

Epi Monthly

February 2024 Vol 25, Issue 2

Public Health LOOK OUT!

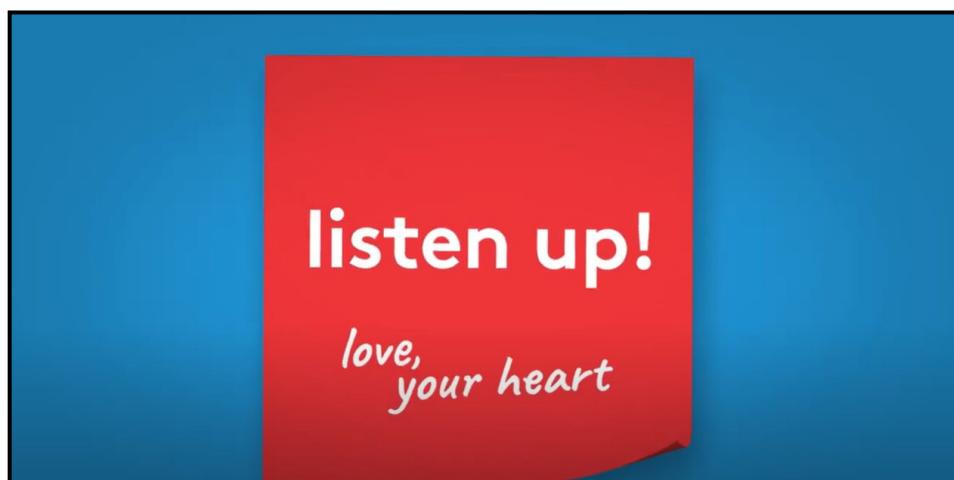
Florida Department of Health in Miami-Dade County

- Get to know your kidneys in **March** for **National Kidney Month!** This month focuses on raising awareness of kidney health and the important role your kidneys have in maintaining health and well-being. Your kidneys work to filter your blood and regulate blood pressure and fluid levels. Kidney disease increases your risk for cardiovascular disease, nerve damage, anemia, heart attack, stroke, and weak bones. Visit kidney.org to learn more about your kidneys and ways to improve kidney health!
- **National Poison Prevention Week** takes place **March 17th-23rd**, to highlight the dangers and risks of poisonings for persons of all ages and raise awareness on poison prevention. The goal of this week is to educate on safe practices that will work to reduce unintentional poisonings across the nation. Poisonings can occur due to accidental exposure to household cleaning products, prescription medication overdoses, illegal and recreational drug overdoses, pesticides, carbon monoxide, and other substances. Our local poison center is available 24 hours a day, 365 days a year via a toll-free hotline 1(800)222-1222. Visit floridapoisontcontrol.org for more information on poisoning in Florida!
- **National Women and Girls HIV/AIDS Awareness Day** is celebrated each year on **March 10th**, to shed light on the impact of HIV and AIDS on women and girls and provide support to those at risk of and living with HIV. In 2019, nearly 7,000 women received an HIV diagnosis in the United States. Only about 10% of women who could benefit from pre-exposure prophylaxis (PrEP) received a prescription. This day sparks the conversation of HIV and brings to light the importance of prevention methods to reduce HIV among women. Visit CDC.gov to learn more!

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: Paola Mancera, MPH CPH

What is Shigellosis?

Shigellosis is an umbrella term used to cover infections caused by members of the bacterial genus *Shigella* which includes four different serogroups; *Shigella dysenteriae* or serogroup A, which is the group most often associated with epidemics, *Shigella flexneri* or serogroup B, which accounts for over 60% of cases of Shigella worldwide particularly affecting developing nations, and *Shigella sonnei* or serogroup D, which accounts for over 70% of cases in developing nations.¹ *Shigella boydii* or serogroup C, is less frequently the reported serogroup for diseases particularly in the United States.³

