

EPI Monthly Report

Florida Department of Health in Miami-Dade County

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Avoiding Food Borne Illness during the Holidays

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Introduction

Despite food safety laws, growing regulations, and education strategies, the presence of food-borne illnesses continues to be a concern throughout the United States. The Centers for Disease Control and Prevention (CDC) estimate that 1 in 6 (48 million) Americans will become sick due to food-borne illnesses this year (CDC, 2014). As you and your family prepare to celebrate the holidays together, please pay special attention to the handling and preparation of foods during the upcoming holiday season.

What is a Food Borne Illness?

Foodborne illnesses (sometimes called "foodborne diseases,") are a widespread, yet preventable, public health issue. More than 250 different types of these diseases have been catalogued. Many food borne illnesses are infections caused by bacteria or viruses, although some diseases can also be caused by harmful chemicals and toxins (CDC, 2014). While there are many kinds of diseases that can be contracted by eating contaminated food, there are five that account for the most domestic hospitalizations here in the US: Salmonella (nontyphoidal), Norovirus, E. Coli, Campylobacter, and Toxoplasma

gondii. Of these five, Salmonella is the culprit behind the most food illness related deaths (CDC, 2011). Most commonly found in poultry, Salmonella is the most devastating food organism in the United States. Salmonella infections account for \$365 million in medical costs each year, and approximately 380 deaths.

Holiday Food Safety

When cooking for your family during the holidays, and especially while preparing your turkey, it is important to consider the CDC's food safety recommendations in order to avoid a food borne illness.

- As always, be sure to practice good hand hygiene by washing your hands with warm, soapy water before and after you touch raw foods, and after you use the restroom or change a child's diaper.
- Wash all utensils and cutting boards with hot water and antibacterial soap.
- Wash raw fruits and vegetables, but **do not** wash raw meats.
- Keep fruits and vegetables separate from raw meats by using separate containers, knives, and cutting boards (maintain this separation even in your cart at the supermarket).
- If you will be cooking a frozen

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turkey, be sure that the turkey has been in the freezer no longer than 2 months. It is recommended that turkey be cooked at 450 degrees F, and until it reaches an internal temperature of 180 degrees F. Use a food thermometer to ensure that the turkey is cooked through.

- After eating, promptly refrigerate any leftovers. Illness-causing bacteria can begin to grow on food after only 2 hours.
- Any leftovers, especially the turkey, should be consumed in the following 3 days. If leftovers have been in the fridge longer than 3 days, they either need to be frozen or thrown out.

Holiday Food Safety & Dining Out

Some families opt for a holiday celebration outside of the home and go together to a restaurant. During the busy holiday rush, it is tempting for some restaurant workers to be lax with their food safety precautions, and thus spread food borne illnesses to unsuspecting holiday patrons. The following dining out suggestions will help your family to avoid an unhappy holiday:

- Check the cleanliness rating of the restaurant at which you wish to eat.
- Observe the cleanliness of the waiting and cook staff.
- Don't hesitate to ask the waiter about the way in which certain high-risk foods (dairy, fish, rare meats, poultry, and cream-based foods) are prepared.

References:

- <http://www.cdc.gov/foodsafety/prevention.html>
- <http://www.cdc.gov/foodsafety/cdc-and-food-safety.html>
- <http://www.foodsafety.gov/keep/basics/index.html>
- <http://www.foodsafety.gov/keep/basics/mistakes/index.html>





Norovirus Outbreak Identified at Local Elementary School While Investigating Hepatitis A in a Food Handler

Isabel Griffin, MPH

On October 29, 2014, the Florida Department of Health (FDOH) in Miami-Dade Epidemiology, Disease Control & Immunization Services (EDC-IS) received a call from an assistant principal at a local elementary school about a food handling employee who had been diagnosed with Hepatitis A. The food handler had been working while symptomatic. The school also reported 14 students absent from the same 4th grade classroom; five experienced vomiting. At the same time, EDC-IS received a fax from Public School Comprehensive Health Services (CHS) which included a line list reporting 14 absent students, one of whom was hospitalized. EDC-IS interviewed the food handler immediately and confirmed that the food handler was positive for Hepatitis A. An investigation was initiated and a site visit was scheduled for the next morning.

