



## Public Health LOOK OUT!

- January is **Cervical Cancer Awareness Month**. Lower your risk of cervical cancer by receiving the Human Papillomavirus (HPV) Vaccine which protects against HPV that most often causes cervical cancer. Regular screenings through the Pap test or through the HPV test can also help prevent cervical cancer or identify it early. For more information please visit: <https://www.cdc.gov/cancer/dpcp/resources/features/cervicalcancer/index.htm>.
- January is **National Slavery and Human Trafficking Prevention Month**. Human trafficking includes what is known as **labor trafficking**, defined as working against ones will for little or no pay. It also includes what is known as **sex trafficking**, defined as having sex for anything of value such as money, food, shelter, clothes, or drugs. Knowing the signs of trafficking is important for identifying victims and connecting them to support and services. The National Human Trafficking Hotline 1-888-373-7888 is a free 24/7 resource for reporting any suspected human trafficking. For more information and resources please visit: <https://www.acf.hhs.gov/otip>.
- January is also **National Birth Defects Prevention Month**. Although not all birth defects can be prevented, managing health conditions and adopting healthy behaviors before and during pregnancy such as reaching a healthy weight, getting vaccinated, and taking folic acid can lead to an increased likelihood of having a healthy baby. For more information on birth defect prevention please visit: <https://www.cdc.gov/ncbddd/birthdefects/prevention-month.html>.

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# A shot worth taking: Assessing 9-valent HPV vaccine completion among adolescents in Miami-Dade County, Florida, for 2018 and 2019

By: Daniel Mauck

## Background

Human papillomavirus (HPV) is a group of viruses that can lead to cancers of the cervix, vagina, and vulva in women, penis in men, and anus and back of the throat in both women and men later in life.<sup>1</sup> Infections with HPV are so common that about 80 million Americans are currently infected with some type of HPV.<sup>1</sup> The Centers for Disease Control and Prevention (CDC) estimates that HPV causes about 14 million infections and nearly 35,000 cases of cancer in men and women each year in the United States (US).<sup>1</sup> Many HPV infections go away by themselves within two years, but can sometimes last longer and cause cancer in the previously mentioned organs.<sup>1</sup>

In 2006, the US became the first country to license an HPV vaccine for females aged 9 to 26.<sup>2</sup> That same year, the CDC Advisory Committee on Immunization Practices (ACIP) recommended a three-dose HPV vaccination series for girls aged 11 or 12.<sup>3</sup> The recommendations were later extended to include boys.<sup>3</sup> Three HPV vaccines are currently licensed for use in the US.<sup>4</sup> These vaccines include a quadrivalent vaccine called Gardasil, a bivalent vaccine called Cevarix, and a 9-valent vaccine called Gardasil 9.<sup>4</sup> The vaccines protect against types of HPV known to cause cancer and genital warts.<sup>4</sup> In October 2016, the Food and Drug Administration (FDA) approved 9-valent HPV for use in a two-dose series for girls and boys aged 9–14 and the ACIP recommended a two-dose schedule for adolescents initiating HPV vaccination in this age range.<sup>4</sup> The CDC currently recommends that all girls and boys receive two doses of HPV vaccine if started at age 11–12 or three doses if started at age 15 or later.<sup>1</sup> For adolescents aged 9 to 14, the two doses should be given at 0 and 6–12 months.<sup>4</sup> For adolescents aged 15 to 19, the three doses should be given at 0, 1–2, and 6 months.<sup>4</sup> To be most effective at preventing HPV-associated cancers later in life, the series should be given prior to exposure to HPV.<sup>1</sup>

While completion of the HPV vaccine series is increasing, half of adolescents have not received all the recommended doses.<sup>5</sup> In the US, 51.1% of adolescents (13 to 17 years old) completed the HPV vaccine series in 2018, up from 48.6% in 2017 according to National Immunization Survey-Teen (NIS-Teen) data.<sup>6</sup> The percentage of adolescents completing the HPV vaccine series in Florida was 46.5% in 2018, compared to 42.3% in 2017.<sup>7</sup> This analysis aimed to assess the percentage of adolescents completing the 9-valent HPV vaccine series (2 or 3 doses) in three health department clinics in Miami-Dade County, Florida, 2015–2019 and to compare the percentage with state and national levels.

