:</b></p>  |   |                          |                          |            |                          |                          |                          |                          |   |

**Section 9: MEAT:** Now I have a few questions about meat that you (your child) might have eaten in the 7 days before your (your child's) illness began. This does not include canned items, but the meat could have been fresh, frozen, or could have been eaten as part of dish such as stir fry, casseroles, salads, soups, sandwiches, fried rice, etc. You (your child) could have eaten these either in your home or outside the home. As I read each food, please answer as yes, no, may have eaten, or can't remember eating the food in the 7 days before you (your child) got sick. As a reminder, the time period that we are talking about is from \_\_\_\_\_ through \_\_\_\_\_.

| Yes                      | Maybe                    | No                       | Don't Know               | In the 7 days before the illness began, did you (your child) eat:   |
|--------------------------|--------------------------|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>1. Any dish containing store-purchased ground beef (that is, the beef was cooked at home)? I am referring either to bulk ground beef or pre-made beef patties purchased in a store.</b>  |
|                          |                          |                          |                          | 1a. Place purchased from:<br>Store 1: _____ Location (address, city): _____<br>Store 2: _____ Location (address, city): _____<br><br>1b. Purchase Date: _____      1c. Date eaten: _____<br>1d. Was it purchased as preformed patties: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown<br>1e. <input type="checkbox"/> Purchased Fresh <input type="checkbox"/> Purchased Frozen <input type="checkbox"/> Precooked<br>1f. Was the beef purchased as bulk ground beef? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown<br>1g. Brand name: _____<br>1h. How many pounds of beef did you buy? Specify: _____<br>1i. What type of ground beef was it? (extra lean, lean, % fat) _____<br>1j. How was it packaged? _____<br>1k. How was the beef prepared?: <input type="checkbox"/> Hamburger <input type="checkbox"/> Other _____<br>1l. Was the beef pink in the middle when you ate it? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>2. Any dish containing ground beef outside your home? (including fast food burgers, tacos, etc.)</b>   |
|                          |                          |                          |                          | 2a. Where eaten:<br>Restaurant/other 1: _____ Location (address, city): _____<br>Restaurant/other 2: _____ Location (address, city): _____<br><br>2b. Date eaten: _____<br>2c. What kind of dish was it? <input type="checkbox"/> Hamburger <input type="checkbox"/> Other _____<br>2d. Was the beef pink in the middle when you ate it? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>3. Any dish containing any type of ground meat?</b>  |
|                          |                          |                          |                          | 3a. What type of meat was this? _____<br>3b. Where did you consume this meat? <input type="checkbox"/> Home <input type="checkbox"/> Restaurant (specify below)<br>Restaurant/other 1: _____ Location (address, city): _____<br>Restaurant/other 2: _____ Location (address, city): _____<br><br>3c. Date eaten: _____<br>3d. What kind of dish was it? <input type="checkbox"/> Meat patty <input type="checkbox"/> Other _____<br>3e. Was the meat pink in the middle when you ate it? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>4. Any beef steaks or roasts?</b>  |
|                          |                          |                          |                          | 4a. Place purchased from:<br>Store 1: _____ Location (address, city): _____<br>Store 2: _____ Location (address, city): _____<br><br>4b. Purchase Date: _____      5c. Date eaten: _____  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>5. Did you (your child) handle any raw beef, even if you (your child) did not eat it?</b>  |
|                          |                          |                          |                          | 5a. Specify type: <input type="checkbox"/> Ground beef <input type="checkbox"/> Steak <input type="checkbox"/> Other _____<br>5b. Brand: _____<br>5c. Place purchased from (names, address, city): _____<br>5d. Purchase date: _____  |

**Comments:**

**Section 10: NUTS, PROCESSED, AND DRIED FOODS:** Now I have a few questions about nuts and processed foods you (your child) might have eaten in the 7 days before your (your child's) illness began. Remember that these may be used as toppings or mixed into foods. If you (your child) ate any of the items as part of another food please answer "yes".

| Yes                      | Maybe                    | No                       | Don't Know               | In the 7 days before the illness began, did you (your child) eat:   |
|--------------------------|--------------------------|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>1. Peanuts?</b>  |
|                          |                          |                          |                          | 1a. Place purchased from or eaten at:<br>Location 1: _____ Location (address, city): _____<br>Location 2: _____ Location (address, city): _____<br>1b. Purchase Date: _____ 1c. Date eaten: _____ |
|                          |                          |                          |                          |   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>2. Sunflower seeds?</b>  |
|                          |                          |                          |                          | 2a. Place purchased from or eaten at:<br>Location 1: _____ Location (address, city): _____<br>Location 2: _____ Location (address, city): _____<br>2b. Purchase Date: _____ 2c. Date eaten: _____ |
|                          |                          |                          |                          |   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>3. Sesame seeds?</b>   |
|                          |                          |                          |                          | 3a. Place purchased from or eaten at:<br>Location 1: _____ Location (address, city): _____<br>Location 2: _____ Location (address, city): _____<br>3b. Purchase Date: _____ 3c. Date eaten: _____ |
|                          |                          |                          |                          |   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>4. Dried shrimp?</b>   |
|                          |                          |                          |                          | 4a. Place purchased from or eaten at:<br>Location 1: _____ Location (address, city): _____<br>Location 2: _____ Location (address, city): _____<br>4b. Purchase Date: _____ 4c. Date eaten: _____ |
|                          |                          |                          |                          |   |

**Comments:**

**Section 11. Food Exposures**

Now I'd like to ask you about a long list of food items, and for each one my question will be "Did you (your child) eat it in the 7 days before you got sick?" The lists are organized into categories, like eggs and dairy foods, vegetables and fruits, and so on. For each item, please answer as yes, no, or may have eaten the food in the 7 days before you/your child got sick. If you tasted a food, please say yes. Some of the questions might seem a little repetitive, but try and answer each question individually, even if you think it was already covered. Please provide as many details as you can remember about the type of food, brand, how it was eaten, where it was eaten, and where it was purchased.

