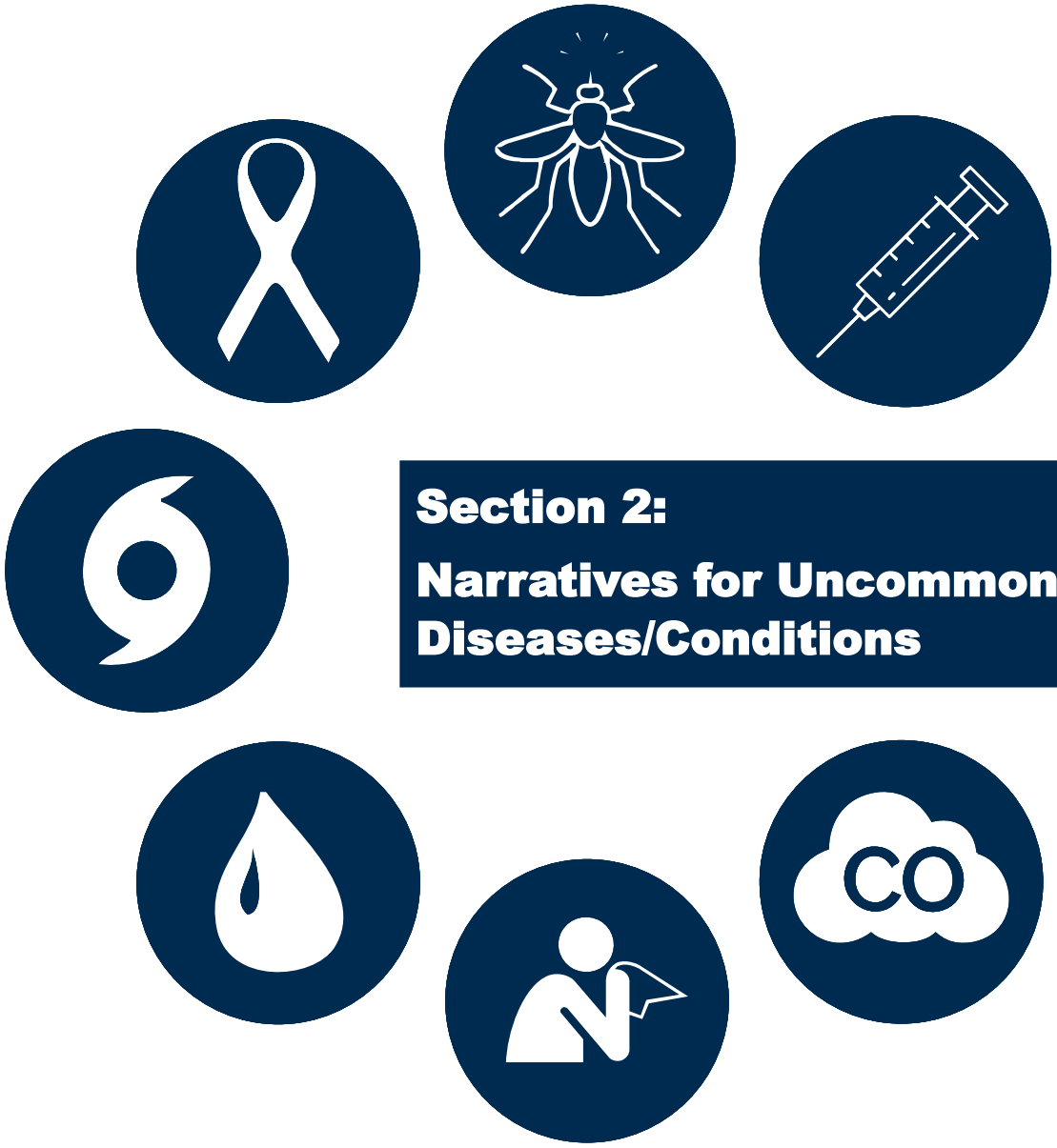


Section 2:

Narratives for Uncommon Reportable Diseases/Conditions

Section 2: Narratives for Uncommon Diseases/Conditions

Anaplasmosis

Anaplasmosis was previously known as human granulocytic ehrlichiosis (HGE), but was later renamed human granulocytic anaplasmosis (HGA) when the bacterium genus was changed from *Ehrlichia* to *Anaplasma*. Anaplasmosis is transmitted to humans by tick bites primarily from *Ixodes scapularis*, the black-legged tick, and *Ixodes pacificus*, the western black-legged tick. Co-infection with other pathogens found in these vectors is possible. Unlike ehrlichiosis, most HGA cases reported in Florida are due to infections acquired in the northeastern and midwestern U.S. Anaplasma infections can be acquired in Florida but it is uncommon.

Disease Facts

- **Caused** by *Anaplasma phagocytophilum* bacteria
- **Illness** includes fever, headache, chills, malaise, and muscle aches; more severe infections can occur in elderly and immunocompromised people
- **Transmitted** via bite of infective tick
- **Under surveillance** to monitor incidence over time, estimate burden of illness, and target areas of high incidence for prevention education

Nationally, cases are most common in males more than 40 years old. All nine cases reported in 2017 in Florida were more than 45 years old. However, six of the nine cases were in females. Onset dates ranged from June to November 2017, which is consistent with national peak activity. Seven of the nine cases were acquired in northeastern U.S. states, while two were acquired in midwestern U.S. states. The vector is common in both regions and continues to expand its range.

