

# Epi Monthly

June 2023 Vol 24, Issue 6

## Public Health LOOK OUT!

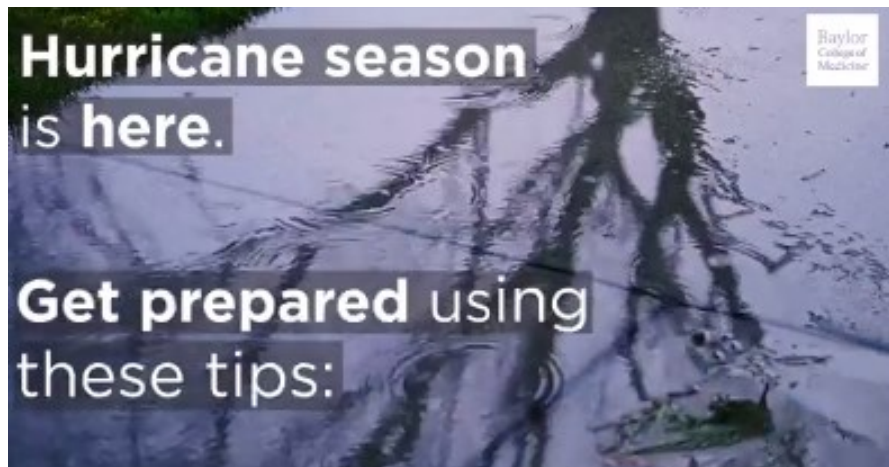
Florida Department of Health in Miami-Dade County

- **UV Safety Awareness Month in July** promotes increased protection against the sun's UV rays. With many outdoor and water activities occurring during the summer, UV protection becomes especially important. UV rays can cause eye and skin damage, premature aging of the skin, and skin cancer. To prevent UV damage, use sunscreen of at least SPF 15 that offers protection against both UV-A and UV-B rays. Clothing, hats, and sunglasses can also offer protection. Lastly, stay in the shade and avoid sun exposure between 10am and 4pm when UV rays are strongest. Visit [CDC.gov](https://www.cdc.gov) to learn more about sun safety.
- **National Minority Mental Health Awareness Month** is observed in **July**. This observance brings awareness to the fact that various racial and ethnic minorities may face unique mental health challenges. Individuals may experience difficulty in accessing care, a lack of culturally competent mental health providers, and discrimination. The U.S. Department of Health and Human Services Office of Minority Health offers courses for healthcare providers to improve cultural competency, and promotes improving mental health equity. Learn more about how to prioritize minority mental health at [CDC.gov](https://www.cdc.gov).
- Join in observing **World Hepatitis Day on July 28<sup>th</sup>** to raise awareness about the global impact of viral hepatitis. More than 354 million individuals around the world suffer from hepatitis. Liver infection and inflammation can occur due to infection with a hepatitis virus of type A, B, C, D, or E. Hepatitis infection can be acute or chronic, and in some cases may lead to liver cancer. Many treatments are available, and types A and B are vaccine-preventable. Visit [CDC.gov](https://www.cdc.gov) to learn more about prevention, testing, and treatment of viral hepatitis.

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: Yoselin Garcia, MPH and Kelsey Bricker, MPH**

**Introduction**

Drowning is characterized as the experience of respiratory impairment due to the submersion or immersion in liquid.<sup>1</sup> Drownings can be identified as fatal or nonfatal and is the third leading cause of unintentional injury deaths worldwide.<sup>2</sup> In the United States, over 4,000 unintentional fatal drownings and approximately 8,000 unintentional nonfatal drownings occur each year.<sup>1</sup> From 2018 to 2020, Florida ranked number one in the United States for unintentional drowning death rate among children one to four years of age and third highest in the nation among children 0-17 years of age. Populations with a higher risk of drowning include children between one and four years old, males, some racial and ethnic groups, and people who have seizure disorders or certain medical conditions.<sup>1</sup> Other factors that increase risk of drowning include not being able to swim, missing or ineffective fences around water, lack of close supervision, location, and not wearing a life jacket.<sup>1</sup> In Miami-Dade County, the age group with the highest incidence of drowning is children 0-17 years old. The purpose of this study is to explore demographic characteristics and geographic regions in Miami-Dade County with the highest frequency of nonfatal drownings among children ages 0-17 years old from 2017-2021.

