

Epi Monthly

May 2023 Vol 24, Issue 5

Public Health LOOK OUT!

Florida Department of Health in Miami-Dade County

- The Alzheimer's Association encourages observance of **Alzheimer's and Brain Awareness Month in June**. Sharing stories online and wearing purple can help to raise awareness about Alzheimer's Disease, which currently affects about 5.8 million Americans. Alzheimer's disease is the most common form of dementia. The disease includes memory loss and prevents individuals from their daily activities. Visit [CDC.gov](https://www.cdc.gov) to learn more about Alzheimer's risk, screening, and prevention.
- **Hurricane Season** begins **June 1** and continues until November 30. The best way to stay healthy through potential storms is to be prepared. Prepare an evacuation plan, disaster kit, and supplies such as water and non-perishable food. Health risks after hurricanes include infectious disease from contaminated flood water and spoiled food, increased mosquito-borne illness, and extreme heat. Miami-Dade county has prepared a [Hurricane Readiness Guide](#) to provide crucial hurricane information to residents.
- **National HIV Testing Day** is observed **June 27th** to promote a healthy community and reduce HIV transmission. Miami-Dade county had the highest rate of newly diagnosed HIV cases in Florida in 2021. Human immunodeficiency virus (HIV) is transmitted through sexual contact, sharing needles, or sharing other drug injection equipment. Once a person becomes infected with HIV, the disease cannot be cured, but can be managed to reduce symptoms and prevent future transmission. Testing is confidential, easy, and can even be done through self-tests. Knowing your HIV status is essential to keeping yourself and others healthy. Visit [CDC.gov](https://www.cdc.gov) to learn more about HIV testing and self-test options.

For the most recent information on COVID-19 in Florida please visit: <https://floridahealthcovid19.gov/>

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Click the image to the left to watch the video.

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By: Arpita Paul, MPHc and Stephanie Ramirez, MPH

Background

Campylobacter species are spiral-shaped gram-negative bacteria that are the causative agents of campylobacteriosis, a form of gastroenteritis. Of the more than 20 known species of *Campylobacter*, *C. jejuni* and *C. coli* are the most commonly identified with *C. jejuni* being responsible for 90 percent of campylobacteriosis cases.¹ *Campylobacter* is the most common bacterial cause of diarrheal illness in humans, accounting for an estimated 550 million cases worldwide in 2020 and 1.5 million in the United States (US) alone.^{1,2} Campylobacteriosis is a reportable disease in the state of Florida which means that commercial laboratories and healthcare providers are required to notify county health departments about persons infected with *Campylobacter* within one business day of identification or diagnosis. Both Florida and Miami-Dade County are experiencing a gradual increase in reported cases.

Clinical presentation

Campylobacter has an average incubation period of 2–4 days, but it can range from 1 to 10 days.³ Campylobacteriosis can be asymptomatic but, if accompanied by symptoms, can be characterized by diarrhea (often bloody), abdominal pain, fever, and occasionally nausea and vomiting that can last for around one week. Possible complications include dehydration, infection of the bloodstream, and symptoms resembling acute appendicitis or inflammatory bowel disease. Postinfectious complications following campylobacteriosis include irritable bowel syndrome, peripheral neuropathies like Guillain-Barré syndrome (a neurological disorder characterized by weakness of limbs, possible involvement of respiratory muscles, anemia, and sensory loss after 1-3 weeks of infection), and reactive arthritis (joint pain involving knees and ankles, occurring about a month after infection and developing for as long as 5 years).⁴

Transmission

Campylobacter species frequently infect the intestines of chickens, cows, sheep, emus, cats, dogs, and pigs. These animals' excrement distributes these germs into the surrounding environment. Infections caused by *Campylobacter* can be transmitted to humans by the consumption of raw milk, contaminated or unchlorinated surface water, or undercooked poultry or red meat. Another common method of *Campylobacter* illness transmission is by direct contact with infected animals. *Campylobacter* can also be transmitted between humans via the fecal-oral route during any outbreak.⁵

Diagnosis

To diagnose campylobacteriosis in humans before initiating antibiotic treatment, a stool sample should be taken soon following the onset of symptoms. *Campylobacter* infection is diagnosed using stool cultures or culture-independent diagnostic tests (CIDT) such as enzyme immunoassay (EIA) tests and polymerase chain reaction (PCR) tests. Antigen testing is becoming increasingly accessible and therefore more utilized. However, laboratories should use culture to validate positive stool antigen test findings as antigen test is less sensitive and specific.⁶ A case of campylobacteriosis is classified as “confirmed” if *Campylobacter* is isolated from a stool sample by means of a bacterial culture. A case is considered “probable” if *Campylobacter* is identified in a stool sample using a culture-independent diagnostic test (CIDT) and if abdominal pain or diarrhea are reported. If there is a case with no reported symptoms and only a positive CIDT for *Campylobacter*, then it is classified as “suspect”.