On October 30, 2014, EDC-IS and Environmental Health (EH) conducted a joint site visit at the elementary school. The elementary school (K-5) has a total of 800 students and 70 staff. EH inspected the facility's kitchen and found no major violations. Five co-workers of the infected Hepatitis A case were identified, educated on prevention and offered vaccines. The health educator from EDC-IS conducted hand hygiene presentations in ten classrooms, including the affected 4th grade classroom. EDC-IS interviewed the 4th grade teacher regarding risk factors for transmission and student symptom onset dates. A second list of absent students was provided during the site visit, which included one new student plus the student from 10/23/14. With the cases on 10/23/14 and 10/30/14, this brings the total number of reported students to 16. EDC-IS reviewed the immunization statuses of the 16 absent students using school records and Florida Shots. Of the 16, 11 (69%) were confirmed to have been vaccinated for Hepatitis A (7 had 1 dose and 4 had 2 doses). On 10/30/14, a letter was sent home to parents regarding possible Hepatitis A exposure. On 10/31/14, three cafeteria workers received Hepatitis A

Immunoglobulin (IG) and/or the Hepatitis A vaccine. Three others who identified themselves as cafeteria workers were already vaccinated for Hepatitis A per Florida Shots. On the same day, two ancillary staff received Hepatitis A IG and Hepatitis A vaccine, and two teachers received Hepatitis A vaccine only (not in age group for IG). On 11/03/14, 18 staff (ancillary and teachers) received Hepatitis A vaccination, and 1 staff member (ancillary) received a second dose of Twinrix (Hepatitis A and B vaccine). As of 11/13/14, there have been no reports of students with Hepatitis A.

Methods

A case of gastrointestinal illness was defined as a student or staff member who reported vomiting, diarrhea, or nausea and had an onset date between October 23 and 29. A questionnaire was developed to evaluate symptoms, onset date, recovery date, large event attendance, eating habits at school, and whether the student sought medical care. Parent interviews were conducted on 10/30/14. Of the 16 students identified, 12 parents were interviewed. Of the 12 interviewed, only 10 are symptomatic with onset dates of 10/28/14 and 10/29/14 (see Figure 1). One student had an onset date of 10/23/14. This student's sibling is linked to a possible outbreak at a local daycare center. A total of ten students met the case definition for this investigation.

Results

The most commonly reported symptoms were vomiting (80%), diarrhea (70%), followed by fever (60%) and abdominal cramps (60%). Thirty-percent of cases reported ill household contacts. Sixty-percent of cases reported eating lunch at school. Sixty-percent of the cases sought medical care. Reported student recovery time ranged from the same day to two days. Stool specimens from four students and a student's sibling were sent to Bureau of Public Health Laboratories (BPHL) Miami and Tampa for norovirus and bacterial pathogens testing. Three results came

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back positive for norovirus G2, one was not tested because of an insufficient sample, and one result is still pending. It is important to note that one of the specimens positive for norovirus was both the index patient's and was collected a week and a half after symptoms had resolved.

Discussion

Gastrointestinal illness was found to be significantly related to classroom. 10 of the 28 students in the fourth grade classroom were found to be symptomatic (attack rate 36%). No other cases of GI illness were reported outside of this 4th grade classroom. Since the outbreak was isolated, the EDC-IS daily school absenteeism report absentee rate for 10/28 and 10/29 did not trigger an alert.

During interviews, the 4th grade teacher reported that one of her students vomited during the previous week while walking into school on 10/23/14 and that two of the reported students vomited in the school bathroom on 10/29/14. Environmental cleaning immediately occurred after all incidents, which limited transmission to other students.

Foodborne or waterborne transmission from the school cafeteria was not suspected because illness was isolated only to one classroom. Also, the possibility of a foodborne exposure in the classroom was ruled out during the interview when the teacher reported no parties or shared food in the classroom. Therefore, person-to-person transmission was more likely and characteristic of norovirus outbreaks.