## Methods

Visit data for clients receiving the 9-valent HPV vaccine was drawn from Florida SHOTS and race/ethnicity data was drawn from Health Management System (HMS). The two datasets were merged by each clients state immunization ID using SAS 9.4. The cohort included adolescents age 9 to 19 seen for 9-valent HPV vaccinations at three health department clinics in Miami-Dade County, Florida, between January 1, 2015 and December 6, 2019. Adolescents starting the 9-valent HPV vaccine series in 2017 were followed through December 31, 2018. Similarly, adolescents starting the 9-valent HPV vaccine series in 2018 were followed through December 6, 2019. Visits occurring in years prior to the analysis year were excluded. The frequency procedure was used to assess HPV completion percentages in 2018 and 2019.

## Results

### *Characteristics of the cohorts*

The 2018 and 2019 groups both had a slight majority of males (51.5% and 53.1%, respectively) and clients aged 9–14 (59.3% and 63.7%, respectively) (Table 1). The majority of the 2018 cohort was Hispanic (81.0%), followed by non-Hispanic black (12.2%), non-Hispanic white (3.9%), other (2.7%), and unknown (0.1%) (Table 1). In 2019, the majority of the cohort was also Hispanic (80.7%), followed by non-Hispanic black (11.5%), non-Hispanic white (4.2%), other (3.4%), and unknown (0.2%) (Table 1). The median number of days between the first and second visit were similar in 2018 and 2019 by sex and race/ethnicity (Table 3). The median number of days between the first and second visit were smaller for the 15–19 age group than the 9–14 age group in 2018 and 2019 (Table 3).

### Completion of HPV in 2018 and 2019

5,065 adolescents who started the 9-valent HPV vaccine series in 2017 were followed through December 31, 2018. Overall, 31.2% completed the recommended doses in 2018 (Table 1). Non-Hispanic blacks, the second largest group, had the lowest completion percentages for 2 and 3 doses (34.3% and 5.9%, respectively) (Table 2). By age group, 39.9% of clients aged 9–14 received 2 HPV doses and 17.7% of clients aged 15–19 received 3 doses (Table 2). Among females, 40.0% of clients aged 9–14 received 2 doses and 20.6% of clients aged 15–19 received 3 doses. Among males, 39.9% of clients aged 9–14 received 2 doses and 15.2% of clients aged 15–19 received 3 doses.

5,221 adolescents who started the 9-valent HPV vaccine series in 2018 were followed through December 6, 2019. The overall completion percentage in 2019 was 36.1 (Table 1). For non-Hispanic blacks, the percentage for completing 2 doses decreased in 2019 (29.6%) while the percentage for completing 3 doses increased (8.4%) compared to 2018 (Table 2). By age group, 43.1% of clients aged 9–14 completed 2 doses and 23.4% of clients aged 15–19 completed 3 doses (Table 2). Among females, 44.4% of clients aged 9–14 received 2 doses and 26.1% of clients aged 15–19 received 3 doses. Among males, 41.9% of clients aged 9–14 received 2 doses and 21.2% of clients aged 15–19 received 3 doses.

