Section 3

Narratives for Uncommon Diseases and Conditions—2019

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

Arsenic poisoning incidence decreased slightly in 2019 (11 cases) compared to 2018 (14 cases). Most cases occurred in adults in their 60s. Arsenic poisoning cases occur year-round at low levels. All cases reported in 2019 were sporadic.

Between 2 and 21 arsenic poisoning cases have been identified each year from 2015 to 2019. Cases occurred in adults and more commonly in males. Most 2019 cases were in non-Hispanic whites. All cases were sporadic and most were acquired in Florida.

Summary	
Number of cases in 2019	11
5-year trend (2015 to 2019)	

Age (in Years)	
Mean	58
Median	64
Min-max	34 - 77

Gender	Number
Female	4
Male	7
Unknown gender	0

Race	Number
White	7
Black	3
Other	1
Unknown race	0

Ethnicity	Number
Non-Hispanic	11
Hispanic	0
Unknown ethnicity	0

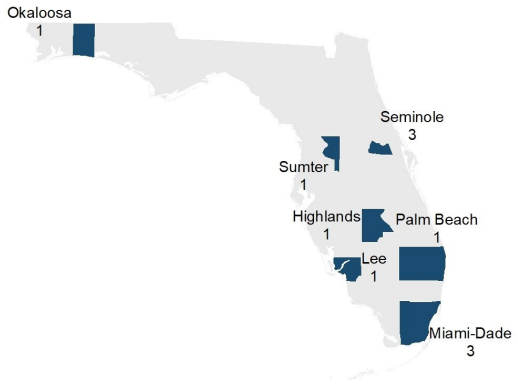
Case Classification	Number
Confirmed	10
Probable	1

Outcome	Number
Interviewed	10
Hospitalized	0
Died	0

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

Location Where Exposed	Number
Florida	9
Florida, Indonesia, or Thailand	1
Unknown	1

Arsenic poisoning cases occurred in residents of 7 Florida counties in 2019. Only 2 counties identified more than 1 case (Miami-Dade [3 cases] and Seminole [3 cases]).



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 those species. 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. *Brucella* cattle vaccine RB51 infections have also been associated with consumption of raw milk. 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; relapses can occur

Transmitted primarily via ingestion of raw milk products or less commonly undercooked meat, inhalation of bacteria, or skin/mucous membrane contact with infected animals

Under surveillance to target areas of high risk for prevention education, identify potentially contaminated products (e.g., food, transfusion, organ transplant products), provide prophylaxis to prevent laboratory exposure-related infections, identify and respond to a bioterrorism incident

The number of brucellosis cases reported varies by year with no clear trend. Cases occurred in adults and more commonly in males, whites, and non-Hispanics. Seven cases were hospitalized; no deaths occurred.

Summary	
Number of cases in 2019	8
5-year trend (2015 to 2019)	

Age (in Years)	
Mean	51
Median	51
Min-max	35 - 75

Gender	Number
Female	1
Male	7
Unknown gender	0

Race	Number
White	4
Black	1
Other	3
Unknown race	0

Ethnicity	Number
Non-Hispanic	7
Hispanic	1
Unknown ethnicity	0

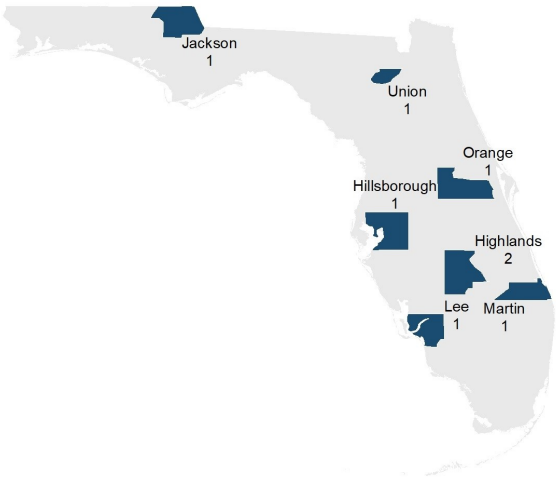
Case Classification	Number
Confirmed	6
Probable	2

Outcome	Number
Interviewed	7
Hospitalized	7
Died	0

Outbreak Status	Number
Sporadic	7
Outbreak-associated	1
Outbreak status unknown	0

Location Where Exposed	Number
Florida	4
Georgia	2
Florida or Cuba	1
Lebanon or Syria	1

Brucellosis cases occurred in residents of seven Florida counties in 2019. Highlands County was the only one to have 2 cases identified in residents. Most infections were acquired in Florida; contact with feral swine was the most commonly reported exposure risk.



