Epi Monthly

Florida Department of Health in Miami-Dade County   July 2022 Vol 23, Issue 7

Public Health LOOK OUT!

- August is **National Immunization Awareness Month**! This month is highlighted to educate on the importance of vaccination at various stages of life and the protection vaccines provide against vaccine-preventable diseases. Vaccines serve as the best layer of protection, strengthening the immune system and reducing severity of disease and/or infection. As the health of people globally is threatened by a multitude of emerging diseases, now more than ever is it vital to get vaccinated! Visit CDC.gov to learn more on current recommended immunization schedules.

- **World Breastfeeding Week** is observed August 1-7th to shed light on the great benefits that breastfeeding provides to both the health and welfare of babies. Maternal health focusing on good nutrition, poverty, and food security is also highlighted to raise awareness on the challenges women face when considering to breast feed their baby. Breast feeding significantly improves the health, development and survival of infants and children. Visit to learn more!

- **World Lung Cancer Day** is observed on **August 1st** to educate and raise awareness on lung cancer, the leading cause of cancer deaths globally. In the United States, lung cancer accounts for almost 25% of all cancer deaths. Join the fight against lung cancer by educating on risk factors and dangerous substances that may cause lung cancer such as smoking, exposure to radon gas, air pollution, and secondhand smoke. New lung cancer screening tools are available and recommended for individuals at high risk for lung cancer. Screening and early detection improve survival rates! Visit to learn more.

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

In this Issue

Near-Drowning Emergency Department Visits in Miami-Dade County, 2017-2020

By: Kelsey Bricker

Introduction

Drowning is characterized as the experience of respiratory impairment due to the submersion or immersion in liquid.[1] Drownings can be identified as fatal or nonfatal and is the third leading cause of unintentional injury deaths worldwide.[2] In the United States, there is an average of eleven drowning deaths per day and twenty-two nonfatal drownings per day.[1] Populations with a higher risk of drowning include children between one and four years old, men, some racial and ethnic groups, and people who have seizure disorders.[1] Other factors that may increase drownings include not being able to swim, missing fences around water, lack of supervision, location, not wearing a life jacket, drinking alcohol, or using drugs and prescription medications.[1] In Miami-Dade County, the age group with the highest incidence of drowning are children 0-17 years old. The purpose of this data analysis is to explore admission factors, demographic data, and geographic regions in Miami-Dade County that had the highest frequency of nonfatal drownings within this age group from 2017-2020.

Methods

Emergency department (ED) visits between 2017-2020 were analyzed using the International Classification of Diseases 10th Revision Clinical Modification (ICD-10-CM) to identify nonfatal drownings in Miami-Dade County for children 0-17 years old. Statistical analysis was conducted using SAS 9.4 to analyze nonfatal drownings by time series, demographics, zip code frequencies and incidence rate per 100,000. Additional analysis was conducted to explore common submersion types, length of stay (hours), patient disposition, payer type, and cost (USD) of drowning related ED visits. To determine length of stay in hours, a new variable *HRS* was created by subtracting ED hour of arrival from ED hour of discharge. To determine the best measure of central tendency for the cost and length of stay of nonfatal drowning ED visits, a normality test was conducted. A box plot was used to measure the distribution of the variable *TCHGS* and *HRS* as well as identify any outliers. Due to the presence of outliers, the median was used to report the cost and length of stay of drowning related ED visits. Lastly, ArcGIS was used to map and analyze the zip codes with the highest frequency of nonfatal drownings.
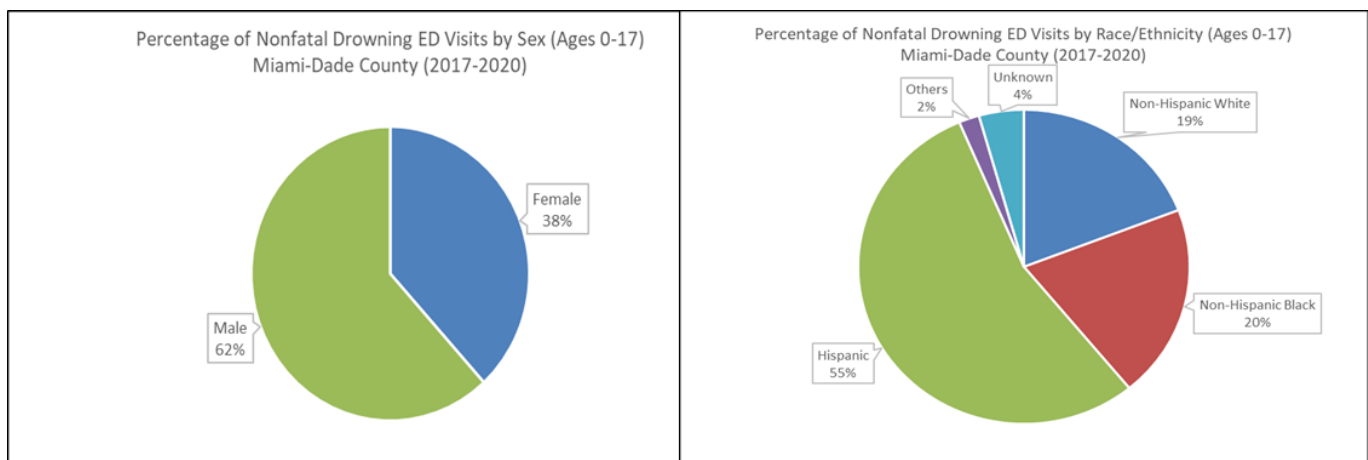
Results

