

Epi Monthly

March 2023 Vol 24, Issue 3

Public Health LOOK OUT!

Florida Department of Health in Miami-Dade County

- Each April, **National Minority Health Month** is observed to highlight the importance of improving the health and wellbeing of racial and ethnic minority and American Indian/Alaska Native communities with the goal of reducing health disparities and increasing health access and equity for all populations. This year's theme is "Better Health Through Better Understanding", focusing on the need for culturally and linguistically competent health care services, information and resources. For more information, visit [minorityhealth.hhs.gov!](https://minorityhealth.hhs.gov/)
- The human body has a built-in defense mechanism called stress that alerts us to danger and compels us to take action against it. Although some levels of stress can be beneficial, chronic stress can have negative effects on both physical and mental health. For this reason, April has also been designated as **Stress Awareness Month** every year since 1992 in order to raise awareness of the negative effects of stress. Since that time, health care professionals and health promotion experts across the country have collaborated in order to raise public awareness about both the causes of our modern stress epidemic and the potential treatments for it. Exercising, developing meditation practices, and maintaining regular doctor's appointments are all effective ways to combat the debilitating effects of stress. Visit the stress.org to learn more about the importance of stress awareness.
- **National Public Health Week (NPHW)** is observed during the first week of April each year to commemorate the contributions of public health and spotlight the health issues essential to improving the health of our nation. This year, NPHW is on April 3-9th, and the theme is "Centering and Celebrating Cultures in Health", celebrating the unique ways different cultures focus on health and how much there is to learn from that uniqueness. Visit nphw.org to learn more about daily themes and ways to contribute!

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.

Florida Department of Health in Miami-Dade County
Epidemiology, Disease Control, and Immunization Services
1350 NW 14th St, Annex Building
Miami, FL 33125
Phone: 305-470-5660
Fax: 305-470-5533
eFax: 786-732-8714



By: Whensley Dareus

Introduction

Salmonella is a bacteria that causes salmonellosis, a mild to severe gastrointestinal illness. Common symptoms may include diarrhea, abdominal cramps, dehydration, fever, nausea, and vomiting.¹ The incubation period for salmonella is up to 6 days after initial infection and illness can last 4 to 7 days.¹ Salmonellosis is caused by consuming contaminated food, water, or touching infected animals, their feces, or their environment.¹ Prevention measures that can mitigate salmonella transmission include thorough hand washing, storing and cooking foods at recommended temperatures, and practicing caution when handling animals. In severe cases of salmonellosis, antibiotics are used as a countermeasure, however, most patients recover without specific treatment.

The CDC estimates salmonella bacteria causes about 1.35 million illnesses, 26,500 hospitalizations, and 420 deaths in the United States each year.¹ Populations most susceptible are children under 5 years old, adults 65 years and older, and immunocompromised individuals. This analysis explores the burden of salmonella illness in Miami-Dade County between 2018 and 2022 and examines the disparities in confirmed cases between Miami-Dade and the state of Florida.

Methods

Data was obtained from Merlin, the disease surveillance system used by the Florida Department of Health. Confirmed cases of salmonellosis in Miami-Dade from 01/01/2018 to 12/31/2022 were included in the data analysis. Population estimates between 2018 and 2022 were obtained for the state of Florida and Miami-Dade County from Florida Health Charts. Incidence rate per 100,000 population was calculated for state and county levels by age, gender, and race/ethnicity. Frequencies were calculated for each demographic using SAS 9.4. ArcGIS Pro was used to geocode and create high-density maps to identify clusters of salmonella infections in Miami-Dade County from 2018 to 2022.

Results

The number of confirmed salmonella infections in Miami-Dade County increased by 43% from 2018 to 2022. In 2018, there were 845 confirmed cases compared to 1,211 cases in 2022 (See Appendix). Despite the growing population, Salmonellosis incidence rates increased from 30.1 in 2018 to 41.9 per 100,000 population in 2022 (Figure 1). Additionally, Miami-Dade County had a higher incidence rate of salmonella infections compared to the state of Florida (Figure 1).

Gender

From 2018 to 2022, while males had a higher incidence of salmonellosis than females, both genders had an increase in incidence. The incidence rate for males increased from 32.0 in 2018 to 44.1 per 100,000 population in 2022 (Figure 2). Over the same period, incidence rate among women increased from 28.3 to 39.8 per 100,000 population.

