

# Florida Morbidity Statistics Report

## 2016



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**Florida Morbidity Statistics Reports:**  
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## Background

The *Florida Morbidity Statistics Report* is the official record of the occurrence of reportable diseases in Florida and this edition marks the 61st publication since 1945. Numerous reports describing disease burden are produced throughout the year while investigations are ongoing. This report is noteworthy as the data contained here are final, with a few exceptions. Most notably, deduplication of HIV and AIDS cases continues after the publication of this report so numbers in future reports may change. The mission of the Florida Department of Health is to protect, promote, and improve the health of all people in Florida through integrated state, county, and community efforts. Per section 381.0031, Florida Statutes, “The Department shall conduct a communicable disease prevention and control program as part of fulfilling its public health mission.” This report directly supports the mission of the Florida Department of Health by identifying patterns and trends in the incidence of disease that are used as the scientific basis for development of disease control and prevention strategies and policies.

Disease control and prevention are core functions of any public health agency. Protection of the public’s health from existing, emerging, and re-emerging diseases requires diligence in all aspects of public health. The public health partners identifying and characterizing emerging trends in disease are the physicians, nurses, laboratorians, hospital infection preventionists, and other health care professionals who participate in reportable disease surveillance. Without their participation, the ability to recognize and intervene in emerging public health issues would be much more limited.

## Acknowledgements

The Bureau of Epidemiology thanks all program areas within the Florida Department of Health that contributed to this report, including the sections of HIV/AIDS, Immunization, Sexually Transmitted Diseases (STDs) and Viral Hepatitis, and Tuberculosis Control. Finally, many thanks are extended to the local health office staff and other public health professionals who are involved in reportable disease surveillance, either through disease control activities, case investigations, data collection, laboratory testing, or other essential functions.

## Purpose

The *Florida Morbidity Statistics Report* is compiled in a single reference document to:

- Summarize annual morbidity from reportable communicable diseases and diseases of environmental origin in Florida.
- Describe patterns of disease that can be assessed over time, compared with trends from other states, and act as an aid in directing future disease prevention and control efforts.
- Provide a resource to medical and public health authorities at county, state, and national levels.
- Serve as the final data record, describing cases and morbidity once investigations are closed and data reconciliation with the Centers for Disease Control and Prevention (CDC) is complete.

## Data Sources

Data presented in this report are based on reportable disease information received by county and state health department staff from physicians, hospitals, and laboratories throughout the state obtained through passive and active surveillance. Reporting of suspected and confirmed reportable diseases and conditions in the state of Florida is mandated under section 381.0031, Florida Statutes and Florida Administrative Code Chapter 64D-3. People in charge of laboratories, hospitals, medical facilities, or other facilities providing health services (which can include schools, nursing homes, and state institutions) are required to report certain diseases and conditions and the associated laboratory test results as listed in the Table of Notifiable Diseases or Conditions to Be Reported, Florida Administrative Code Chapter 64D-3. Reporting of test results by a laboratory does not nullify a practitioner’s obligation to report the disease or condition. These data are the basis for providing useful information on reportable diseases and conditions in Florida to health care workers and policymakers, and would not be possible without the cooperation of the extensive network involving both private and public sector participants. Data in this report are collected by a variety of means described on the following page.

**Case-based passive surveillance** is the most common surveillance approach for reportable diseases. Passive surveillance relies on physicians, laboratories, and other health care providers to report diseases to the Florida Department of Health confidentially in one of three forms: electronically, by telephone, or by facsimile. Increasingly, information about cases of reportable diseases and conditions is passed from providers, especially laboratories, to the Department as electronic records. This occurs automatically, without the involvement of a person once the electronic transmission process has been established between the Department and the reporting partner. Case-based reporting implies that some action is taken for every case, such as interviewing the case to identify risk factors or detect outbreaks.

**Laboratory-based surveillance** is when laboratory data are used to assess trends. In Florida, laboratory-based surveillance is used to monitor antimicrobial resistance patterns in the community and is the primary means of monitoring diseases such as chronic hepatitis in Florida. Laboratories participating in electronic laboratory reporting (ELR) are required to submit antimicrobial susceptibility testing for a variety of bacteria. These laboratories are also required to submit all positive and negative results to the Department for hepatitis viruses, human papillomavirus, influenza virus, respiratory syncytial virus (RSV), and *Staphylococcus aureus*. Individual cases of these diseases are not investigated (except for acute hepatitis infections); surveillance relies entirely on laboratory results. Additionally, the CDC's National Respiratory and Enteric Virus Surveillance System (NREVSS) is a laboratory-based system used to monitor temporal and geographic circulation patterns of RSV and other respiratory viruses in Florida.

**Sentinel surveillance** is when a sample of providers or laboratories are used to represent a wider population. ILINet is a nationwide surveillance system of sentinel providers, predominately outpatient health care providers, to monitor influenza and influenza-like illness (ILI) in the community.

**Syndromic surveillance** uses existing health-related data that precede diagnosis to identify cases of reportable diseases that would have otherwise gone unreported, identify outbreaks, monitor health trends in the community, and provide situational awareness during public health responses. Florida uses the Electronic Surveillance System for the Early Notification of Community-Based Epidemics (ESSENCE-FL) to monitor influenza, ILI, and RSV trends across the state through chief complaints and discharge diagnoses from participating emergency departments and urgent care centers.

**Registries** are another passive surveillance approach. The Florida Cancer Data System (FCDS) is Florida's legislatively mandated, population-based, statewide cancer registry. All hospital and outpatient facilities licensed in Florida must report each patient admitted for treatment of cancer to the Department. The Florida Birth Defects Registry (FBDR) is a passive, statewide, population-based surveillance system. FBDR utilizes and links multiple datasets, including vital statistics and hospital records, to identify infants with birth defects.

**Active surveillance** entails Department staff regularly contacting hospitals, laboratories, and physicians in an effort to identify all cases of a given disease or condition. This approach can be used in outbreak situations or to support an event or case investigation of urgent public health importance.

## References

The following references were used in many of the disease-specific chapters within Section 2: Data Summaries for Selected Reportable Diseases/Conditions of Frequent Occurrence.

Centers for Disease Control and Prevention. CDC A-Z Index. Available at [www.cdc.gov/az/a.html](http://www.cdc.gov/az/a.html).

Centers for Disease Control and Prevention. 2015. *Epidemiology and Prevention of Vaccine-Preventable Diseases*, 13th ed. Washington, D.C.: Public Health Foundation. Available at [www.cdc.gov/vaccines/pubs/pinkbook/index.html](http://www.cdc.gov/vaccines/pubs/pinkbook/index.html).