From 2017-2020, there were a total of 251 near drowning emergency department (ED) visits for children 0-17 years old (Table 1). Of the total near drowning ED visits, male children accounted for sixty-two percent of visits and fifty-five percent of visits were Hispanic children (Figure 1). These results support national data trends and prior research that show most drowning victims are male and of racial/ethnic minorities.[2-7]

As seen in Figure 2, the zip codes with the highest nonfatal drowning ED rate per 100,000 population include: Homestead (33031), Coral Gables (33146), Coral Way (33145), Miami Beach (33140), Hialeah (33013), Miami Gardens (33169), and North Miami Beach (33160).

Table 1. Frequency of Nonfatal Drowning ED Visits by Year (2017-2020).

Frequency of Nonfatal Drowning ED Visits by Year (Ages 0-17) Miami-Dade County (2017-2020)	
Year	Frequency
2017	77
2018	64
2019	68
2020	42
Total	251

Figure 1. Percentage of Nonfatal Drowning ED Visits by Sex and Race/Ethnicity (2017-2020).

The results from the time series data indicates that from 2017-2020, the highest frequency of ED visits from nonfatal drownings occurred in the summer months of June and July (Figure 3). In addition, with over half of submersion types being reported as other and unspecified, submersion also occurred in natural water, swimming pools, or while being on a watercraft.

Length of Stay & Patient Disposition

The median length of stay (LOS) in the ED due to a nonfatal drowning was 3 (2 to 4) hours. The minimum LOS was less than one hour, and the maximum LOS was twenty-three hours (Figure 4). Of the patients seen in the ED, 208 (82.8%) were routinely discharged and 21 (8.3%) were transferred to a hospital for inpatient care. Other patients were transferred to a cancer center or children's hospital, left against medical advice, expired, or were discharged to an unspecified facility (Figure 5).

Cost of Visit and Insurance Type

Results from the boxplot to determine normality can be found in Figure 6. The median cost for a near-drowning ED visit was $3,350 ($1,766 to $6,089). Additionally, the minimum cost for a near-drowning ED visit was $279 and the maximum cost was $51,749. Next, 132 (52.5%) patients were covered under Medicaid HMO and 74 (29.4%) patients were covered under a commercial insurance (Figure 7).