Figure 1. Incidence Rate of Salmonellosis in Miami-Dade County and Florida, 2018-2022

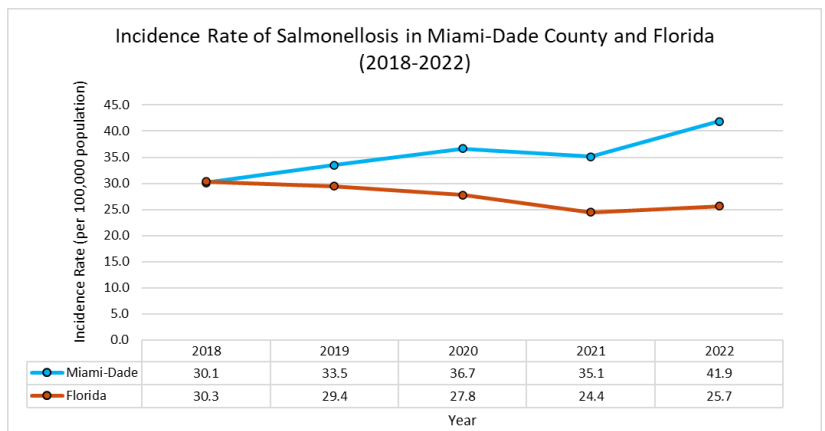
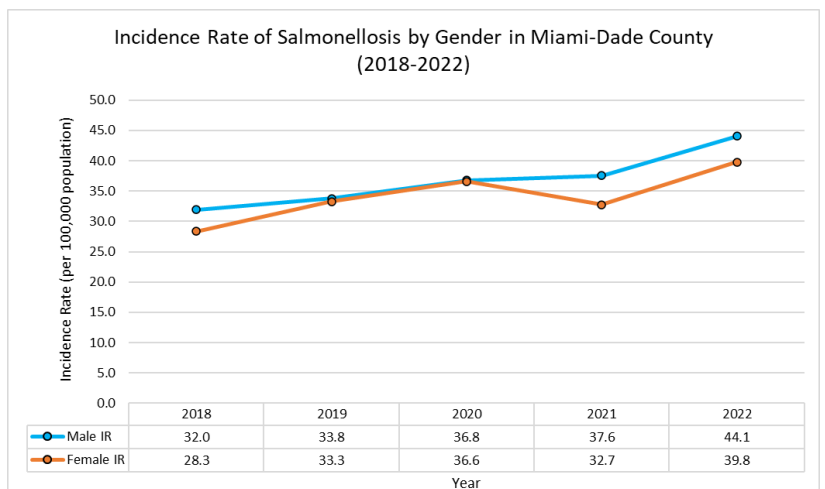


Figure 2. Incidence Rate of Salmonellosis by Gender in Miami-Dade County, 2018-2022



Age

In Miami-Dade County, infants and children have the highest incidence of salmonellosis. From 2018 to 2022, the incidence rate among ages 0 to 4 increased from 243.6 in 2018 to 381.9 per 100,000 population in 2022 (See Appendix). Over that same time, incidence rate among children aged 5 to 14 increased from 34.4 in 2018 to 46.2 in 2022. The appendix table provides the annual frequencies and incidence rates of salmonellosis across each age group.

Race and Ethnicity

From 2018 to 2022, salmonella infections were higher among Hispanics in comparison to other races and ethnicities, making up 72% of all confirmed cases (Figure 4). Over the last five years, incidence rates increased among all populations (Figure 5). Average incidence among Hispanics was 36.8 infections per 100,000 population whereas Non-Hispanic Whites had 33.1 infections per 100,000 population over the same duration. (Figure 5). Among Non-Hispanic Blacks, salmonella incidence remained constant (Figure 5).

Seasonality

Salmonellosis exhibits seasonal variation, with a higher number of infections in summer and fall in Miami-Dade County between 2018 and 2022 (Figure 6). The lowest frequency was recorded between January and April.

Distribution of Cases in Miami-Dade County

Figure 7 shows geographical locations of salmonellosis within Miami-Dade County from 2018-2022. High density cases were observed within central and northern Miami Dade County including the cities of Miami, Hialeah, and Miami Lakes. Southern and coastal cities such as Homestead, Palmetto Bay, and West Kendall contained a lower density of cases.