### Conclusion

Completion for 9-valent HPV vaccine in the Miami-Dade County clinics is lower than national and state levels. Efforts are needed to improve HPV completion rates in Miami-Dade County clinics, especially among adolescents aged 15–19 and non-Hispanic blacks, to meet the Healthy People 2020 target of 80%.<sup>8</sup> Meningococcal and tetanus, diphtheria, and pertussis vaccinations are recommended at age 11–12; encouraging the HPV vaccine at the same time could improve HPV vaccination rates.<sup>9</sup> The use of electronic reminders (electronic medical record, text messaging, emails) for providers and parents/clients may raise HPV vaccination rates.<sup>9</sup> Strong and consistent provider recommendations can also boost HPV vaccination rates.<sup>3</sup> Promoting the timely receipt and completion of the HPV vaccine series in adolescents of Miami-Dade will benefit the community greatly in the long run since the vaccine is a proven method for preventing HPV-associated cancers later in life.<sup>1</sup>

Table 1. Demographics of adolescents completing HPV vaccines in 2018 and 2019, Miami-Dade County.

	2018 n (%)	2019 n (%)
<b>Sex</b>		
Female	2,457 (48.5)	2,449 (46.9)
Male	2,608 (51.5)	2,772 (53.1)
<b>Age group, years</b>		
9–14	3,001 (59.3)	3,328 (63.7)
15–19	2,064 (40.7)	1,893 (36.3)
<b>Race/ethnicity</b>		
Hispanic	3,610 (81.0)	3,677 (80.7)
Non-Hispanic Black	545 (12.2)	523 (11.5)
Non-Hispanic White	175 (3.9)	193 (4.2)
Other*	121 (2.7)	155 (3.4)
Unknown**	4 (0.1)	8 (0.2)
<b>HPV doses completed</b>		
1 dose	2,689 (53.1)	2,577 (49.3)
2 doses	1,995 (39.4)	2,196 (42.0)
3 doses	383 (7.6)	449 (8.6)
<b>Overall HPV completion***</b>	<b>1,581 (31.2)</b>	<b>1,885 (36.1)</b>

\* Other includes Asian, American Indian or Alaska Native, Native Hawaiian or Pacific Islander, and other race/ethnicity combinations.

\*\* Unknown includes unknown/unreported, and clients who declined to answer.

\*\*\* Overall HPV completion was calculated as 9 to 14 year olds completing 2 and 3 doses plus 15 to 19 year olds completing 3 doses divided by total for year. For 2018: (1198+17+366)/5065. For 2019: (1435+6+443+1)/5221.

Table 2. Number of HPV vaccine doses among adolescents in 2018 and 2019, Miami-Dade County.

	2018		2019	
	2 doses, n (col %)	3 doses, n (col %)	2 doses, n (col %)	3 doses, n (col %)
<b>Sex</b>				
Female	945 (38.5)	208 (8.5)	1,034 (42.2)	224 (9.2)
Male	1,050 (40.3)	175 (6.7)	1,162 (41.9)	225 (8.1)
<b>Age group, years</b>				
9–14	1,198 (39.9)	17 (0.6)	1,435 (43.1)	6 (0.2)
15–19	797 (38.6)	366 (17.7)	761 (40.2)	443 (23.4)
<b>Race/ethnicity</b>				
Hispanic	1,535 (42.5)	309 (8.6)	1,660 (45.2)	364 (9.9)
Non-Hispanic Black	187 (34.3)	32 (5.9)	155 (29.6)	44 (8.4)
Non-Hispanic White	67 (38.3)	17 (9.7)	76 (39.4)	17 (8.8)
Other	44 (36.4)	18 (14.9)	67 (43.2)	13 (8.4)
Unknown	1 (25.0)	0 (0.0)	2 (25.0)	2 (25.0)

Table 3. Days between first and second visit among adolescents in 2018 and 2019, Miami-Dade County.