| Y | M                        | N                        | FRESH FRUIT (Not frozen or cooked)              | Y | M                        | N                        | FRESH FRUIT (Not frozen or cooked)  |
|---|--------------------------|--------------------------|---|---|--------------------------|--------------------------|-------------------------------------|
| A | <input type="checkbox"/> | <input type="checkbox"/> | mango   | A | <input type="checkbox"/> | <input type="checkbox"/> | blueberries                         |
| B | <input type="checkbox"/> | <input type="checkbox"/> | papaya  | B | <input type="checkbox"/> | <input type="checkbox"/> | blackberries                        |
| C | <input type="checkbox"/> | <input type="checkbox"/> | chayote (in Vietnamese, <i>su su, trai su</i> ) | C | <input type="checkbox"/> | <input type="checkbox"/> | cherries                            |
| D | <input type="checkbox"/> | <input type="checkbox"/> | apples  | D | <input type="checkbox"/> | <input type="checkbox"/> | plums                               |
| E | <input type="checkbox"/> | <input type="checkbox"/> | pears   | E | <input type="checkbox"/> | <input type="checkbox"/> | any kind of grapes <i>if yes...</i> |
|   |                          |                          | peaches   | F | <input type="checkbox"/> | <input type="checkbox"/> | green grapes                        |
| F | <input type="checkbox"/> | <input type="checkbox"/> | nectarines                                      | G | <input type="checkbox"/> | <input type="checkbox"/> | red grapes                          |
| G | <input type="checkbox"/> | <input type="checkbox"/> | apricots  | H | <input type="checkbox"/> | <input type="checkbox"/> | bananas                             |
| H | <input type="checkbox"/> | <input type="checkbox"/> | persimmons                                      | I | <input type="checkbox"/> | <input type="checkbox"/> | plantains                           |
| I | <input type="checkbox"/> | <input type="checkbox"/> | oranges   | J | <input type="checkbox"/> | <input type="checkbox"/> | honeydew                            |
| J | <input type="checkbox"/> | <input type="checkbox"/> | tangerines                                      | K | <input type="checkbox"/> | <input type="checkbox"/> | watermelon                          |
| K | <input type="checkbox"/> | <input type="checkbox"/> | grapefruit                                      | L | <input type="checkbox"/> | <input type="checkbox"/> | kiwi                                |
| L | <input type="checkbox"/> | <input type="checkbox"/> | lemon   | M | <input type="checkbox"/> | <input type="checkbox"/> | pineapple                           |
| M | <input type="checkbox"/> | <input type="checkbox"/> | lime  | N | <input type="checkbox"/> | <input type="checkbox"/> | coconut                             |
| N | <input type="checkbox"/> | <input type="checkbox"/> | raspberries                                     | O | <input type="checkbox"/> | <input type="checkbox"/> | coconut milk                        |
|   |                          |                          |   | P | <input type="checkbox"/> | <input type="checkbox"/> | other fresh fruit: _____            |

**Please fill in any comments on types, brands, how eaten, where eaten, where purchased in the space below.**

| Y | M                        | N                        | FRESH VEGETABLES {Not frozen}            | Y | M                        | N                        | FRESH VEGETABLES {Not frozen}                    |
|---|--------------------------|--------------------------|--|---|--------------------------|--------------------------|--|
| A | <input type="checkbox"/> | <input type="checkbox"/> | celery                                   | A | <input type="checkbox"/> | <input type="checkbox"/> | leeks  |
| B | <input type="checkbox"/> | <input type="checkbox"/> | mini-carrots in sealed bag               | B | <input type="checkbox"/> | <input type="checkbox"/> | avocado {or guacamole}                           |
| C | <input type="checkbox"/> | <input type="checkbox"/> | loose or bagged carrots {full size}      | C | <input type="checkbox"/> | <input type="checkbox"/> | cabbage  |
| D | <input type="checkbox"/> | <input type="checkbox"/> | cucumbers                                | D | <input type="checkbox"/> | <input type="checkbox"/> | potatoes   |
| E | <input type="checkbox"/> | <input type="checkbox"/> | broccoli                                 | E | <input type="checkbox"/> | <input type="checkbox"/> | yams or sweet potatoes                           |
| F | <input type="checkbox"/> | <input type="checkbox"/> | cauliflower                              | F | <input type="checkbox"/> | <input type="checkbox"/> | alfalfa sprouts                                  |
| G | <input type="checkbox"/> | <input type="checkbox"/> | green bell peppers                       | G | <input type="checkbox"/> | <input type="checkbox"/> | bean sprouts                                     |
| H | <input type="checkbox"/> | <input type="checkbox"/> | red bell peppers                         | H | <input type="checkbox"/> | <input type="checkbox"/> | any other sprouts {clover, mixed, broccoli, etc} |
| I | <input type="checkbox"/> | <input type="checkbox"/> | asparagus                                | I | <input type="checkbox"/> | <input type="checkbox"/> | fresh basil                                      |
| J | <input type="checkbox"/> | <input type="checkbox"/> | fresh corn                               | J | <input type="checkbox"/> | <input type="checkbox"/> | fresh parsley                                    |
| K | <input type="checkbox"/> | <input type="checkbox"/> | snow peas {eaten in pod}                 | K | <input type="checkbox"/> | <input type="checkbox"/> | fresh cilantro                                   |
| L | <input type="checkbox"/> | <input type="checkbox"/> | fresh beans                              | L | <input type="checkbox"/> | <input type="checkbox"/> | other fresh herbs                                |
| M | <input type="checkbox"/> | <input type="checkbox"/> | brussel sprouts                          | M | <input type="checkbox"/> | <input type="checkbox"/> | fresh garlic                                     |
| N | <input type="checkbox"/> | <input type="checkbox"/> | eggplant                                 | N | <input type="checkbox"/> | <input type="checkbox"/> | fresh mushrooms                                  |
| O | <input type="checkbox"/> | <input type="checkbox"/> | zucchini or other "soft" squash          | O | <input type="checkbox"/> | <input type="checkbox"/> | beets, turnips, or radishes                      |
| P | <input type="checkbox"/> | <input type="checkbox"/> | any "hard" squash {pumpkin, acorn, etc.} | P | <input type="checkbox"/> | <input type="checkbox"/> | any "organic" produce                            |
| Q | <input type="checkbox"/> | <input type="checkbox"/> | white or yellow onions                   | Q | <input type="checkbox"/> | <input type="checkbox"/> | other fresh vegetables: _____                    |
| R | <input type="checkbox"/> | <input type="checkbox"/> | green onions {scallions}                 |   |                          |                          |  |