Centers for Disease Control and Prevention. 2012. *Manual for the Surveillance of Vaccine-Preventable Diseases*, 5th ed. Available at [www.cdc.gov/vaccines/pubs/surv-manual/index.html](http://www.cdc.gov/vaccines/pubs/surv-manual/index.html).

Centers for Disease Control and Prevention. 2016. *CDC Health Information for International Travel 2016*. New York: Oxford University Press.

Hill HA, Elam-Evans LD, Yankey D, Singleton JA, Dietz V. 2016. Vaccination Coverage Among Children Aged 19–35 Months — United States, 2015. *Morbidity and Mortality Weekly Report*, 65 (39):1065-1071. Available at [www.cdc.gov/mmwr/volumes/65/wr/mm6539a4.htm](http://www.cdc.gov/mmwr/volumes/65/wr/mm6539a4.htm).

Heymann DL (ed). 2015. *Control of Communicable Diseases Manual*. 20th ed. Washington, D.C.: American Public Health Association Press.

## Interpreting the Data

Information in this report should be interpreted in light of the limitations below.

### 1. Under-Reporting

The data presented in this report are primarily based on passive reporting by health care providers and laboratories across Florida. Case reporting is most often dependent upon a person becoming ill, seeking medical attention, the health care provider ordering laboratory testing, and finally the health care provider or laboratory reporting the case. Frequently, not all steps in this process occur, so the number of reported cases represents a fraction of the true number of cases of reportable illnesses occurring in Florida each year. Evaluations of infectious disease reporting systems have indicated that the completeness of reporting varies by disease. The less common but more severe reportable diseases such as bacterial meningitis, diphtheria, polio, botulism, anthrax, tuberculosis, and congenital syphilis are more completely reported than the more common diseases with less severe symptoms such as hepatitis A or campylobacteriosis. Variation in identified disease incidence at the local level probably reflects, to varying degrees, both differences in the true incidence of disease and differences in the vigor with which surveillance is performed.

### 2. Reliability of Rates

All incidence rates in this report are expressed as the number of reported cases of a disease or condition per 100,000 population unless otherwise specified. All population estimates are from the Community Health Assessment Resource Tool Set (CHARTS), a Florida Department of Health web-based data query system with community tools, health indicators, and data queries for public consumption ([www.FLHealthCHARTS.com](http://www.FLHealthCHARTS.com)). Population estimates within CHARTS are provided by the Florida Department of Health, Division of Public Health Statistics and Performance Management, in consultation with the Florida Legislature's Office of Economic and Demographic Research. Estimates in CHARTS are updated at least once per year, and population data were extracted from CHARTS for this report on October 23, 2017, after revisions to population estimates were made to the annual update in CHARTS. Note that previous editions of this report may show somewhat different populations for a given year than the ones shown here, as these estimates are revised periodically. Revisions to population estimates can also impact disease rates.

Animal rabies is not expressed as a rate; it is only expressed as the number of cases because no reliable denominators exist for animal populations.

Rates for diseases with only a few cases reported per year can be unstable and should be interpreted with caution. The observation of zero events is especially difficult to interpret. Rates were not generally calculated in this report when there were less than 20 cases, except as part of graphs and maps. In some cases, even though maps and graphs (e.g., by year, gender, race) may have small individual counts, rates were calculated. These maps include footnotes as a reminder that rates based on less than 20 cases are not reliable.

### 3. Determining How Cases Are Counted: Reporting Period and Cases Included

There are important differences by disease that determine how cases are counted and summarized in this report. The date of illness onset or the date of diagnosis may not be available for all cases. Cases reported early in 2016 may have actually had onset or diagnosis in 2015; rarely, cases reported in 2016 may have onset or diagnosis dates prior to 2015. Additionally, cases with illness onset or diagnosis late in 2016 may not have been reported to public health by the end of the 2016 report year, and thus would not be included in this report for most diseases. Information by disease is listed below.

#### AIDS and HIV Cases

Year: Data are aggregated by calendar year.

Cases included: HIV cases are based on the date, county of residence, and state of residence of the first confirmed HIV test. AIDS cases are based on the date, county of residence, and state of residence of the first CD4 count below 200 cells/mm<sup>3</sup> or AIDS-defining opportunistic infection in a person with HIV. The 2016 HIV and AIDS case dataset was frozen on June 30, 2017. Changes occurring after that point that affect the number of cases in 2016 or earlier will be updated in the following year's dataset.

Please note that prior to 2014, HIV and AIDS cases were assigned to a report year based on the date the case was entered into the surveillance system. For more information about how AIDS and HIV cases are counted, please see the HIV Data Center website ([www.floridahealth.gov/diseases-and-conditions/aids/surveillance/index.html](http://www.floridahealth.gov/diseases-and-conditions/aids/surveillance/index.html)).

#### Sexually Transmitted Diseases (STDs)

Year: Data are aggregated by calendar year.

Cases included: Cases are assigned to a report year based on the date the case was entered into the surveillance system. Occasionally, STD reports are received after the end of the reporting year that should have been included based on the laboratory result date. For these cases, the laboratory result date is used for the report date.

#### Tuberculosis

Year: Data are aggregated by the standard reporting year as outlined by the CDC, where every year has at least 52 reporting weeks and some years have 53 (there were 52 weeks in 2016). This is referred to as the Morbidity and Mortality Weekly Report (MMWR) year.

Cases included: Cases are assigned to a report year based on the date when the suspected diagnosis is confirmed by clinical, radiographic, and laboratory testing (often referred to as "date counted").

#### Zika Virus Disease and Infection (Including Congenital)

Year: Data are aggregated by MMWR year (see tuberculosis above for explanation of MMWR year).

Cases included: Cases are assigned to a report year based on the earliest date associated with the case (onset date, diagnosis date, laboratory report date, or date the Department was notified of the case). In the surveillance application, Merlin, this is referred to as "event date."

## All Other Diseases

Year: Data are aggregated by MMWR year (see tuberculosis on the previous page for explanation of MMWR year).

Cases included: Cases are assigned to a report year based on the date the case was determined to have enough information to be submitted by local health office epidemiology staff to the Florida Department of Health Bureau of Epidemiology (BOE) for state-level review. In the surveillance application, Merlin, this is referred to as “date reported to BOE.”

Disease-specific reports describing data by other dates, such as disease onset and diagnosis dates, may also be published and available on the Florida Department of Health website; numbers may vary from this report based on different inclusion criteria.