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 in endemic areas 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. Florida was the only continental U.S. state to report local cases of chikungunya fever, with 12 cases reported. No locally acquired cases have been identified since 2014.

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. Infection with chikungunya virus is believed to lead to lifetime immunity, which is considered to be the primary reason for the substantial decrease in incidence in endemic countries and subsequent decreased risk for introduction in non-endemic areas such as Florida. Overall incidence in Florida decreased dramatically in 2015 (121 cases) and 2016 (10 cases), but has remained relatively stable since (2017: 4 cases; 2018: 6 cases; 2019: 6 cases).

Infected residents and non-residents who are infectious and bitten by mosquitoes while in Florida could pose a potential risk for introduction of chikungunya fever; however, cases in non-Florida residents are not included in counts in this report. Two chikungunya fever cases were identified in non-Florida residents visiting Florida in 2019.

Over 400 chikungunya fever cases were identified in 2014; activity has decreased dramatically since. Six cases occurred in 2019 in adults who were infected in Thailand (4 cases) and India (2 cases). Two of the cases were confirmed.

Imported chikungunya cases occurred in residents of 5 Florida counties in 2019. All infections were acquired outside the U.S.

Summary	
Number of cases in 2019	6
5-year trend (2015 to 2019)	

Age (in Years)	
Mean	48
Median	50
Min-max	17 - 76

Gender	Number
Female	4
Male	2
Unknown gender	0

Race	Number
White	3
Black	0
Other	3
Unknown race	0

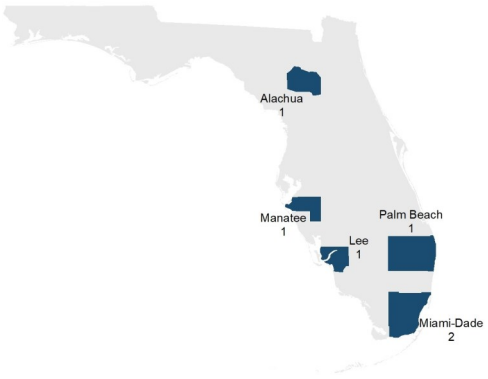
Ethnicity	Number
Non-Hispanic	6
Hispanic	0
Unknown ethnicity	0

Case Classification	Number
Confirmed	2
Probable	4

Outcome	Number
Interviewed	5
Hospitalized	1
Died	0

Outbreak Status	Number
Sporadic	6
Outbreak-associated	0
Outbreak status unknown	0

Location Where Exposed	Number
Thailand	4
India	2



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

Section 2: Narratives for Uncommon Diseases/Conditions

Hepatitis D

The hepatitis D virus, also known as hepatitis delta, is an incomplete virus and cannot replicate in the absence of the hepatitis B virus. Infection with hepatitis D can only occur in people experiencing hepatitis B infection. Hepatitis D can be acquired at the same time as hepatitis B (co-infection) or be acquired by people already living with chronic hepatitis B (superinfection). Hepatitis D co-infection is usually indistinguishable from hepatitis B alone, but a superinfection can convert an asymptomatic or otherwise mild chronic hepatitis B infection into a more severe infection. Like hepatitis B, hepatitis D can occur as an acute infection or persist as a chronic infection. Although there is no vaccine for hepatitis D, the hepatitis B vaccine can help protect against hepatitis D infection.

Disease Facts

- **Caused** by hepatitis D virus (HDV) in the presence of hepatitis B virus
- **Illness** includes inflammation of the liver, fever, malaise, loss of appetite, nausea, vomiting, abdominal discomfort and jaundice (can be asymptomatic)
- **Transmitted** via blood exposure, anal or vaginal sex, percutaneous exposure (e.g., tattooing, needle sticks)
- **Under surveillance** to prevent HDV transmission, identify and prevent outbreaks, improve allocation of resources for treatment services, assist in evaluating the impact of public health interventions, monitor effectiveness of hepatitis B immunization programs

Hepatitis D is uncommon in the U.S. and national case counts may be an underestimation as not all states and territories report hepatitis D infections to the Centers for Disease Control and Prevention.

