Miami-Dade County Health Department
Office of Epidemiology and Disease Control

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Epi Monthly Report

Staphylococcus Aureus Outbreak at a Construction Site in Miami Beach, Florida, June 2007

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Background

At approximately 4:00 p.m. on Monday, June 4, 2007, the Miami-Dade County Health Department Office of Epidemiology and Disease Control (MDCHD-OEDC) received a phone call from Miami Beach Fire Rescue Department reporting that several workers at a construction site on Miami Beach had fallen ill. Some of the ill workers were taken to two local hospitals in ambulances. Firemen stated that the workers had recently eaten food purchased at a mobile truck that frequently serves lunch at that site. OEDC decided to conduct an investigation to determine the possible source of the illness. The Florida Poison Control Center, the Florida Department of Business and Professional Regulation (DBPR) and the MDCHD Office of Environmental Health were also informed of the incident.

Methods

Four epidemiologists from OEDC arrived at the construction site at approximately 5:00 p.m. on June 4th. OEDC staff discovered that the food truck was regulated by the Florida Department of Agriculture and Consumer Services (DOACS) and that three different catering companies regularly sold food to the truck owner. DOACS and OEDC conducted a joint inspection of the truck and catering facilities on the morning of June 6, 2007. Two epidemiologists were escorted by officers with the Miami Beach Police Department and conducted interviews with the owner of the mobile truck and catering companies. The other two epidemiologists went to one of the hospitals and interviewed some of the ill patients. Interviews using the MDCHD Environmental Health Foodborne Illness Survey/Complaint Form were completed with six ill patients. Three stool samples and two vomitus samples were collected and sent to the Bureau of Laboratories Miami Branch for bacterial stool culture and ova and parasite testing. A case was defined as a construction worker that was present at the work site on June 4, 2007 and had symptoms of diarrhea and/or vomiting.

Laboratory Results

Stool and vomitus samples

Staphylococcus aureus was isolated in large quantities from all 5 of the stool and vomitus samples. However, although positive cultures were found, no specific enteroxins were isolated.

Food

Food from the lunch truck was discarded and so it was not tested.

Results

Ill worker investigation

A total of 9 construction workers met the case definition for gastrointestinal illness on this outbreak. Eight of the ill workers were sent to one hospital and one

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worker was sent to another hospital. We obtained interviews on 6 workers and the analysis was based on these. The median age for the ill workers was 24 years (Range: 19 – 51 years) and 5 (83.3%) were male. The mean incubation period from the time of eating lunch from the truck to the onset of illness was 2 hours and 15 minutes (Range: 1 hour to 3 hours and 10 minutes). At the time of interview, which was approximately 4 hours after the time of onset, 5 (83.3%) were still experiencing symptoms. Nausea, vomiting and diarrhea were symptoms experienced by all of the ill workers while 5 (83.3%) had symptoms of cramps, chills, weakness and fatigue. Interviews with the workers also showed that 4 (66.7%) experienced sweating, 3 (50.0%) had a headache or dizziness, 2 (33.3%) had numbness and 1 (16.7%) had fainted. None of the ill workers had fever. Five (83.3%) had watery diarrhea, 1 (16.7%) had mucousy diarrhea and none had bloody diarrhea. Only information about foods eaten on the day of the event were obtained. All of the ill had eaten a rice dish mixed with eggs and assorted meats. Although other foods were eaten among the ill, this was the only common food eaten among all the ill workers. Therefore, the rice dish was suspected to be the source of illness. Although no case-control study was conducted, information from conversations with co-workers of the ill stated that workers who did not become ill had eaten pizza from the same truck or had eaten elsewhere. In addition, ill patients stated that there were more co-workers that were ill however they went home rather than going to the hospital. There was no follow-up with the ill workers that were not hospitalized and therefore the exact number of ill workers is unknown.