## 4. Case Definition

Cases of most diseases are classified as confirmed, probable, or suspect at the state level using a published set of surveillance case definitions consistent with national case definitions where appropriate (*Surveillance Case Definitions for Selected Reportable Diseases in Florida*, available at [www.FloridaHealth.gov/DiseaseCaseDefinitions](http://www.FloridaHealth.gov/DiseaseCaseDefinitions)). Case classifications are reviewed at the state level for most diseases. Following CDC MMWR print criteria (available at [www.cdc.gov/nndss/script/downloads.aspx](http://www.cdc.gov/nndss/script/downloads.aspx)), only confirmed and probable cases have been included in this report unless otherwise specified (i.e., suspect cases are excluded).

Changes to case definitions can affect the number of cases reported, which can impact calculated incidence rates, but ultimately case definition changes do not change the true incidence of a disease. Each year case definitions are evaluated for necessary revisions. A number of changes were made to reportable disease case definitions in 2016 as a result of position statements approved by the Council of State and Territorial Epidemiologists (CSTE) in 2015.

Summary of case definition changes effective January 2016:

- a. Diphtheria: specified that clinical specimen must be from the nose or throat and eliminated the epidemiological linkage criteria from the probable case classification.
- b. Ehrlichiosis/anaplasmosis: removed positive IgM from presumptive laboratory criteria.
- c. Hepatitis B, acute: expanded presumptive laboratory criteria to include a negative test result other than HBsAg followed within 6 months by a positive test result.
- d. Hepatitis C, acute:
  - Lowered alanine aminotransferase (ALT) cut-point from <400 to <200 IU/L for clinical criteria.
  - Updated maximum time between a negative hepatitis C virus (HCV) antibody (anti-HCV) result and a positive laboratory result from 6 months to 12 months for the confirmatory laboratory criteria.
  - Revised confirmatory laboratory criteria by adding HCV antigen test and removing anti-HCV with signal-to-cutoff ratio.
- e. Hepatitis C, chronic:
  - Revised confirmatory laboratory criteria by adding HCV antigen test and removing anti-HCV with signal-to-cutoff ratio and presumptive criteria by removing ALT values.
  - Revised probable case classification to be a positive anti-HCV test in the absence of negative nucleic acid test for HCV RNA or a negative HCV antigen test.
  - Removed suspect case classification.

- f. Hepatitis C, perinatal: created a new case definition.
- g. Rocky Mountain spotted fever and spotted fever rickettsiosis: removed positive IgM from presumptive laboratory criteria.
- h. Typhoid fever:
  - Added non-culture-based methods as supportive laboratory criteria and created a corresponding new suspect case classification.
  - Added a new suspect case classification for asymptomatic people.
- i. Vibriosis: added non-culture-based methods as supportive laboratory criteria and created a corresponding new suspect case classification.
- j. Zika fever: created new case definitions for imported, non-pregnant cases and for locally acquired or pregnant cases.

## 5. Assigning Cases to Counties

Cases are assigned to Florida counties following national guidance and based on the county of residence at the time of the disease identification, regardless of where they became ill or were hospitalized, diagnosed, or exposed. Cases who reside outside of Florida are not counted as Florida cases regardless of whether they became ill or were hospitalized, diagnosed, or exposed in Florida. Zika virus disease and infection cases do include residents of other states; however cases of other diseases in out-of-state residents are not included in this report unless specifically noted. These cases are referred through an interstate reciprocal notification system to the state where the person resides.

## 6. Population Estimates

All population estimates are from the Community Health Assessment Resource Tool Set (CHARTS), a Florida Department of Health web-based data query system with community tools, health indicators, and data queries for public consumption ([www.FLHealthCHARTS.com](http://www.FLHealthCHARTS.com)). Population estimates within CHARTS are provided by the Florida Department of Health Division of Public Health Statistics and Performance Management in consultation with the Florida Legislature's Office of Economic and Demographic Research. Estimates in CHARTS are updated at least once per year, and population data were extracted from CHARTS for this report on October 23, 2017, after revisions to population estimates were made to the annual update in CHARTS. Note that previous editions of this report may show somewhat different populations for a given year than the ones shown here, as these estimates are revised periodically. Revisions to population estimates can also impact disease rates.

## 7. Florida Disease Codes in Merlin

Reported case data for most reportable diseases (excluding HIV/AIDS, STDs, and tuberculosis) are stored in Merlin, Florida's web-based reportable disease surveillance system. When entering case data into Merlin, users assign a Florida Disease Code based on the disease. Due to changes in case definitions over time, new codes have been added and outdated codes have expired. In addition, some diseases have multiple disease codes that represent different clinical manifestations.

Diseases that include cases from **multiple or expired** Florida Disease Codes in this report:

- a. Amebic Encephalitis
  - Amebic Infections (*Acanthamoeba*) - 13621
  - Amebic Infections (*Balamuthia mandrillaris*) - 13625
  - Amebic Infections (*Naegleria fowleri*) - 13629
  - Amebic Encephalitis - 13620 (EXPIRED)

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- b. California Serogroup Virus Disease  
California Serogroup Virus Neuroinvasive Disease - 06250  
California Serogroup Virus Non-Neuroinvasive Disease - 06251
- c. Dengue Fever  
Dengue Fever - 06100  
Dengue Fever, Severe - 06101
- d. Eastern Equine Encephalitis  
Eastern Equine Encephalitis Neuroinvasive Disease - 06220  
Eastern Equine Encephalitis Non-Neuroinvasive Disease - 06221
- e. Ehrlichiosis  
Ehrlichiosis (*Ehrlichia ewingii*) - 08383  
Ehrlichiosis, HME (*Ehrlichia chaffeensis*) - 08382
- f. *Haemophilus influenzae* Invasive Disease in Children <5 Years Old  
*Haemophilus influenzae* Invasive Disease - 03841  
Cellulitis (*Haemophilus influenzae*) - 69290 (EXPIRED)  
Epiglottitis (*Haemophilus influenzae*) - 46430 (EXPIRED)  
Meningitis (*Haemophilus influenzae*) - 32000 (EXPIRED)  
Pneumonia (*Haemophilus influenzae*) - 48220 (EXPIRED)  
Septic Arthritis (*Haemophilus influenzae*) - 71100 (EXPIRED)
- g. Hantavirus Infection  
Hantavirus Infection, Non-Pulmonary Syndrome - 07870  
Hantavirus Pulmonary Syndrome - 07869
- h. Listeriosis  
Listeriosis - 02700  
Meningitis (*Listeria monocytogenes*) - 32070 (EXPIRED)
- i. Plague  
Plague, Bubonic - 02000  
Plague, Pneumonic - 02050
- j. Poliomyelitis  
Poliomyelitis, Nonparalytic - 04520  
Poliomyelitis, Paralytic - 04590
- k. Q Fever (*Coxiella burnetii*)  
Q Fever, Acute (*Coxiella burnetii*) - 08301  
Q Fever, Chronic (*Coxiella burnetii*) - 08302  
Q Fever - 08300 (EXPIRED)
- l. Rocky Mountain Spotted Fever and Spotted Fever Rickettsiosis  
Rocky Mountain Spotted Fever and Spotted Fever Rickettsiosis - 08309  
Rocky Mountain Spotted Fever - 08200 (EXPIRED)
- m. Rubella  
Rubella - 05690  
Rubella, Congenital Syndrome - 77100
- n. Salmonellosis  
Paratyphoid Fever (Salmonella Serotypes Paratyphi A, B, C) - 00210  
Salmonellosis - 00300