Figure 6. Average Number of Salmonellosis Cases in Miami-Dade County by Month, 2018-2022

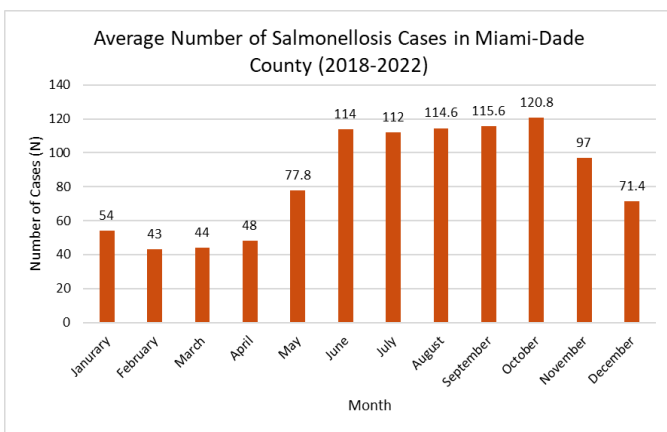


Figure 3. Average Incidence Rate of Salmonellosis by Age Group in Miami-Dade County, 2018-2022

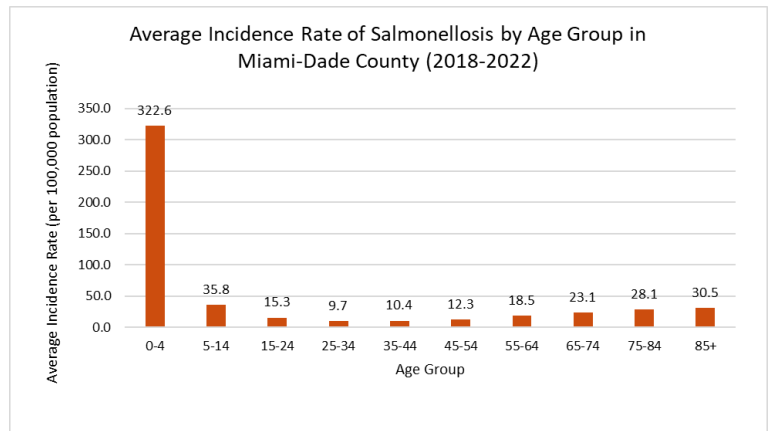


Figure 4. Percent of Salmonellosis Cases by Race/Ethnicity in Miami-Dade, 2018-2022

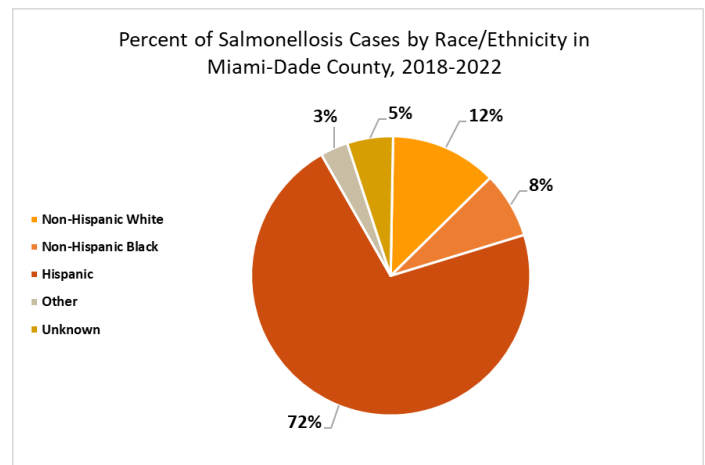
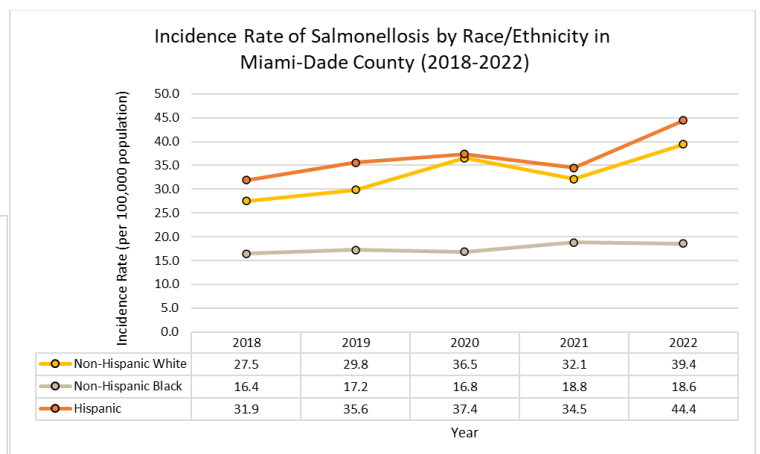