The number of hepatitis D cases reported each year has increased slightly, but remained low in 2019, with only 4 cases reported. Cases occurred in adults and more commonly in males. All 2019 cases were in non-Hispanics. All cases were sporadic. Most cases were hospitalized; no deaths occurred.

Hepatitis D cases occurred in residents of three Florida counties in 2019. Pasco County had 2 cases; the other 2 counties had 1 case each.

Summary	
Number of cases in 2019	4
5-year trend (2015 to 2019)	

Age (in Years)	
Mean	67
Median	74
Min-max	39 - 81

Gender	Number
Female	2
Male	2
Unknown gender	0

Race	Number
White	3
Black	0
Other	1
Unknown race	0

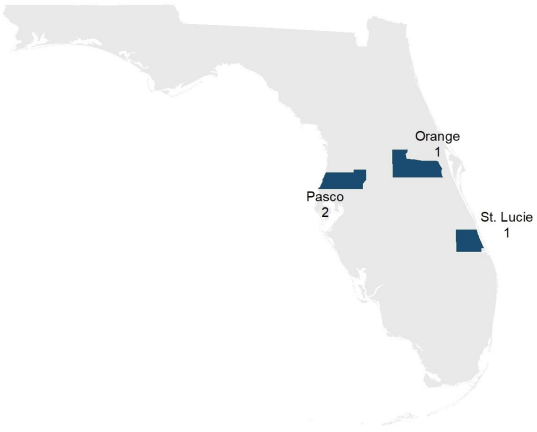
Ethnicity	Number
Non-Hispanic	4
Hispanic	0
Unknown ethnicity	0

Case Classification	Number
Confirmed	4
Probable	0

Outcome	Number
Interviewed	3
Hospitalized	3
Died	0

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

Location Where Exposed	Number
Florida	3
Florida or New York	1



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 and mortality with an estimated 20 million HEV infections and tens of thousands of deaths each year. 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 2019, 2 (33%) cases reported travel outside the U.S. during their exposure period. No common risk factors for infection were identified among the 2019 cases.

Less than 10 hepatitis E cases are reported each year; 6 cases were reported in 2019. All cases occurred in adults and most commonly in females. Most cases were in whites and non-Hispanics. All cases were sporadic. All 2019 cases were hospitalized; no deaths occurred.

Summary	
Number of cases in 2019	6
5-year trend (2015 to 2019)	

Age (in Years)	
Mean	32
Median	27
Min-max	17 - 73

Gender	Number
Female	5
Male	1
Unknown gender	0

Race	Number
White	3
Black	2
Other	1
Unknown race	0

Ethnicity	Number
Non-Hispanic	4
Hispanic	2
Unknown ethnicity	0

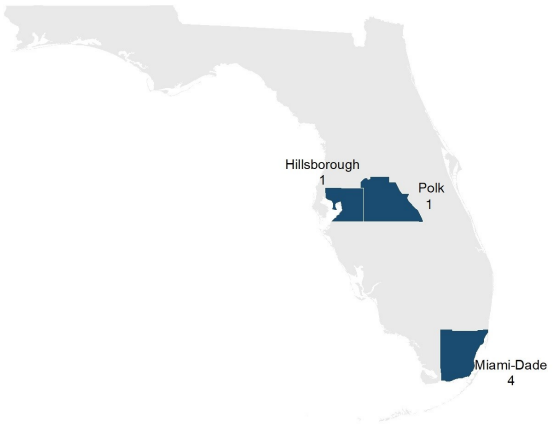
Case Classification	Number
Confirmed	6
Probable	0

Outcome	Number
Interviewed	5
Hospitalized	6
Died	0

Outbreak Status	Number
Sporadic	6
Outbreak-associated	0
Outbreak status unknown	0

Location Where Exposed	Number
Florida	4
Florida or Colombia	1
India	1

Hepatitis E cases occurred in residents of 3 Florida counties in 2019. Miami-Dade had 4 cases and Hillsborough and Polk each had 1 case. A definitive exposure location was not able to be determined for two of the infections.



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

Section 2: Narratives for Uncommon Diseases/Conditions

Leptospirosis

Leptospirosis is cased by spirochete bacteria in the genus *Leptospira*. The bacteria can be present in the urine of infected animals such as rodents, dogs, livestock, pigs, horses, and wildlife. Most human exposures are thought to occur through ingestion of urine-contaminated water or food as well as by direct contact of urine-contaminated water with mucous membranes or wounds. Activities that can result in swallowing of untreated freshwater, or that can lead to water or soil contamination of wounds, can significantly increase risk of exposure. Adventure races have resulted in cases of leptospirosis in Florida in the past.