Cases counted in this report are based on year reported, whereas other reports may be based on date of onset. One case reported in 2017 had onset in 2016.

The number of anaplasmosis cases has increased slightly over the past five years. Cases occurred in adults and more commonly in females. All 2017 cases were in whites and primarily non-Hispanics. All cases were sporadic and acquired in other states.

Summary	
Number of cases in 2017	9
5-year trend (2013 to 2017)	

Age (in Years)	
Mean	69
Median	69
Min-max	48 - 82

Gender	Number
Female	6
Male	3
Unknown gender	0

Race	Number
White	9
Black	0
Other	0
Unknown race	0

Ethnicity	Number
Non-Hispanic	7
Hispanic	1
Unknown ethnicity	1

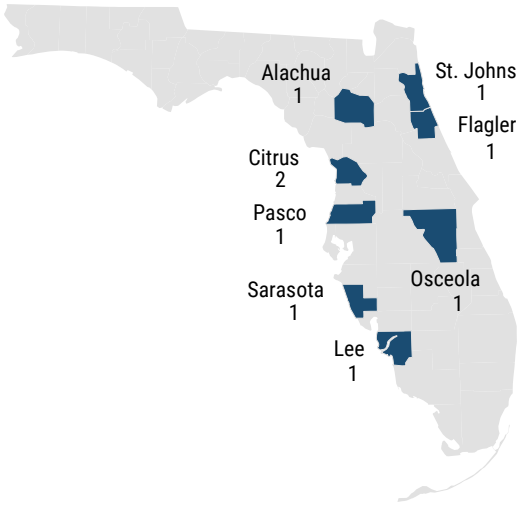
Case Classification	Number
Confirmed	8
Probable	1

Outcome	Number
Interviewed	6
Hospitalized	4
Died	0

Outbreak Status	Number
Sporadic	9
Outbreak-associated	0
Outbreak status unknown	0

State Where Exposed	Number
Maine	3
Massachusetts	3
Minnesota	1
Pennsylvania	1
Wisconsin	1

Imported anaplasmosis cases were identified in residents of eight Florida counties in 2017. Citrus County was the only one to have two cases identified in residents. All infections were acquired in other U.S. states.



See Appendix III: Report Terminology for explanations of case classification, outcome, and outbreak status.

Section 2: Narratives for Uncommon Diseases/Conditions

Arsenic Poisoning

Arsenic poisoning became a reportable condition in Florida in November 2008. Arsenic is a naturally occurring element that is widely distributed in the environment. It is usually found in conjunction with other elements like oxygen, chlorine, and sulfur (inorganic arsenic). Arsenic in animals and plants combines with carbon and hydrogen to form organic arsenic compounds. Most arsenic-induced toxicity in humans is due to exposure to inorganic arsenic. Common sources of potential inorganic arsenic exposure are chromated copper arsenate (CCA)-treated wood, tobacco smoke, certain agricultural pesticides, and some homeopathic and naturopathic preparations and folk remedies. In addition, inorganic arsenic is a naturally occurring contaminant found in water in certain areas of Florida, affecting private drinking wells (which are not regulated).

Disease Facts

- **Caused** by inorganic arsenic
- **Illness** can include severe gastrointestinal signs and symptoms (e.g., vomiting, abdominal pain, and diarrhea) which may lead rapidly to dehydration and shock, dysrhythmias (prolonged QT, T-wave changes), altered mental status, and multisystem organ failure may follow, which can ultimately result in death
- **Transmitted** via ingestion of arsenic or inhalation of air containing arsenic
- **Under surveillance** to identify sources of arsenic exposure that are of public health concern (e.g., water source, workplace exposure, homeopathic medicines), prevent further exposure

The number of cases decreased in 2017 compared to 2016. Most cases occurred in adults in their 60s and 70s. Arsenic poisoning cases occur year-round at low levels. Cumulatively over the past five years, there has been a small peak in June, though in 2017 activity peaked in July with five cases. All cases reported in 2017 were sporadic. Eight cases had known exposures related to drinking well/ cistern water (3), chemicals (3), occupation (1), and smoking (1). For the remaining six cases, the source of exposure was unknown.

Between 2 and 21 arsenic poisoning cases have been identified each year from 2013 to 2017. Cases occurred in adults and more commonly in males. Most 2017 cases were in non-Hispanic whites. All cases were sporadic and most were acquired in Florida.

Summary	
Number of cases in 2017	14
5-year trend (2013 to 2017)	

Age (in Years)	
Mean	64
Median	66
Min-max	42 - 93

Gender	Number
Female	4
Male	10
Unknown gender	0

Race	Number
White	9
Black	2
Other	1
Unknown race	2

Ethnicity	Number
Non-Hispanic	10
Hispanic	1
Unknown ethnicity	3

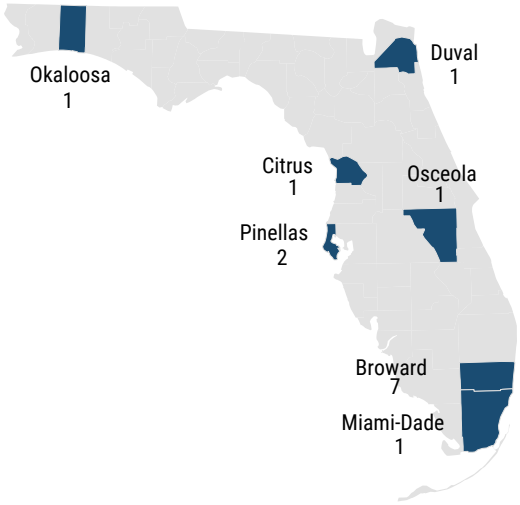
Case Classification	Number
Confirmed	14
Probable	0