School settings provide the perfect environment for norovirus transmission. Risk factors for norovirus transmission include poor hand hygiene, close person to person contact and through contaminated surfaces or fomites. Norovirus can be prevented by frequent hand washing with soap and water, cleaning and disinfecting contaminated surfaces by using a chlorine-based solution, and keeping ill persons isolated at home until symptoms have resolved.

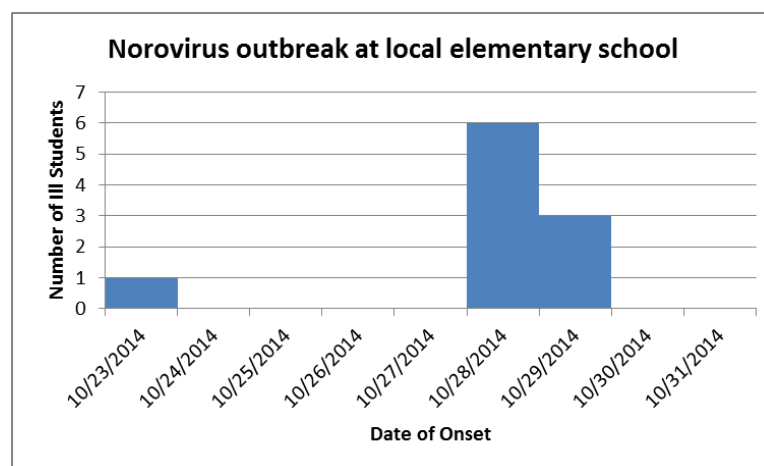
Common source outbreaks of Hepatitis A often occur due to an infected food handler contaminating foods that are not cooked, such as salads or sandwiches, or foods that are handled after cooking. Since the

infectious agent is found in feces, which peaks the week or two before the onset of symptoms, we knew there was a high risk of transmission at the elementary school. However, if proper hand washing and other preventive measures are taken transmission can be prevented. Since the incubation period for Hepatitis A ranges from 15 to 50 days, we calculated the expected onset date of a new case using the last possible day of transmission. Because most children have asymptomatic or unrecognized infections, they play an important role in the transmission of this virus in schools and serve as a source of infection to others. While most children infected with Hepatitis A are asymptomatic, severity of Hepatitis A increases with age. The school is still being monitored for cases of Hepatitis A.

References:

1. Heymann, D. Control of Communicable Diseases Manual, 19th Edition. American Public Health Association. 2008.

Figure-1: Gastrointestinal illness by date of symptom onset



Healthcare providers should report suspected clusters of gastrointestinal illness to the Florida Department of Health in Miami-Dade at 305-470-5660 (24/7, 365). For Hepatitis A vaccinations, please call 786-845-0550 to schedule an appointment.

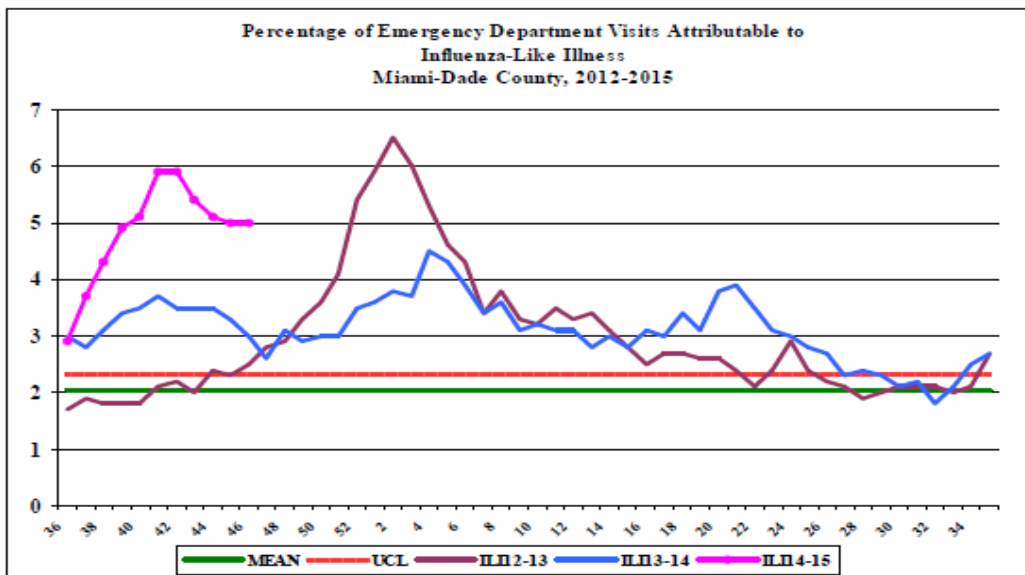
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Influenza-Like-Illness, All Age