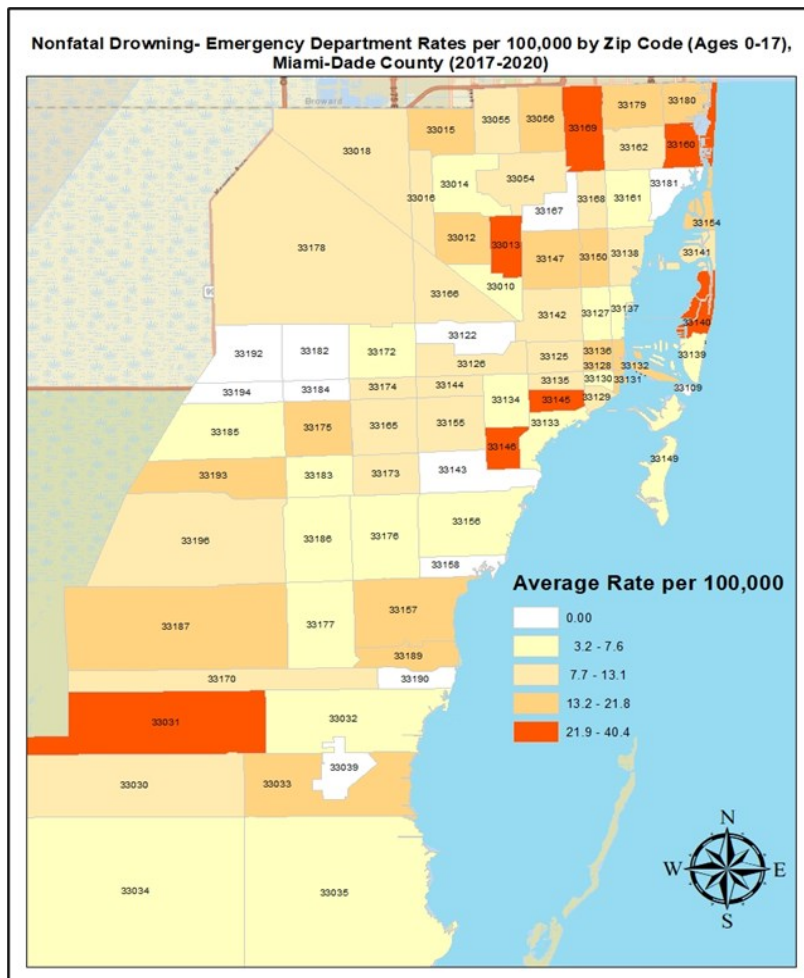Figure 2. Zip Code Map of Nonfatal Drowning ED Rates per 100,0000 in Miami-Dade County from 2017-2020.

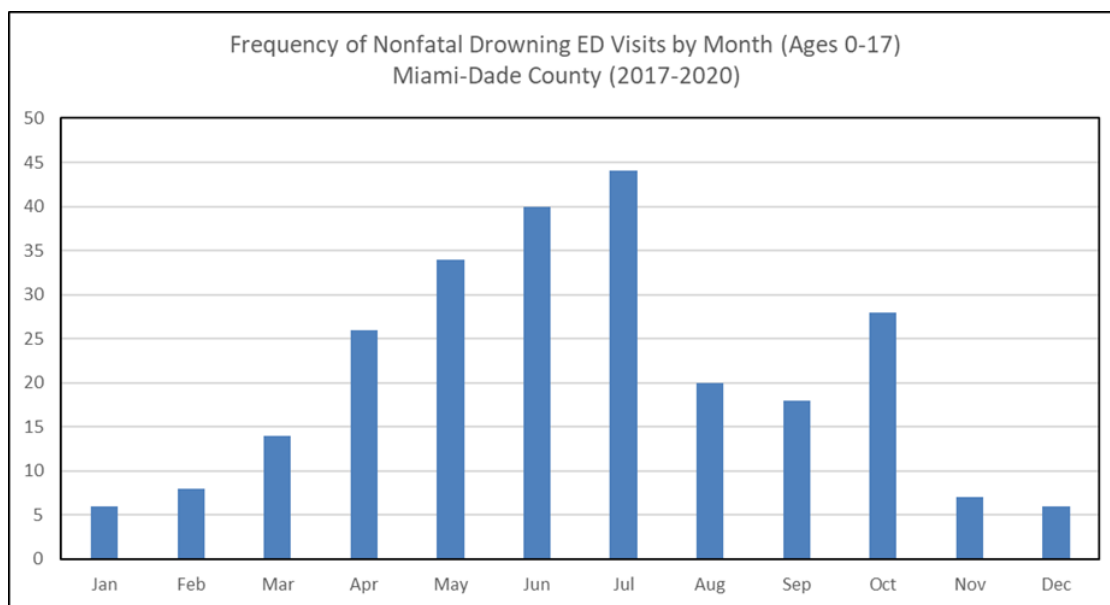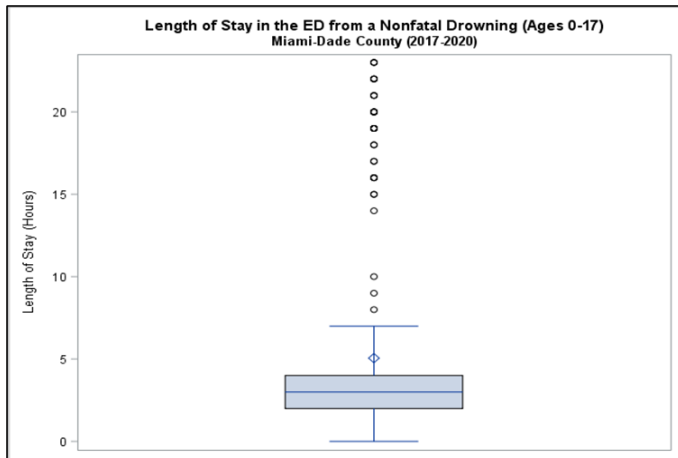Figure 3. Frequency of Nonfatal Drowning ED Visits by Month (2017-2020)