Outcome	Number
Interviewed	13
Hospitalized	2
Died	0

Outbreak Status	Number
Sporadic	14
Outbreak-associated	0
Outbreak status unknown	0

State Where Exposed	Number
Florida	12
Florida, Maryland, or New York	1
Michigan	1

Arsenic poisoning cases occurred in residents of seven Florida counties in 2017. Half of the cases were identified in Broward County.



See Appendix III: Report Terminology for explanations of case classification, outcome, and outbreak status.

Section 2: Narratives for Uncommon Diseases/Conditions

Babesiosis

Babesiosis became nationally notifiable in 2011 and became reportable in Florida in October 2016. Most U.S. reported cases have been *B. microti* infections acquired in parts of the northeastern and north-central regions. Sporadic U.S. cases may be caused by other *Babesia* species, such as *B. duncani* and related organisms in several western states, as well as *B. divergens*-like variant M01 in various states. Zoonotic *Babesia* species have also been reported in Europe, Africa, Japan, Taiwan, India, and Mexico. Some infections may be asymptomatic and can lead to transfusion-associated cases in both endemic and non-endemic areas like Florida.

Disease Facts

- **Caused** by *Babesia* parasites, most commonly *Babesia microti*
- **Illness** includes hemolytic anemia and influenza-like symptoms (e.g., fever, chills, body aches, weakness, fatigue); complications can include thrombocytopenia, disseminated intravascular coagulation, hemodynamic instability, acute respiratory distress, myocardial infarction, renal failure, hepatic dysfunction, altered mental status, and death; can be asymptomatic
- **Transmitted** via bite of infective tick
- **Under surveillance** to monitor incidence over time, estimate burden of illness, and target areas of high incidence for prevention education

B. microti circulates between *Ixodes scapularis* (blacklegged tick) and animal reservoir hosts, primarily small mammals such as *Peromyscus leucopus* (white-footed mouse). In these regions, this enzootic cycle is shared by the etiologic agents of Lyme disease (*Borrelia burgdorferi*) and human anaplasmosis (*Anaplasma phagocytophilum*) and co-infections can occur. Babesiosis appears to have increasing case numbers and an expanding endemic range in some areas, although the U.S. incidence and the full geographic extent of *B. microti* and novel *Babesia* agents are unknown.

All nine cases reported in Florida in 2017 were exposed in U.S. states where babesiosis is endemic and were in people more than 50 years old. Four cases were confirmed through polymerase chain reaction testing; three were infected with *B. microti* and one was infected with a *Babesia* species. One case was co-infected with *Borrelia burgdorferi* and was also reported as a Lyme disease case.

Babesiosis became reportable in late 2016 and nine cases were identified in 2017. Cases occurred in adults and more commonly in males. All 2017 cases were in non-Hispanic whites. Most cases were hospitalized, but no deaths occurred.

Summary	
Number of cases in 2017	9

Age (in Years)	
Mean	66
Median	68
Min-max	52 - 79

Gender	Number
Female	3
Male	6
Unknown gender	0

Race	Number
White	9
Black	0
Other	0
Unknown race	0

Ethnicity	Number
Non-Hispanic	9
Hispanic	0
Unknown ethnicity	0

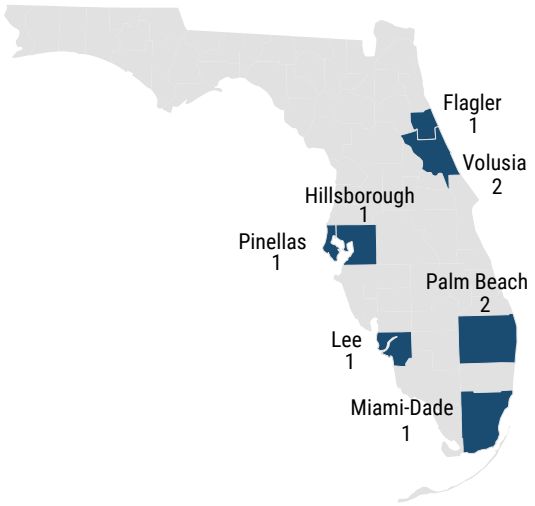
Case Classification	Number
Confirmed	7
Probable	2

Outcome	Number
Interviewed	7
Hospitalized	6
Died	0

Outbreak Status	Number
Sporadic	9
Outbreak-associated	0
Outbreak status unknown	0

State Where Exposed	Number
New York	4
Massachusetts	3
Rhode Island	1
Wisconsin	1

Imported babesiosis cases occurred in residents of seven Florida counties in 2017. Each of the seven counties had one or two cases identified. All infections were acquired in other U.S. states.



See Appendix III: Report Terminology for explanations of case classification, outcome, and outbreak status.