Treatment

Typically, the disease is self-limiting and the associated symptoms last one week or less. The majority of individuals recover from a *Campylobacter* infection without antibiotic therapy. In most cases, restoration of fluids and electrolytes is the most important supportive therapy for this illness. Antibiotics are utilized when symptoms persist, and antibiotic treatments are most effective when initiated within three days after disease onset. Now-a-days, an alarming number of antibiotic-resistant *Campylobacter* strains have been identified posing a significant global issue.⁷

Prevention

In humans, the importance of campylobacteriosis prevention includes not only the avoidance of acute infection but also the prevention of complications and reduction of antibiotic resistance. The implementation of strict biocontrol procedures in the poultry sector is an intervention shown to be effective in preventing the introduction of *Campylobacter* into industrial facilities.⁸ Educating sensitive organizations and the general public on the need for good hand hygiene can be a useful preventive measure. Places where *Campylobacter* is easily transmitted, such as daycares, schools, and public areas, should be educated on the importance of consuming only purified water, not drinking unpasteurized milk, cooking food at high temperatures, keeping raw meat separate from other foods during preparation and grocery shopping, and, most importantly, practicing good hand hygiene. Presently, there is no vaccine available to prevent campylobacteriosis.⁹ Therefore, public awareness and strong legislation might be the most efficient way to reduce campylobacteriosis transmission.

Methods

Data for campylobacteriosis cases reported for Miami-Dade County residents between 01/01/2018 and 12/31/2022 were obtained from the Florida Department of Health's electronic surveillance system, Merlin. Campylobacteriosis cases were classified using the Council of State and Territorial Epidemiologists (CSTE) Position Statement 14-ID-09 of confirmed, probable and suspected cases. Population estimates were obtained from Florida Health Charts to estimate incidence rates. SAS 9.4 was used to perform data analysis and examine campylobacteriosis case distribution. ArcGIS pro was used to produce a density map of the case distribution in Miami-Dade.

Results

From 2018 to 2022 3,721 campylobacteriosis cases were reported to the Florida Department of Health in Miami-Dade County (DOH-Miami-Dade). The breakdown of cases by disease status was: 751 confirmed cases (20.18%), 2,968 probable cases (79.76%), and 2 suspected cases (0.05%). As seen in Figure 1, the incidence rate of all campylobacteriosis cases in Miami-Dade decreased from 2018 to 2020 and increased from 2020 to 2022. Comparing the incidence rates of total cases in Miami Dade, Florida, and the United States from 2018 to 2022 reveals that the incidence rate has been significantly higher in Miami Dade than in Florida and the United States over these years. However, annual trends reveal a similar pattern for Miami-Dade County, Florida, and the United States, where the incidence rate declined from 2018 to 2020 and then increased after 2020.