**Please fill in any comments on types, brands, how eaten, where eaten, where purchased in the space below.**

| Y | M                        | N                        | DAIRY AND EGGS  | Y | M                        | N                        | CHEESE   |
|---|--------------------------|--------------------------|---|---|--------------------------|--------------------------|--|
| A | <input type="checkbox"/> | <input type="checkbox"/> | eggs {anything anywhere from fresh eggs} <i>If yes, ...</i>   | A | <input type="checkbox"/> | <input type="checkbox"/> | cream cheese   |
| B | <input type="checkbox"/> | <input type="checkbox"/> | any eggs at home  | B | <input type="checkbox"/> | <input type="checkbox"/> | cottage cheese   |
| C | <input type="checkbox"/> | <input type="checkbox"/> | any eggs away from home   | C | <input type="checkbox"/> | <input type="checkbox"/> | Ricotta  |
| D | <input type="checkbox"/> | <input type="checkbox"/> | any eggs anywhere that were runny   | D | <input type="checkbox"/> | <input type="checkbox"/> | any "string" cheese  |
| E | <input type="checkbox"/> | <input type="checkbox"/> | anything that had eggs that were still raw in it {e.g.,<br>dough, sauces, homemade ice cream, mayo} | E | <input type="checkbox"/> | <input type="checkbox"/> | any cheese sold as or cut from solid blocks {"typical"}  |
| F | <input type="checkbox"/> | <input type="checkbox"/> | any egg substitutes {Egg-Beaters, etc.}   | F | <input type="checkbox"/> | <input type="checkbox"/> | any cheese on a deli-type sandwich   |
| G | <input type="checkbox"/> | <input type="checkbox"/> | butter {real butter; not margarine}   | G | <input type="checkbox"/> | <input type="checkbox"/> | any cheese spread  |
| H | <input type="checkbox"/> | <input type="checkbox"/> | buttermilk {fluid, not powdered}  | H | <input type="checkbox"/> | <input type="checkbox"/> | American {processed} cheese  |
| I | <input type="checkbox"/> | <input type="checkbox"/> | sour cream  | I | <input type="checkbox"/> | <input type="checkbox"/> | cheddar  |
| J | <input type="checkbox"/> | <input type="checkbox"/> | whipped cream   | J | <input type="checkbox"/> | <input type="checkbox"/> | Swiss  |
| K | <input type="checkbox"/> | <input type="checkbox"/> | fresh or flavored store-bought yogurt   | K | <input type="checkbox"/> | <input type="checkbox"/> | uncooked mozzarella {e.g., <i>not</i> cooked on pizza}   |
| L | <input type="checkbox"/> | <input type="checkbox"/> | frozen yogurt   | L | <input type="checkbox"/> | <input type="checkbox"/> | any Parmesan or Romano   |
| M | <input type="checkbox"/> | <input type="checkbox"/> | ice cream   | M | <input type="checkbox"/> | <input type="checkbox"/> | any blue-veined cheese {Bleu, gorgonzola,...}  |
| N | <input type="checkbox"/> | <input type="checkbox"/> | ice cream bars or frozen dairy dessert items  | N | <input type="checkbox"/> | <input type="checkbox"/> | feta   |
| O | <input type="checkbox"/> | <input type="checkbox"/> | any pasteurized {"regular"} milk.   | O | <input type="checkbox"/> | <input type="checkbox"/> | any cheese made from goat or sheep milk  |
| P | <input type="checkbox"/> | <input type="checkbox"/> | any unpasteurized {raw} milk  | P | <input type="checkbox"/> | <input type="checkbox"/> | any fancy imported cheese  |
| Q | <input type="checkbox"/> | <input type="checkbox"/> | other dairy or egg product: _____   | Q | <input type="checkbox"/> | <input type="checkbox"/> | homemade Mexican-style { <i>queso fresco, q. blanco</i> }  |
|   |                          |                          |   | R | <input type="checkbox"/> | <input type="checkbox"/> | store-bought Mexican-style { <i>queso fresco, q. blanco</i> }                                    |
|   |                          |                          |   | S | <input type="checkbox"/> | <input type="checkbox"/> | any cheese made from unpasteurized milk {often<br>homemade or sold off-the-farm or door-to-door} |
|   |                          |                          |   | T | <input type="checkbox"/> | <input type="checkbox"/> | other cheese product: _____  |

Please fill in any comments on types, brands, how eaten, where eaten, where purchased in the space below.