Section 2: Narratives for Uncommon Diseases/Conditions

Brucellosis

Human infections in Florida are most commonly associated with exposure to feral swine infected with *B. suis*. Dogs and domestic livestock may also be infected with *B. suis*. Although dogs and other animals, such as dolphins, may be infected with their own *Brucella* species, human illness is not commonly associated with them. Outside the U.S., unpasteurized milk products from goats, sheep, and cattle infected with *B. melitensis* and *B. abortus* are important sources of human infections. Laboratorians can be at risk for exposure to *Brucella* species while working with human or animal cultures.

Disease Facts

- **Caused** by *Brucella* bacteria
- **Illness** includes fever, sweats, headaches, back pain, weight loss, and weakness; long-lasting or chronic symptoms can include recurrent fevers, joint pain, and fatigue
- **Transmitted** primarily via ingestion of contaminated animal products, inhalation of bacteria, or skin/mucous membrane contact with infected animals
- **Under surveillance** to target areas of high risk for prevention education, detect potentially contaminated products (e.g., food, transfusion, organ transplant products), provide prophylaxis to prevent laboratory exposure-related infections, detect and respond to a bioterrorist incident

All five confirmed cases in 2017 were culture-positive for *B. suis*. *Brucella* is sometimes misidentified as *Ochrobactrum*. Initial culture results were reported as *Ochrobactrum* for one confirmed case and one probable case involved a pig hunter with a history of positive *Ochrobactrum* cultures. Two laboratorians who worked with those cultures were recommended to receive *Brucella* serologic follow-up as a precaution. At least 11 potential laboratory exposures involving laboratorians working with *Brucella* cultures were reported; laboratorians may have been exposed out of state as well. Risk factors for confirmed cases included pig hunting (five cases) and pig farming (one case). Risk factors for probable cases were pig hunting (three cases), deer hunting (one case), imported soft cheese (one case), and one case had unknown risk factors. Three of the six probable cases also had history of drug use and serologic cross-reaction with other more common bacteria is a possibility. One probable case who reported eating imported soft cheeses died; the person was also an intravenous drug user with a history of positive *Staphylococcus* cultures.

The number of brucellosis cases reported varies by year with no clear trend. Cases occurred in adults and more commonly in males. All 2017 cases were in whites and most were in non-Hispanics. All cases were sporadic. Eight cases were hospitalized and one death occurred, though it was unrelated to the brucellosis.

Summary	
Number of cases in 2017	11
5-year trend (2013 to 2017)	

Age (in Years)	0
Mean	44
Median	41
Min-max	29 - 63

Gender	Number
Female	2
Male	9
Unknown gender	0

Race	Number
White	11
Black	0
Other	0
Unknown race	0

Ethnicity	Number
Non-Hispanic	9
Hispanic	1
Unknown ethnicity	1

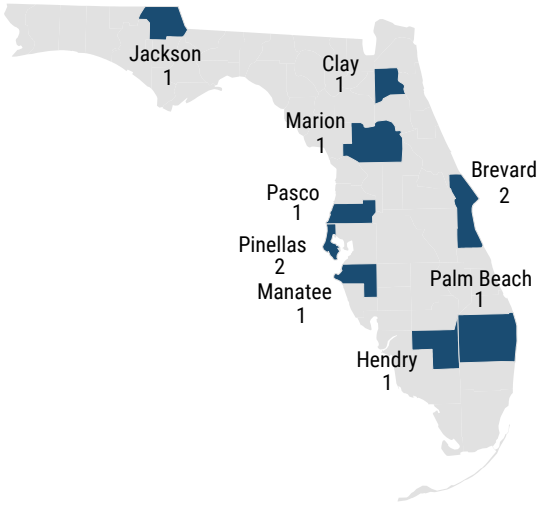
Case Classification	Number
Confirmed	5
Probable	6

Outcome	Number
Interviewed	11
Hospitalized	8
Died	1

Outbreak Status	Number
Sporadic	11
Outbreak-associated	0
Outbreak status unknown	0

State Where Exposed	Number
Florida	11

Brucellosis cases occurred in residents of nine Florida counties in 2017. Seven counties each had one or two cases identified. All infections were acquired in Florida.



See Appendix III: Report Terminology for explanations of case classification, outcome, and outbreak status.

Section 2: Narratives for Uncommon Diseases/Conditions

Chikungunya Fever

Chikungunya virus is most often spread to people by *Aedes aegypti* and *Aedes albopictus* mosquitoes (the same mosquitoes that transmit dengue and Zika viruses). The first autochthonous transmission of chikungunya virus in the Americas was reported on the island of St. Martin in December 2013. Since then, local transmission has been identified in countries throughout the Caribbean and the Americas. In 2014, 442 cases were identified in Florida residents and Florida was the only continental U.S. state to report local cases of chikungunya fever, with 12 cases reported. No locally acquired cases were identified from 2015 to 2017.

Disease Facts

- **Caused** by chikungunya virus
- **Illness** is acute febrile with joint and muscle pain, headache, joint swelling, and rash; joint pain can persist for months to years and relapse can occur
- **Transmitted** via bite of infective mosquito, rarely by blood transfusion or organ transplant
- **Under surveillance** to identify individual cases and implement control measures to prevent endemicity, monitor incidence over time, estimate burden of illness

Extensive spread in Central and South America and the Caribbean in 2014 resulted in immunity for many people in those areas. Overall incidence in Florida decreased dramatically in 2015 (121 cases), 2016 (10 cases), and 2017 (4 cases). Infection with chikungunya virus is believed to lead to lifetime immunity, which is considered to be the primary reason for this decrease.