	2018	2019
	median (range)	median (range)
<b>Sex</b>		
Female	182.0 (27.0–653.0)	183.0 (26.0–565.0)
Male	182.0 (26.0–608.0)	182.0 (26.0–630.0)
<b>Age group, years</b>		
9–14	201.0 (28.0–653.0)	201.0 (28.0–630.0)
15–19	63.0 (63.0–511.0)	38.0 (26.0–470.0)
<b>Race/ethnicity</b>		
Hispanic	182.0 (26.0–653.0)	182.0 (26.0–630.0)
Non-Hispanic Black	182.0 (28.0–542.0)	184.0 (28.0–529.0)
Non-Hispanic White	187.0 (28.0–469.0)	184.0 (28.0–393.0)
Other	112.0 (28.0–443.0)	187.0 (28.0–511.0)
Unknown	210.0 (210.0–210.0)	68.0 (32.0–181.0)

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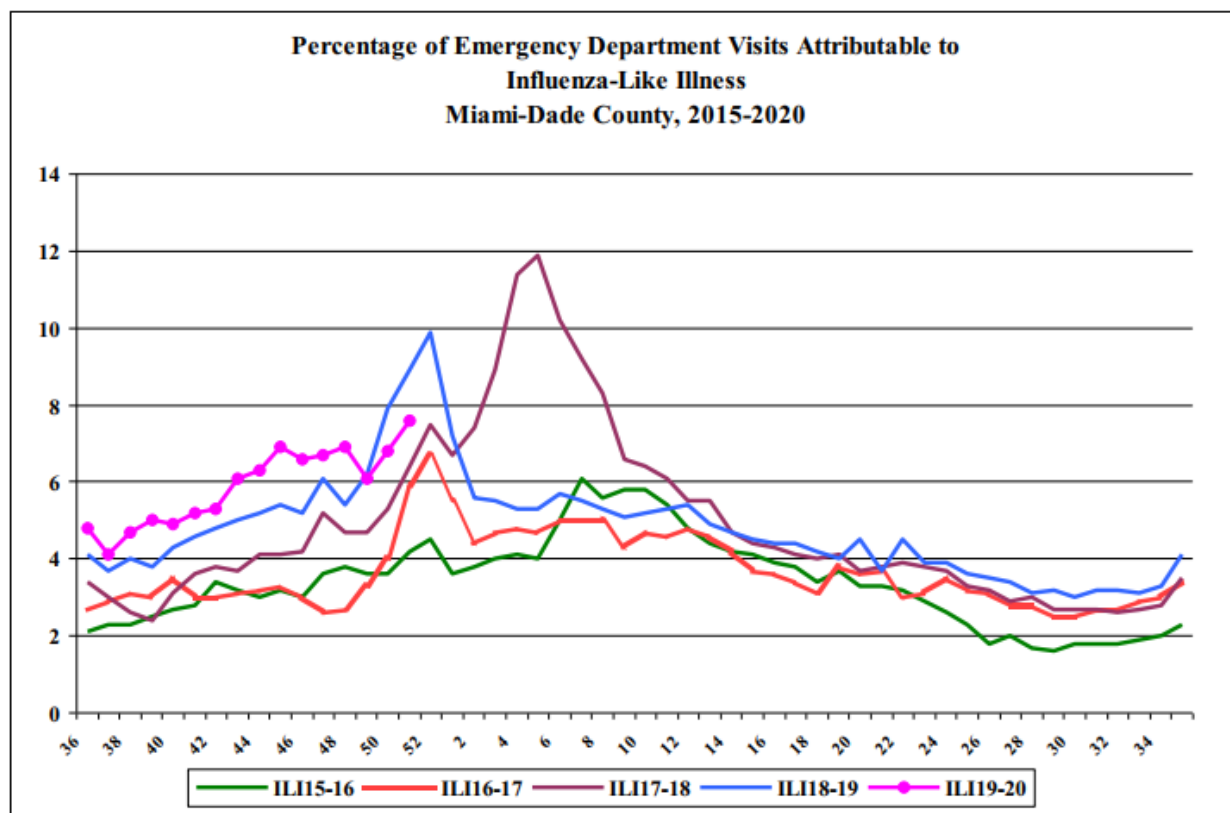


# Florida Department of Health in Miami-Dade County Epidemiology, Disease Control and Immunization Services

## 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 2019-2020 data is compared to the previous 4 influenza seasons (2015-2016, 2016-2017, 2017-2018, 2018-2019).