| Y | M                        | N                        | MEAT & POULTRY   | Y | M                        | N                        | COOKED OR PROCESSED MEATS                                     |
|---|--------------------------|--------------------------|--|---|--------------------------|--------------------------|---|
| A | <input type="checkbox"/> | <input type="checkbox"/> | any chicken prepared at home {i.e., not take-out}                      | A | <input type="checkbox"/> | <input type="checkbox"/> | smoked or dried fish {e.g., lox}                              |
| B | <input type="checkbox"/> | <input type="checkbox"/> | anything prepared at home from a "whole" chicken                       | B | <input type="checkbox"/> | <input type="checkbox"/> | any pre-packaged sliced deli meats                            |
| C | <input type="checkbox"/> | <input type="checkbox"/> | <i>if yes, was that chicken frozen when you got it?</i>                | C | <input type="checkbox"/> | <input type="checkbox"/> | any other sliced deli meats {i.e., <i>not</i> pre-packaged}   |
| D | <input type="checkbox"/> | <input type="checkbox"/> | anything prepared at home from pre-cut chicken parts                   | D | <input type="checkbox"/> | <input type="checkbox"/> | corn dogs   |
| E | <input type="checkbox"/> | <input type="checkbox"/> | <i>if yes, was that chicken frozen when you got it?</i>                | E | <input type="checkbox"/> | <input type="checkbox"/> | hot dogs  |
| F | <input type="checkbox"/> | <input type="checkbox"/> | any chicken prepared or eaten <i>away</i> from home                    | F | <input type="checkbox"/> | <input type="checkbox"/> | bologna   |
| G | <input type="checkbox"/> | <input type="checkbox"/> | anything from ground chicken   | G | <input type="checkbox"/> | <input type="checkbox"/> | bacon   |
| H | <input type="checkbox"/> | <input type="checkbox"/> | ground turkey  | H | <input type="checkbox"/> | <input type="checkbox"/> | breakfast sausage   |
| I | <input type="checkbox"/> | <input type="checkbox"/> | any other turkey {whole or parts}                                      | I | <input type="checkbox"/> | <input type="checkbox"/> | any other sausage/bratwurst etc.                              |
| J | <input type="checkbox"/> | <input type="checkbox"/> | duck or game hen   | J | <input type="checkbox"/> | <input type="checkbox"/> | pepperoni/salami  |
| K | <input type="checkbox"/> | <input type="checkbox"/> | veal   | K | <input type="checkbox"/> | <input type="checkbox"/> | store-bought beef sticks/jerky                                |
| L | <input type="checkbox"/> | <input type="checkbox"/> | pork   | L | <input type="checkbox"/> | <input type="checkbox"/> | other meat or poultry: _____                                  |
| M | <input type="checkbox"/> | <input type="checkbox"/> | ham  |   |                          |                          | <b>SEAFOOD</b> -----  |
| N | <input type="checkbox"/> | <input type="checkbox"/> | lamb   | M | <input type="checkbox"/> | <input type="checkbox"/> | {store-bought} fresh fish                                     |
| O | <input type="checkbox"/> | <input type="checkbox"/> | any kind of game {venison, pheasant, etc.—<br>fresh, frozen, or dried} | N | <input type="checkbox"/> | <input type="checkbox"/> | crab  |
|   |                          |                          |  | O | <input type="checkbox"/> | <input type="checkbox"/> | shrimp/prawns   |
|   |                          |                          |  | P | <input type="checkbox"/> | <input type="checkbox"/> | oysters   |
|   |                          |                          |  | Q | <input type="checkbox"/> | <input type="checkbox"/> | <i>if yes, were the oysters raw when eaten?</i>               |
|   |                          |                          |  | R | <input type="checkbox"/> | <input type="checkbox"/> | other shellfish   |
|   |                          |                          |  | S | <input type="checkbox"/> | <input type="checkbox"/> | <i>if yes, were the shellfish raw when eaten?</i>             |
|   |                          |                          |  | T | <input type="checkbox"/> | <input type="checkbox"/> | sushi, sashimi, or ceviche made with raw fish or<br>shellfish |
|   |                          |                          |  | U | <input type="checkbox"/> | <input type="checkbox"/> | other seafood: _____  |

Please fill in any comments on types, brands, how eaten, where eaten, where purchased in the space below.

|   |  |   |   |
|---|--|---|---|
| <p><b>Y M N</b></p> <p>A <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>B <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>C <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>D <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>E <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>F <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>G <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>H <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>I <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>J <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>K <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> | <p><b>PREMADE AND DRIED FOODS</b></p> <p>pre-made ethnic specialty food</p> <p>peanut butter</p> <p>any fresh-ground "natural" peanut butter</p> <p>almonds</p> <p>walnuts</p> <p>cashews</p> <p>pistachios</p> <p>other seeds (e.g., pepita)</p> <p>raisins</p> <p>other premade/dried foods: _____</p> | <p><b>Y M N</b></p> <p>A <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>B <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>C <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>D <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>E <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>F <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> | <p><b>MISCELLANY</b></p> <p>any <i>fresh</i> salsa</p> <p>taco shells</p> <p>tortillas</p> <p>bulk chocolate (not wrapped candy)</p> <p>any spices bought in bulk or at ethnic specialty markets (e.g., from a bin or in a plastic pouch, Indian groceries, etc.)</p> <p>any spices at home first opened in the 2 weeks before illness onset</p>  |
| <p><b>Y M N</b></p> <p>A <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>B <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>-----</p> <p>C <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>D <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>E <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>F <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>G <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>  | <p><b>FROZEN FOODS</b></p> <p>ethnic specialty frozen food, e.g., tamales</p> <p>other frozen foods: _____</p> <p><b>SNACK FOODS</b></p> <p>crackers: _____</p> <p>cookies: _____</p> <p>chips (potato, corn, Fritos, etc.)</p> <p>candy: _____</p> <p>other snack foods: _____</p>                      | <p><b>Y M N</b></p> <p>A <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>B <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>C <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>D <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>E <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>F <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> | <p><b>SPECIFIC FOODS EATEN OUT</b></p> <p><i>These refer to food eaten or prepared away from home</i></p> <p>anything from a salad bar</p> <p>any kind of salad made with lettuce or greens</p> <p>anything with raw tomatoes</p> <p>any kind of burrito or "wrap"</p> <p>any kind of stir-fry or other dish that might have included bean sprouts</p> <p>anything that might have had fresh cilantro such as salsa, spring roll, taco, and other Mexican and Asian foods</p> |
| <p><b>Please fill in any comments on types, brands, how eaten, where eaten, where purchased in the space below.</b></p><br><br><br><br><br><br><br><br><br><br>   |  |   |   |

That's my last question. I realized that I have asked you a lot of questions. Do you have any questions for me?

Thank you very much for your time and assistance. These interviews are extremely valuable in helping us solve the mystery of why people are getting sick. Depending on what we find out when we put these interviews together, we may need to follow up about a few details. Are there any other numbers I should have in case I need to reach you quickly?

\_\_\_\_\_

If you think of anything else or need to contact me, you can call me at \_\_\_\_\_. Thank you again for your time.





Edwin M. Lee  
Mayor

## Appendix C

Barbara A. Garcia, MPA  
Director of Health

Tomás J. Aragón, MD, DrPH  
Health Officer

Date: 08/30/2013

Burma SuperStar Restaurant  
309 Clement St  
San Francisco, CA 94118  
Tel: (415) 387-2147

Dear Owner and Managers,

The San Francisco Department Public Health is conducting an investigation of at least nine patients with *E. coli* O157 infection that reported eating in your restaurant on August 16 and 17, 2013. *E. coli* O157 bacteria cause bloody diarrhea that can be complicated by kidney failure. Several patients have been hospitalized.