Case counts in this report are based on report year and may differ from other reports that use different criteria to assemble the data (such as onset date). One additional case had onset in 2017 but was not reported until 2018 and will therefore be included in the 2018 report.

Over 400 chikungunya fever cases were identified in 2014 and activity has decreased dramatically since. Four cases occurred in 2017 in adults who were infected in India (three cases) and Brazil (one case). Three of the four cases were confirmed.

Number of cases in 2017	4
5-year trend (2013 to 2017)	

Age (in Years)	
Mean	52
Median	49
Min-max	43 - 69

Gender	Number
Female	1
Male	3
Unknown gender	0

Race	Number
White	1
Black	0
Other	3
Unknown race	0

Ethnicity	Number
Non-Hispanic	3
Hispanic	1
Unknown ethnicity	0

Case Classification	
Confirmed	3
Probable	1

Outcome	0	Number
Interviewed		3
Hospitalized		1
Died		0

Outbreak Status	0	Number
Sporadic		4
Outbreak-associated		0
Outbreak status unknown		0

Country Where Exposed	Number
India	3
Brazil	1

Imported chikungunya cases occurred in residents of three Florida counties in 2017. Each of the three counties had one or two cases identified. All infections were acquired outside the U.S.

See Appendix III: Report Terminology for explanations of case classification, outcome, and outbreak status.

Section 2: Narratives for Uncommon Diseases/Conditions

Ehrlichiosis

Ehrlichiosis is a broad term used to describe a group of bacterial pathogens. At least three different *Ehrlichia* species are known to cause human illness in the U.S. Both *Ehrlichia chaffeensis*, also known as human monocytic ehrlichiosis (HME) and *Ehrlichia ewingii* are transmitted by the lone star tick (*Amblyomma americanum*), one of the most commonly encountered ticks in the southeastern U.S. A third *Ehrlichia* species, provisionally called *Ehrlichia muris*-like (EML), has been reported in a small number of cases in Minnesota and Wisconsin, but no tick vector has been identified.

Disease Facts

- **Caused** by *Ehrlichia chaffeensis*, *Ehrlichia ewingii*, *Ehrlichia* muris-like bacteria
- **Illness** includes fever, headache, fatigue, and muscle aches
- **Transmitted** via bite of infective tick
- **Under surveillance** to monitor incidence over time, estimate burden of illness, understand epidemiology of each species, target areas of high incidence for prevention education

Ehrlichiosis cases present with similar symptoms regardless of species causing infection and are indistinguishable by serologic testing. *E. ewingii* and EML are most frequently identified in immunocompromised patients. Severe illness is most frequent in adults more than 50 years old. Delays in treatment can result in severe outcome. Unlike other tick-borne diseases, such as anaplasmosis and Lyme disease, most reported ehrlichiosis cases were acquired in Florida.

Ehrlichiosis was reported in four cases in people less than 50 years old, including two cases who were hospitalized. The overall hospitalization rate was high (81%), which may indicate that only the most severe illnesses are being reported. Though 13 people with ehrlichiosis were hospitalized, one person was hospitalized for other reasons (the other 12 were hospitalized for ehrlichiosis). Delays in recognition and doxycycline treatment may also have contributed to the elevated proportion of hospitalizations, with at least two of the hospitalized cases requiring more than one health care visit for a diagnosis to be made. One case was erroneously classified as probable due to late reporting of a positive PCR result. There should have been 12 cases reported as confirmed cases and four as probable cases in 2017 rather than 11 confirmed and five probable.

The number of ehrlichiosis cases reported varies by year with no clear trend. Cases occurred in adults and more commonly in males. All 2017 cases were in whites and most were in non-Hispanics. All cases were sporadic. Most cases were hospitalized but no deaths occurred.

Summary	
Number of cases in 2017	16
5-year trend (2013 to 2017)	

Age (in Years)	
Mean	59
Median	65
Min-max	22 - 76

Gender	Number
Female	4
Male	12
Unknown gender	0

Race	Number
White	16
Black	0
Other	0
Unknown race	0

Ethnicity	Number
Non-Hispanic	15
Hispanic	1
Unknown ethnicity	0

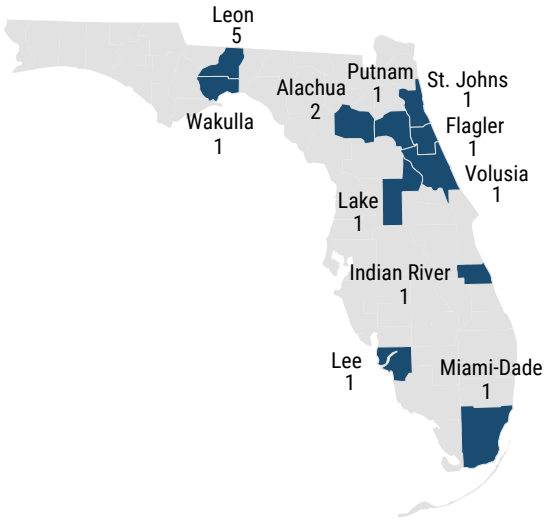
Case Classification	Number
Confirmed	11
Probable	5

Outcome	Number
Interviewed	12
Hospitalized	13
Died	0

Outbreak Status	Number
Sporadic	16
Outbreak-associated	0
Outbreak status unknown	0

Location Where Exposed	Number
Florida	12
Unknown	2
Florida or North Carolina	1
Georgia	1

Ehrlichiosis cases occurred in residents of 11 Florida counties in 2017. Five cases were identified in Leon County. Most infections were acquired in Florida.