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- o. Shiga Toxin-Producing *Escherichia coli* Infection  
*Escherichia coli*, Shiga Toxin-Producing (STEC) Infection - 00800  
Shiga Toxin-Producing *Escherichia coli* (STEC) Infection, Non-O157 - 41602 (EXPIRED)  
Shiga Toxin-Producing *Escherichia coli* (STEC) Infection, O157:H7 - 41601 (EXPIRED)
- p. St. Louis Encephalitis  
St. Louis Encephalitis Neuroinvasive Disease - 06230  
St. Louis Encephalitis Non-Neuroinvasive Disease - 06231
- q. Typhus Fever  
Typhus Fever, Epidemic (*Rickettsia prowazekii*) - 08000  
Typhus Fever, Endemic (*Rickettsia typhi*) - 08100 (EXPIRED)  
Typhus Fever - 08190 (EXPIRED)
- r. Venezuelan Equine Encephalitis  
Venezuelan Equine Encephalitis Neuroinvasive Disease - 06620  
Venezuelan Equine Encephalitis Non-Neuroinvasive Disease - 06621
- s. Vibriosis (Excluding Cholera)  
Vibriosis (*Grimontia hollisae*) - 00196  
Vibriosis (*Vibrio alginolyticus*) - 00195  
Vibriosis (*Vibrio cholerae* Type Non-O1) - 00198  
Vibriosis (*Vibrio fluvialis*) - 00194  
Vibriosis (*Vibrio mimicus*) - 00197  
Vibriosis (*Vibrio parahaemolyticus*) - 00540  
Vibriosis (*Vibrio vulnificus*) - 00199  
Vibriosis (Other *Vibrio* Species) - 00193
- t. Viral Hemorrhagic Fever  
Crimean-Congo Hemorrhagic Fever - 06591  
Ebola Hemorrhagic Fever - 06592  
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Junin Hemorrhagic Fever - 06594  
Lassa Fever - 06595  
Lujo Virus - 06596  
Machupo Hemorrhagic Fever - 06597  
Marburg Fever - 06598  
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Viral Hemorrhagic Fever - 06590 (EXPIRED)
- u. West Nile Virus Disease  
West Nile Virus Neuroinvasive Disease - 06630  
West Nile Virus Non-Neuroinvasive Disease - 06631
- v. Western Equine Encephalitis  
Western Equine Encephalitis Neuroinvasive Disease - 06210  
Western Equine Encephalitis Non-Neuroinvasive Disease - 06211



## Summary of Key Disease Trends in 2016

Zika virus emerged in 2016 as a serious public health threat in Florida, resulting in a large-scale response by the Florida Department of Health. Over 1,000 imported cases and 285 locally acquired cases were identified in Florida in 2016. For more information on Zika virus, see 2016 Focus: Zika Virus in Florida. Other mosquito-borne diseases continued to occur in Florida in 2016, though in low volume. The incidence of malaria increased from 2015. All cases were imported from other countries, primarily in Africa (66%). Fewer cases of dengue fever were reported in 2016 than the two previous years. It is possible some dengue fever cases were counted as Zika virus infection or disease cases, therefore the true extent of the decrease in dengue fever incidence is unknown. There were three local introductions of dengue virus (DENV) identified in Miami-Dade County (for more information on these cases, see Section 2: Data Summaries for Selected Reportable Diseases/Conditions of Frequent Occurrence). Central America and the Caribbean continued to be the regions in which most imported dengue fever cases were exposed (64%). Tick-borne diseases, including Lyme disease, ehrlichiosis, and anaplasmosis, continued to be identified in Florida in 2016. Lyme disease is the most common illness transmitted by ticks. The increase in cases was primarily due to cases imported from 14 highly endemic states in the northeast and upper midwestern U.S. Consistent with previous years, 73% of cases were imported from other states. Ehrlichiosis and anaplasmosis incidence in Florida remained low with 28 and 6 cases reported in 2016, respectively.

Sexually transmitted diseases (STDs), HIV, and AIDS are among the most common reportable diseases in Florida, particularly among 20- to 54-year-olds. Generally, incidence of chlamydia and syphilis have been increasing over the past 10 years, while incidence of HIV and AIDS have been decreasing. While AIDS continued to decline in 2016, the rate of HIV was 4% higher than the previous five-year average. Linkage to care plays a key role in preventing AIDS in people infected with HIV. In 2016, there were 114,772 people living with HIV, of whom 66% were retained in care and 60% had suppressed viral loads. In contrast, STDs, particularly gonorrhea and syphilis, continued to increase in 2016. The rate of gonorrhea was 28% higher than the previous five-year average and the rate of syphilis was 49% higher. Chlamydia remained the highest-volume reportable disease in Florida, with over 90,000 cases reported in Florida in 2016.

In the mid-1980s, tuberculosis (TB) re-emerged as a public health threat in the U.S. Since 1994, the number of cases of TB in Florida has decreased every year and increased very slightly in 2016. Over the past 20 years, the number of TB cases counted in foreign-born people has remained relatively constant while decreasing dramatically in U.S.-born people. The proportion of all TB cases in people born in a foreign country grew to 59.7% in 2016 in Florida.