### Influenza-Like-Illness, All Age



Across all ages, there were 36,162 ED visits; among them 2,743 (7.6%) were ILI. During the same week

### 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 Calle** at 305-470-5660.



## Miami-Dade County Monthly Report Select Reportable Disease/Conditions November 2019

Diseases/Conditions	2019 Current Month	2019 Year to Date	2018 Year to Date	2017 Year to Date
<b>HIV/AIDS</b>				
AIDS*	46	403	383	443
HIV	117	1268	1188	1332
<b>STD</b>				
Infectious Syphilis*	39	353	444	346
Chlamydia*	1098	13736	12323	11132
Gonorrhea*	386	4379	3896	3056
<b>TB</b>				
Tuberculosis**	11	106	110	74
<b>Epidemiology, Disease Control &amp; Immunization Services</b>				
<b>Epidemiology</b>				
Campylobacteriosis	51	783	738	626
Chikungunya Fever	0	2	1	1
Ciguatera Poisoning	0	43	35	10
Cryptosporidiosis	9	68	41	39
Cyclosporiasis	0	26	0	4
Dengue Fever	23	215	29	9
Escherichia coli, Shiga Toxin-Producing	21	145	166	34
Encephalitis, West Nile Virus	0	0	0	0
Giardiasis, Acute	14	170	163	120
Influenza Novel Strain	0	0	0	0
Influenza, Pediatric Death	0	0	0	0
Legionellosis	9	50	59	42
Leptospirosis	0	0	1	0
Listeriosis	0	5	5	7
Lyme disease	0	3	6	6
Malaria	0	4	11	5
Meningitis (except aseptic)	1	10	11	10
Meningococcal Disease	0	3	0	6
Salmonella serotype Typhi (Typhoid Fever)	0	3	4	2
Salmonellosis	74	940	792	746
Shigellosis	19	243	269	103
Streptococcus pneumoniae, Drug Resistant	1	17	15	23
Vibriosis	2	18	5	4
West Nile Fever	0	0	0	0
Zika Virus (non-congenital)	3	33	30	135
<b>Immunization Preventable Diseases</b>				
Measles	0	0	3	0
Mumps	1	60	10	7
Pertussis	2	34	16	34
Rubella	0	0	0	0
Tetanus	0	0	0	0
Varicella	8	152	75	44
<b>Hepatitis</b>				
Hepatitis A	2	36	18	119
Hepatitis B (Acute)	8	43	46	39
<b>Healthy Homes</b>				
Lead Poisoning	11	122	173	376

\*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

- Between December 1st and December 9th, DOH-Miami-Dade collaborated with many community partners in observance of World AIDS Day which is observed globally on December 1st.
- The Miami-Dade WIC and Nutrition Program hosted their 6th annual Holiday Health & Resource Fair on Saturday December 7th, 2019 at the Florida City WIC Clinic. There were a total of 2,003 registered attendees, not including the approximately 500 staff, volunteers, and partners that participated as well. The free services and goods provided to the attendees included health and dental screenings, dental and eye exams, toys, books, hot meals, and groceries. (See picture below.)
- On December 23rd, DOH-Miami-Dade issued another Mosquito Borne Illness alert. Two cases of locally transmitted dengue fever have been confirmed in Miami-Dade residents. These cases are geographically linked to a travel-related case. Miami-Dade County has fourteen local cases in 2019. To protect yourself and others practice personal mosquito protection and remember to "[Drain and Cover.](#)"

### 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



DOH-Miami-Dade WIC staff that participated in the 6th Annual Holiday Homestead/FL City Health & Resource Fair on December 7th.

### 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 Vanessa Villamil at 305-470-5643 or [vanessa.villamil@flhealth.gov](mailto:vanessa.villamil@flhealth.gov).