Worldwide, Shigella is the leading cause of bacterial diarrheal death in all ages accounting for approximately 13% of all diarrheal associated deaths the burden of which falls on low- and middle-income countries.⁴ In the United States, there are an estimated 450,000 cases annually.¹ While *Shigella* can affect anyone, there are certain groups who are at greater risk for contracting this infection. Young children are at greater risk of acquiring the infection due to increased hand to mouth activities and underdeveloped toileting and hand washing skills.² Individuals who travel to areas where there is poor water and sewage infrastructure can be at greater risk to contracting an infection with *Shigella*.² Men who have sex with men are at increased risk from person-to-person transmission of Shigellosis due to contact with fecal matter during sexual contact.²

Shigellosis is acquired through the ingestion of the bacteria, with ingestion of less than 100 bacteria estimated to be needed to produce illness.¹ Ingestion of the bacteria can occur in multiple different ways including touching your mouth after handling objects that could be contaminated with the fecal matter, eating food that was contaminated with the bacteria, swimming in water that could contain the bacteria, exposure to fecal matter during sexual contact with someone who has or recently recovered from Shigellosis.²

Symptom onset for Shigellosis can begin in as little as one day after ingestion of the bacteria but can occur as late as 10 days post ingestion.¹ Clinical symptoms can include abdominal pain, diarrhea which is often bloody or mucoid, fever, nausea, and vomiting.¹ Symptoms can last approximately one week but individuals can continue to shed the bacteria in their stool even after symptoms have subsided.³

Complications from Shigellosis include the development of reactive arthritis, seizures, and Hemolytic Uremic Syndrome (HUS).¹ Life-threatening blood stream infections are most common in those with weakened immune systems such as those with HIV, cancer, severe malnutrition, and diabetes.¹

The Florida Department of Health in Miami-Dade conducts surveillance of Shigellosis to prevent transmission, outbreak control, and improve understanding of the disease for more effective formulation of mitigation strategies. Investigations begin with the prioritization of reported cases for follow-up. The purpose of this analysis is to examine *Shigella* infection trends in Miami-Dade and identify populations with the highest rates of Shigellosis.

Methods

Confirmed and probable cases of Shigellosis reported between 01/01/2018– 12/31/2023 in Miami-Dade were obtained from the Florida Department of Health's surveillance system, Merlin, by event date. Cases with residential zip codes outside of Miami-Dade County were excluded from this analysis. Population estimates obtained from Florida Health Charts were used to calculate incidence rates per 100,000 population in Miami-Dade and Florida. Statistical analysis was conducted using SAS 9.4 and graphically summarized using Microsoft Excel.

Results

A total of 1,201 confirmed and probable Shigellosis cases were reported in Miami-Dade County from 2018 to 2023.

Figure one compares incidence rates of Shigellosis in Miami-Dade to statewide incidence rates. At the county and state level Shigellosis incidence rates followed a similar trend between 2018 to 2023 with the exception of Miami-Dade seeing a sharper increase in incidence of cases of Shigellosis in 2022.

Figure two shows the breakdown of cases reported by year as well as corresponding incidence rates per 100,000 population.

The number of Shigellosis cases as well as yearly incidence rate in Miami-Dade remained stable between 2018 and 2019 but decreased by 61% from 261 cases in 2019 to 103 cases in 2021. Between 2021 and 2023, cases and incidence rates rose to levels similar to those observed prior to 2020.

Age

Shigellosis incidence rates were highest among children ages 1 through 4. In 2020 and 2021 incidence rates sharply decreased within this age group which may have resulted from a public health emergency that likely affected childcare attendance where individuals in this age group have a greater risk of exposure to this infection. In 2023, incidence of Shigella infections among those ages 20 to 54 were slightly higher compared to previous years.