Our investigation suggests these patients became infected at your restaurant, though at this point we do not whether from a contaminated food ingredient, a contaminated food item, or a sick foodhandler. To complete our investigation we need your full cooperation.

Our Environmental Health inspectors will be working with your restaurant to complete this investigation. We will require the following:

1. List of all workers that worked on August 16 and 17, 2013. Please include their phone numbers.
2. Confidential interviews with these workers.
3. All foodhandlers that worked on August 16 and 17, 2013 are required to submit stool specimens for testing of *E. coli* O157 by Wednesday, September 4, 2013.
4. All foodhandlers must follow strict food and hand sanitation practices.
5. All foodhandlers must complete approved food and hand sanitation training.
6. All foodhandlers that are or become sick (fever or diarrhea) cannot come to work, they must be reported to the SFDPH (415-554-2830), and they must follow our instructions for stool testing before they can return to work.
7. Strictly adhere to all recommendations and requests by our Environmental Health inspectors.

Your cooperation is essential to protecting the health of the public and your patrons.

Thank you for your full cooperation,

Dr. Tomás Aragón  
Health Officer, City & County of San Francisco  
Director, Population Health Division

# Appendix D



City and County of San Francisco

Edwin M. Lee, Mayor

## San Francisco Department of Public Health

Barbara A. Garcia, MPA  
Director of Health

Tomás J. Aragón, MD, DrPH  
Health Officer

**FOR IMMEDIATE RELEASE**

**August 30, 2013**

**CONTACT INFO:**

**Burma Superstar: Joe Arellano**

[joe@joearellano.com](mailto:joe@joearellano.com)

**San Francisco Department of Public Health:**

[Eileen.Shields@sfdph.org](mailto:Eileen.Shields@sfdph.org)

415/554-2507

### Statements Regarding *E. Coli* Cases in San Francisco

#### STATEMENT BY TOMÁS J. ARAGÓN, MD, DRPH, SAN FRANCISCO HEALTH OFFICER

**SAN FRANCISCO, CA** - The San Francisco Department of Public Health (SFDPH) is investigating an outbreak of *E. coli* O157 infection in 14 persons (11 San Francisco residents), 9 of whom ate at a restaurant in San Francisco on August 16 or 17. There have been no fatalities and there have been no new cases since this exposure date. Based on our current investigation, our preliminary conclusion is that there is no ongoing risk to the public's health. The restaurant, San Francisco Burma Superstar, is fully cooperating with health authorities. Their environmental health food inspections have been excellent. The restaurant will remain open and SFDPH is working with owners to ensure continuing safe food storage, preparation, and handling. SFDPH is continuing its investigation, conducting special interview studies with the patients to determine how they may have been exposed and working closely with the California Department of Public Health.

Residents are reminded to always follow good hygiene practices, including washing hands thoroughly with soap and water after using the bathroom, changing diapers and before preparing food or eating. Safe food-handling includes cooking meats thoroughly, and thoroughly washing hands, counters, cutting boards, and utensils after touching raw meat. San Franciscans experiencing symptoms of *E. coli* infection, which may include abdominal cramps and diarrhea, which is often bloody, should consult their doctors.

—more—

See next page for San Francisco Burma Superstar statement

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**The mission of the San Francisco Department of Public Health is to protect and promote the health of all San Franciscans.**

We shall ~ Assess and research the health of the community ~ Develop and enforce health policy ~ Prevent disease and injury ~  
~ Educate the public and train health care providers ~ Provide quality, comprehensive, culturally-proficient health services ~ Ensure equal access to all ~

101 Grove Street, Room 308, San Francisco, CA 94102 • Phone: 415-554-2600

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## **STATEMENT BY SAN FRANCISCO BURMA SUPERSTAR REGARDING REPORTED CASES OF E. COLI**

**SAN FRANCISCO, CA**— Today San Francisco Burma Superstar owner Desmond Tan released the following statement in response to reported cases of E. coli at his restaurant.

“We understand that several customers who dined at our restaurant on or around August 17th were exposed to E coli. We have been informed by the Department of Public Health that this is an isolated incident and we are fully cooperating with their investigation.

San Francisco Burma Superstar has been in business for over 17 years, serving hundreds of people everyday and this is the first incident that we have ever had in our history. We have and continue to adhere to the highest food safety health practices, including having DPH officials provide food safety seminars to our staff. Additionally, we have always utilized vendors that provide only the best ingredients.

We are working with public health officials to identify the exact cause of these incidents, and the City has reassured us that this was an isolated case and that San Francisco Burma Superstar is a safe place to eat.

We plan to continue using thorough food safety practices and will ensure that all of our vendors do so as well. We are confident that any exposure has been eliminated and that this appears to be an isolated and singular incident. We greatly apologize for the inconvenience this has caused and thank all of our customers for their continued support and patience. We are doing everything we can to ensure that an incident of this type never occurs again. We have decided to voluntarily close our restaurant over the Labor Day holiday and plan to reopen on Monday.”

###



Case     Control # \_\_\_\_\_

**Section 4: BURMA SUPERSTAR:** I will now ask you about foods you may have eaten at a specific restaurant in San Francisco. I know it can be very difficult to remember what you ate. Please let us know, even if you had only a bite or a small taste. Take your time.