Figure 5. Incidence Rate of Salmonellosis by Race/Ethnicity in Miami-Dade County, 2018-2022



Discussion

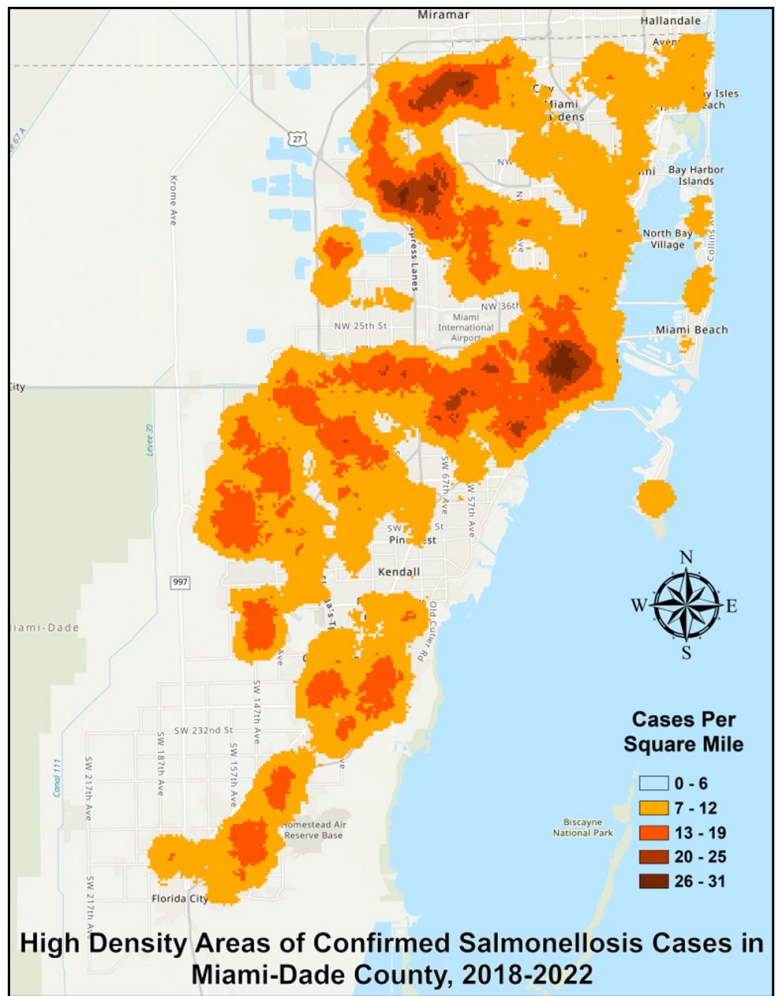
In Miami-Dade County, an increase of salmonella illness was observed during 2018-2022, while incidence in the state of Florida decreased over the same period. Populations with disproportionately higher incidence include infants and children under 14 years of age, adult males, and Hispanics. Central and northern areas of Miami-Dade County contain the highest density of infection cases. The highest number of cases occurred between June and November, peaking in October. The greater number of cases can be explained by higher temperatures in the summertime which create optimal conditions for salmonella bacteria to grow.¹ An increase in domestic and international travel during the summertime may also contribute to the increase in salmonella infections.² Recent trends reveal that international travel is associated with higher incidence of salmonellosis compared to residents that remain domestic.³

Prevention

Salmonella infections occur most often in children younger than 4 years. To prevent your child from passing on a salmonella infection:

- ⇒ Clean your child's bottom well when changing diapers. Afterward, wash your hands with soap and water. Do the same for your child.⁴
- ⇒ Keep your child home from daycare or school until cleared by the healthcare provider.⁴