See Appendix III: Report Terminology for explanations of case classification, outcome, and outbreak status.

Section 2: Narratives for Uncommon Diseases/Conditions

Hansen's Disease (Leprosy)

With early diagnosis and treatment, Hansen's disease can be cured. However, if left untreated, the nerve damage can be permanent. Leprosy was once feared as a highly contagious and devastating disease. However, it is now recognized that the disease is not spread through casual contact, and most people (about 95%) are resistant to infection. For those who do become infected, effective treatment is available. Historically, the disease was not thought to be endemic in Florida. More recently in Florida and other parts of the southern U.S., infections have been identified in both people and armadillos believed to have been exposed in the region.

Disease Facts

- **Caused** by *Mycobacterium leprae* bacteria
- **Illness** mainly affects the skin (e.g., discolored patches of skin, nodules on the skin, ulcers on soles of feet), nerves (e.g., numbness in affected areas, muscle weakness or paralysis, enlarged nerves), and mucous membranes (e.g., stuffy nose, nosebleeds)
- **Transmission** thought to be person-to-person via respiratory droplets following extended close contact with an infected person (still not clearly defined, but it is hard to spread)
- **Under surveillance** to facilitate early diagnosis and appropriate treatment by an expert to minimize permanent nerve damage and prevent further transmission

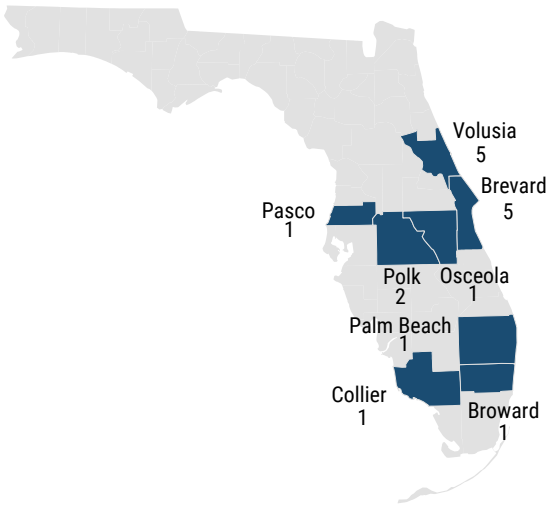
Due to the long incubation period for Hansen's disease and a mobile population, location of exposure is often difficult to identify. However, five infected people spent most or all their lives in Florida and were reported as infections acquired in Florida. Only one case reported direct armadillo contact; armadillo exposure was not provided or was unknown for five cases. The median age of infected people was 68 years and all except three were aged 50 years or older. This older age distribution differs from overall national cases reported to the National Hansen's Disease Program, which tend to have a younger median age. Nine cases (53%) were diagnosed within one year of onset, four (23%) within two years, two (12%) within 3 years, and two (12%) were diagnosed five or more years after onset.

The number of Hansen's disease cases ranges from 10 to 30 cases each year; 17 cases were reported in 2017. Cases occurred in adults and more commonly in males. Most 2017 cases were in non-Hispanic whites. No cases were known to be outbreak-associated and no cases were hospitalized or died.

Summary	
Number of cases in 2017	17
5-year trend (2013 to 2017)	
Age (in Years)	
Mean	65
Median	68
Min-max	31 - 85
Gender	**Number**
Female	5
Male	12
Unknown gender	0
Race	**Number**
White	15
Black	2
Other	0
Unknown race	0
Ethnicity	**Number**
Non-Hispanic	15
Hispanic	2
Unknown ethnicity	0

Outcome	Number
Interviewed	12
Hospitalized	0
Died	0
Outbreak Status	**Number**
Sporadic	16
Outbreak-associated	0
Outbreak status unknown	1
Location Where Exposed	**Number**
Florida	5
Unknown	5
Florida or Georgia	2
Brazil	1
Florida or Cuba	1
Florida or Haiti	1
Hawaii	1
Netherlands	1

Infected people primarily resided in counties in the central and southern part of the state, with infections acquired in Florida in the central region. It is unclear if this distribution is due to enhanced regional training and outreach efforts, population demographics, or other factors.



See Appendix III: Report Terminology for explanations of case classification, outcome, and outbreak status.

Section 2: Narratives for Uncommon Diseases/Conditions

Hepatitis E

Hepatitis E is usually self-limiting, but some cases may develop into acute liver failure, particularly among pregnant woman and persons with preexisting liver disease. HEV may also cause chronic infection, primarily in immunocompromised persons. Although rare in developed countries, individual cases and outbreaks have been linked to exposure to pigs; consumption of undercooked pork, wild game, or shellfish; and blood transfusions. Most locally acquired infections report no specific risk factors. Surveillance for hepatitis E worldwide is important because it is a significant cause of morbidity with an estimated 20 million HEV infections, three million acute cases of hepatitis E, and over 57,000 hepatitis E-related deaths. Pregnant women with hepatitis E, particularly those in the second or third trimester, are at an increased risk of acute liver failure, fetal loss, and death.