Figure 4. Length of Stay in the ED from a Nonfatal Drowning (2017-2020)

Figure 5. Patient Discharge Status after Nonfatal Drowning ED Visit (2017-2020)

Discussion

Nonfatal drownings are a public health issue that is often overlooked and underreported compared to fatal drownings. The long-term impacts of a nonfatal drowning include damage to the brain, lungs, and kidneys.[7] Nonfatal drownings can be prevented by installing barriers around water hazards, increasing supervision of children, teaching school-aged children basic swimming skills, and enforcing safe boating.[1,2]

The results from this data analysis are similar to findings from previous research.[1-8] For example, 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.[2] In addition, racial and ethnic minorities are at a higher risk for Nonfatal drownings.[1-6] Previous research has indicated that Black populations have a higher percentage of near drowning ED visits compared to other populations.[1-6] This data analysis indicates that the Hispanic population in Miami-Dade County has a higher frequency of near drowning ED visits. These results may be due to the racial makeup of the local population. Next, zip codes with the highest incidence rate per 100,000 can be contributed to an increased access to open water sources such as the ocean, ponds, irrigation channels, lakes, rivers, and pools. Lastly, the median length of stay in the ED, median cost of visit, and number of patients who are admitted into inpatient care is lower in Miami-Dade compared to findings from previous research.[4-6,8]