Time Series

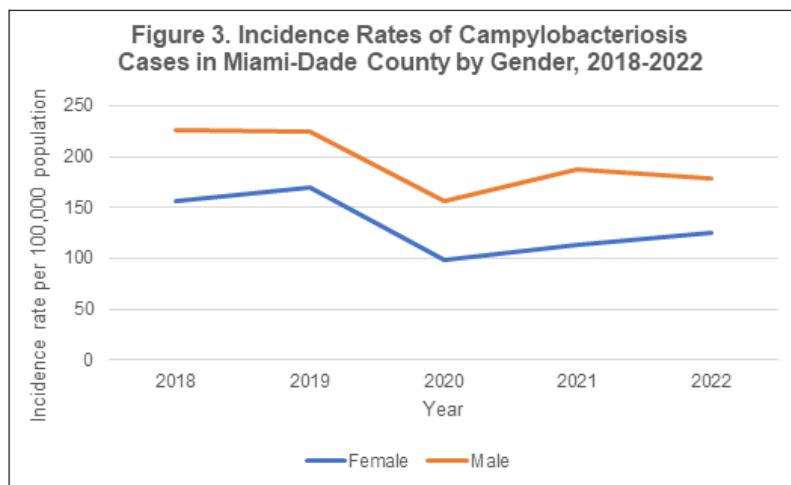
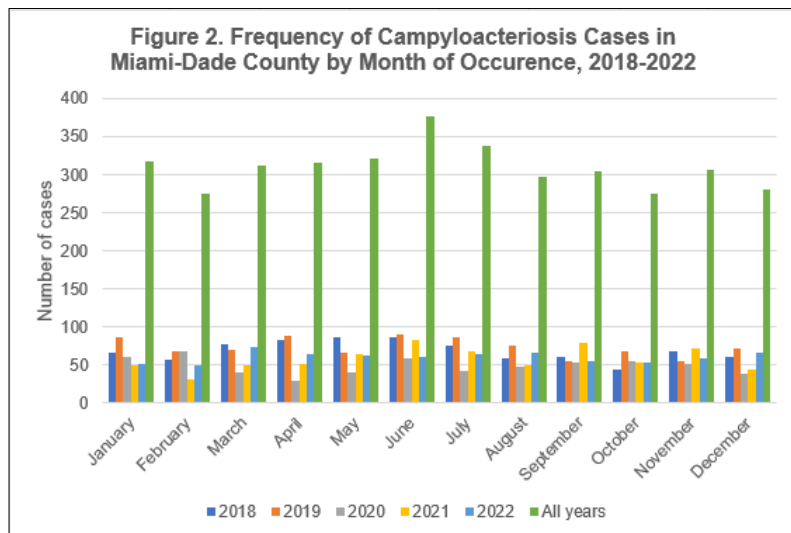
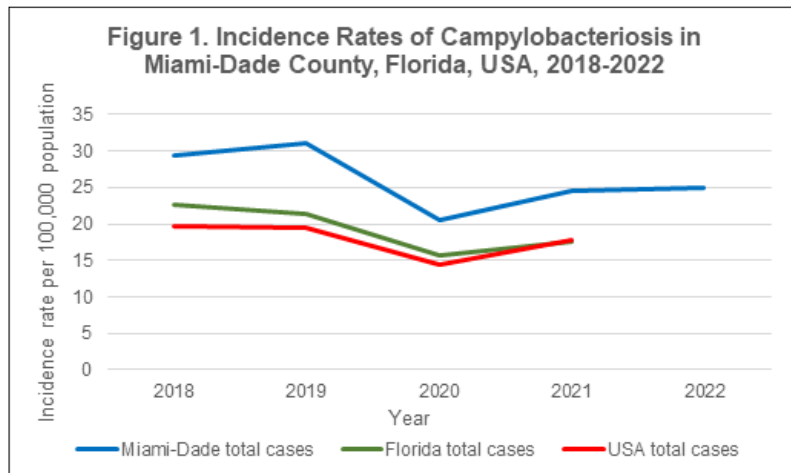
The overall monthly trend of campylobacteriosis cases from 2018 to 2022 appears to decrease between January and February, begins to rise the next month, reaches its peak in June, and then declines the following month (Figure 2).

Gender

A total of 1,816 cases were reported among females while 1,904 cases were reported among males between 2018 and 2022. As shown in Figure 3, the campylobacteriosis case incidence rates have been higher for males compared to females during this 5-year period. Both male and female incidence rate showed similar trends throughout the year from 2018 to 2022. The incidence rate decreased from 2018 to 2020 and after 2020, it increased again for both male and female.

Age Group

The age group with the highest frequency of campylobacteriosis cases reported between 2018 and 2022 was the "65+ years" age group with 918 cases, followed by the age group "1 to 4 years" with 463 cases. However, the incidence rate was the highest for the "less than 1 year" age group, followed by the "1 to 4 years" age group, and then the "65+ years" age group (Figure 4).



Race and Ethnicity

Campylobacteriosis incidence rates have been found higher in Hispanic followed by non-Hispanic White and Non-Hispanic Black (Figure 5). Campylobacteriosis case frequencies were highest for the “Hispanic” group (2,778 cases) followed by “Non-Hispanic White” (458 cases) “Non-Hispanic Black” (297 cases), “Other” (148 cases), and “Unknown” (40). For both the “Hispanic” and “Non-Hispanic White” groups, incidence rates decreased from 2018 to 2020 and increased after 2020. The trend of the incidence rates for the “Non-Hispanic Black” group differed from the other two groups after 2021 when it decreased.