Figure 1. Shigellosis Incidence Rate in Miami-Dade and Florida, 2018-2023

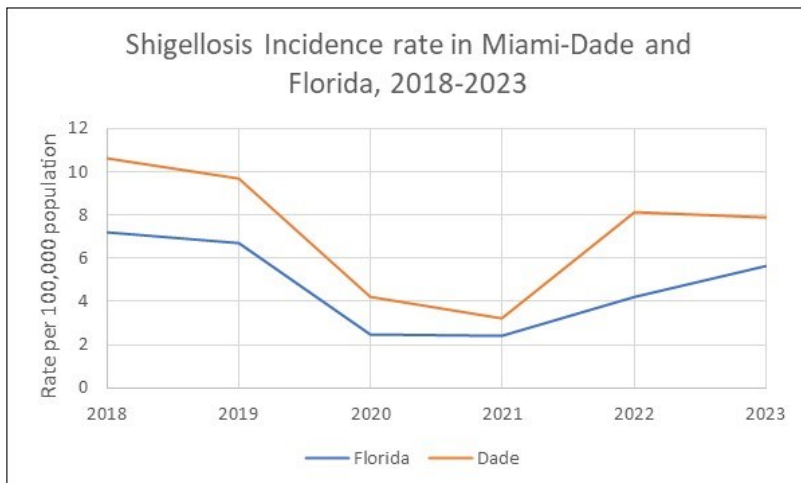


Figure 2. Shigellosis Incidence Rate and Case Count by Year in Miami-Dade, 2018-2023

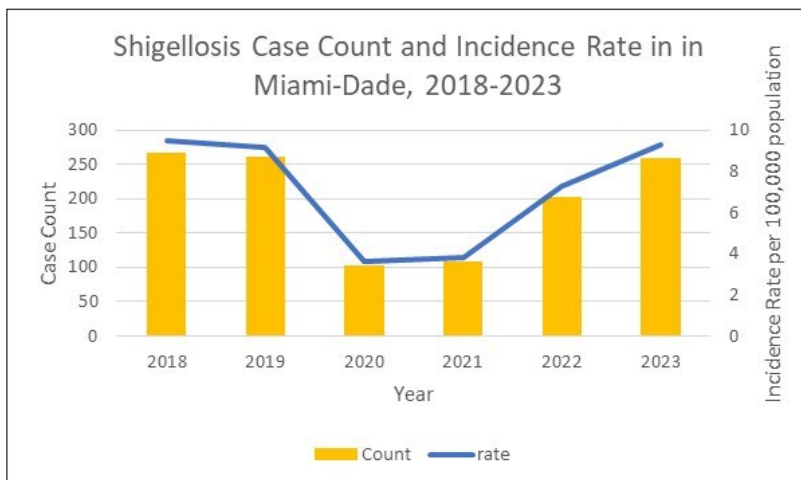
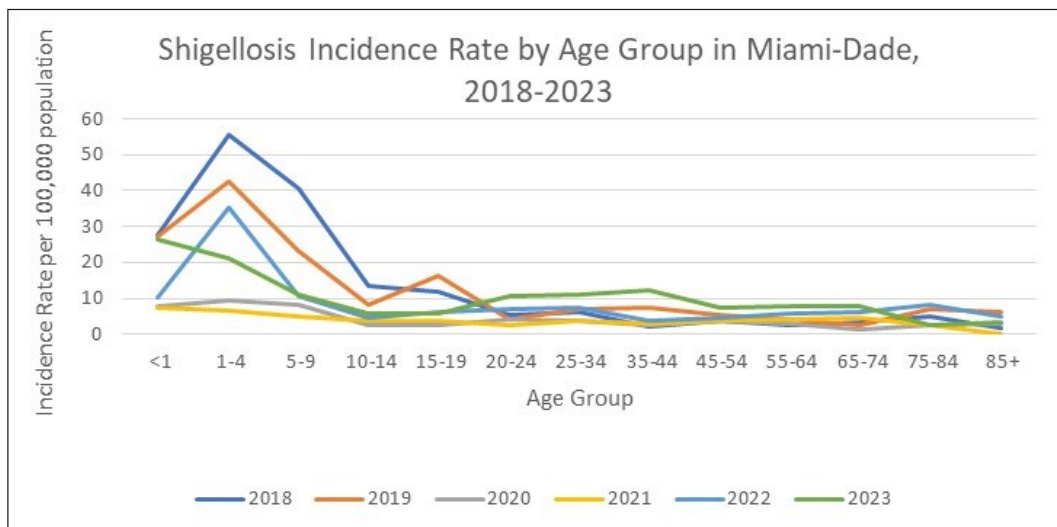