To further explore the populations in Miami-Dade that are at a higher risk of nonfatal drownings, future analysis must include the demographic incidence rate of near drowning ED visits. In addition, it would be beneficial to explore the relationship between nonfatal drownings and socioeconomic factors, as well as the perception of water safety. With this, the most effective interventions can be implemented in Miami-Dade County.
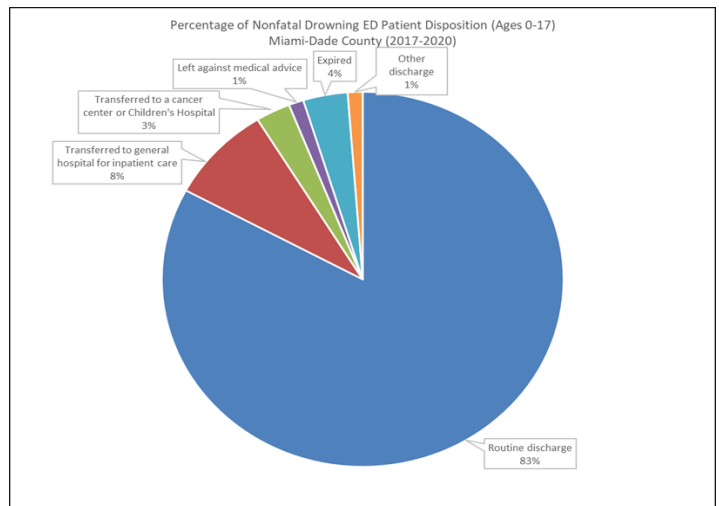
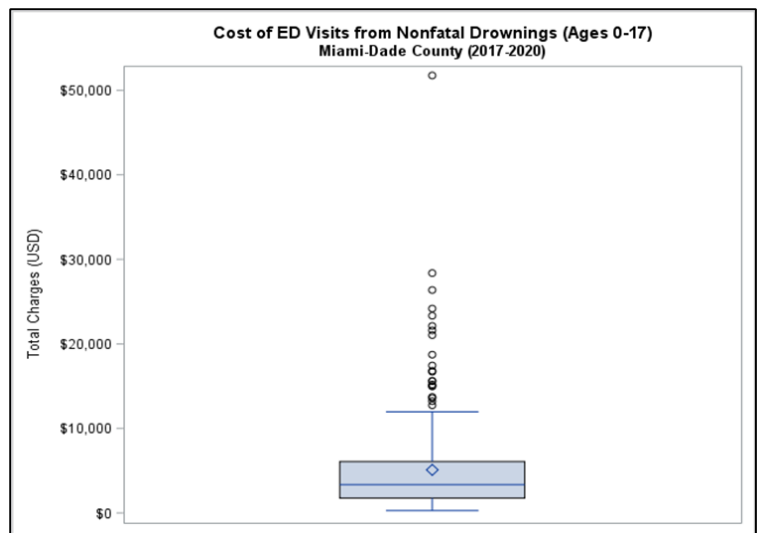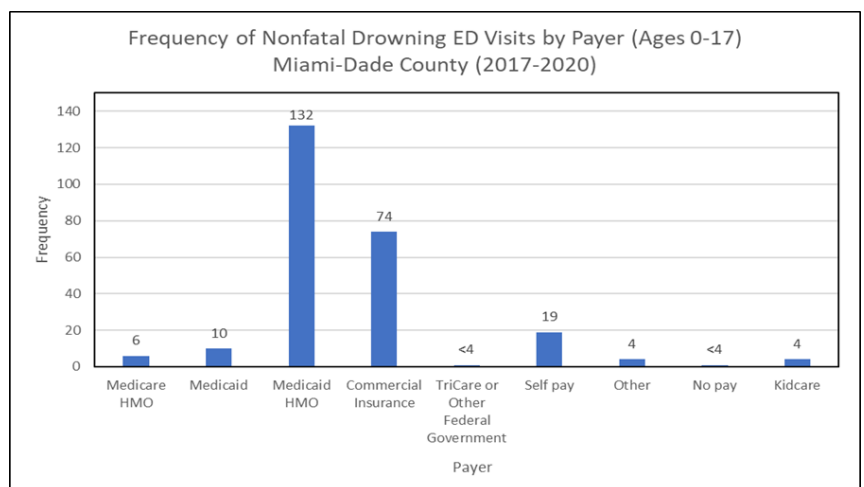Figure 6. Cost of Stay in the ED from a Nonfatal Drowning (2017-2020)

Figure 7. Patient Payer Type for Nonfatal Drowning ED Visit (2017-2020)

References

1. Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Drowning prevention. cdc.gov. Updated March 10, 2022. https://www.cdc.gov/drowning/facts/index.html.
2. World Health Organization. Drowning. who.int. Published April 27, 2021. https://www.who.int/news-room/fact-sheets/detail/drowning.
3. Stanford Children's Health. Water safety-Injury statistics and incidence rates. https://www.stanfordchildrens.org/en/topic/default?id=water-safety--injury-statistics-and-incidence-rates-90-P03004
4. Webb A, Wheeler A, Ricci A, et al. Descriptive epidemiology of pediatric drowning patients presenting to a large southern US children's hospital. *SMJ*. 2021; 114: 266-270. doi: 10.14423/SMJ.0000000000001250
5. United States Consumer Product Safety Commission. Pool or spa submersion: Estimated nonfatal drowning injuries and reported drownings, 2022 report. cpsc.gov. Published May 2022. https://www.cpsc.gov/s3fs-public/Pool-or-Spa-Submersion-Estimated-Nonfatal-Drowning-Injuries-and-Reported-Drownings-2022-Report.pdf?VersionId=KJipFopPSvg.ARYid_oxUSlmC.E1HbiQ
6. Felton H, Myers J, Liu G, Davis D. Unintentional, non-fatal drowning of children: US trends and racial/ethnic disparities. *BMJ*. 2015;5:e008444. doi:10.1136/bmjopen-2015-008444.
7. Suominen P, Vahatalo R. Neurologic long term outcome after drowning in children. *Scand J Trauma Resusc Emerg Med*. 2012;20:55. doi:10.1186/1757-7241-20-55.
8. Peterson C, Xu L, Florence C. Average medical cost of fatal and non-fatal injuries by type in the USA. *Inj Prev*. 2021; 27(1): 24-33. doi:10.1136/injuryprev-2019-043544.