**Methods**

Emergency department (ED) visits between 2017-2021 were analyzed using all diagnosis codes with the International Classification of Diseases 10<sup>th</sup> Revision Clinical Modification (ICD-10-CM) to identify nonfatal drownings in Miami-Dade County for children 0-17 years old. SAS 9.4 was used to analyze nonfatal drownings by time series and demographics. Incidence rate was calculated per 100,000 population using population estimates from Florida Health Charts. Lastly, ArcGIS was used to map and analyze the zip codes with the highest frequency of nonfatal drownings.

**Results**

From 2017-2021, there were a total of 309 near-drowning emergency department (ED) visits for children 0-17 years old (Figure 1). Incidence rate was highest in 2017, with 13.7 nonfatal drowning ED visits per 100,000 population. A decreasing trend in nonfatal drowning ED visits was observed during this period.

*Age and Gender*

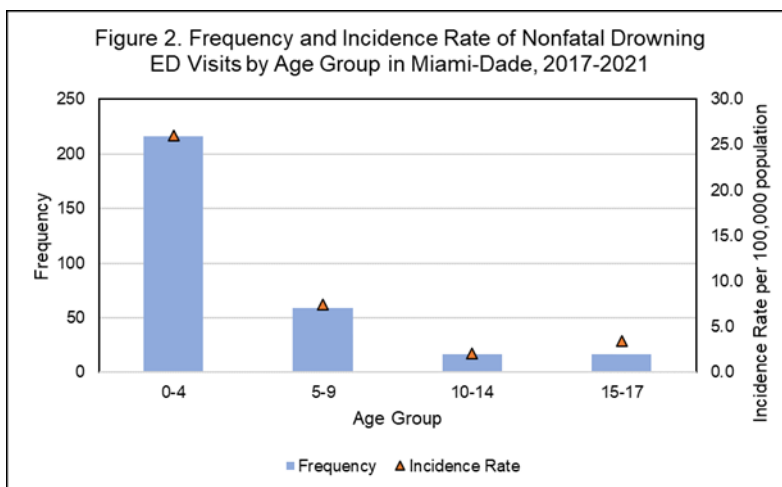
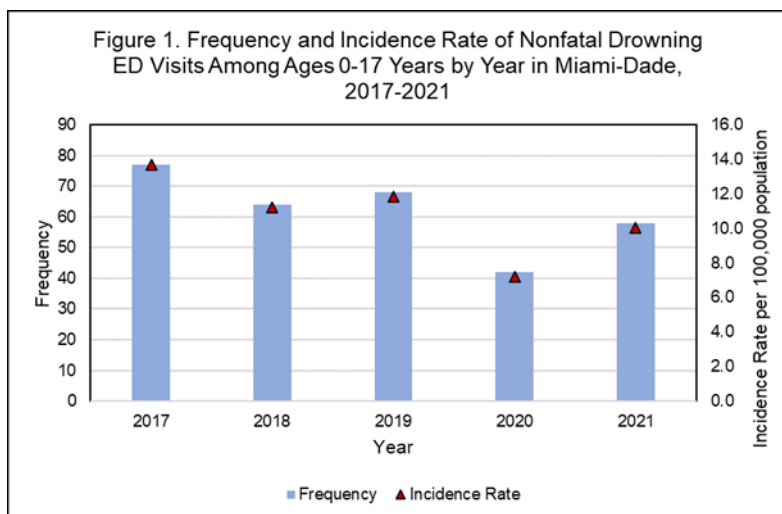
Among children 0-17 years of age, children 0-4 years old accounted for nearly 70% of all nonfatal drowning ED visits (Figure 2). Incidence rate was highest among children ages 0-4 years old with 26.1 ED visits per 100,000 population, followed by age group 5-9 years old with 7.5 visits per 100,000 population. Of the total nonfatal drowning ED visits, 61% were males (Figure 3).

*Race and Ethnicity*

During 2017-2021, sixty-nine percent of Hispanic children accounted for 54% of all nonfatal drowning ED visits. Non-Hispanic Whites and Non-Hispanic Blacks had higher incidence of nonfatal drowning ED visits, with 15 visits and 11.4 visits per 100,000 population, respectively (Figure 4).

*Time Series*

The results from the time series data indicate that from 2017-2021, the highest frequency of ED visits from nonfatal drownings occurred in the summer months of June and July (Figure 5). An increasing trend of nonfatal drowning ED visits was observed from Spring to Summer months, with nearly 60% of all visits occurring during the months of April through July. Peak frequency of 57 nonfatal drowning ED visits occurred in July (Figure 5). Most nonfatal drowning incidents occur during the weekend, with 56% of nonfatal drowning ED visits occurring on Saturday and Sunday.