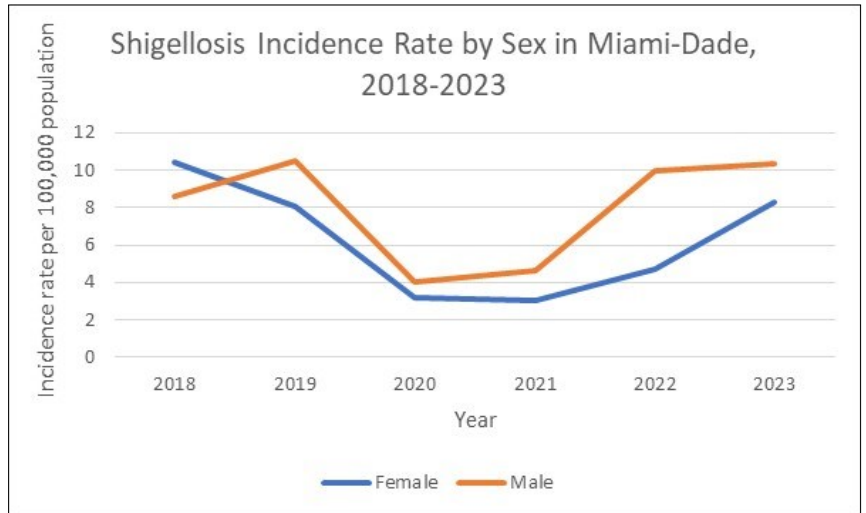
Figure 3. Shigellosis Incidence Rate by Age in Miami-Dade, 2018-2023



Sex

Between 2018 to 2023, 55% of all cases reported were males compared to 45% reported in females. When broken down by year, in 2018 Shigellosis incidence was greater in females compared to males. Between 2018 to 2021 incidence of cases in females declined but then increased between 2022 and 2023 to levels similar to those observed in 2019. Since 2019, the incidence rates in males have been higher than in females with a sharper increase between 2021 and 2022. Incidence rates for males in 2022 to 2023 are comparable to those observed prior to 2020.

Figure 4. Shigellosis Incidence Rate by Sex in Miami-Dade, 2018-2023



Race/Ethnicity

Of all cases reported, 71% of cases of Shigellosis occurred in Hispanics followed by 15% among Black Non-Hispanics. Across all years observed, incidence rates were highest among the Other Race and Ethnicity category, however these incidence rates should be interpreted with caution as case numbers within this group were low and could lead to unstable rates. Additionally, cases with unknown Race and Ethnicity were categorized as other and could be misattributed due to missing data. In 2018, Black Non-Hispanics had an incidence rate of 14.39 cases per 100,000 population which was significantly higher compared to Hispanics and White Non-Hispanics. Since 2022, incidence among Black Non-Hispanics was the lowest among all racial/ethnic groups.

Figure 5. Shigellosis Incidence Rate by Race and Ethnicity in Miami-Dade, 2018-2023