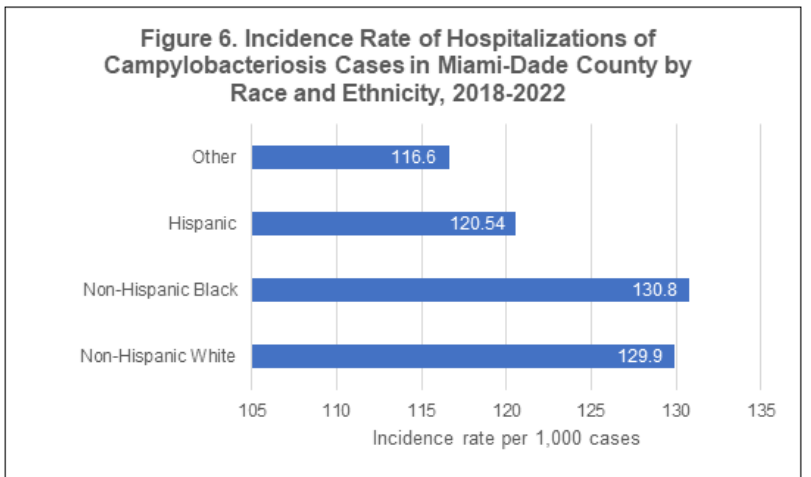
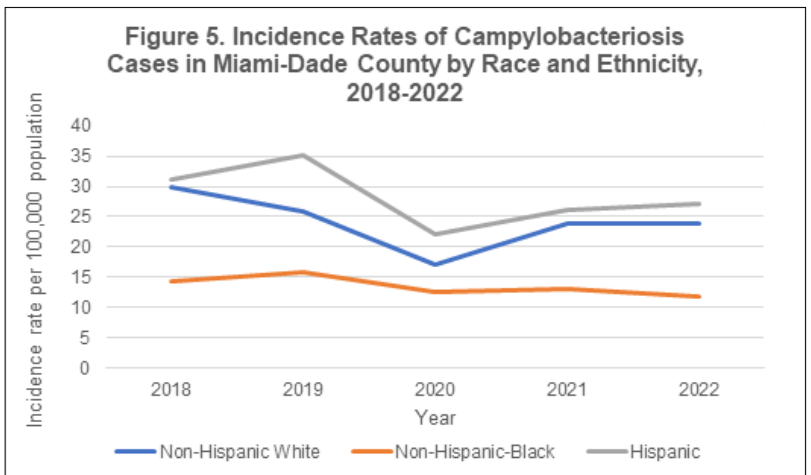
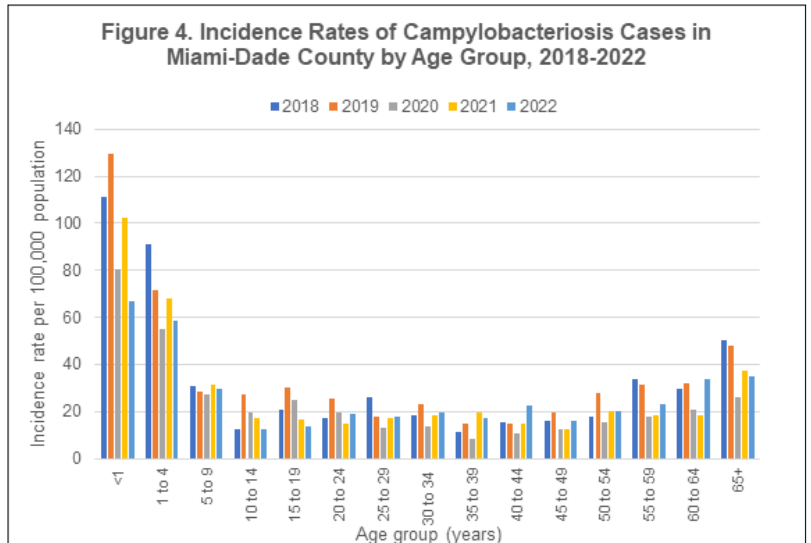
From 2018 to 2022, 2,872 (77.18%) of total campylobacteriosis cases visited an emergency room, with most of the emergency room visits occurring in 2019 (727 cases) and 2022 (629). During this 5-year period, 453 (12.17%) of total cases were hospitalized, 27 of them had a disease status of “confirmed”, 425 were “probable” cases, and 1 was a “suspected” case. After analyzing hospitalization data based on race and ethnic groups, the “Non-Hispanic Black” hospitalization incidence rates per 1,000 cases reported were the highest followed by “Non-Hispanic White”, “Hispanic” and “Other” groups (Figure 6).