**Submersion Type**

While the majority of all nonfatal drowning ED visits were due to submersion/drowning while in a swimming pool, other submersion types included falling off a watercraft, falling into other water (including natural water and beach), submersion/drowning while in a bathtub, and unspecified effects or cause of drowning/submersion (Table 1).

Table 1. Submersion Types of Nonfatal Drowning ED Visits Among Ages 0-17 Years in Miami-Dade (2017-2021)	
Submersion Type	Frequency
While in swimming pool	115
Unspecified effects or cause of drowning/submersion	94
Falling off of water craft (powered and nonpowered)	21
Fall into other water	13
While in a bathtub	3
Unknown	63
<b>Total</b>	<b>309</b>

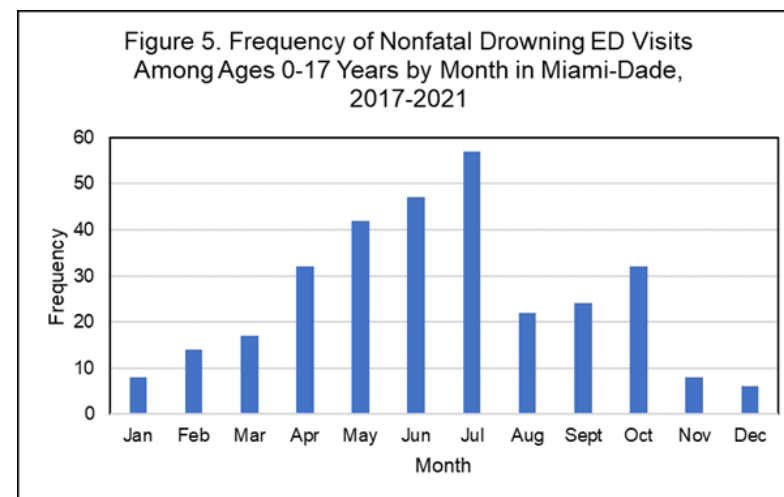
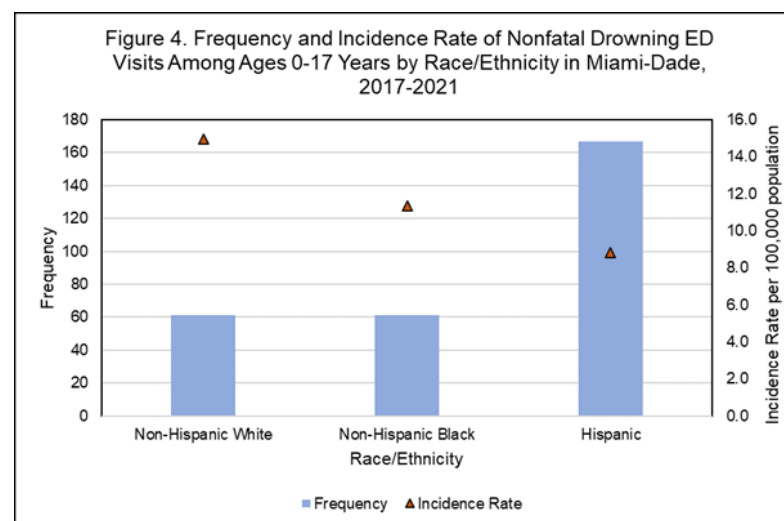
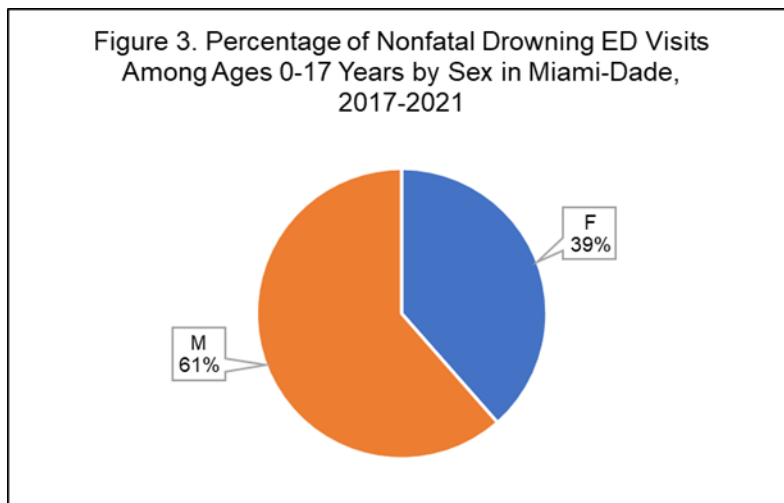
**Geographic Distribution**

In Miami-Dade, areas with the highest incidence rate of nonfatal drowning ED visits per 100,000 population included Homestead (33031), Coral Gables (33146), Miami Beach (33140), North Miami Beach (33160), North Miami (33169), and Hialeah (33013).