Figure 7. High Density Areas of Confirmed Salmonellosis Cases in Miami-Dade, 2018-2022



References

- Centers for Disease Control and Prevention (2019). Salmonella Information for Healthcare Professionals and Laboratories. Available at: <https://www.cdc.gov/salmonella/general/technical.html>
- Rhoden, K., Alonso, J., Carmona, M., Pham, M., & Barnes, A. N. (2021). Twenty years of waterborne and related disease reports in Florida, USA. *One Health*, 13, 100294.
- Sher, A. A., Mustafa, B. E., Grady, S. C., Gardiner, J. C., & Saeed, A. M. (2021). Outbreaks of foodborne Salmonella enteritidis in the United States between 1990 and 2015: An analysis of epidemiological and spatial-temporal trends. *International Journal of Infectious Diseases*, 105, 54-61.
- Salmonella infection (salmonellosis) in children - fairview.org. <https://www.fairview.org/patient-education/88615>.

Appendix: Table 1

Frequency and Incidence Rate of Salmonellosis by Year in Miami-Dade County (2018 to 2022)										
AGE	2018		2019		2020		2021		2022	
	N	RATE ^a	N	RATE ^a	N	RATE ^a	N	RATE ^a	N	RATE ^a
Age <5	394	243.6	498	304.7	590	355.9	533	326.7	630	381.9
Age 5-14 years	107	34.4	84	26.8	115	36.2	112	35.3	148	46.2
Age 15-24 years	44	13.2	45	13.5	53	15.9	51	15.5	61	18.3
Age 25-34 years	37	9.2	41	10.2	36	8.9	39	9.8	42	10.4
Age 35-44 years	44	11.4	43	11.1	36	9.2	27	6.9	52	13.2
Age 45-54 years	48	11.5	51	12.3	44	10.6	59	14.5	52	12.6
Age 55-64 years	58	16.8	52	14.7	67	18.4	78	21.1	81	21.7
Age 65-74 years	55	22.9	57	23.1	50	19.6	56	21.6	74	28.2
Age 75-84 years	40	28.0	52	35.4	38	24.4	33	20.9	51	31.9
Age 85+ years	18	28.1	26	39.4	21	31.3	17	24.7	20	28.8
GENDER										
Male	435	32.0	464	33.8	512	36.8	523	37.6	620	44.1
Female	409	28.3	485	33.3	539	36.6	481	32.7	591	39.8
RACE/ETHNICITY										
Non-Hispanic White	102	27.5	110	29.8	135	36.5	124	32.1	154	39.4
Non-Hispanic Black	73	16.4	76	17.2	74	16.8	82	18.8	82	18.6
Hispanic	614	31.9	695	35.6	743	37.4	680	34.5	885	44.4
Other	34	*	39	*	36	*	28	*	26	*
Unknown	22	*	29	*	63	*	91	*	64	*
JURISDICTION										
Miami-Dade County	845	30.1	949	33.5	1051	36.7	1005	35.1	1211	41.9
State of Florida	6358	30.3	6261	29.4	6011	27.8	5379	24.4	5728	25.7