Florida consistently has one of the highest rates of enteric diseases in the nation, with 11,000 to 14,000 cases reported annually. Enteric diseases are disproportionately reported in children <5 years old, though the distribution of cases within that age range varies by disease. Salmonellosis is the most common enteric disease with more than 5,600 cases reported in 2016. The rate of salmonellosis in infants <1 year old is >3.5 times as high as in 1- to 4-year-olds, the next highest incidence group, and >12 times as high as in any other age group. No other reportable enteric disease has such a dramatic decrease in incidence rates with age. Campylobacteriosis incidence rates also peak in <1-year-olds, but the disease is relatively more common among other age groups. Unlike other enteric diseases, the distribution of campylobacteriosis cases is bimodal, with peaks in young children and increasing incidence starting around age 45 years. Other enteric diseases, including cryptosporidiosis, giardiasis, shigellosis, and Shiga toxin-producing *E. coli* (STEC), peak in the 1- to 4-year-old age group. Giardiasis incidence increased very slightly in 2016 compared to 2015, while campylobacteriosis, cryptosporidiosis, salmonellosis, shigellosis, and STEC all decreased. Culture-independent diagnostic testing for enteric diseases has been widely implemented over the past few years, improving case detection. The reason for the decrease in most enteric diseases in 2016 is not well understood. Historically, shigellosis has a cyclic temporal pattern with large, community-wide outbreaks, frequently involving daycare centers, every three to five years. Shigellosis activity peaked in 2007, 2011, and again in 2014. Following the 2014 peak, incidence decreased dramatically in 2015 and 2016.

Hepatitis continues to account for a large bulk of infectious disease burden in Florida with 4,000 to 5,000 chronic hepatitis B cases and 19,000 to 23,000 chronic hepatitis C cases reported each year. The rate of reported chronic hepatitis C has increased very slightly each year for the past 10 years, then increased dramatically to over 29,000 cases in 2016 due to a change in case definition that expanded the case classification criteria. The rate of reported chronic hepatitis B has been relatively stable since 2009. Over the past few years, improvements in electronic laboratory reporting (ELR) and increased focus on surveillance are believed to have improved case ascertainment of chronic hepatitis. In 2014, reporting requirements were updated to include mandatory reporting of all positive and negative hepatitis results, as well as all liver function tests, to support the identification of acute hepatitis cases. ELR continued to expand and in 2016, 96.1% of all chronic hepatitis B virus and 97.7% of all chronic hepatitis C virus (HCV) laboratory results were received by the Department electronically. The expansion of ELR has contributed to the increase in chronic hepatitis C case reporting, but a similar increase has not been observed for chronic hepatitis B. Although the overall rate of chronic hepatitis C has gradually increased over the past 10 years, the rate in young adults increased substantially. In response to the increased rate in young adults, an enhanced surveillance project focusing on hepatitis in young adults was funded and implemented in 2012 in Florida. The incidence of both acute hepatitis B and acute hepatitis C increased in 2016. The enhanced surveillance project for young adults and the change in reporting requirements to include both positive and negative hepatitis results has likely contributed to the increases. In 2016, 8% of acute hepatitis B cases and 36% of acute hepatitis C cases were determined to be acute based on negative results preceding positive results, which were received due to the change in Department requirements. These cases would otherwise have been misclassified as chronic. A large number of new hepatitis C infections in young adults in Florida are due to injection drug use (IDU).<sup>1</sup> In Florida and other states, the dual increases in newly identified hepatitis C infections and IDU among young adults has been associated with the proliferation of highly addictive prescription opioid painkillers.<sup>2</sup> About 6% of HCV-infected mothers transmit the infection to their infants, and that risk doubles if a woman is co-infected with HIV or has high levels of HCV. The number of women of childbearing age testing positive for HCV increased by 80% from 2012 to 2016 in Florida. This is partially due to better case ascertainment as described above, but also likely reflects a true increase in disease. Despite this very large increase, the number of babies infected with HCV has not increased. For more information about perinatal hepatitis C, see Section 9: Congenital and Perinatal Conditions. Acute hepatitis A incidence has declined drastically over the past 15 years, largely due to increased vaccination coverage. There was a slight decrease in the rate of hepatitis A in 2016 compared to 2015 and the previous five-year average. Almost half of the cases reported in 2016 were imported from outside Florida; primarily Central and South America and the Caribbean (64%). Approximately 40% of hepatitis A infections in 2015 were acquired in other countries where transmission is higher due to lower vaccination coverage.

Despite high vaccine coverage in Florida, vaccine-preventable diseases (VPDs) continue to occur. Vaccination coverage in Florida and nationally for 2015 was published by the CDC in 2016.<sup>3</sup> Varicella incidence has been steadily declining since 2008 due to effective vaccination programs. Beginning with the 2008-2009 school year, children entering kindergarten were required to receive two doses of varicella vaccine. Incidence increased in 2015 for the first time since 2008 but remained stable in 2016. Pertussis incidence has generally increased nationwide over the past decade, despite routine vaccine use. However, incidence in Florida decreased dramatically in 2015, with less than half the number of reported cases compared to 2014. Factors contributing to the decrease are not well understood. Incidence in 2016 was just slightly lower than in 2015. The number of reported meningococcal disease cases reached a historic low in 2016 in Florida, similar to U.S. trends. Vaccines for prevention of the five common serogroups of *Neisseria meningitidis* that cause meningococcal disease are recommended for targeted populations. The explanation for the decrease in cases in Florida and the U.S. is unknown, but it is likely partially attributable to vaccination rates among some subgroups.



Cancer, excluding non-melanoma skin cancer and including benign and borderline intracranial and central nervous system tumors, is also reportable in Florida. At the time this report was published, the most recent Florida cancer data available were from 2014. Over 110,000 primary cancers among Floridians were diagnosed in 2014. The most common cancers types were lung and bronchus (15%), female breast (14%), prostate (10%), and colorectal (9%).

For additional information on disease-specific trends, see Section 1: Summary of Selected Reportable Diseases/Conditions, Section 2: Data Summaries for Selected Reportable Diseases/Conditions of Frequent Occurrence, Section 3: Narratives for Selected Reportable Diseases/Conditions of Infrequent Occurrence, Section 8: Cancer Surveillance, and Section 9: Congenital and Perinatal Conditions.

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### 2016 Focus: Zika Virus in Florida

Zika fever is a febrile illness caused by a mosquito-borne flavivirus similar to those that cause dengue and West Nile virus infection. Prior to local transmission of the virus in Brazil in 2015, cases were previously reported in Africa, Southeast Asia, and the Pacific Islands. Since then, local Zika virus transmission has been identified throughout the Americas and Caribbean. The outbreak in the Americas resulted in large numbers of imported Zika virus cases being reported in the U.S. as well as the identification of local transmission in several U.S. territories, Florida, and Texas. In Florida, 1,122 imported cases were reported in 2016 and in mid-July 2016, Florida became the first state in the continental U.S. with local mosquito-borne transmission of Zika virus. In 2016, 285 cases associated with local transmission occurred in four counties. Although local transmission was identified in four counties, active ongoing transmission of Zika virus was only identified in Miami-Dade County. Four areas in Miami-Dade County had active transmission of Zika virus (Wynwood, North and South Miami Beach, and Little River communities). In addition, 49 infected people reported spending time in both active transmission areas in Miami-Dade County and countries or territories with widespread Zika virus transmission; therefore exposure location could not be determined. Extensive measures to stop ongoing transmission were implemented and the last symptom onset for a case associated with areas of active transmission was October 18, 2016. At the time of this report, no active transmission has been identified since then and Zika virus did not become established as endemic in Florida, despite having the competent mosquito vector present in the state. For additional information on these cases, please see Section 2: Data Summaries for Selected Reportable Diseases/Conditions of Frequent Occurrence and Section 9: Congenital and Perinatal Conditions.