**Discussion**

The results from this data analysis support findings from previous research.<sup>1-8</sup> As stated by the World Health Organization, male children are at a higher risk for nonfatal drowning due to increased exposure to water and riskier behaviors.<sup>2</sup> In Miami-Dade, males accounted for 61% of nonfatal drowning ED visits from 2017-2021. Previous research has indicated that Black populations have a higher percentage of near drowning ED visits compared to other populations.<sup>1-6</sup> Additionally, zip codes with the highest incidence rate per 100,000 may be attributed to increased access to open water sources such as the ocean, ponds, irrigation channels, lakes, rivers, and pools.

Drowning is a major public health concern that requires coordinated prevention efforts. Through the analysis of nonfatal drowning ED visits, we can quantify the burden of drownings in Miami-Dade and aim drowning prevention efforts to communities that have increased incidence of nonfatal drownings. Nearly 40% of all nonfatal drownings treated in the emergency room require hospitalization or transfer to further care.<sup>1</sup> Long term impacts of nonfatal drownings result from damage to the brain, lungs, and kidneys.<sup>7</sup>



## Prevention

With the use of multiple layers of protection and restricted unsupervised access to water sources, drowning risk is significantly reduced. The following tips are essential to drowning prevention and keeping kids safe from drowning!

### → Supervision – *Proper supervision is the most effective drowning prevention!*

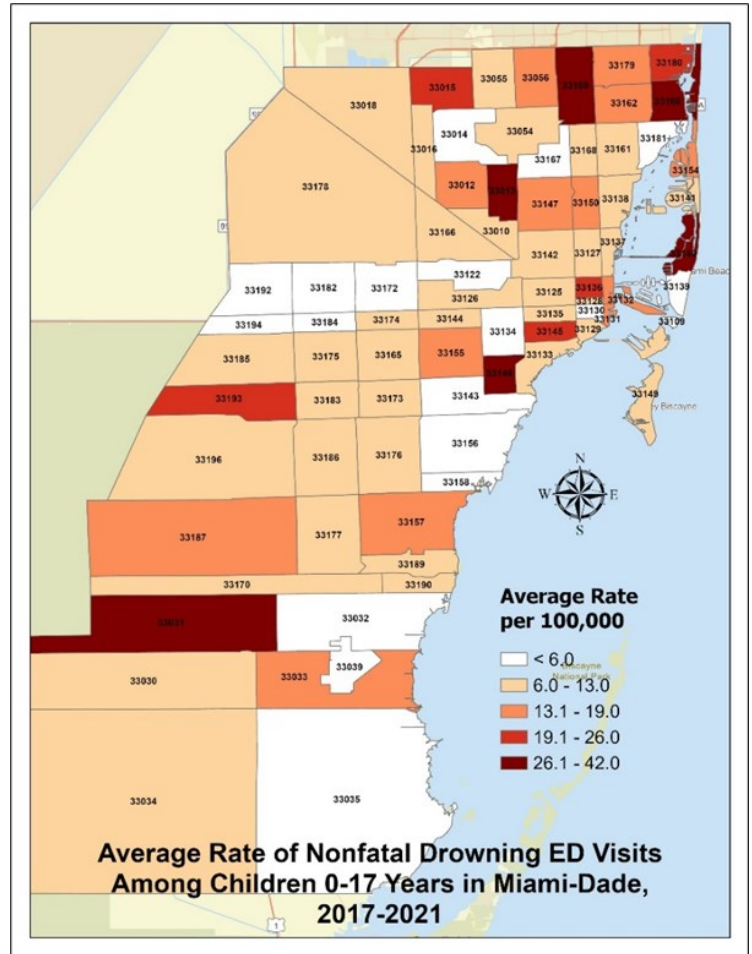
- Know your surroundings and possible drowning risks to your child at home and when traveling.
- Ensure young children are **always** supervised by a designated caregiver, even when lifeguards are present.
- Assign a Water Watcher and use touch-supervision.
- Never leave a child alone near water, even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

### → Barriers and alarms – *Use barriers to water access!*

- Install and maintain 4-foot (minimum) 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.

