



Epi Monthly Report

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Refugees & Residents: The Epidemiology of Giardiasis in Miami

-Dade County, Florida, 2011-2014

Isabel Griffin, MPH

BACKGROUND

Giardia lamblia is a microscopic parasite that causes a diarrheal illness called giardiasis. The parasite is typically found on surfaces, and also in food, soil, and water that has been contaminated with feces from an infected animal or human. Acute symptoms may include diarrhea, gas, greasy stools that tend to float, abdominal cramps, vomiting, and dehydration, which can last for one to two weeks. Asymptomatic infections are common, especially among individuals living in endemic areas. Treatment of Giardiasis typically includes metronidazole, tinidazole, and nitazoxanide (1).

Miami-Dade County receives 14 million visitors and has an annual net international immigration of 40,000. It has the highest percentage (50.9%) of foreign born residents of any other county in Florida. While tourism and immigration bring benefits to a community, they may also affect the health of visitors and residents.

This study aimed to determine the epidemiology of Giardiasis cases among both refugees and residents of Miami-Dade County, with emphasis on risk factors such as age, gender, and race/ethnicity, and origin of infection.

METHODS

Giardiasis cases from 2011-2014 were obtained from Merlin, the Florida Department of Health Surveillance System. Residential status, Miami-Dade County or refugee (RHAP), was distinguished according to the laboratory reporting facility recorded in the laboratory result. Data was analyzed using SAS v9.3 and ArcGIS (2, 3).

RESULTS

Between 2011 and 2014, the Florida Department of Health in Miami-Dade County Refugee Health Assessment Program (RHAP) provided services to roughly 118,000 newly immigrated individuals in Miami-Dade County, 98.1% of which had just arrived from Cuba. During this same timeframe, the Florida Department of Health in Miami-Dade County (DOH-Miami-Dade) received 1,219 positive Giardiasis laboratory results.

Among the 1,219 positive *Giardia lamblia* laboratory results, 1,064 were reported as symptomatic Giardiasis cases, a quarter of which were identified through RHAP health screenings. Sixty-two percent were Hispanic, 14.3% were Non-Hispanic White, and 4.6% were Non-Hispanic Black. Age group distribution was 0-4 (19.7%), 5-17 (29.8%), 18-64 (45.6%), and 65+ (5%).



G. intestinalis trophozoites in a Giemsa stained mucosal imprint. Photo credit: DPDx, CDC

FLORIDA
DEPARTMENT OF
HEALTH IN MIAMI-
DADE COUNTY

EPIDEMIOLOGY,
DISEASE
CONTROL &
IMMUNIZATION
SERVICES

8600 NW 17th Street
Suite 200 Miami, FL
33126

Tel: 305-470-5660

Fax: 305-470-5533

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Commonly reported symptoms were diarrhea (64.3%), abdominal pain (53.7%), loss of appetite (21.3%), weight loss (14.1%), nausea (13%), bloating (5%), and malabsorption (3.2%).

Among the 782 Miami-Dade County residents' cases who were symptomatic, 71.1% were Hispanic, 19.2% were Non-Hispanic White, and 6.0% were Non-Hispanic Black. Sixty-six percent were male. Seventy-eight percent acquired Giardiasis while in Florida. Among the

19.8% travel-associated cases, 32.7% were from Cuba, Central America (25%), South America (10.9%), Caribbean (9.6%), Asia (9.6%), North America (6.4%), Africa (3.2%), Europe (1.3%), and Unknown (1.3%).

Hot-spots were identified in the neighborhoods of Little Havana and South Beach. Eighty-five percent of cases reported on South Beach were male.

DISCUSSION

Little Havana has the highest concentration of Hispanics (98%) among neighborhoods in Miami-Dade County, many of whom frequently travel back-and-forth to Central and South America and the Caribbean (4). International travel to endemic areas have been shown to increase an individual's risk of acquiring Giardiasis (5).

In 1984, a San Francisco Bay study examining the prevalence of intestinal parasitic infections among MSM found that oral-anal sex was associated with *giardia* infection ($P < 0.001$) (8). South Beach also has a high prevalence of individuals infected with HIV, which may be associated with prolonged Giardiasis infection (6, 7, 9).