Zika is primarily spread through the bite of a mosquito, specifically *Aedes aegypti* and *Aedes albopictus*. Although mosquito transmission is most common, Zika virus has the potential to spread through perinatal or sexual transmission, and rarely through blood transfusions and organ or tissue donations. Illness is characterized by rash, fever, arthralgia, and conjunctivitis. Only about 1 in 5

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people are symptomatic. Severe disease requiring hospitalization is uncommon; however, there have been some reports of Guillain-Barré syndrome following Zika virus infection. Zika virus infection during pregnancy has been linked to fetal abnormalities, including microcephaly. Adverse pregnancy and infant outcomes associated with Zika virus infection during pregnancy are being studied and the full spectrum of fetal outcomes is yet to be determined.

In response to the identification of imported Zika virus cases in Florida, the Governor of Florida directed the State Surgeon General and Secretary of the Department to declare a public health emergency on February 3, 2016, and directed local jurisdictions with imported Zika cases to take precautionary actions to prevent local transmission of Zika virus. Thirty-nine counties declared public health emergencies due to the identification of travel-associated Zika virus infections in 2016. In addition, each impacted county convened a meeting with community partners, developed a community action plan for execution of prevention programs, and developed an outreach program targeting local medical professionals to increase Zika virus awareness. Impacted counties were also provided maps developed by the Florida Department of Health Environmental Public Health Tracking Program highlighting Florida populations that may be difficult to reach and in need of targeted messaging or that lack access to care (e.g., low income, non-English speaking, non-white, women of childbearing age).

The Department activated an internal incident command system and worked closely with external partners, including the Florida Department of Agriculture and Consumer Services (FDACS), local mosquito control districts, state wildlife and state environmental protection agencies. Ongoing Zika preparedness, surveillance, and response was a concerted effort among Department programs, local county health departments (CHDs), local mosquito control, and other key partners throughout the state. Protocols related to the investigation of local dengue and chikungunya introductions were modified for use during local Zika virus investigations. Zika virus guidance from the Centers for Disease Control and Prevention (CDC) was also adapted and distributed to health care providers statewide, including District XII of the American Congress of Obstetricians and Gynecologists and midwives. In collaboration with the Department, CDC subject matter experts provided webinars for Florida health care providers. Response plans developed with blood banks for dengue (2013) and chikungunya virus (2014) introductions were reviewed and updated. A call center for public inquiries regarding Zika virus was set up through the Florida Poison Information Center Network starting in February, which received over 8,000 calls.

Due to the possibility of adverse pregnancy and fetal outcomes associated with Zika virus infection during pregnancy, outreach to pregnant women and their providers was a high priority for the Department. On August 3, 2016, the Governor directed the Department to provide free Zika virus infection risk assessments and testing for pregnant women statewide. The Department's Bureau of Public Health Laboratories (BPHL) partnered with both CDC and commercial laboratories to help support this testing. Process maps were developed for different scenarios by which CHDs would identify pregnant women for testing, including steps for ensuring that both women and infants exposed to Zika virus would be linked to care in each scenario. This project was accomplished through a collaborative workgroup that included representatives from the Department, Healthy Start Coalitions, and local Early Steps offices. Early Steps, an early intervention program in Florida, also updated its inclusion criteria so that infants with microcephaly and infants with laboratory evidence of Zika virus infection had immediate access to their services. In order to learn more about the impacts of Zika virus infection during pregnancy, the Department participated in CDC's Zika Pregnancy Registry and is following up on affected pregnant women and infants for at least one year after birth. In addition, the Department's Birth Defects Registry team began a retrospective and prospective analysis of registry data to help identify microcephaly cases or other Zika virus-related conditions and help evaluate the overall incidence of these conditions in Florida.

After local Zika virus transmission was identified in Brazil in 2015, BPHL rapidly added Zika virus testing capacity at their Tampa and Jacksonville laboratories. The BPHL Miami laboratory also added Zika virus testing capacity following the identification of local Zika virus cases in Miami-Dade County.

BPHL was instrumental in identifying urine as an important sample type to help diagnose acute Zika virus infections and played an important role in steering changes in national Zika virus testing guidelines. In addition, BPHL testing helped identify some of the first pregnant women with prolonged Zika virus viremia. Over 23,000 Zika virus tests were performed by BPHL in 2016.

Local mosquito control districts worked closely with CHDs to respond to travel-related Zika fever cases and any suspected locally acquired infections. Because of Florida's history of arbovirus introductions and to minimize the risk of Zika virus introduction, CHDs contacted mosquito control districts upon notification of a suspected Zika virus case. Local mosquito control programs conducted mosquito abatement activities within one-eighth of a mile of the home of the suspected cases. Additional funding was provided to several mosquito control programs in high risk areas in Florida to help support surveillance and control efforts. FDACS also partnered with the Department to offer several trainings for mosquito control and CHD personnel.

An emergency rule was issued on February 5, 2016, requiring immediate reporting of suspected or confirmed cases of Zika virus infection to the Department. In October 2016, the Florida Administrative Code was updated to require reporting of suspected Zika infections upon initial suspicion. Reports to CHDs were primarily made by health care providers and laboratories. However, self-reporting, syndromic surveillance, blood bank testing, and active surveillance were also important sources of case identification and reporting. Active surveillance for locally acquired cases included household investigations, workplace investigations, and community urine collections (urosurveys). Three different types of urosurveys were performed: door-to-door sampling of homes within a 150-meter radius of the property of interest, sampling at businesses with known local Zika cases and other symptomatic employees or customers, and community clinics that were open to members of the public who lived or worked in a specified area where local transmission was suspected. Urosurveys were initially performed for each local case as they were identified but were refined over time to include more high-risk situations such as clusters of cases (not in the same household) and workplaces with additional ill employees. Over 2,000 people were tested through active investigations, resulting in the identification of 55 additional local cases.