| Yes                      | Maybe                    | No                       | Don't Know               | Did you (your child):   |
|--------------------------|--------------------------|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>1. Eat any foods from Burma Superstar or BStar restaurant, either as dine-in or take-out?</b><br><br><i>Note to interviewer: If response is NO or DON'T KNOW, skip to closing statement.</i>   |
|                          |                          |                          |                          | 1a. Which restaurant: <input type="checkbox"/> Burma Superstar <input type="checkbox"/> BStar<br>1b. Location (address, city, state): _____<br>1c. Dine-in or take-out: <input type="checkbox"/> Dine-in <input type="checkbox"/> Take-out<br>1d. Date of meal: _____<br>1e. Time of meal: _____ <input type="checkbox"/> am <input type="checkbox"/> pm  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>2. Did you (your child) eat any salads? Remember, we want to know even if you just had a small taste or bite.</b>  |
|                          |                          |                          |                          | Which of the following salads did you eat?<br><br><b>Y   M   N   DK</b><br><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Tea Leaf Salad<br><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Ginger Salad<br><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Rainbow Salad<br><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Burmese Style Chicken Salad<br><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Mango Salad<br><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Samusa Salad (Burmese raviolis)<br><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Burmese Traditional Rice Salad<br><br>For any of these dishes:<br><b>Y   M   N   DK</b><br><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Did you ask for any changes or substitutions to the dish? (i.e., dressing/sauce on the side, no jalapenos, using a different meat, vegetarian, etc.)<br>If yes, which dish and please describe: _____<br><br><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Did you add any condiments, spices, seasonings, or sauces to the dish?<br>If yes, please describe: _____<br><br>If you can't remember the name of the dish, can you describe the ingredients and how it was cooked or brought out to the table?: |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>3. Did you (your child) eat any appetizers? Remember, we want to know even if you just had a small taste or bite.</b>  |
|                          |                          |                          |                          | Which of the following appetizers did you eat?<br><br><b>Y   M   N   DK</b><br><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Burmese Samusas (raviolis filled with curry spices, potatoes and sauce)<br>If yes, with: <input type="checkbox"/> chicken <input type="checkbox"/> lamb <input type="checkbox"/> vegetarian<br><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Fried Yellow Bean Tofu<br><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Platha and Dip (multilayered bread with coconut chicken curry sauce)<br><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Lettuce Cups<br><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Mu Shu Vegetable Wraps (vegetable or beef)<br>If yes, with: <input type="checkbox"/> vegetable <input type="checkbox"/> beef<br><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Salt and Pepper Chicken<br><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Salt and Pepper Calamari<br><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Sticky Fingers (pork riblettes with bone in)   |

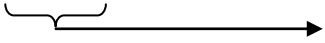
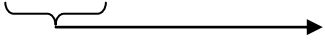
Case     Control # \_\_\_\_\_

|   | <p>For any of these dishes:<br/> <b>Y M N DK</b><br/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Did you ask for any changes or substitutions to the dish? (i.e., dressing/sauce on the side, no jalapenos, using a different meat, vegetarian, etc.)<br/>                     If yes, which dish and please describe: _____</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Did you add any condiments, spices, seasonings, or sauces to the dish?<br/>                     If yes, please describe: _____</p> <p>If you can't remember the name of the dish, can you describe the ingredients and how it was cooked or brought out to the table?:</p>  |                          |                          |            |                          |                          |                          |                          |   |
|---|--|--------------------------|--------------------------|------------|--------------------------|--------------------------|--------------------------|--------------------------|---|
| <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 25%;">Yes</th> <th style="width: 25%;">Maybe</th> <th style="width: 25%;">No</th> <th style="width: 25%;">Don't Know</th> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table> | Yes  | Maybe                    | No                       | Don't Know | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <p><b>Did you (your child):</b></p>   |
| Yes   | Maybe  | No                       | Don't Know               |            |                          |                          |                          |                          |   |
| <input type="checkbox"/>  | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> |            |                          |                          |                          |                          |   |
| <p><b>4. Did you (your child) eat any soups? Remember, we want to know even if you just had a small taste or bite.</b></p>  |  |                          |                          |            |                          |                          |                          |                          |   |
|   | <p>Which of the following soups did you eat?</p> <p><b>Y M N DK</b><br/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Vegetarian Samusa Soup<br/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Moh Hinga (catfish chowder)<br/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Oh Noh Kauswer (coconut chicken noodle soup)</p> <p>For any of these dishes:<br/> <b>Y M N DK</b><br/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Did you ask for any changes or substitutions to the dish? (i.e., dressing/sauce on the side, no jalapenos, using a different meat, vegetarian, etc.)<br/>                     If yes, which dish and please describe: _____</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Did you add any condiments, spices, seasonings, or sauces to the dish?<br/>                     If yes, please describe: _____</p> <p>If you can't remember the name of the dish, can you describe the ingredients and how it was cooked or brought out to the table?:</p>   |                          |                          |            |                          |                          |                          |                          |   |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 25%;">Yes</th> <th style="width: 25%;">Maybe</th> <th style="width: 25%;">No</th> <th style="width: 25%;">Don't Know</th> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table> | Yes  | Maybe                    | No                       | Don't Know | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <p><b>5. Did you (your child) eat any chicken dishes? Remember, we want to know even if you just had a small taste or bite.</b></p> |
| Yes   | Maybe  | No                       | Don't Know               |            |                          |                          |                          |                          |   |
| <input type="checkbox"/>  | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> |            |                          |                          |                          |                          |   |
|   | <p>Which of the following chicken dishes did you eat?</p> <p><b>Y M N DK</b><br/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Classic Burmese chicken Casserole with Cardamom Cinnamon Rice<br/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Mint chicken<br/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Chicken Dahl (special curry with yellow beans, chicken is on the bone)<br/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Fiery chicken with tofu<br/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Spicy and Crispy chicken<br/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Chicken with fresh basil<br/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Sesame chicken<br/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Chicken Tofu kebat<br/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Mango chicken</p> <p>For any of these dishes:<br/> <b>Y M N DK</b><br/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Did you ask for any changes or substitutions to the dish? (i.e., dressing/sauce on the side, no jalapenos, using a different meat, vegetarian, etc.)<br/>                     If yes, which dish and please describe: _____</p> <p>_____</p> |                          |                          |            |                          |                          |                          |                          |   |