PREVENTION

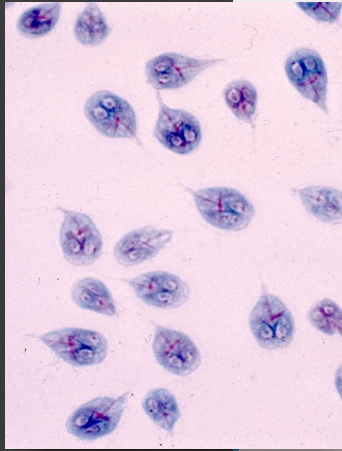
Given the high-percentage of symptomatic locally-acquired Giardiasis cases, Miami-Dade County residents would greatly benefit from targeted education on the prevention of Giardiasis while at home and abroad. The CDC currently provides the following recommendations to prevent the transmission of *Giardia*: practice good hand hygiene, avoid swallowing potentially contaminated drinking and recreational water, avoid eating potentially contaminated food, and take steps to prevent transmission during oral-anal sex (1). Wash hands with soap and water for 20 seconds after using the restroom, and before cooking or eating food. Avoid swallowing water while swimming in pools, lakes, rivers, and the ocean. Wash fruits and vegetables in safe uncontaminated water, and avoid eating raw or undercooked foods when traveling internationally.

Use barrier methods during oral-anal sex, and wash hands immediately after handling a condom used during anal sex.



Practicing good hand hygiene can help to prevent Giardia

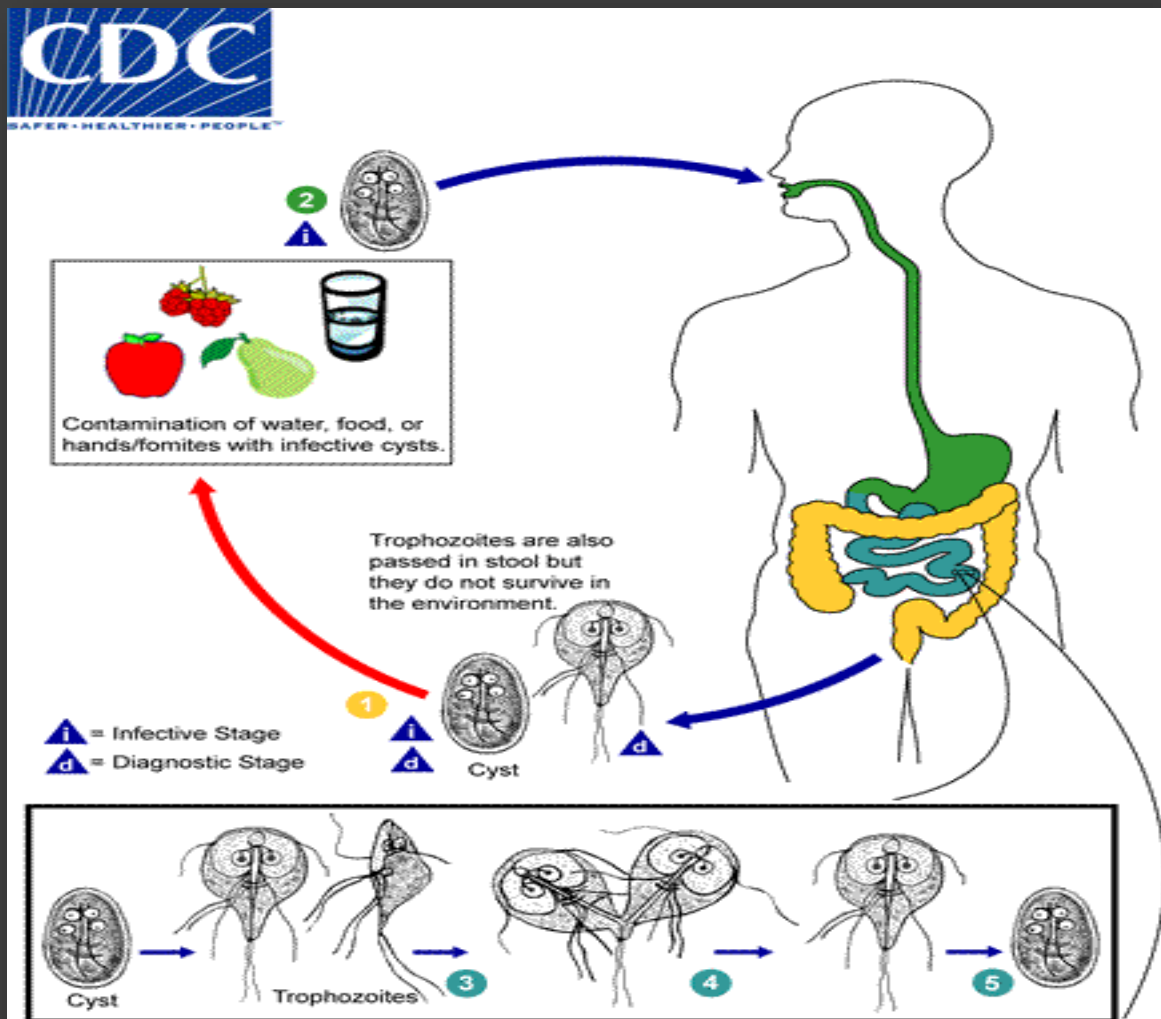
Healthcare providers should report cases and clusters of Giardiasis to the Florida Department of Health in Miami-Dade County at 305-470-5660 (24/7, 365).