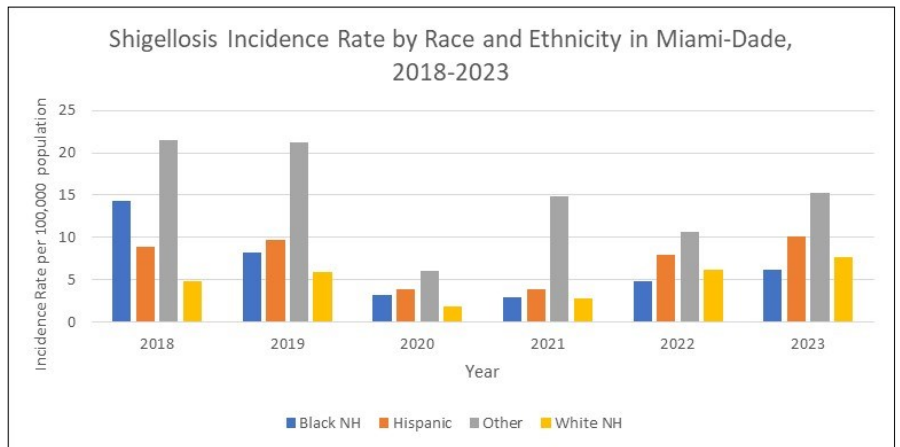
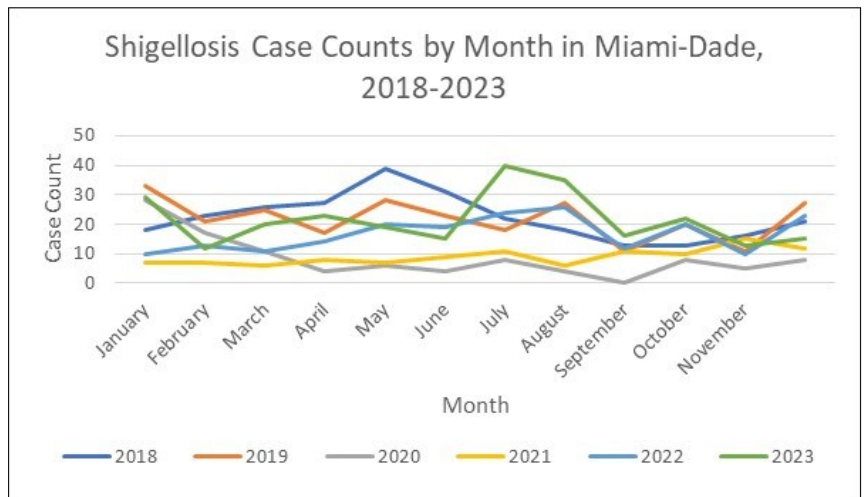


Figure 6. Shigellosis Case Counts by Month in Miami-Dade, 2018-2023



Seasonality

Seasonality in case counts reflect the fecal-oral transmission of Shigella as well as the increased risk associated with travel. Across all years observed, the highest case counts occurred during the warm summer months when there is an increase in participation in water activities as well as lining up with summer breaks when individuals are more likely to travel. Shigellosis cases show a secondary peak in case counts beginning in November and ending in February that lines up with travel for the holiday season as well as increased food associated transmission. Of note, the years 2020 and 2021 are missing these characteristic peaks probably due to a public health emergency which led to travel and dining restrictions.

Discussion

In Miami-Dade, children between 1 to 4 years old have the highest burden of infection due to *Shigella* with the highest incidence rates among this age group across all years analyzed. This burden of diseases among this age group is consistent with the fecal-oral transmission of this bacteria since this age group is also when most children learn adequate handwashing and toileting. Additionally, after age 5, hand to mouth behaviors that increase the risk of accidentally ingesting the *Shigella* bacteria stop. In 2023, a secondary peak of incidence of Shigellosis was observed between age groups of 15 to 54 that had not been seen in previous years among this same age group. This is a new trend developing and could be due to the increased risk of transmission of *Shigella* through sexual activity.

Starting in 2019, males had consistently higher incidence rates compared to females. This higher incidence rate could be attributed to an increased risk of transmission of *Shigella* bacteria during sexual activities among men who have sex with men.

Of all cases reported, 71% of cases of Shigellosis occurred in individuals identifying as Hispanic. This might be explained by the demographic makeup of Miami-Dade County where approximately 72% of the population identifies as Hispanic.

One limitation of this analysis to consider is that due to the self-limiting nature of Shigellosis, *Shigella* infections are often undiagnosed and underreported.

Additional statistical analysis and research are needed to understand the socioeconomic and cultural factors that contribute to incidence of Shigellosis. In addition, a public health emergency which modified individual behaviors such as health seeking behavior, travel, and food related activities as well as strains on healthcare settings and diagnostic testing, data from 2020 and 2021 should be interpreted with caution.

Prevention for Shigellosis is focused on limiting exposures where fecal matter can be introduced into the mouth. This includes washing hands thoroughly with soap and water particularly before preparing food or eating, after going to bathroom or helping another individual with toileting needs, and before sexual activity. Hand washing is particularly a key prevention strategy in young children where hand to mouth activity is common. When helping another with toileting needs, it's important to ensure proper disposal of any soiled materials to avoid spread of the bacteria. Avoiding swallowing of drinking water that could come from sources that are adequately treated including while swimming or traveling to other countries can also reduce risk. Lastly, abstaining from sexual contact for at least two weeks after diarrhea can also decrease the risk of person-to-person transmission resulting from sexual contact.