### → 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 of 1-4 years old.
- Swim lessons are not a replacement for supervision.
- Wear a life jacket. Ensure use of life jackets for all activities in and near natural water.
- Know the risks of natural water.
- Make a family drowning prevention plan and ensure all family members know how to swim.
- Avoid alcohol when swimming and/or supervising children.
- Use the buddy system.
- Take additional precautions for medical conditions and consider medication side effects.
- Do not hyperventilate or hold your breath under water for a long time.



## References

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**By: Paola Mancera, MPH CPH**

## Background

On February 14, 2023, the Florida Department of Health in Miami-Dade County Epidemiology, Disease Control & Immunization Services (EDC-IS) was notified by the Director of Nursing (DON) of a local skilled nursing facility (SNF) of a gastrointestinal illness outbreak. The initial notification included 12 residents reported with symptoms of nausea, vomiting, and diarrhea with an onset date of 02/12/2023. At initial notification there were 12 ill residents and no ill staff members. Ill residents were mostly confined to the second floor of the SNF. EDC-IS immediately initiated an investigation on 02/14/2023 which included requesting a line list from the ALF of ill residents and were at this point notified of no ill staff. Verbal and written recommendations were provided which focused on thorough hand washing, environmental cleanings, isolating ill residents, and excluding ill staff from the facility.

## Methods

### *Epidemiological Investigation*

At the time of the investigation, the 180-bed facility had 172 residents and 234 staff members. On 02/16/2023, the DON provided an additional line list which reported 41 ill residents and 9 ill staff members. A final line list was provided on 02/28/2023 reporting 53 ill residents and 11 ill staff members. Ill residents were spread amongst both residential floors of the facility.

An internal investigation conducted by the DON indicated that two additional cases displayed gastrointestinal symptoms prior to 02/12/2023 but had been thought of as isolated occurrences and not linked to the outbreak. This moved the outbreak onset date from 02/12/2023 to 02/10/2023.

Based on the shape of the epidemiological curve, the assumed agent was most likely to be norovirus which has a short of incubation period of 24-48 hours.

### *Laboratory Investigation*

The facility collected stool samples from five residents and sent them to the Florida Department of Health Bureau of Public Health Laboratory BPHL-Tampa for testing. The SNF also sent two additional samples to a commercial laboratory for testing. One case had a stool sample sent to both BPHL-Tampa and the commercial laboratory for testing; Thus, there were a total of seven samples tested but only six unique cases.

### *Preliminary Control Measures*

Concurrent to reporting the gastrointestinal outbreak to EDC-IS, the SNF began to implement control measures for the gastrointestinal outbreak. Residents presenting with gastrointestinal symptoms were placed under isolation protocols. All residents were encouraged to remain in their rooms throughout the outbreak; to assist in this the facility cancelled all communal activities until one week had passed without new cases. During the outbreak, the facility did not accept new admissions. Family of residents were notified of the outbreak via email and phone calls and visitors were notified upon entrance to the facility.

Staff were monitored for symptoms and were excluded if gastrointestinal symptoms developed. The facility reviewed hand hygiene and correct use of personal protective equipment (PPE) with all staff. Additional cleaning and disinfection of common areas and equipment were performed with EPA registered reagents.

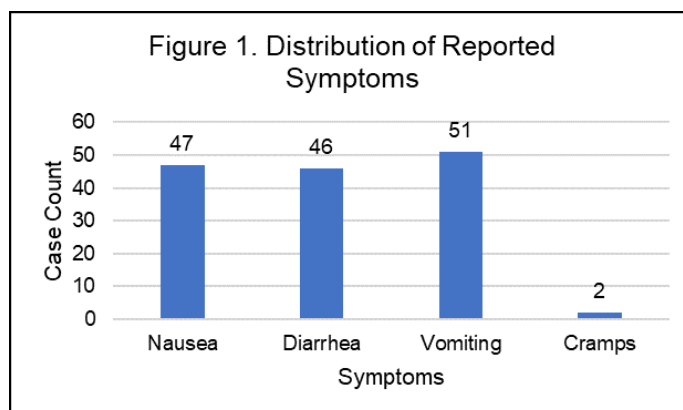
### *Epidemiological Criteria*

A confirmed case was defined as staff, resident, or visitor at the nursing home that met both the clinical criteria (vomiting and/or diarrhea on or after 02/10/2023) and had a positive laboratory result for a clinically compatible pathogen linked to the outbreak. Probable cases had illness histories with vomiting and/or diarrhea on or after 02/10/2023 but lacked positive laboratory results. All data analysis was performed using Microsoft Excel.