# Introduction

## List of Reportable Diseases/Conditions in Florida, January 2016

Subsection 381.0031(2), Florida Statutes, provides that “Any practitioner licensed in this state to practice medicine, osteopathic medicine, chiropractic medicine, naturopathy, or veterinary medicine; any hospital licensed under part I of Chapter 395, Florida Statutes; or any laboratory licensed under Chapter 483, Florida Statutes that diagnoses or suspects the existence of a disease of public health significance shall immediately report the fact to the Department of Health.” This list of reportable diseases and conditions is maintained in Florida Administrative Code Rule 64D-3.029. The Rule was revised in October 2016; a summary of changes and the updated list are on the following page.

Any disease outbreak	Malaria
Any grouping or clustering of disease	Measles (rubeola)
Acquired immune deficiency syndrome (AIDS)	Melioidosis
Amebic encephalitis	Meningitis, bacterial or mycotic
Anthrax	Meningococcal disease
Arsenic poisoning	Mercury poisoning
Arboviral diseases not otherwise listed	Mumps
Botulism	Neonatal abstinence syndrome (NAS)
Brucellosis	Neurotoxic shellfish poisoning
California serogroup virus disease	Pertussis
Campylobacteriosis	Pesticide-related illness and injury, acute
Cancer (excluding non-melanoma skin cancer and including benign and borderline intracranial and CNS tumors)	Plague
Carbon monoxide poisoning	Poliomyelitis
Chancroid	Psittacosis (ornithosis)
Chikungunya fever	Q Fever
Chlamydia	Rabies (human, animal, possible exposure)
Cholera ( <i>Vibrio cholerae</i> type O1)	Ricin toxin poisoning
Ciguatera fish poisoning	Rocky Mountain spotted fever and other spotted fever rickettsioses
Congenital anomalies	Rubella
Conjunctivitis in neonates <14 days old	St. Louis encephalitis
Creutzfeldt-Jakob disease (CJD)	Salmonellosis
Cryptosporidiosis	Saxitoxin poisoning (paralytic shellfish poisoning)
Cyclosporiasis	Severe acute respiratory disease syndrome associated with coronavirus infection
Dengue fever	Shigellosis
Diphtheria	Smallpox
Eastern equine encephalitis	Staphylococcal enterotoxin B poisoning
Ehrlichiosis/anaplasmosis	<i>Staphylococcus aureus</i> infection, intermediate or full resistance to vancomycin (VISA, VRSA)
<i>Escherichia coli</i> infection, Shiga toxin-producing	<i>Streptococcus pneumoniae</i> invasive disease in children <6 years old (all ages for electronic laboratory reporting laboratories)
Giardiasis, acute	Syphilis
Glanders	Tetanus
Gonorrhea	Trichinellosis (trichinosis)
Granuloma inguinale	Tuberculosis (TB)
<i>Haemophilus influenzae</i> invasive disease in children <5 years old (all ages for electronic laboratory reporting laboratories)	Tularemia
Hansen’s disease (leprosy)	Typhoid fever ( <i>Salmonella</i> serotype Typhi)
Hantavirus infection	Typhus fever, epidemic
Hemolytic uremic syndrome (HUS)	Vaccinia disease
Hepatitis A	Varicella (chickenpox)
Hepatitis B, C, D, E, and G	Venezuelan equine encephalitis
Hepatitis B surface antigen in pregnant women or children <2 years old	Vibriosis (infections of <i>Vibrio</i> species and closely related organisms, excluding <i>Vibrio cholerae</i> type O1)
Herpes B virus, possible exposure	Viral hemorrhagic fevers
Herpes simplex virus (HSV) in infants <60 days old with disseminated infection and liver involvement; encephalitis; and infections limited to skin, eyes, and mouth; anogenital HSV in children <12 years old	West Nile virus disease
Human immunodeficiency virus (HIV) infection	Yellow fever
HIV, exposed infants <18 months old born to an HIV-infected woman	
Human papillomavirus (HPV), associated laryngeal papillomas or recurrent respiratory papillomatosis in children <6 years old; anogenital papillomas in children <12 years old (all HPV DNA for electronic laboratory reporting laboratories)	<b>Electronic laboratory reporting laboratories only:</b>
Influenza A, novel or pandemic strains	Antimicrobial susceptibility results for isolates from a normally sterile site for <i>Acinetobacter baumannii</i> , <i>Citrobacter</i> species, <i>Enterococcus</i> species, <i>Enterobacter</i> species, <i>Escherichia coli</i> , <i>Klebsiella</i> species, <i>Pseudomonas aeruginosa</i> , and <i>Serratia</i> species
Influenza-associated pediatric mortality in children <18 years old	Hepatitis B, C, D, E, and G viruses, all test results (positive and negative) and all liver function tests
Lead poisoning	Influenza virus, all test results (positive and negative)
Legionellosis	Respiratory syncytial virus, all test results (positive and negative)
Leptospirosis	<i>Staphylococcus aureus</i> isolated from a normally sterile site
Listeriosis	
Lyme disease	
Lymphogranuloma venereum (LGV)	

## List of Reportable Diseases/Conditions in Florida, October 2016

Florida Administrative Code Rule 64D-3.029 was updated in 2016 to modify the list of reportable diseases and conditions, effective October 20, 2016. Additions are highlighted below in red. Babesiosis was added to the list. Zika fever and paratyphoid fever were added as explicitly reportable, though they were previously reportable under arboviral diseases and salmonellosis, respectively. Updates will be made to the list of reportable diseases and conditions in future years and these updates will continue to be reflected as appropriate in future *Florida Morbidity Statistics Reports*.