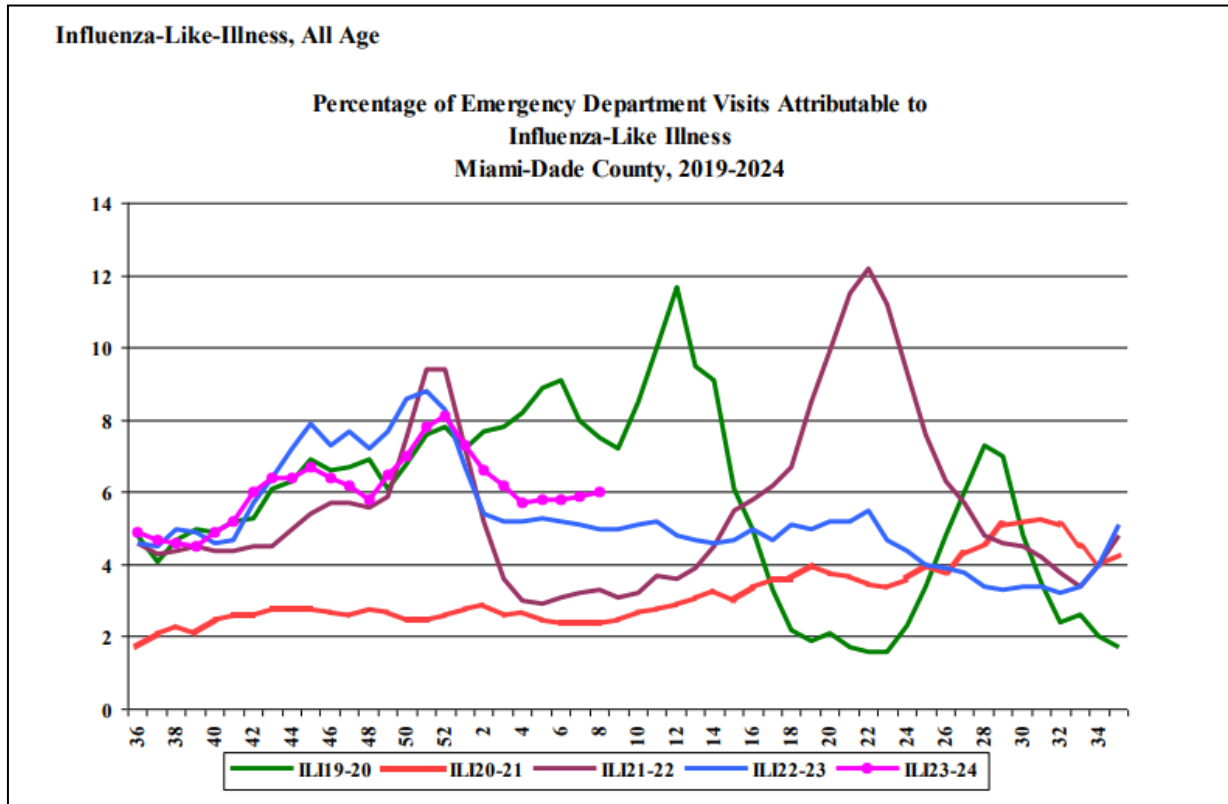
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Epidemiology, Disease Control and Immunization Services

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 2023-2024 data is compared to the previous 4 influenza seasons (2019-2020, 2020-2021, 2021-2022, 2022-2023).



There were 38,947 ED visits; among them 2,327 (6.0%) were due to ILI. During the same week last year, 5.0% 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
Yoselin Rodriguez at 305-470-5660.