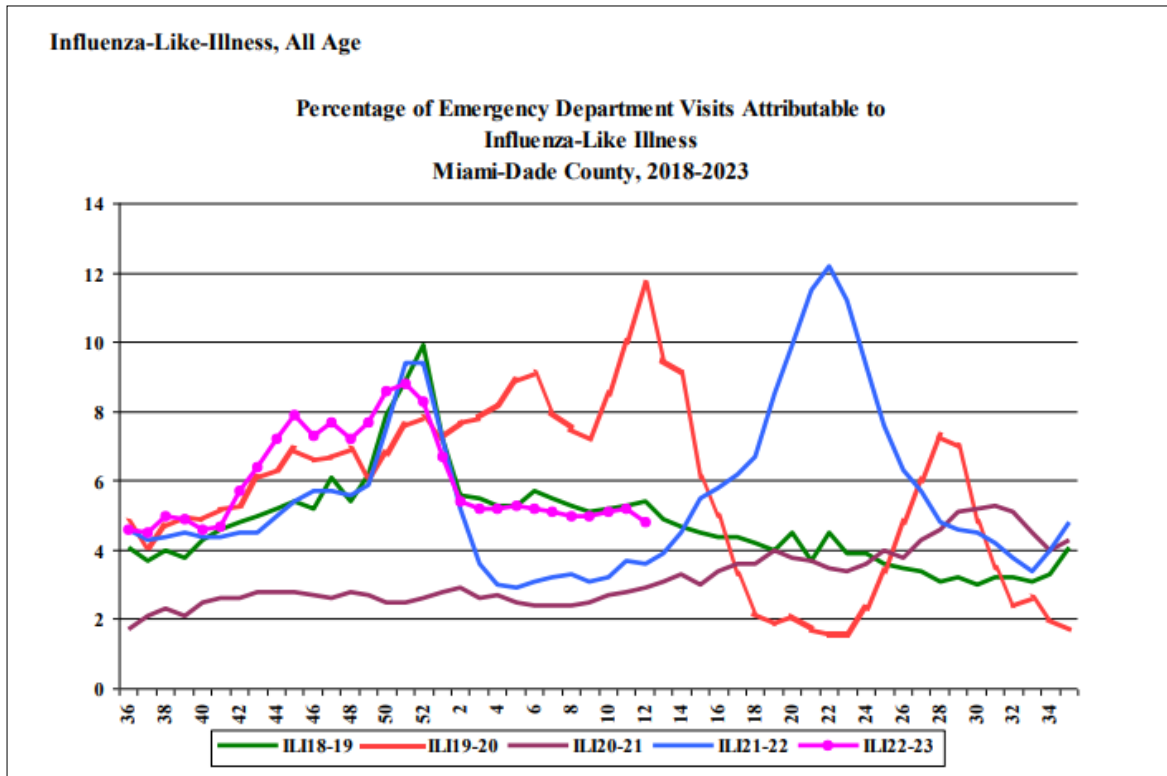
^a = per 100,000 population

*=Incidence rate not calculated due to low population size

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 36,712 ED visits; among them 1,761 (4.8%) were ILI. During the same week last year, 3.6% 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 February 2023

Diseases/Conditions	2023 Current Month	2023 Year to Date	2022 Year to Date	2021 Year to Date
HIV/AIDS				
AIDS*	24	62	59	60
HIV	135	306	324	173
STD				
Infectious Syphilis*	49	112	95	89
Chlamydia*	1166	2218	2155	2161
Gonorrhea*	499	1028	836	990
TB				
Tuberculosis**	10	19	22	N/A
Epidemiology, Disease Control & Immunization Services				
Epidemiology				
Campylobacteriosis	46	83	68	61
Chikungunya Fever	0	0	0	0
Ciguatera Poisoning	1	1	0	0
Cryptosporidiosis	11	14	5	9
Cyclosporiasis	0	2	0	1
Dengue Fever	11	22	3	0
Escherichia coli, Shiga Toxin-Producing	17	27	23	5
Encephalitis, West Nile Virus	0	0	0	0
Giardiasis, Acute	22	33	25	11
Influenza, Pediatric Death	0	0	0	0
Legionellosis	4	6	3	3
Leptospirosis	0	0	0	0
Listeriosis	0	0	1	0
Lyme disease	0	0	0	0
Malaria	0	0	0	0
Meningitis (except aseptic)	0	0	1	1
Meningococcal Disease	0	0	1	0
Salmonella serotype Typhi (Typhoid Fever)	0	0	0	0
Salmonellosis	61	119	111	68
Shigellosis	17	34	15	13
S. Pneumoniae, invasive disease	13	28	7	4
Vibriosis	1	1	1	0
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	6	6	3	0
Hepatitis				
Hepatitis A	1	3	2	3
Hepatitis B (Acute)	8	19	10	3
Healthy Homes				
Lead Poisoning	33	67	33	14

*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!

- Perrigo has initiated a recall of certain lots of Gerber Good Start SoothePro™ Powdered Infant Formula in the U.S. due to the potential presence of the bacteria, **Cronobacter sakazakii**. [Visit](#) to view what batch numbers are included in this recall.
- Miami-Dade is one of selected Florida counties to participate in the **Sleep Baby Safely Project**, **SUIDI Advocacy Project**, and **Drowning Prevention Project** to combat preventable infant and child deaths in Miami-Dade and Florida!
- DOH Miami-Dade offers COVID-19 vaccines, vaccine boosters, pediatric vaccines, and flu shots. Visit 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.