During this period, there were 23,754 ED visits; among them 1,191 (5.0%) were ILI. At the same week of last year, 3.0% of ED visits were ILI.

PARTICIPATE IN INFLUENZA SENTINEL PROVIDER SURVEILLANCE

Florida Department of Health in Miami-Dade County **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

Lakisha Thomas at 305-470-5660.

TO REPORT ANY DISEASE AND FOR INFORMATION CALL:
Epidemiology, Disease Control & Immunization Services

- Childhood Lead Poisoning
- Prevention Program305-470-6877
- Hepatitis305-470-5536
- Immunizations or outbreaks305-470-5660
- HIV/AIDS Program305-470-6999
- STD Program305-575-5430
- Tuberculosis Program305-575-5415
- Immunization Service305-470-5660
- To make an appointment.....786-845-0550

About the Epi Monthly Report

The Epi Monthly Report is a publication of the Florida Department of Health in Miami-Dade County: Epidemiology, Disease Control & Immunization Services. 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 Emily Moore at (305) 470-6918.

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Miami-Dade County Monthly Report Select Reportable Disease/Conditions October 2014

Diseases/Conditions	2014 Current Month	2014 Year to Date	2013 Year to Date	2012 Year to Date
HIV/AIDS				
AIDS*	31	460	602	486
HIV	103	1216	1207	898
STD				
Infectious Syphilis*	32	293	310	259
Chlamydia*	868	8180	8404	7233
Gonorrhea*	187	1799	1986	1971
TB				
Tuberculosis**	7	107	99	90
Epidemiology, Disease Control & Immunization Services				
Epidemiology				
Campylobacteriosis	20	305	299	297
Chikungunya Fever	14	63	0	0
Ciguatera Poisoning	2	22	22	19
Cryptosporidiosis	5	35	20	19
Cyclosporiasis	0	1	3	1
Dengue Fever	7	34	37	35
Escherichia coli, Shiga Toxin-Producing	5	21	8	5
E. coli, Non-O157	0	0	0	0
Encephalitis, West Nile Virus	0	0	0	0
Giardiasis, Acute	25	196	230	195
Influenza Novel Strain	0	0	0	0
Influenza, Pediatric Death	0	1	1	2
Legionellosis	0	14	21	16
Leptospirosis	0	0	0	0
Listeriosis	2	4	2	1
Lyme disease	2	6	5	7
Malaria	1	6	8	6
Meningitis (except aseptic)	1	17	28	18
Meningococcal Disease	3	10	15	13
Salmonella serotype Typhi (Typhoid Fever)	0	1	2	2
Salmonellosis	86	537	507	493
Shigellosis	4	638	61	66
Streptococcus pneumoniae, Drug Resistant	1	36	74	62
Toxoplasmosis	0	0	0	0
Vibriosis	0	6	10	3
West Nile Fever	0	0	0	0
Immunization Preventable Diseases				
Measles	0	0	0	0
Mumps	0	0	0	1
Pertussis	1	30	39	57
Rubella	0	0	0	0
Tetanus	0	0	0	0
Varicella	3	40	53	39
Hepatitis				
Hepatitis A	1	31	29	21
Hepatitis B (Acute)	2	11	15	17
Lead				
Lead Poisoning	2	56	75	72

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

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