Symptoms

Of all 3,721 campylobacteriosis cases among Miami-Dade County residents between 2018 to 2022, 3,567 (95.86%) reported at least one symptom, 62 (1.67%) reported no symptoms (asymptomatic), and there were 92 (2.47%) cases for which symptom information was not obtained. The most commonly reported symptoms were diarrhea (3,246 cases, 91%), abdominal pain (2,051 cases, 57.5%), vomiting (1,061 cases, 29.74%), nausea (768 cases, 21.53%), and fever/chills (708 cases, 19.85%). All other symptoms were reported in fewer than four percent of the symptomatic cases.

Outbreak Association

Ninety-five percent of the cases reported were classified as “sporadic” which means that no known link was established between the case and other people or a particular source of infection. During the 5-year period, only 28 cases were classified as “outbreak associated”. Only 3.5% of cases reported working at or attending a daycare, 2 cases reported an animal exposure history, and 13 cases reported being pregnant.

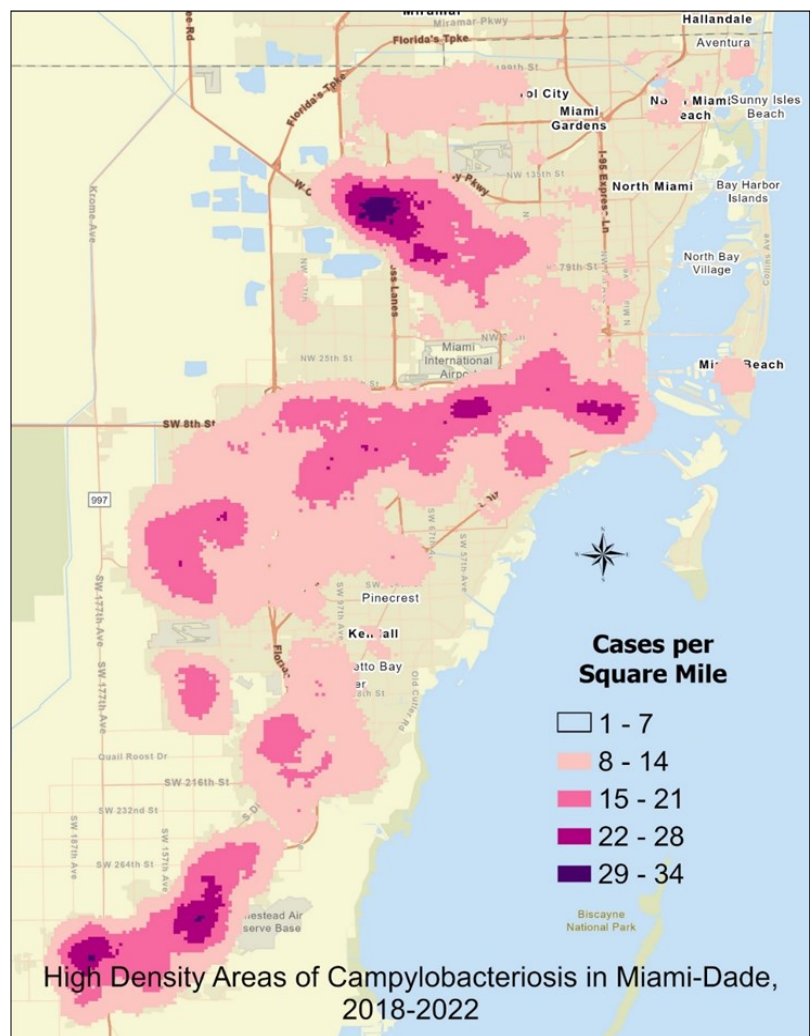
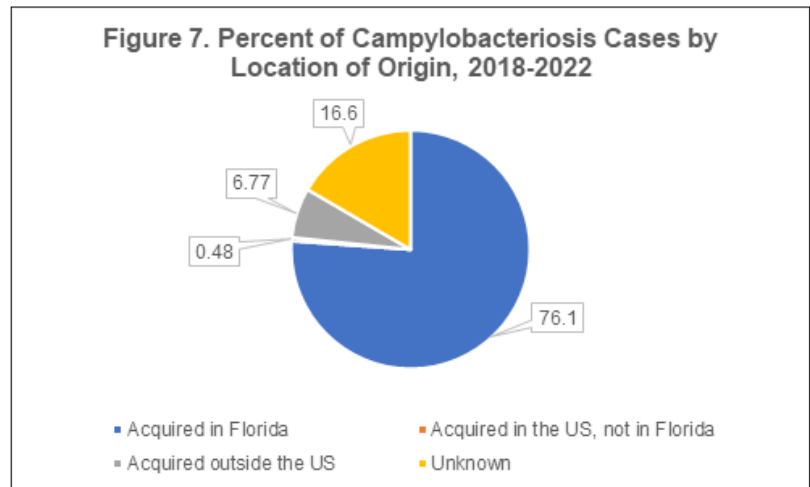