Mobile lunch truck and catering companies investigation

Two Miami Beach Police Department officers and two OEDC staff went to inspect the lunch truck and catering facilities. Upon arrival to the site of the mobile lunch truck, there was no leftover hot food from lunch at the construction site. The only food leftover was cold food packaged in ice. The truck owner was unable to produce any of the DOACS licenses required for the selling of his goods. Observations of the catering facility showed that there was a table with cardboard crates storing hard-boiled eggs left out at room temperature and catering staff was preparing wraps without wearing gloves. No hot food was prepared at the time because hot foods such as the rice dish are prepared earlier in the day. When OEDC staff asked to visit the second catering company, the truck owner said that he did not know the specific location of the site and therefore this area was not inspected. An inspection of the third catering company was not deemed necessary because this company only sells pre-packaged items and drinks. The investigation also found that none of the other construction sites visited by the mobile truck reported any additional ill person.

Miami-Dade Fire Rescue and Miami Beach Police Department investigation

Both departments conducted an on-site evaluation of the construction facility and determined that there were no environmental exposures other than food from the mobile truck. The criminal investigations unit of the Miami Beach police ruled out a criminal act.

Department of Agriculture and Consumer Services investigation

The investigation was conducted on June 6, 2007 at the main facility which houses the preparation and selling of foods sold primarily on mobile trucks in the South Florida region. Several hundred mobile vendors were purchasing and loading their trucks with food items from various businesses. The investigation focused on rice dishes with egg as an ingredient since this was the suspected vehicle in the outbreak to which all ill were exposed. The joint DOACS and OEDC team visited two of the catering vendors that supplied food on the day the workers became ill. Upon investigation it was determined that the first vendor does not sell rice dishes and the second vendor does sell rice dishes but the mobile truck owner denied purchasing such items from the vendor on that day. The truck owner's assistant stated that in an effort to save time, some rice dishes were purchased from other vendors at the facility site. However, no documentation was given for the purchase of those rice dishes and therefore it is suspected that the rice dishes were possibly purchased from an illegal vendor. Suppliers and truck owners described how purchasing from non-licensed vendors is an ongoing problem for that facility. The investigators did not observe illegal purchases on the day of the inspection. However, since the facility received notice that inspectors would be visiting on that day, as soon as the inspectors arrived, some food vendors left the building. Though no formal interview was conducted, it was suggested by various workers that those vendors who left the premises did not have licenses to sell their goods.

Conclusions

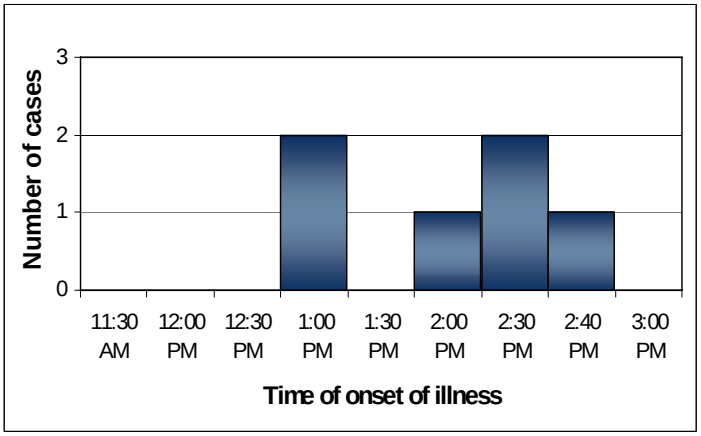
The suspected common food vehicle in this outbreak based on interviews was a rice, meat, and egg dish most likely bought from an illegal and unapproved source. The size and scope of the mobile lunch truck operation involves thousands of customers at various

levels. This includes preparation, distribution and sales to the consumer. Therefore, we were not able to find the particular vendor that produced this rice dish. We recommended to the regulatory agencies involved to take action in the solution of the illegal food vendor problem. This is essential in order to protect consumers from possible food contamination that is likely to occur in unlicensed and unregulated facilities.