## Results

### *Statistics of the Outbreak*

Of the 64 ill residents, six residents met the confirmed case definition while another 57 ill staff and residents met the probable case definition. One ill resident did not meet the probable case definition since they only experienced nausea. Reported symptoms included nausea 75%, diarrhea 73%, vomiting 81%, and abdominal pain/cramps 3% (Figure 1).



Among cases, the mean age for resident and staff was 82.89 years (range of 60 - 100) and 55.89 years (range 36 - 74), respectively. Overall, 42 (67%) of the cases were female and 21 (33%) were male (Figure 2). Among males, 19 cases were residents (90%) and 2 staff members (10%). Among females, however, 31 cases were residents (74%) and 11 were staff members (26%). Overall attack rates for the SNF were 16%. When distributed by staff and residents, the attack rates were 5% and 22% respectively. Among resident cases, 66% resided on the second floor and 34% on the third floor. Peak onset date was 02/15/2023. Last onset of gastrointestinal symptoms was on 02/18/2023 (Figures 3 and 4).

All 53 ill residents received medical attention at the facility and two residents were transported via ambulance to a local hospital emergency department due to the severity of their symptoms. Of these two cases, one was admitted for further monitoring and evaluation while the second was transported back to the facility. Neither case received testing.

No information was provided on whether any ill staff member sought medical care or testing.

All seven samples that were tested came back positive for Norovirus; the samples tested at the BPHL-Tampa were tested further and it was determined that all five were Norovirus group GI.

## Discussion

Norovirus is part of a family of viruses that are the most common cause of gastroenteritis or inflammation of the stomach and intestines. The viruses are genetically diverse and divided into seven genogroups. Human infections are limited to genogroups GI and GII. This group of viruses are the leading cause of gastrointestinal disease outbreaks particularly associated with healthcare settings.

Exposure to the virus occurs with the ingestion of viral particles from contaminated food, water, via person-to-person contact, or contact with contaminated surfaces. It has been shown that in hospital-based settings, person-to-person transmission was the primary mode of infection regardless of genotype. Reviews show that outbreaks in hospital settings more often originate in patients rather than staff index cases.

Symptoms can begin anywhere from 12 to 48 hours after ingestion of the virus and symptoms can last from one to three days. Norovirus infections typically present with non-bloody diarrhea and vomiting. While no medical treatments are currently available to reduce illness, medical management is focused on supportive care to prevent or reverse dehydration and electrolyte balance. This is key especially in more vulnerable populations such as those over 65 years of age and those with other comorbidities that may complicate infections. While some patients benefit from the use of antiemetics and antimotility agents, there is not enough evidence to utilize either of these agents as a standard of care.

Prevention of Norovirus should be focused on cleaning and disinfection protocols. The environmental persistence of the virus specifically in clinical settings leads to the opportunity for recurrent outbreaks, specifically in settings with more vulnerable populations such as in SNFs.

Strategies for the prevention and disruption of Norovirus outbreaks are summarized in the CDC's Healthcare Infection Control Practices Advisory Committee (HICPAC) guidelines published in 2011 which are divided into three broad categories: Staff and patient policy, hand hygiene, and environmental disinfection.

Staff and patient policies during outbreaks can include surveillance and restricting work of staff that present with gastrointestinal symptoms, temporary holds on new patient admissions, interruption of group activities and implementation of visitor policies.