Location of Origin

An analysis of the location of origin for all the cases determined that 2,831 (76.1%) cases were found to be acquired in Florida, 18 (0.48%) cases were acquired in the US but not in Florida, 252 (6.77%) cases were acquired outside of the US (Figure 7). The location of origin was not obtained for 619 (16.64%) cases. After evaluating the campylobacteriosis case distribution in Miami-Dade, areas of high case concentration were discovered in the cities of Hialeah Gardens, West Miami, Little Havana, and Homestead.

Discussion

The trends and characteristics of campylobacteriosis cases in Miami-Dade County are comparable with nationwide trends and patterns. As expected, the majority of cases are acquired sporadically in Florida. Cases increased during the warmer months of May and June, indicating that a warmer climate facilitates the spread of this disease. Infection with *Campylobacter* caused the greatest burden in children younger than one year old, who had the highest incidence rates across all years. Inadequate immunological development and inadequate hand cleanliness among parents may add to this burden. In the majority of cases, the analysis of symptom data revealed a pattern corresponding to national and worldwide trends. Men were disproportionately impacted by this condition, with greater incidence rates reported across all years. The “Hispanic” race/ethnicity group made up the greatest proportion of cases in Miami-Dade County between 2018 and 2022. Case hospitalization rates were greater among the “Non-Hispanic Black” race/ethnicity group. To understand the socioeconomic and cultural aspects that contribute to the incidence of campylobacteriosis in different racial and ethnic groups, additional statistical analysis and research are required.



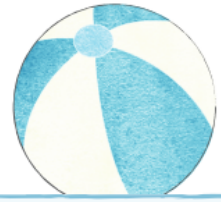
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Keep Kids Safe from Drowning

Drowning happens when you least expect it.

In Florida, drowning is one of the leading causes of preventable death in children 1–4 years of age. To reduce the risk of drowning, use multiple **layers of protection** and restrict unsupervised access to water sources such as pools, hot tubs, canals, ponds, ditches, bathtubs, toilets and more.



Layers of Protection

Supervise

Proper supervision is the most effective drowning prevention.

- Know your surroundings and possible drowning risks to your child at home and when traveling.
- Ensure young children are always supervised by a trusted caregiver.
- Assign a Water Watcher and use touch-supervision.
- Never leave a child alone near water, even for a second.

Swim Safety

- Seconds count! CPR training saves lives.
- Water survival skills training and swim lessons can help reduce drowning risk for children between the ages 1–4.
- By their 4th birthday, most children are ready for swim lessons.
- Swim lessons are not a replacement for supervision.
- Make a family drowning prevention plan and ensure all family members know how to swim.

Barriers & Alarms

Use barriers to water access.

- Install and maintain 4-foot pool fencing and self-closing, self-latching gates and doors.
- Secure and lock all doors, windows and pet doors.
- Install door chimes or alarms.
- Routinely check for needed repairs to fencing, gates and barriers.

Did You Know?

- While most child drowning incidents occur in a pool, nearly 70% of those children were not expected to be in the pool at that time.
- Distracted caregivers are a primary factor in child drowning incidents.
- Most drowning happens without a sound.
- Drowning incidents are preventable.

To learn more, visit:

WaterSmartFL.com

WaterSmartFL
WATER SAFETY IS EVERYONE'S RESPONSIBILITY.