Miami-Dade County Monthly Report Select Reportable Disease/Conditions January 2024

Diseases/Conditions	2024 Current Month	2024 Year to Date	2023 Year to Date	2022 Year to Date
HIV/AIDS				
AIDS*	33	33	39	28
HIV	98	98	176	153
STD				
Infectious Syphilis*	40	40	63	48
Chlamydia*	1207	1207	1052	919
Gonorrhea*	607	607	529	379
TB				
Tuberculosis**	5	5	9	11
Epidemiology, Disease Control & Immunization Services				
Epidemiology				
Campylobacteriosis	37	37	37	28
Chikungunya Fever	0	0	0	0
Ciguatera Poisoning	0	0	0	0
Cryptosporidiosis	7	7	3	2
Cyclosporiasis	0	0	2	0
Dengue Fever	26	26	12	0
Escherichia coli, Shiga Toxin-Producing	10	10	12	0
Encephalitis, West Nile Virus	0	0	0	0
Giardiasis, Acute	10	10	11	4
Influenza, Pediatric Death	0	0	1	0
Legionellosis	2	2	2	1
Leptospirosis	0	0	0	0
Listeriosis	1	1	0	1
Lyme disease	0	0	0	0
Malaria	0	0	0	0
Meningitis (except aseptic)	0	0	0	0
Meningococcal Disease	0	0	0	0
Salmonella serotype Typhi (Typhoid Fever)	0	0	0	0
Salmonellosis	63	63	57	40
Shigellosis	12	12	15	7
S. Pneumoniae, invasive disease	9	9	15	4
Vibriosis	1	1	0	1
West Nile Fever	0	0	0	0
Zika Virus (non-congenital)	0	0	0	0
Immunization Preventable Diseases				
Measles	0	0	0	0
Mumps	0	0	0	0
Pertussis	0	0	0	0
Rubella	0	0	0	0
Tetanus	0	0	0	0
Varicella	3	3	0	0
Hepatitis				
Hepatitis A	0	0	2	0
Hepatitis B (Acute)	2	2	10	5
Healthy Homes				
Lead Poisoning	58	58	25	8

*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.

For more information access: [The Florida Department of Health in Miami-Dade County Reportable Disease Handbook](#)

NATIONAL CANCER INSTITUTE

Cancer Prevention Interventions

AVAILABLE TODAY BECAUSE OF RESEARCH

MEDICATIONS
proven to reduce risk of breast and colon cancers in those at increased risk.

LOWERING RISK
by avoiding or controlling things known to cause cancer, like tobacco use.

TREATMENTS FOR INFECTIONS
known to increase cancer risk, including hepatitis C, HIV, and H. pylori.

SCREENING TESTS
that allow removal of precancerous lesions, such as colon polyps.

VACCINES TO PROTECT
against infection with human papillomavirus (HPV) and hepatitis B.

SURGERY
to remove tissues at risk, such as for women with increased risk of breast and ovarian cancer.

prevention.cancer.gov
NCI Division of Cancer Prevention

What's New at DOH-Miami-Dade!

- Measles cases in Broward County and a travel-related case in Central Florida have been reported to the Florida Department of Health! Measles is **highly contagious** and suspected measles must be reported **immediately** to your local health department. [Click](#) to view disease overview and reporting information.
- Visit floridahealth.gov to learn the ABC's of Safe Sleep and reduce risk of Sudden Infant Death Syndrome (SIDS)!
- DOH-Miami-Dade provides FREE [vaccines](#) for children 0 to 18 years of age. Keeping up with child vaccination [schedules](#) and ensuring your children are up-to-date with their vaccines will help protect them and prevent the spread of vaccine-preventable diseases. [Visit](#) to find a clinic near you. Appointment line: 786-845-0550

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

ACTING QUICKLY CAN SAVE LIVES FROM SEPSIS

Sepsis is your body's life-threatening response to an infection and is a medical emergency.

When it comes to sepsis, remember **IT'S ABOUT TIME™**. Watch for:

- T TEMPERATURE**
higher or lower than normal
- I INFECTION**
may have signs or symptoms of infection
- M MENTAL DECLINE**
confused, sleepy, difficult to rouse
- E™ EXTREMELY ILL**
severe pain, discomfort, shortness of breath

CALL 911 OR GO TO A HOSPITAL AND SAY "I'M CONCERNED ABOUT SEPSIS"

Take the **TIME** to learn the signs at sepsis.org.



Made possible in part by an unrestricted educational grant from Merck and Co., Inc. Special thanks to the UK Sepsis Trust ©2020 Sepsis Alliance

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