Any disease outbreak	Malaria
Any grouping or clustering of disease	Measles (rubeola)
Acquired immune deficiency syndrome (AIDS)	Melioidosis
Amebic encephalitis	Meningitis, bacterial or mycotic
Anthrax	Meningococcal disease
Arsenic poisoning	Mercury poisoning
Arboviral diseases not otherwise listed	Mumps
<b>Babesiosis</b>	Neonatal abstinence syndrome (NAS)
Botulism	Neurotoxic shellfish poisoning
Brucellosis	<b>Paratyphoid fever (<i>Salmonella</i> serotypes Paratyphi A, B, C)</b>
California serogroup virus disease	Pertussis
Campylobacteriosis	Pesticide-related illness and injury, acute
Cancer (excluding non-melanoma skin cancer and including benign and borderline intracranial and CNS tumors)	Plague
Carbon monoxide poisoning	Poliomyelitis
Chancroid	Psittacosis (ornithosis)
Chikungunya fever	Q Fever
Chlamydia	Rabies (human, animal, possible exposure)
Cholera ( <i>Vibrio cholerae</i> type O1)	Ricin toxin poisoning
Ciguatera fish poisoning	Rocky Mountain spotted fever and other spotted fever rickettsioses
Congenital anomalies	Rubella
Conjunctivitis in neonates <14 days old	St. Louis encephalitis
Creutzfeldt-Jakob disease (CJD)	Salmonellosis
Cryptosporidiosis	Saxitoxin poisoning (paralytic shellfish poisoning)
Cyclosporiasis	Severe acute respiratory disease syndrome associated with coronavirus infection
Dengue fever	Shigellosis
Diphtheria	Smallpox
Eastern equine encephalitis	Staphylococcal enterotoxin B poisoning
Ehrlichiosis/anaplasmosis	<i>Staphylococcus aureus</i> infection, intermediate or full resistance to vancomycin (VISA, VRSA)
<i>Escherichia coli</i> infection, Shiga toxin-producing	<i>Streptococcus pneumoniae</i> invasive disease in children <6 years old (all ages for electronic laboratory reporting laboratories)
Giardiasis, acute	Syphilis
Glanders	Tetanus
Gonorrhea	Trichinellosis (trichinosis)
Granuloma inguinale	Tuberculosis (TB)
<i>Haemophilus influenzae</i> invasive disease in children <5 years old (all ages for electronic laboratory reporting laboratories)	Tularemia
Hansen's disease (leprosy)	Typhoid fever ( <i>Salmonella</i> serotype Typhi)
Hantavirus infection	Typhus fever, epidemic
Hemolytic uremic syndrome (HUS)	Vaccinia disease
Hepatitis A	Varicella (chickenpox)
Hepatitis B, C, D, E, and G	Venezuelan equine encephalitis
Hepatitis B surface antigen in pregnant women or children <2 years old	Vibriosis (infections of <i>Vibrio</i> species and closely related organisms, excluding <i>Vibrio cholerae</i> type O1)
Herpes B virus, possible exposure	Viral hemorrhagic fevers
Herpes simplex virus (HSV) in infants <60 days old with disseminated infection and liver involvement; encephalitis; and infections limited to skin, eyes, and mouth; anogenital HSV in children <12 years old	West Nile virus disease
Human immunodeficiency virus (HIV) infection	Yellow fever
HIV, exposed infants <18 months old born to an HIV-infected woman	<b>Zika fever</b>
Human papillomavirus (HPV), associated laryngeal papillomas or recurrent respiratory papillomatosis in children <6 years old; anogenital papillomas in children <12 years old (all HPV DNA for electronic laboratory reporting laboratories)	<b>Electronic laboratory reporting laboratories only:</b>
Influenza A, novel or pandemic strains	Antimicrobial susceptibility results for isolates from a normally sterile site for <i>Acinetobacter baumannii</i> , <i>Citrobacter</i> species, <i>Enterococcus</i> species, <i>Enterobacter</i> species, <i>Escherichia coli</i> , <i>Klebsiella</i> species, <i>Pseudomonas aeruginosa</i> , and <i>Serratia</i> species
Influenza-associated pediatric mortality in children <18 years old	Hepatitis B, C, D, E, and G viruses, all test results (positive and negative) and all liver function tests
Lead poisoning	Influenza virus, all test results (positive and negative)
Legionellosis	Respiratory syncytial virus, all test results (positive and negative)
Leptospirosis	<i>Staphylococcus aureus</i> isolated from a normally sterile site
Listeriosis	
Lyme disease	
Lymphogranuloma venereum (LGV)	



# Introduction

## Florida County Boundaries



# Introduction

## Florida Population Estimates by Year, Age Group, Gender, Race, and Ethnicity

Year	Population
2007	18,500,958
2008	18,636,837
2009	18,711,844
2010	18,820,280
2011	18,941,742
2012	19,118,938
2013	19,314,396
2014	19,579,871
2015	19,897,762
2016	20,231,092

Gender	2015 Population	2016 Population	Percent Change
Female	10,172,238	10,343,928	+1.7%
Male	9,725,524	9,887,164	+1.7%
Race	2015 Population	2016 Population	Percent Change
White	15,492,935	15,722,428	+1.5%
Black	3,344,939	3,408,734	+1.9%
Other	1,059,888	1,099,930	+3.8%
Ethnicity	2015 Population	2016 Population	Percent Change
Non-Hispanic	15,106,559	15,268,108	+1.1%
Hispanic	4,791,203	4,962,984	+3.6%
<b>Total</b>	<b>19,897,762</b>	<b>20,231,092</b>	<b>+1.7%</b>

In 2016, the estimated population increased 1.7% from 2015. Note that increases are not uniform across all demographic groups. Groups where the population change was substantially different from the overall 1.4% increase are highlighted in gray (i.e., groups that increased more than 3.4% or decreased more than 1.7%). There was a disproportionate increase in adults 65-74 years old, other races, and Hispanics. The estimated number of infants <1 year old decreased slightly (0.2%) and adults 20 to 24 years old decreased by 1.6%.

Age	2015 Population	2016 Population	Percent Change
<1	221,333	220,904	-0.2%
1-4	868,873	889,872	+2.4%
5-9	1,124,392	1,130,984	+0.6%
10-14	1,136,562	1,141,142	+0.4%
15-19	1,171,629	1,179,821	+0.7%
20-24	1,315,643	1,295,161	-1.6%
25-34	2,532,191	2,608,186	+3.0%
35-44	2,424,296	2,443,227	+0.8%
45-54	2,736,706	2,742,649	+0.2%
55-64	2,572,268	2,645,654	+2.9%
65-74	2,082,092	2,175,153	+4.5%
75-84	1,187,221	1,218,261	+2.6%
85+	524,556	540,078	+3.0%
<b>Total</b>	<b>19,897,762</b>	<b>20,231,092</b>	<b>+1.7%</b>

All population estimates are from the Community Health Assessment Resource Tool Set (CHARTS), a Florida Department of Health web-based data query system with community tools, health indicators, and data queries for public consumption ([www.FLHealthCHARTS.com](http://www.FLHealthCHARTS.com)). Population estimates within CHARTS are provided by the Florida Department of Health Division of Public Health Statistics and Performance Management in consultation with the Florida Legislature's Office of Economic and Demographic Research. Estimates in CHARTS are updated at least once per year, and population data were extracted from CHARTS for this report on October 23, 2017, after revisions to population estimates were made to the annual update in CHARTS. Note that previous editions of this report may show somewhat different populations for a given year than the ones shown here, as these estimates are revised periodically. Revisions to population estimates can also impact disease rates.

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