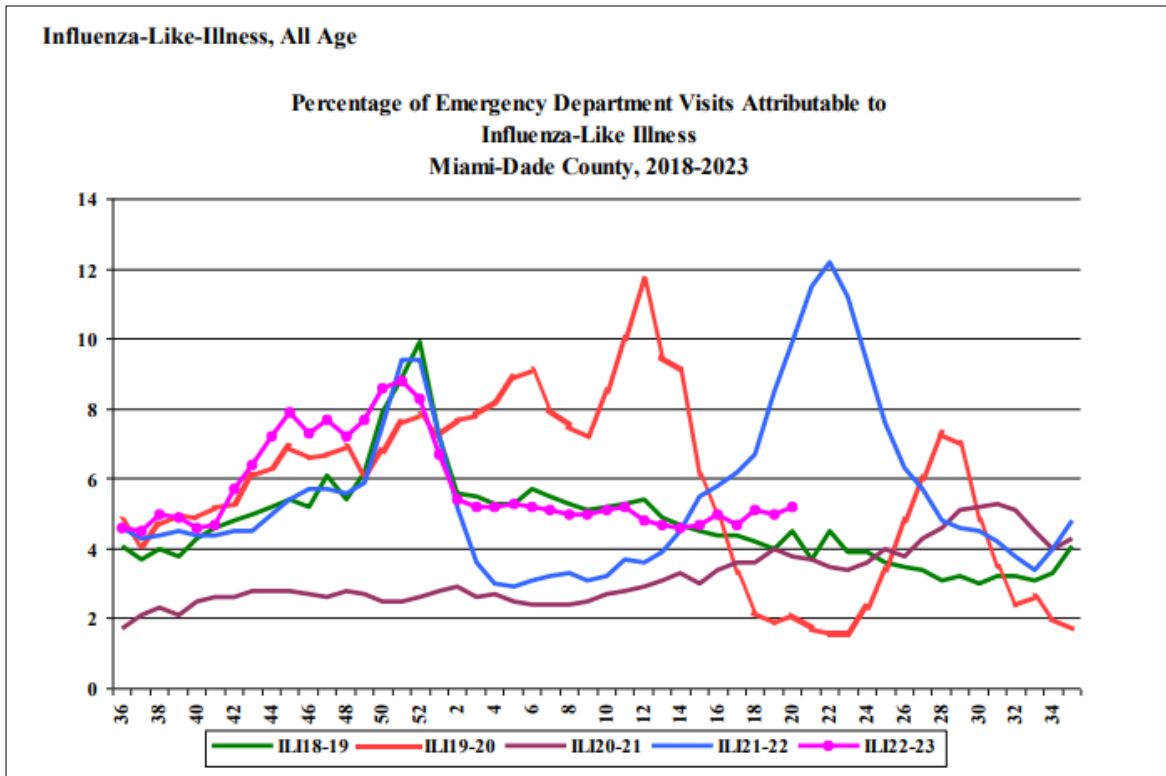
**Florida
HEALTH**



Epidemiology, Disease Control and Immunization Services

Florida Department of Health in Miami-Dade County

On a daily basis, all of Miami-Dade County's emergency department (ED) hospitals electronically transmit ED data to the Florida Department of Health. This data is then categorized into 11 distinct syndromes. The influenza-like illness (ILI) syndrome consists of fever with either cough or sore throat. It can also include a chief complaint of "flu" or "ILI". This season's 2020-2021 data is compared to the previous 4 influenza seasons (2016-2017, 2017-2018, 2018-2019, 2019-2020).



Across all ages, there were 39,279 ED visits; among them 2,037 (5.2%) were ILI. During the same week last year, 9.9% 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
Stephanie Ramirez at 305-470-5660.