Florida Department of Health in Miami-Dade County
Epidemiology, Disease Control and Immunization Services

Influenza Like Illness Surveillance Report

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).
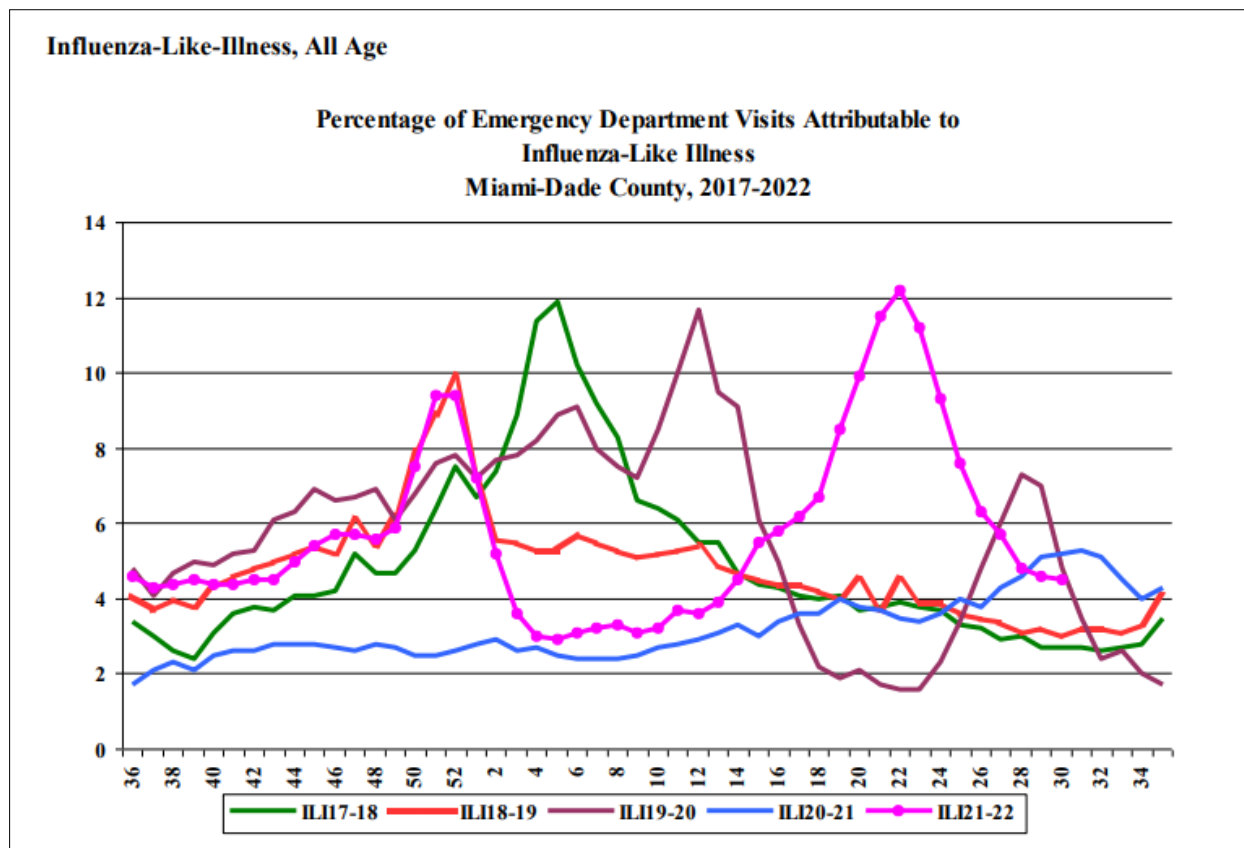
Across all ages, there were 34,573 ED visits; among them 1,561 (4.5%) were ILI. During the same week last year, 5.2% of ED visits were ILI.