Figure 2. Case Distribution by Gender

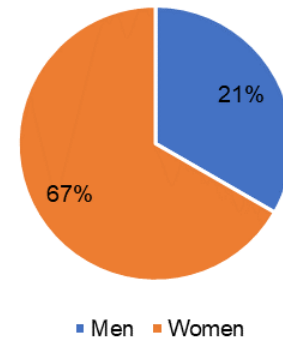


Figure 3. Epidemiological Curve for Norovirus Outbreak

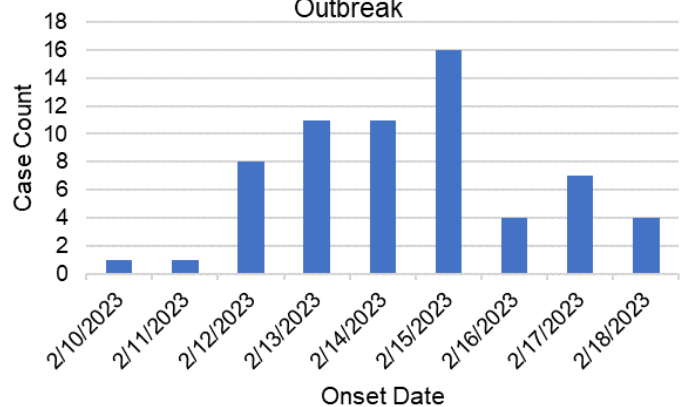
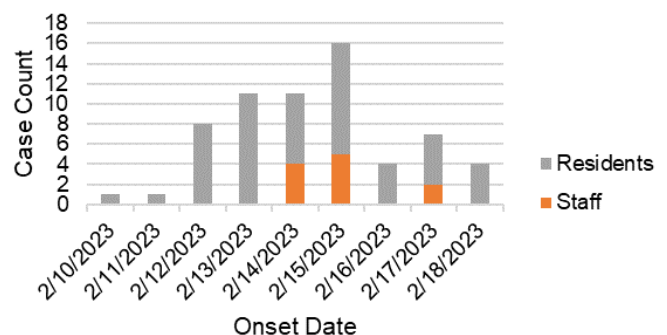


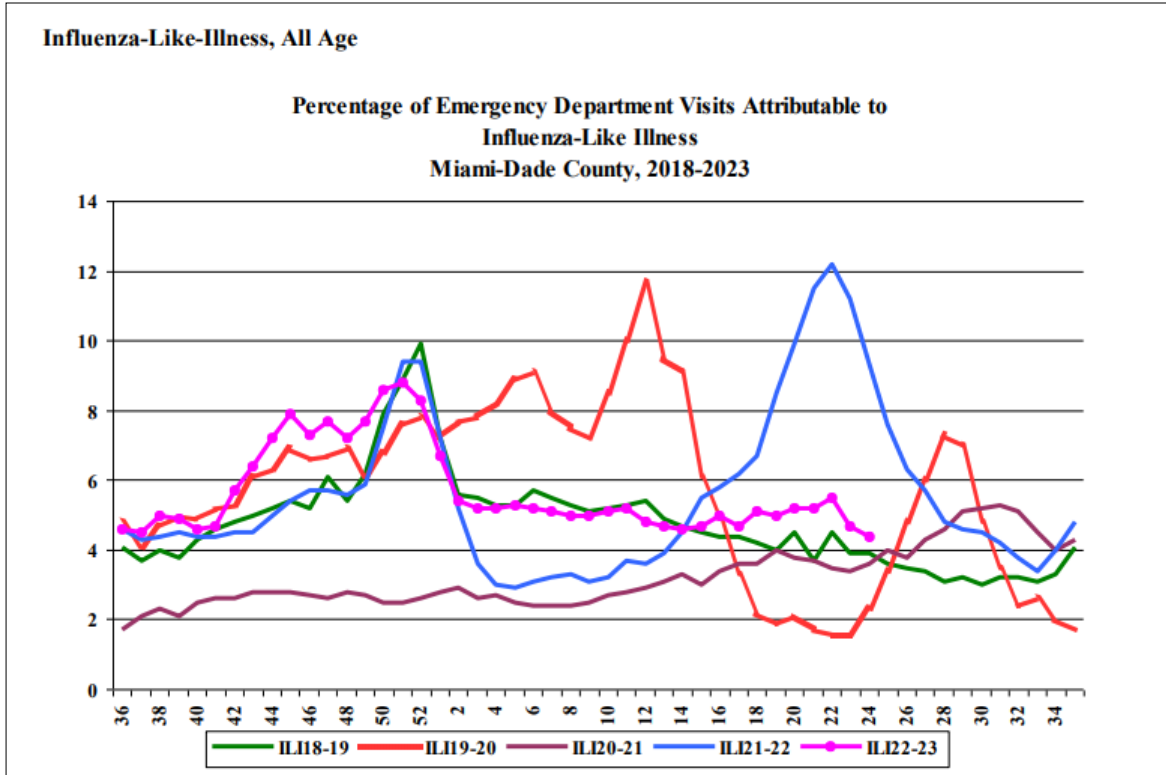
Figure 4. Epidemiological Curve by Case Role at Facility