Miami-Dade County Monthly Report Select Reportable Disease/Conditions April 2023

Diseases/Conditions	2023 Current Month	2023 Year to Date	2022 Year to Date	2021 Year to Date
HIV/AIDS				
AIDS*	34	129	132	134
HIV	200	675	630	422
STD				
Infectious Syphilis*	78	275	204	177
Chlamydia*	1405	5033	4641	4663
Gonorrhea*	615	2161	1932	2068
TB				
Tuberculosis**	11	38	49	34
Epidemiology, Disease Control & Immunization Services				
Epidemiology				
Campylobacteriosis	56	199	203	162
Chikungunya Fever	0	0	0	0
Ciguatera Poisoning	1	2	0	0
Cryptosporidiosis	7	35	17	11
Cyclosporiasis	0	2	0	1
Dengue Fever	7	44	12	1
Escherichia coli, Shiga Toxin-Producing	25	74	53	20
Encephalitis, West Nile Virus	0	0	0	0
Giardiasis, Acute	19	76	83	34
Influenza, Pediatric Death	0	0	0	0
Legionellosis	3	13	13	15
Leptospirosis	0	0	0	1
Listeriosis	0	0	1	2
Lyme disease	1	1	2	0
Malaria	1	1	0	1
Meningitis (except aseptic)	1	1	1	5
Meningococcal Disease	0	0	3	2
Salmonella serotype Typhi (Typhoid Fever)	0	0	0	0
Salmonellosis	95	291	264	165
Shigellosis	16	75	39	21
S. Pneumoniae, invasive disease	6	41	25	8
Vibriosis	4	7	5	0
West Nile Fever	1	1	0	0
Zika Virus (non-congenital)	0	0	0	0
Immunization Preventable Diseases				
Measles	0	0	0	0
Mumps	0	0	2	2
Pertussis	1	3	4	0
Rubella	0	0	0	0
Tetanus	0	0	0	0
Varicella	1	8	6	3
Hepatitis				
Hepatitis A	3	9	5	3
Hepatitis B (Acute)	7	32	31	9
Healthy Homes				
Lead Poisoning	52	172	89	30

*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.

Data on EDC-IS includes Confirmed and Probable cases.

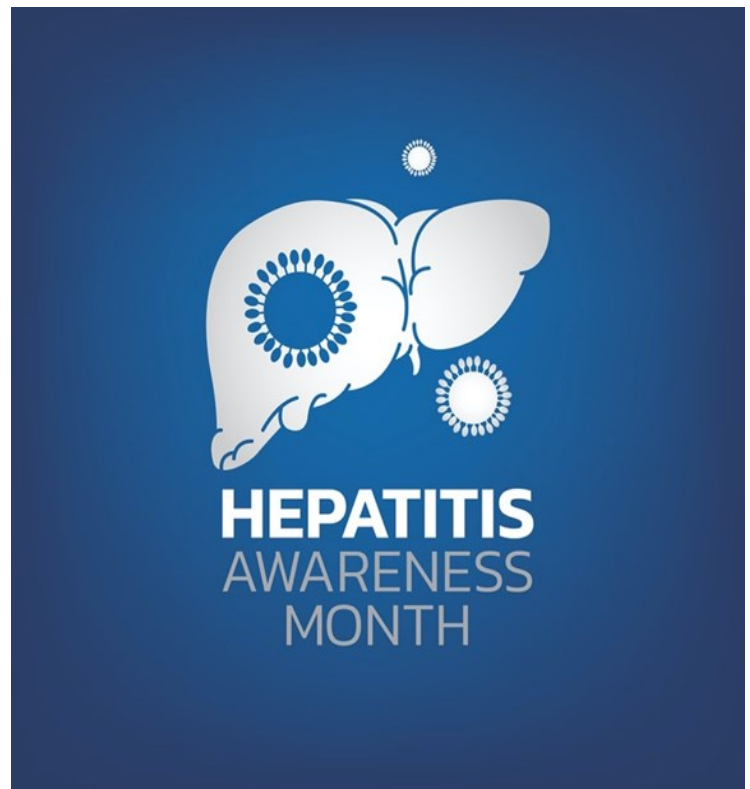
What's New at DOH-Miami-Dade!

- The Florida Department of Health in Miami-Dade County (DOH-Miami-Dade) encourages communities to participate in **National Water Safety Month** and take precautions to prevent drowning! [Visit](#) to learn more!
- Miami-Dade remains under a mosquito-borne illness alert! Currently, there are two local cases of dengue infection. Continue to follow protection efforts by remembering to **DRAIN and COVER**. [Visit](#) to learn more.
- DOH Miami-Dade offers COVID-19 vaccines, vaccine boosters, pediatric vaccines, and flu shots. Visit mi-amidade.floridahealth.gov for clinic locations and appointments!



To report disease and for information,
call EDC-IS at:

Childhood Lead Poisoning Prevention Program	305-470-6877
Epidemiology and Disease Surveillance	305-470-5660
Hepatitis Program	305-470-5536
HIV/AIDS Program	305-470-6999
Immunization Services	305-470-5660
STD Program	305-575-5430
Tuberculosis Program	305-575-5415
Appointment Line	786-845-0550



About the Epi Monthly

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 Yoselin Garcia at (786) 582-2266 or Yoselin.Garcia@flhealth.gov.