Miami-Dade County Monthly Report
Select Reportable Disease/Conditions
June 2022

WASH YOUR HANDS

Diseases/Conditions	2022 Current Month	2022 Year to Date	2021 Year to Date	2020 Year to Date
HIV/AIDS				
AIDS*	43	221	209	166
HIV	146	939	661	547
STD				
Infectious Syphilis*	55	324	308	217
Chlamydia*	1129	7069	7014	5226
Gonorrhea*	537	3108	3116	1826
TB				
Tuberculosis**	12	72	50	41
Epidemiology, Disease Control & Immunization Services				
Epidemiology				
Campylobacteriosis	55	320	272	257
Chikungunya Fever	0	0	0	0
Ciguatera Poisoning	0	3	3	5
Cryptosporidiosis	6	30	23	12
Cyclosporiasis	2	3	3	2
Dengue Fever	8	24	1	10
Escherichia coli, Shiga Toxin-Producing	8	72	41	33
Encephalitis, West Nile Virus	0	0	0	0
Giardiasis, Acute	28	138	48	61
Influenza, Pediatric Death	0	0	0	0
Legionellosis	3	0	0	0
Leptospirosis	0	0	1	0
Listeriosis	2	0	0	0
Lyme disease	1	0	0	0
Malaria	0	0	1	2
Meningitis (except aseptic)	1	4	8	4
Meningococcal Disease	1	4	3	2
Salmonella serotype Typhy (Typhoid Fever)	0	0	0	0
Salmonellosis	110	479	323	314
Shigellosis	10	71	31	72
Pneumoniae, invasive disease	9	40	19	34
Vibriosis	6	15	11	2
West Nile Fever	0	0	0	3
Zika Virus (non-congenital)	0	0	0	0
Immunization Preventable Diseases				
Measles	0	0	0	0
Mumps	0	3	2	1
Pertussis	0	4	0	8
Rubella	0	0	0	0
Tetanus	0	0	0	0
Varicella	7	17	8	24
Hepatitis				
Hepatitis A	3	15	4	8
Hepatitis B (Acute)	5	42	12	30
Healthy Homes				
Lead Poisoning	33	154	51	38

*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:

- DOH-Miami-Dade is offering the **Jynneos Monkeypox vaccine** to high-risk populations. To become fully immunized, you must be vaccinated with 2 doses, the second dose 28 days after the initial dose. Schedule an appointment here!

- **Saturday, August 13th**, DOH-Miami-Dade is collaborating with Community Health Centers to provide **FREE** back to school immunizations to many communities across Miami-Dade county! Click for event details.

- COVID-19 testing sites in Miami-Dade will continue to offer free testing to patients without health insurance through July. Free At-Home COVID-19 tests also remain available. Visit https://special.usps.com/testkits to order a set of 8 tests.

- DOH Miami-Dade offers COVID-19 vaccines, vaccine boosters, pediatric vaccines, and flu shots. Visit miamidade.floridahealth.gov for clinic locations and appointments!

- The **Test to Treat Initiative** provides individuals with rapidly accessible, free, lifesaving oral COVID-19 antiviral pills. Visit the HHS.gov to locate a COVID-19 Test to Treat site near you!

SUN SAFETY — SUMMER SKIN PROTECTION
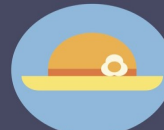
WEAR BROAD HAT · USE SUNGLASSES · WEAR PROTECTIVE CLOTHING · AVOID SUN BETWEEN 11 AM AND 3 PM · USE SUNSCREEN · DRINK MORE WATER · REFLECTION CAUTION · SEEK SHADE · AVOID DIRECT SUNLIGHT

BreastfeedMIAMI and DOH-Miami-Dade WIC presents

Florida HEALTH WIC Florida

11TH ANNUAL Breastfeeding Awareness Family Day
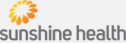
DORAL LEGACY PARK
11400 NW 82ND STREET
DORAL, FL 33178

AUGUST 6TH
9:00AM–2:00PM

"TOGETHER WE DO GREAT THINGS"

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

Florida HEALTH Miami-Dade County