

Epi Monthly Report

Office of Epidemiology and Disease Control



Foodborne Outbreak of *Campylobacter* Infection from a Group Conference in North Miami Beach, Miami-Dade County, 2002

Juan A. Suarez, Marie K. Etienne, Fermin Leguen

Inside this issue:

Foodborne Outbreak of *Campylobacter* Infection from a Group Conference in North Miami Beach, Miami-Dade County, 2002 1

Selected Reportable Diseases/Conditions in Miami-Dade County, March 2002 4

Background

On February 13, 2002, a physician from New York City reported to the Office of Epidemiology and Disease Control (OEDC), Miami-Dade County Health Department (MDCHD), that he had diagnosed two college students with food poisoning and that these students had attended a conference at a hotel in North Miami Beach from February 1st to the 3rd, 2002. On February 14th the Department of Business and Professional Regulation (DBPR) forwarded a complaint to the OEDC reporting that a student from Pennsylvania had a *Campylobacter jejuni* infection and had attended a conference in North Miami Beach. The OEDC expanded the investigation of the first two cases. A search for additional cases was initiated.

Campylobacter jejuni is the most common bacteria causing diarrheal diseases in the United States. Infected persons usually develop symptoms within a period of 1 to 10 days. Diarrhea, cramping, abdominal pain, and fever within 2 to 5 days are frequent complaints among patients with campylobacteriosis. The diarrhea may be bloody and can be accompanied by nausea and vomiting. This illness usu-

ally lasts about one week. Some of the persons infected with *Campylobacter* may never develop symptoms.

Investigation

Methods

Phone interviews of the index cases were conducted to gather information about the conference's participants, symptoms, and foods consumed. A copy of the menu served during the conference was obtained from the caterer. A questionnaire and a database were created in Epi Info 2000. The questionnaire was sent via e-mail to 74 attendees and organizers of the conference. A reminder was sent to non-respondents a few days later.

Case Definition

A case was defined as a person attending the conference who reported at least two of the following symptoms with an onset between February 2nd and 13th: diarrhea, fever, abdominal pain, tiredness, headache, and vomiting. A confirmed case was defined as having symptoms and a positive stool culture for *Campylobacter*.



Mary Jo Trepka, MD, MSPH
Director, Office of Epidemiology and Disease Control

1350 NW 14 Street BLDG. 7
Miami, Florida 33125

Tel: 305-324-2413
Fax: 305-325-3562
Email:
Maryjo_Trepka@doh.state.fl.us

Website: www.dadehealth.org

Laboratory Testing

Symptomatic persons were encouraged to seek medical attention and submit a stool sample for testing. No food samples were available for testing.

Environmental Investigation

An inspector from DBPR visited the caterer at the hotel and inspected the facilities to determine compliance with the regulations and a possible connection between foods and the outbreak.

Results

Epidemiologic Results

Nineteen (25.7%) of 74 attendees of the conference who received the questionnaire responded by either e-mail, fax or regular mail. Of the nineteen respondents, eight (42%) reported illness that met the case definition. Median duration of reported illness was 4 days. Six (75%) of the 8 ill respondents sought medical assistance for their symptoms. A summary of symptoms is shown in Table 1. The epidemic curve of this outbreak is displayed in Figure 1. One respondent had diarrhea but did not meet the case definition and was excluded from analysis.

Of the 18 remaining persons, the median age was 20 years old and ranged from 18 to 23 years. Eleven of them (61.1 %) were females.

Univariate analysis was performed to detect association between selected foods and illness. BBQ chicken wings and salad composed served on Saturday night were significantly associated with illness (Fisher's exact test, $p=0.004$ and 0.01 respectively). These two risk factors were included in a forward logistical regression analysis. Only BBQ chicken wings was significantly associated with illness by logistic regression analysis (odds ratio=54.0; 95% confidence interval =2.8-1040.0).

Laboratory Results

Two cases were confirmed by stool culture for *Campylobacter jejuni* and *Campylobacter* species.

Environmental Investigation Results

The DBPR inspector who visited the caterer kitchen facilities on February 14, 2002 reported several critical violations including lack of handwashing supplies, sanitizing techniques, dish washing protocols, and cold storage temperature violations. These violations resulted in a warning issued by DBPR threatening with further sanctions if the problems were not corrected.

Conclusions and Recommendations

This investigation was limited by a poor response. Only 26% participated. It is unknown if this group is representative of the entire group of attendees. However, it is likely that the ill students were more likely to participate. In addition, the students were interviewed an average of 15 days after the conference and some of them could not recall what they ate.

If these students are representative, this foodborne outbreak of *Campylobacter* infection had most likely as a vehicle the BBQ chicken wings consumed during the Saturday night BBQ. The survival of the organism could be a result of possible undercooking of the chicken. Several violations were reported by the DBPR inspector. These violations could have led to cross-contamination of the food. Handwashing is critical to prevent the transfer of bacteria from raw to cooked products. Cold storage temperatures must be maintained at 41 degrees F or lower. All these issues must be corrected to produce safe food at this location. We recommended to all attendees via e-mail that these persons seek medical attention if they developed gastrointestinal symptoms. Information about the isolated organism and accompanying illness was also sent to all attendees. This outbreak included exposed persons from several states as the attendees came from various states and Canada. No additional cases have been reported to our office.