Case     Control # \_\_\_\_\_

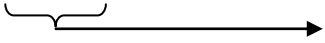
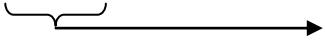
|                          |                          |                          |                          |  |
|--------------------------|--------------------------|--------------------------|--------------------------|--|
|                          |                          |                          |                          | <p><b>Y M N DK</b><br/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Did you add any condiments, spices, seasonings, or sauces to the dish?<br/>                 If yes, please describe: _____</p> <p>If you can't remember the name of the dish, can you describe the ingredients and how it was cooked or brought out to the table?:</p>   |
| <b>Yes</b>               | <b>Maybe</b>             | <b>No</b>                | <b>Don't Know</b>        | <b>Did you (your child):</b>   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>6. Did you (your child) eat any pork dishes? Remember, we want to know even if you just had a small taste or bite.</b>  |
|                          |                          |                          |                          | <p>Which of the following pork dishes did you eat?</p> <p><b>Y M N DK</b><br/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Pork curry with potatoes<br/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Pumpkin pork stew<br/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Braised pork belly with pickled mustard greens<br/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Basil Chili pork belly</p> <p>For any of these dishes:<br/> <b>Y M N DK</b><br/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Did you ask for any changes or substitutions to the dish? (i.e., dressing/sauce on the side, no jalapenos, using a different meat, vegetarian, etc.)<br/>                 If yes, which dish and please describe: _____</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Did you add any condiments, spices, seasonings, or sauces to the dish?<br/>                 If yes, please describe: _____</p> <p>If you can't remember the name of the dish, can you describe the ingredients and how it was cooked or brought out to the table?:</p>   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>7. Did you (your child) eat any beef dishes? Remember, we want to know even if you just had a small taste or bite.</b>  |
|                          |                          |                          |                          | <p>Which of the following beef dishes did you eat?</p> <p><b>Y M N DK</b><br/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Burmese style curry with beef<br/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Sesame beef<br/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Homestyle Oxtail claypot<br/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Steak Kebab<br/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Fiery Tofu with beef<br/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Mango beef</p> <p>For any of these dishes:<br/> <b>Y M N DK</b><br/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Did you ask for any changes or substitutions to the dish? (i.e., dressing/sauce on the side, no jalapenos, using a different meat, vegetarian, etc.)<br/>                 If yes, which dish and please describe: _____</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Did you add any condiments, spices, seasonings, or sauces to the dish?<br/>                 If yes, please describe: _____</p> <p>If you can't remember the name of the dish, can you describe the ingredients and how it was cooked or brought out to the table?:</p> |

Case     Control # \_\_\_\_\_

| Yes   | Maybe                    | No                       | Don't Know               | Did you (your child):   |
|---|--------------------------|--------------------------|--------------------------|---|
| <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>8. Did you (your child) eat any lamb dishes? Remember, we want to know even if you just had a small taste or bite.</b>   |
|    |                          |                          |                          | <p>Which of the following lamb dishes did you eat?</p> <p><b>Y M N DK</b></p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Burmese style curry with lamb</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Chili lamb</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Fiery tofu with lamb</p> <p>For any of these dishes:</p> <p><b>Y M N DK</b></p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Did you ask for any changes or substitutions to the dish? (i.e., dressing/sauce on the side, no jalapenos, using a different meat, vegetarian, etc.)<br/>If yes, which dish and please describe: _____</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Did you add any condiments, spices, seasonings, or sauces to the dish?<br/>If yes, please describe: _____</p> <p>If you can't remember the name of the dish, can you describe the ingredients and how it was cooked or brought out to the table?:</p>  |
| <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>9. Did you (your child) eat any seafood dishes? Remember, we want to know even if you just had a small taste or bite.</b>  |
|  |                          |                          |                          | <p>Which of the following seafood dishes did you eat?</p> <p><b>Y M N DK</b></p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Burmese style curry<br/>If yes, with: <input type="checkbox"/> shrimp    <input type="checkbox"/> catfish</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> SuperStar shrimp (wok tossed shrimps with a chili and garlic sauce)</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Pumpkin shrimp</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Garlic chili shrimp</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Lemongrass salmon</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Walnut shrimp</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Shrimp Kebat</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Mango shrimp</p> <p>For any of these dishes:</p> <p><b>Y M N DK</b></p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Did you ask for any changes or substitutions to the dish? (i.e., dressing/sauce on the side, no jalapenos, using a different meat, vegetarian, etc.)<br/>If yes, which dish and please describe: _____</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Did you add any condiments, spices, seasonings, or sauces to the dish?<br/>If yes, please describe: _____</p> <p>If you can't remember the name of the dish, can you describe the ingredients and how it was cooked or brought out to the table?:</p> |



Case     Control # \_\_\_\_\_

| Yes   | Maybe                    | No                       | Don't Know               | Did you (your child):  |
|---|--------------------------|--------------------------|--------------------------|--|
| <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>10. Did you (your child) eat any noodle dishes? Remember, we want to know even if you just had a small taste or bite.</b>   |
|    |                          |                          |                          | <p>Which of the following noodle dishes did you eat?</p> <p><b>Y M N DK</b></p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> SuperStar Vegetarian Noodles</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Nan Gyi Dok (mild coconut chicken rice noodle curry)</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Bun Tay Kauswer (coconut chicken curry flour noodle)</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Nan Pia Dok (coconut chicken curry flat flour noodles)</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Shan Noodles (rice noodles in a spicy tomato sauce with pickled radish, cilantro, peanuts, and choice of chicken or tofu)</p> <p>If yes, with: <input type="checkbox"/> chicken    <input type="checkbox"/> tofu</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Garlic noodles</p> <p>If yes, with: <input type="checkbox"/> duck    <input type="checkbox"/> pork    <input type="checkbox"/> tofu    <input type="checkbox"/> broccoli</p> <p>For any of these dishes:</p> <p><b>Y M N DK</b></p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Did you ask for any changes or substitutions to the dish? (i.e., dressing/sauce on the side, no jalapenos, using a different meat, vegetarian, etc.)</p> <p>If yes, which dish and please describe: _____</p> <p>_____</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Did you add any condiments, spices, seasonings, or sauces to the dish?</p> <p>If yes, please describe: _____</p> <p>If you can't remember the name of the dish, can you describe the ingredients and how it was cooked or brought out to the table?:</p> |
| <input type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>11. Did you (your child) eat any rice dishes? Remember, we want to know even if you just had a small taste or bite.</b>   |
|  |                          |                          |                          | <p>Which of the following rice dishes did you eat?</p> <p><b>Y M N DK</b></p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Coconut rice</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Tan poi (Basmati rice with cardamom, cinnamon, raisins, fried onions)</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> White Jasmine rice</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Brown Jasmine rice</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Burmese style fried rice (with brown rice and whole yellow beans)</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Burmese Traditional Rice Salad</p> <p>For any of these dishes:</p> <p><b>Y M N DK</b></p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Did you ask for any changes or substitutions to the dish? (i.e., dressing/sauce on the side, no jalapenos, using a different meat, vegetarian, etc.)</p> <p>If yes, which dish and please describe: _____</p> <p>_____</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Did you add any condiments, spices, seasonings, or sauces to the dish?</p> <p>If yes, please describe: _____</p> <p>If you can't remember the name of the dish, can you describe the ingredients and how it was cooked or brought out to the table?:</p>   |