Giardia trophozoites stained with trichrome. Credit: Waterborne Diseases Prevention Branch, CDC

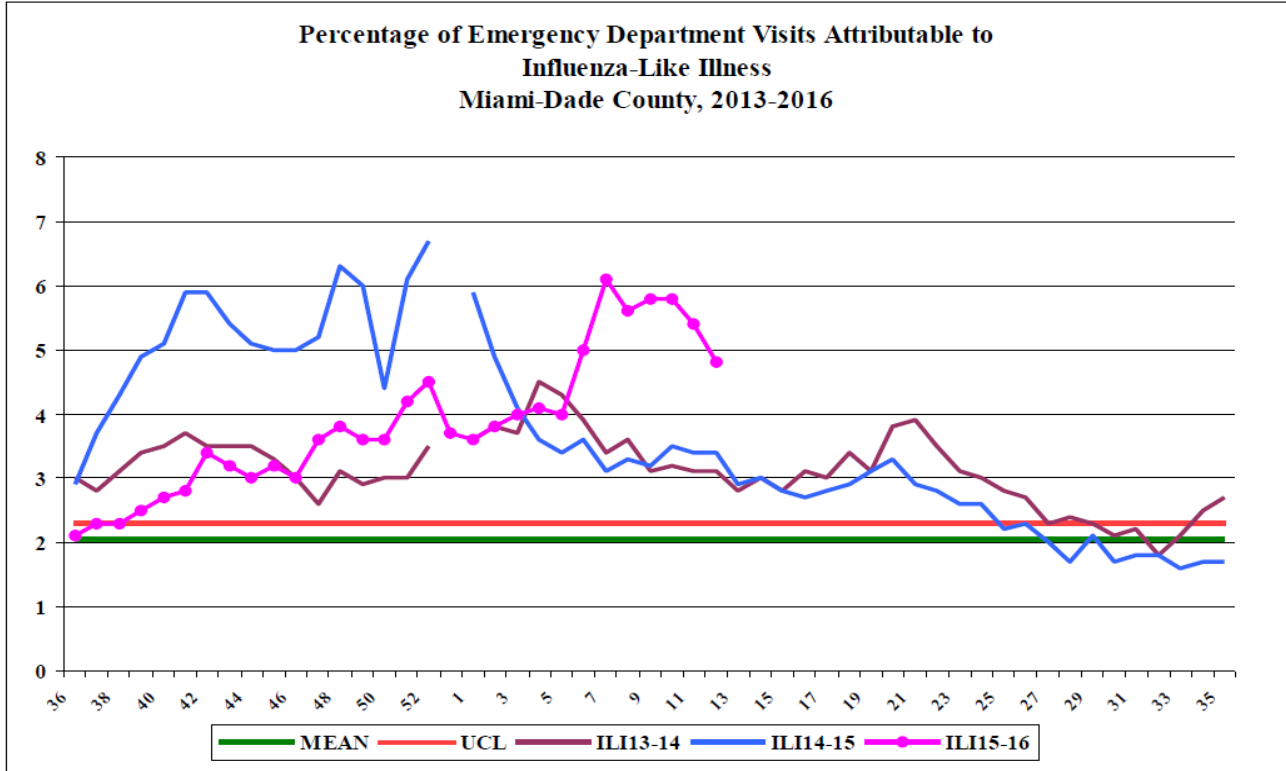
Refugees & Residents: REFERENCES

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3. ArcGIS Desktop: Release 10. Redlands, CA: Environmental Systems Research Institute.
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5. Yoder, Jonathan, Courtney Harral, and Michael Beach. "Giardiasis Surveillance --- United States, 2006--2008." Centers for Disease Control and Prevention. Centers for Disease Control and Prevention, 11 June 2010. Web. 23 Feb. 2016.
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EDC-IS Influenza/Respiratory Illness Surveillance Report

Influenza-Like-Illness, All Age



During this period, there were 26,376 ED visits; among them 1,271 (4.8%) were ILI. At the same week of last year, 3.4% of ED visits were ILI.

PARTICIPATE IN INFLUENZA SENTINEL PROVIDER SURVEILLANCE

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

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.

- Childhood Lead Poisoning
- Prevention Program305-470-6877
- Hepatitis305-470-5536
- Immunizations or outbreaks305-470-5660
- HIV/AIDS Program305-470-6999

- 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**.

STD Program305-575-5430

Tuberculosis Program305- 575-5415

Immunization Service305-470-5660

To make an appointment.....786-845-0550

For more information, please contact

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, please contact Emily Moore at (305) 470-6918.