Disease Facts

- **Caused** by hepatitis E virus (HEV)
- **Illness** includes inflammation of the liver, fever, malaise, loss of appetite, nausea, vomiting, abdominal discomfort, and jaundice (can be asymptomatic)
- **Transmitted** via fecal-oral route, including foodborne and waterborne
- **Under surveillance** to monitor incidence and trends

In 2017, six of eight hepatitis E cases were acquired in Florida, while in 2016, most cases were associated with international travel. All cases were interviewed, but investigations did not identify any common risk factors.

The number of hepatitis E cases reported each year has increased slightly, but remained low in 2017. All cases occurred in adults and most commonly in females. Most cases were in whites and non-Hispanics. All cases were sporadic. Five cases were hospitalized.

Summary	
Number of cases in 2017	8
5-year trend (2013 to 2017)	

Age (in Years)	
Mean	43
Median	39
Min-max	22 - 69

Gender	Number
Female	6
Male	2
Unknown gender	0

Race	Number
White	6
Black	0
Other	2
Unknown race	0

Ethnicity	Number
Non-Hispanic	5
Hispanic	3
Unknown ethnicity	0

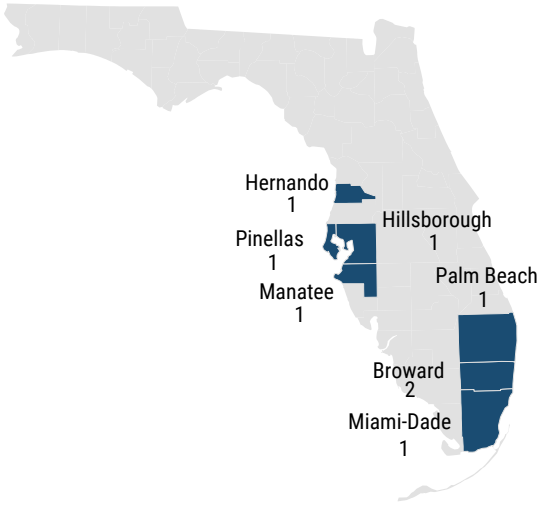
Case Classification	Number
Confirmed	8
Probable	0

Outcome	Number
Interviewed	8
Hospitalized	5
Died	0

Outbreak Status	Number
Sporadic	8
Outbreak-associated	0
Outbreak status unknown	0

Location Where Exposed	Number
Florida	6
Dominican Republic	1
Peru	1

Hepatitis E cases occurred in residents of seven Florida counties in 2017. Broward County had two cases; each of the other seven counties had one case. Most infections were acquired in Florida.



See Appendix III: Report Terminology for explanations of case classification, outcome, and outbreak status.

Section 2: Narratives for Uncommon Diseases/Conditions

Staphylococcus aureus Infection, Intermediate Resistance to Vancomycin (VISA)

Most *Staphylococcus aureus* infections are minor, but sometimes serious or fatal bloodstream infections, wound infections, or pneumonia can occur. *S. aureus* is also an important cause of health care-associated infections, especially among chronically ill patients who have recently had invasive procedures or who have indwelling medical devices. Commonly found among health care workers, *S. aureus* is spread by hands that become contaminated by contact with colonized or infected patients; colonized or infected body sites of the health care workers themselves, or devices, items; or other environmental surfaces contaminated with body fluids containing *S. aureus*.

Disease Facts

- **Caused** by *Staphylococcus aureus* bacteria that are partially or fully resistant to vancomycin
- **Illness** is typically minor skin infections; serious or fatal bloodstream infections, wound infections, or pneumonia can occur
- **Transmitted** person-to-person via direct contact
- **Under surveillance** to evaluate risk factors for infected people, assess the risk of a patient transmitting infection to others and prevent such transmission, track emergence of a relatively new and rare clinically important organism

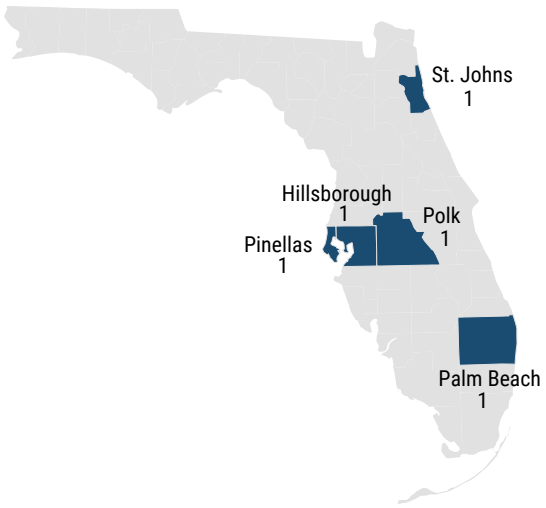
S. aureus with resistance to many antibiotics has become more common in the last decade. Consequently, physicians rely heavily on vancomycin as the primary antibiotic for treating patients infected with bacteria that are resistant to many antibiotics. When the bacteria become resistant to vancomycin as well, treatment options are limited. Vancomycin-intermediate *S. aureus* (VISA) and vancomycin-resistant *S. aureus* (VRSA) have acquired intermediate or complete resistance to vancomycin. VISA emerges when a patient with preexisting *S. aureus* infection or colonization is exposed to repeated vancomycin use and the *S. aureus* strain develops a thicker cell wall. This resistance mechanism is not transferrable to susceptible strains. In contrast, VRSA emerges when a strain of *S. aureus* acquires the *vanA* gene from a vancomycin-resistant *Enterococcus* (VRE) organism. Recent exposure to vancomycin is not necessary. This type of gene-mediated resistance is theoretically transferable to susceptible strains or organisms, so there is potential for person-to-person transmission. No VRSA infection has ever been detected in Florida.