## 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 36,739 ED visits; among them 1,606 (4.4%) were ILI. During the same week last year, 9.3% 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 May 2023

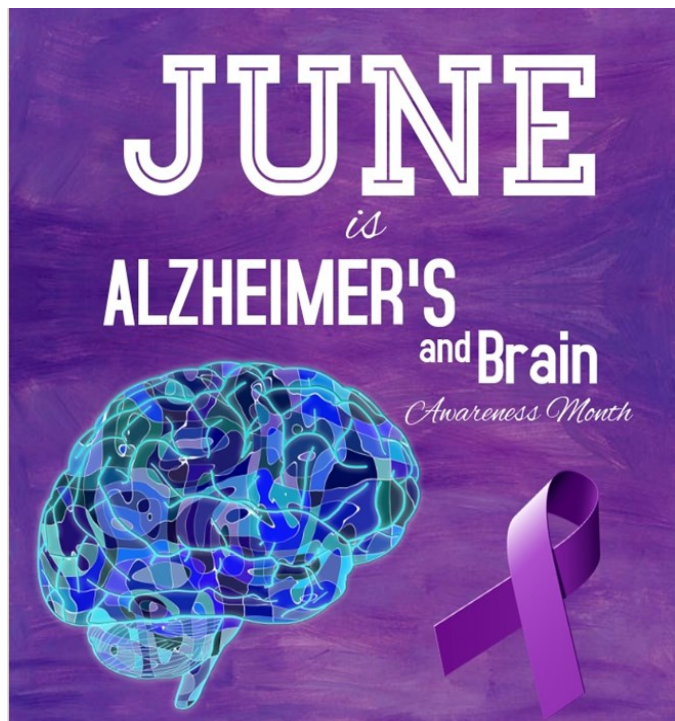
Diseases/Conditions	2023 Current Month	2023 Year to Date	2022 Year to Date	2021 Year to Date
<b>HIV/AIDS</b>				
AIDS*	38	167	178	165
HIV	122	734	789	508
<b>STD</b>				
Infectious Syphilis*	61	336	269	239
Chlamydia*	1467	6500	5939	5810
Gonorrhea*	640	2801	2571	2535
<b>TB</b>				
Tuberculosis**	12	50	60	39
<b>Epidemiology, Disease Control &amp; Immunization Services</b>				
<b>Epidemiology</b>				
Campylobacteriosis	85	284	265	220
Chikungunya Fever	0	0	0	0
Ciguatera Poisoning	1	3	3	1
Cryptosporidiosis	6	41	21	18
Cyclosporiasis	2	4	1	3
Dengue Fever	8	52	17	1
Escherichia coli, Shiga Toxin-Producing	19	93	68	26
Encephalitis, West Nile Virus	0	0	0	0
Giardiasis, Acute	27	102	107	43
Influenza, Pediatric Death	0	1	0	0
Legionellosis	1	14	16	20
Leptospirosis	0	0	0	1
Listeriosis	1	1	1	3
Lyme disease	0	1	3	0
Malaria	2	3	0	1
Meningitis (except aseptic)	1	2	3	7
Meningococcal Disease	0	0	3	2
Salmonella serotype Typhi (Typhoid Fever)	0	0	0	0
Salmonellosis	95	386	365	235
Shigellosis	34	109	52	24
S. Pneumoniae, invasive disease	13	54	30	12
Vibriosis	6	13	9	2
West Nile Fever	0	1	0	0
Zika Virus (non-congenital)	0	0	0	0
<b>Immunization Preventable Diseases</b>				
Measles	0	0	0	0
Mumps	0	0	0	0
Pertussis	0	3	4	0
Rubella	0	0	0	0
Tetanus	0	0	0	0
Varicella	5	13	10	4
<b>Hepatitis</b>				
Hepatitis A	3	30	14	4
Hepatitis B (Acute)	8	40	42	10
<b>Healthy Homes</b>				
Lead Poisoning	38	209	116	37

\*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!

- **Hurricane Season** began **June 1!** FDOH-Miami-Dade urges all residents and visitors to prepare for hurricane season! Prepare an evacuation plan, disaster kit, and supplies such as water and non-perishable food. View the [Hurricane Readiness Guide](#) for crucial information on hurricane preparedness!
- 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 [miamidade.floridahealth.gov](http://miamidade.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](mailto:Yoselin.Garcia@flhealth.gov).