Selected Reportable Diseases/Conditions in February 2016



Miami-Dade County Monthly Report Select Reportable Disease/Conditions February 2016

Diseases/Conditions	2016 Current Month	2016 Year to Date	2015 Year to Date	2014 Year to Date
HIV/AIDS				
AIDS*	46	75	57	76
HIV	152	271	232	190
STD				
Infectious Syphilis*	33	55	51	43
Chlamydia*	1060	1740	1389	1511
Gonorrhea*	209	367	270	316
TB				
Tuberculosis**	9	12	11	15
Epidemiology, Disease Control & Immunization Services				
Epidemiology				
Campylobacteriosis	27	46	38	40
Chikungunya Fever	0	0	5	0
Ciguatera Poisoning	0	0	2	0
Cryptosporidiosis	4	0	0	0
Cyclosporiasis	0	5	0	6
Dengue Fever	3	5	2	3
Escherichia coli, Shiga Toxin-Producing	1	2	2	3
Encephalitis, West Nile Virus	0	0	0	0
Giardiasis, Acute	12	20	25	30
Influenza Novel Strain	0	0	0	0
Influenza, Pediatric Death	0	0	0	1
Legionellosis	0	0	2	2
Leptospirosis	0	0	0	0
Listeriosis	0	0	0	0
Lyme disease	0	0	0	0
Malaria	0	0	0	1
Meningitis (except aseptic)	1	1	1	4
Meningococcal Disease	0	0	1	1
Salmonella serotype Typhi (Typhoid Fever)	0	0	1	0
Salmonellosis	35	69	67	66
Shigellosis	7	19	20	75
Streptococcus pneumoniae, Drug Resistant	1	1	0	13
Vibriosis	0	0	0	2
West Nile Fever	0	0	0	0
Immunization Preventable Diseases				
Measles	0	0	0	0
Mumps	0	0	0	0
Pertussis	3	5	2	2
Rubella	0	0	0	0
Tetanus	0	0	0	0
Varicella	16	17	3	10
Hepatitis				
Hepatitis A	2	3	1	2
Hepatitis B (Acute)	1	1	0	2
Healthy Homes				
Lead Poisoning	9	11	6	11

*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.



<http://miamidade.floridahealth.gov/>