Each year, four or five VISA infection cases are reported in Florida residents. All 2017 cases were in adult non-Hispanic males. All 2017 cases were hospitalized and one death occurred. All cases were sporadic.

Summary	
Number of cases in 2017	5
5-year trend (2013 to 2017)	
Age (in Years)	**0**
Mean	62
Median	57
Min-max	53 - 85
Gender	**Number**
Female	0
Male	5
Unknown gender	0
Race	**Number**
White	3
Black	2
Other	0
Unknown race	0
Ethnicity	**Number**
Non-Hispanic	5
Hispanic	0
Unknown ethnicity	0

Outcome	Number
Interviewed	0
Hospitalized	5
Died	1
Outbreak Status	**Number**
Sporadic	5
Outbreak-associated	0
Outbreak status unknown	0
Location Where Exposed	**Number**
Florida	4
Unknown	1

VISA infection cases occurred in residents of five Florida counties in 2017; each county had one case. No infections were known to have been acquired outside of Florida.



See Appendix III: Report Terminology for explanations of case classification, outcome, and outbreak status.

Section 2: Narratives for Uncommon Diseases/Conditions

West Nile Virus Disease

West Nile virus (WNV) is a mosquito-borne flavivirus that was first introduced to the northeastern U.S. in 1999 and first detected in Florida in 2001. Since its initial detection, WNV activity has been reported in all 67 Florida counties. People infected with WNV can experience a wide range of symptoms. Approximately 80% of those infected show no clinical symptoms, 20% have mild non-neuroinvasive illness, and less than 1% suffer from the neuroinvasive form of illness. *Culex* species (mosquitoes) and wild birds are the natural hosts. Humans and horses can become infected when they are bitten by a mosquito infected with WNV. WNV can also be transmitted to humans via contaminated blood transfusions and less frequently through organ transplantation. Since 2003, all blood donations are screened for the presence of WNV prior to transfusion. People spending large amounts of time outside (due to occupation, hobbies, or homelessness) or not using insect repellant or other forms of prevention are at higher risk of becoming infected.

Disease Facts

- **Caused** by West Nile virus
- **Illness** can be asymptomatic, mild (e.g., headache, fever, pain, fatigue), or neuroinvasive (e.g., meningitis and encephalitis with possible irreversible neurological damage, paralysis, coma, or death)
- **Transmitted** via bite of infective mosquito or by blood transfusion or organ transplant
- **Under surveillance** to identify areas where WNV is being transmitted to target prevention education for the public, monitor incidence over time, estimate burden of illness

Five of the six cases reported in 2017 were exposed in Florida. Four cases had neuroinvasive symptoms, including a 5-year-old child. Two additional WNV-positive, asymptomatic individuals were identified through blood donor screening. While blood donors do not meet case criteria if no symptoms are reported, they are still indicative of WNV activity occurring in the area and can be used to meet criteria for issuing mosquito-borne illness advisories and alerts. Donors were identified in Escambia (August) and Lee (November) counties.

Fewer West Nile virus disease cases were reported in 2017 than in the past five years. Cases occurred in male and female non-Hispanic whites. All cases were sporadic and all were hospitalized but no deaths were identified.

Summary	
Number of cases in 2017	6
5-year trend (2013 to 2017)	

Age (in Years)	
Mean	50
Median	58
Min-max	5 - 71

Gender	Number
Female	3
Male	3
Unknown gender	0

Race	Number
White	6
Black	0
Other	0
Unknown race	0

Ethnicity	Number
Non-Hispanic	6
Hispanic	0
Unknown ethnicity	0

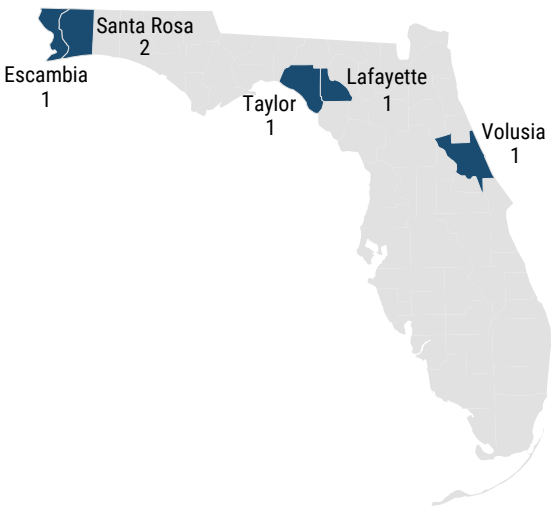
Case Classification	Number
Confirmed	2
Probable	4

Outcome	Number
Interviewed	5
Hospitalized	6
Died	0

Outbreak Status	Number
Sporadic	5
Outbreak-associated	1
Outbreak status unknown	0

State Where Exposed	Number
Florida	5
California	1

West Nile virus disease cases occurred in residents of five Florida counties in 2017, primarily in north Florida. Five of the six cases identified in 2017 were infected in Florida.



See Appendix III: Report Terminology for explanations of case classification, outcome, and outbreak status.