Table 1. Frequency of symptoms reported by respondents (N=6)

Symptom	Number	Percent
Nausea	6	100
Diarrhea	6	100
Vomiting	6	100
Cramps	5	83.3
Chills	5	83.3
Weakness	5	83.3
Fatigue	5	83.3
Sweating	4	66.7
Headache	3	50
Dizziness	3	50
Numbness	2	33.3
Fainted	1	16.7
Fever	0	0

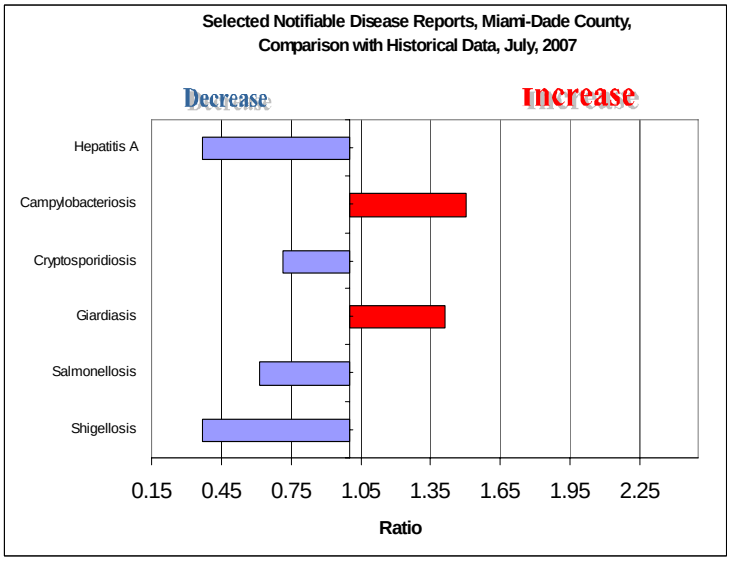
Figure 1. Epidemic Curve Among Ill Construction Workers, June 4, 2007



TO REPORT ANY DISEASE AND FOR INFORMATION CALL:

Office of Epidemiology and Disease Control

Childhood Lead Poisoning Prevention Program	(305) 470-6877
Hepatitis	(305) 470-5536
Other diseases and outbreaks	(305) 470-5660
HIV/AIDS Program	(305) 470-6999
STD Program	*(305) 325-3242*
Tuberculosis Program	*(305) 324-2470*
Special Immunization Program	(786) 845-0550



AVIAN FLU WATCH

Unless indicated, information is current as of August 23, 2007



- **Since 2003, 322 human cases of avian influenza (H5N1) have been confirmed** by the World Health Organization (WHO). Of these, 195 have been fatal.
- **Countries with confirmed *human* cases** include Cambodia, China, Djibouti, Indonesia, Thailand, Vietnam, Iraq, Azerbaijan, Egypt, Turkey, and Lao People's Democratic Republic.
- **No human cases of avian influenza (H5N1) have been reported in the United States.**
- **The most recent confirmed case of human infection with H5N1 avian influenza is from Indonesia.** A 28 year old female was hospitalized Aug. 18 after presenting with symptoms on Aug. 14; she was pronounced dead Aug. 21. The case investigation revealed she was a poultry trader, collecting poultry from villages where outbreaks or avian influenza had been identified. Also from Indonesia was a 17 year old girl who became symptomatic Aug. 9, was hospitalized Aug. 13 and died the very next day. The source of her exposure is under investigation. A 29 year old female, developed symptoms Aug. 3, was hospitalized Aug. 7, and died Aug. 12. The source of exposure for this case is said to have been sick and dead poultry. The case also had a 5 year old daughter who became ill with respiratory illness before the 29 year old's symptom onset. The daughter became symptomatic July 26 and was hospitalized July 30 but died Aug. 3 without avian influenza being considered as the possible infection. The daughter also had contact with sick and dead poultry prior to symptom onset.
- **H5N1 has been confirmed in *birds* in several other countries since 2003.** H5N1 has been documented in birds in more than 30 countries in Europe & Eurasia, South Asia, Africa, East Asia and the Pacific, and the Near East. For a list of these countries, visit the World Organisation for Animal Health Web Site at http://www.oie.int/downld/AVIAN%20INFLUENZA/A_AI-Asia.htm.
- **No restrictions on travel to affected countries have been imposed.** Travelers should avoid contact with live poultry and monitor their health for ten days after returning from an affected country.