Case     Control # \_\_\_\_\_

| Yes                      | Maybe                    | No                       | Don't Know               | Did you (your child):  |
|--------------------------|--------------------------|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>12. Did you (your child) eat any vegetable or tofu dishes? Remember, we want to know even if you just had a small taste or bite.</b>  |
|                          |                          |                          |                          | Which of the following vegetable or tofu dishes did you eat?<br><b>Y M N DK</b><br><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Peashoots<br><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Wok Tossed Broccoli<br><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Poodi (Potato Curry)<br><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Yellow Bean Curry<br><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Vegetable Curry Delux<br><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Okra Tofu<br><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Tofu Vegetable Kebat<br><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Okra Egg Curry<br><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Sesame Tofu<br><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Dried Fried String Beans<br><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Eggplant with Garlic Sauce<br><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Eggplant and Curry Tofu<br><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Tofu Tower<br><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Fiery Vegetables with Tofu<br><br>For any of these dishes:<br><b>Y M N DK</b><br><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Did you ask for any changes or substitutions to the dish? (i.e., dressing/sauce on the side, no jalapenos, using a different meat, vegetarian, etc.)<br>If yes, which dish and please describe: _____<br>_____<br><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Did you add any condiments, spices, seasonings, or sauces to the dish?<br>If yes, please describe: _____<br>_____<br><br>If you can't remember the name of the dish, can you describe the ingredients and how it was cooked or brought out to the table?: _____ |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>13. Did you (your child) have any drinks? Remember, we want to know even if you just had a small taste or sip.</b>  |
|                          |                          |                          |                          | Which of the following drinks did you have?<br><b>Y M N DK</b><br><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Lemonade<br><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Fresh coconut juice<br><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Tea<br><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Water<br><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Other   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>14. We have covered a wide variety of food and drinks. Are there any other items that you (your child) ate or drank that have not been mentioned?</b>   |
|                          |                          |                          |                          | Please describe with as much detail as possible.   |
| <b>Comments:</b>         |                          |                          |                          |  |

That's my last question. I realized that I have asked you a lot of questions. Do you have any questions for me?

Thank you very much for your time and assistance. These interviews are extremely valuable in helping us solve the mystery of why people are getting sick. Depending on what we find out when we put these interviews together, we may need to follow up about a few details. Are there any other numbers I should have in case I need to reach you quickly? \_\_\_\_\_. If you think of anything else or need to contact me, you can call me at \_\_\_\_\_. Thank you again for your time.

**Appendix F**

```

##-----
## epicurve.dates function for R
##-----
epicurve.dates = function (x, format = "%Y-%m-%d", strata = NULL,
                           min.date, max.date, before = 7, after = 7,
                           width = 1, space = 0, tick = TRUE,
                           tick.offset = 0.5, segments = FALSE, ...){
  dates0 <- as.Date(x, format = format)
  if (missing(min.date)) {
    min.date <- min(dates0, na.rm = TRUE) - before
  }
  if (missing(max.date)) {
    max.date <- max(dates0, na.rm = TRUE) + after
  }
  cdates <- seq(min.date, max.date, by = 1)
  dates <- factor(as.character(dates0), levels = as.character(cdates))
  if (is.null(strata)) {
    dat <- t(as.matrix(table(dates)))
  }
  else {
    dat <- t(table(dates, strata))
  }
  xvals <- barplot(dat, width = width, space = space, ...)
  if (tick) {
    axis(1, at = c(0, xvals + tick.offset), labels = FALSE, tick = TRUE)
  }
  if (segments) {
    x <- xvals - (width/2)
    y2 <- apply(dat, 2, sum)
    xy2 <- cbind(x, y2)
    y0 <- cbind(xy2[1, 1], 0:xy2[1, 2])
    z0 <- cbind(y0, y0[, 1] + width, y0[, 2])
    for (i in 2:nrow(xy2)) {
      yy <- cbind(xy2[i, 1], 0:xy2[i, 2])
      z <- cbind(yy, yy[, 1] + width, yy[, 2])
      z2 <- rbind(z0, z)
      z0 <- z2
    }
    segments(z0[, 1], z0[, 2], z0[, 3], z0[, 4])
  }
  cmday <- as.numeric(format(cdates, format = "%d"))
  cmonth <- format(cdates, format = "%b")
  cyear <- format(cdates, format = "%Y")
  rr <- list(dates = dates0, dates2 = dates, xvals = xvals,
            cdates = cdates, cmday = cmday, cmonth = cmonth, cyear = cyear)
  invisible(rr)
}

##-----
## Read data into R
##-----
dat <- read.table("final-linelist.txt", header = TRUE, sep = "", as.is = TRUE)
dat$Julian = as.Date(dat$Onset, format = "%m/%d/%y")

##-----
## Create PDF epidemic curve
##-----
pdf("ecoli-bss-epicurve.pdf", width = 4, height = 4)
bss = epicurve.dates(dat$Julian, segments = TRUE, strata = dat$Status, axes = FALSE,
                    axisnames = FALSE, ylim = c(0,10), ylab = "Cases",
                    xlab = "Symptom Onset Date (August)", legend.text = TRUE, before = 1,
                    after =3, args.legend = list(legend=c("Probable", "Confirmed")),
axis(1, at = bss$xvals, labels = format(bss$cdates, "%d"), tick = FALSE)
axis(2, at = 1:9, labels = 1:9, las = 1)
points(c(1.5,7.5),c(0.5,0.5),pch=2,col="white")
abline(h=1:8, lty = 2, col = "lightgrey")
dev.off()

```