Delay in the reporting of foodborne illnesses to the health department is detrimental to the successful implementation of control measures and may compromise the ability of the health authorities to prevent the transmission of foodborne pathogens potentially resulting in populations being exposed.

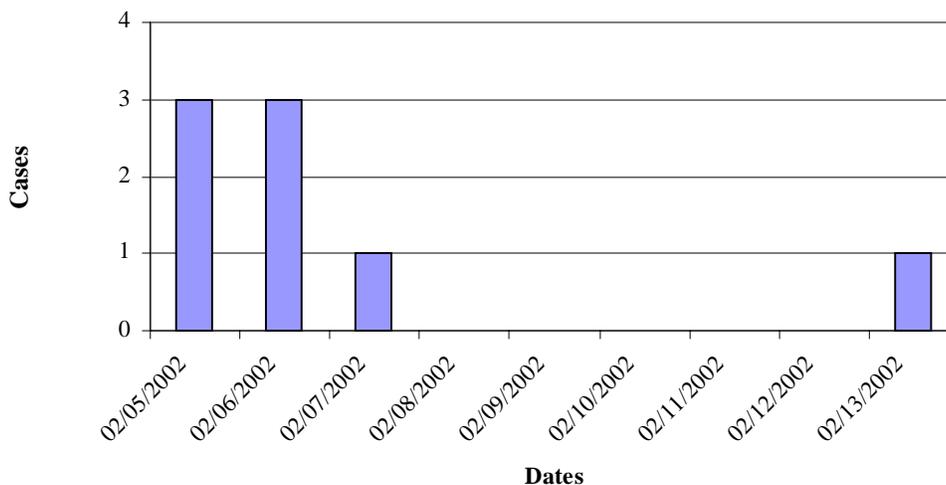
This outbreak highlights the utility of electronic communication in current public health practice. We were able to communicate quickly with attendees, physicians, and health authorities from other

states and Canada through e-mail facilitating the implementation of adequate control measures and the education of participants about hand washing and other health-related issues.

Table 1. Frequency of Symptoms among Ill Attendees, At a Conference in North Miami Beach, February 2002 (N=8)

Symptom	Number of cases	% of cases
Fever	8	100
Headache	7	87.5
Tiredness	7	87.5
Abdominal pain	6	75.0
Diarrhea	6	75.0
Vomiting	1	12.5
Bloody diarrhea	1	12.5

Figure 1. Number of Reported Ill Cases by Day of Onset, At a Conference in North Miami Beach, February 2002



Monthly Report

Selected Reportable Diseases/Conditions in Miami-Dade County, March 2002

Diseases/Conditions	2002	2002	2001	2000	1999	1998
	this Month	Year to Date				
AIDS ^{*Provisional}	118	329	371	388	391	391
Campylobacteriosis	8	19	21	7	14	7
Chancroid	0	0	0	0	0	0
<i>Chlamydia trachomatis</i>	276	869	665	849	1107	589
Ciguatera Poisoning	0	0	0	0	0	0
Cryptosporidiosis	0	1	4	1	0	1
Cyclosporiasis	0	0	0	0	0	0
Diphtheria	0	0	0	0	0	0
<i>E. coli</i> , O157:H7	0	0	0	0	0	0
<i>E. coli</i> , Other	0	0	0	0	0	0
Encephalitis	0	0	0	0	0	0
Giardiasis, Acute	18	33	45	1	4	8
Gonorrhea	96	402	352	620	745	714
Granuloma Inguinale	0	0	0	0	0	0
<i>Haemophilus influenzae</i> B (invasive)	0	0	1	1	0	0
Hepatitis A	7	17	36	14	9	35
Hepatitis B	1	3	9	4	9	0
HIV ^{*Provisional}	189	525	333	407	350	451
Lead Poisoning	18	48	43	N/A	N/A	N/A
Legionnaire's Disease	0	0	0	0	0	0
Leptospirosis	0	0	0	0	0	0
Lyme disease	0	0	0	0	0	0
Lymphogranuloma Venereum	0	0	0	0	0	2
Malaria	1	2	8	0	6	5
Measles	0	0	0	0	0	0
Meningitis (except aseptic)	1	2	2	1	1	5
Meningococcal Disease	2	4	4	5	4	2
Mumps	0	0	0	0	1	0
Pertussis	0	0	0	0	2	7
Polio	0	0	0	0	0	0
Rabies, Animal	0	0	0	0	0	1
Rubella	0	0	0	0	0	0
Salmonellosis	22	52	32	24	27	43
Shigellosis	17	40	19	19	26	28
<i>Streptococcus pneumoniae</i> , Drug Resistant	20	34	45	23	9	14
Syphilis, Infectious	15	46	50	40	20	9
Syphilis, Other	86	227	102	180	112	155
Tetanus	0	0	0	0	0	0
Toxoplasmosis	4	4	1	0	0	0
Tuberculosis ^{*Provisional}			39	48	47	82
Typhoid Fever	0	1	0	0	12	1
<i>Vibrio cholera</i>	0	0	0	0	0	0
<i>Vibrio</i> , Other	0	0	0	0	0	0

* Data on AIDS are provisional at the county level and are subject to edit checks by state and federal agencies.

** Data on tuberculosis are provisional at the county level.