SOURCES: World Health Organization; World Organisation for Animal Health; Centers for Disease Control and Prevention

PARTICIPATE IN INFLUENZA SENTINEL PROVIDER SURVEILLANCE

The Miami-Dade County Health Department NEEDS Influenza Sentinel Providers!!

Sentinel providers are key to the success of the Florida Department of Health's Influenza Surveillance System. Data reported by sentinel providers gives a picture of the influenza virus and ILI activity in the U.S. and Florida which can be used to guide prevention and control activities, vaccine strain selection, and patient care.

- Providers of any specialty, in any type of practice, are eligible to be sentinel providers.
- Most providers report that it takes **less than 30 minutes a week** to compile and report data on the total number of patients seen and the number of patients seen with influenza-like illness.
- Sentinel providers can submit specimens from a subset of patients to the state laboratory for virus isolation **free of charge**.

For more information, please contact **Erin O'Connell** at 305-470-5660.

About the Epi Monthly Report

The Epi Monthly Report is a publication of the Miami-Dade County Health Department, Office of Epidemiology and Disease Control, The publication serves a primary audience of physicians, nurses, and public health professionals. Articles published in the Epi Monthly Report may focus on quantitative research and analysis, program updates, field investigations, or provider education. For more information or to submit an article, contact Diana Rodriguez, Managing Editor at 305-470-5660.

Monthly Report
Selected Reportable Diseases/Conditions in Miami-Dade County, July 2007

Diseases/Conditions	2007 this Month	2007 Year to Date	2006 Year to Date	2005 Year to Date	2004 Year to Date	2003 Year to Date
AIDS *Provisional	81	482	730	835	841	602
Campylobacteriosis	25	85	96	83	87	78
Ciguatera Poisoning	0	0	0	0	0	0
Cryptosporidiosis	2	16	8	15	11	7
Cyclosporosis	0	0	0	11	1	1
Dengue Fever	2	3	1	0	3	0
E. coli, O157:H7	0	1	0	0	2	0
E. coli, Non-O157	0	0	0	1	0	0
Encephalitis (except WNV)	0	1	0	0	1	0
Encephalitis, West Nile Virus	0	0	0	0	3	0
Giardiasis, Acute	34	144	119	114	174	97
West Nile Fever	0	0	0	0	2	0
Hepatitis A	3	17	25	33	20	25
Hepatitis B	1	10	15	30	24	35
HIV *Provisional	125	825	668	813	1034	941
Influenza A (H5)	0	0	0	0	0	0
Influenza Isolates	0	0	0	0	0	0
Influenza Novel Strain	0	0	0	0	0	0
Influenza, Pediatric Death	0	0	0	0	0	0
Lead Poisoning	0	78	81	105	177	141
Legionnaire's Disease	0	1	7	2	6	4
Leptospirosis	0	0	0	2	0	0
Lyme disease	0	0	0	0	2	2
Malaria	3	5	7	4	10	5
Measles	0	0	0	0	1	0
Meningitis (except aseptic)	1	6	11	9	8	2
Meningococcal Disease	1	5	8	5	12	3
Mumps	0	1	0	0	0	0
Pertussis	1	12	5	8	7	4
Rubella	0	0	0	0	0	0
Rubella, Congenital	0	0	0	0	0	0
Salmonellosis	34	180	284	255	225	254
Shigellosis	8	75	67	167	109	187
Streptococcus pneumoniae, Drug Resistant	4	56	70	43	50	71
Tetanus	0	0	0	0	0	0
Toxoplasmosis	0	1	0	7	4	5
Tuberculosis *Provisional	22	92	115	104	133	128
Typhoid Fever	1	1	2	2	2	2
Vibrio cholera Type O1	0	0	0	0	0	0
Vibrio cholera Non-O1	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.