Disease Facts

- **Caused** by *Leptospira* bacteria
- **Illness** includes abrupt onset of fever, headache, muscle aches, vomiting, or diarrhea; severe presentations may include kidney failure, liver failure, pulmonary hemorrhage, or meningitis; may be asymptomatic
- **Transmitted** indirectly through ingestion or contact with contaminated water, soil, or food; less frequently, animal to person by direct contact with urine or other body fluids from an infected animal; rarely by animal bites and breastfeeding
- **Under surveillance** to monitor incidence over time, estimate burden of illness, identify activities and groups at increased risk for exposure to target prevention education

Two of the 2019 leptospirosis cases were imported from Costa Rica following exposure to untreated fresh water. Two imported cases from Illinois and Puerto Rico also reported exposure to untreated fresh water.
The case imported from Puerto Rico also had livestock exposure and reported that other family members who shared these exposure had similar symptom. Of the 3 Florida-acquired cases, 2 reported exposures at a mud race in December 2019 in Polk County and the third had occupational exposures to livestock in Broward County. In addition, a resident of Puerto Rico who became ill while visiting Miami-Dade and who was not included in the 2019 case count, met confirmed leptospirosis case criteria. This non-resident case reported occupational livestock exposure in Puerto Rico.

Less than 10 leptospirosis cases are reported each year. Cases occurred in adolescents and adults <55 years with most being male (87%). All cases were white. Hispanics were over-represented compared to state demographics (43% case vs. 27% state). Two outbreaks were linked to a mud race or Costa Rica exposures. Most cases (86%) were hospitalized; no deaths occurred.

Leptospirosis cases were reported in residents of 5 Florida counties. Only 3 exposures occurred in Florida, 2 in Polk County and 1 in southeast Florida.

Summary	
Number of cases in 2019	7
5-year trend (2015 to 2019)	

Age (in Years)	
Mean	34
Median	32
Min-max	16 - 51

Gender	Number
Female	1
Male	6
Unknown gender	0

Race	Number
White	7
Black	0
Other	0
Unknown race	0

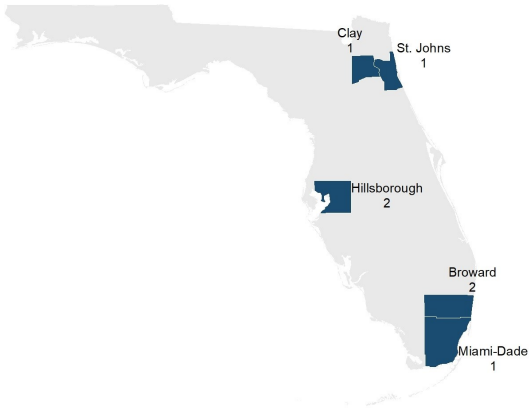
Ethnicity	Number
Non-Hispanic	4
Hispanic	3
Unknown ethnicity	0

Case Classification	Number
Confirmed	3
Probable	4

Outcome	Number
Interviewed	6
Hospitalized	6
Died	0

Outbreak Status	Number
Sporadic	3
Outbreak-associated	4
Outbreak status unknown	0

Location Where Exposed	Number
Florida	3
Costa Rica	2
Illinois	1
Puerto Rico	1



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

Section 2: Narratives for Uncommon Diseases/Conditions

Mercury Poisoning

In August 2008, the case definition was updated to require clinically compatible illness, leading to a decrease in cases in subsequent years. The number of cases increased dramatically in 2017 and 2018 with more cases than any year since the 2008 case definition change but decreased in 2019.

Forms of mercury most likely encountered by the general public include elemental mercury vapor (found in some thermometers and dental amalgam), methylmercury (associated with fish consumption), ethylmercury (found in some medical preservatives) and inorganic mercury (mercuric salts). Eating fish is healthy and can reduce the risk of heart attack and stroke, but eating too much of certain fish can increase exposure to mercury.

Disease Facts

- **Caused** by mercury (elemental or metallic mercury, organic mercury compounds, inorganic mercury compounds)
- **Illness** includes impaired neurological development, impaired peripheral vision; disturbed sensations (e.g., "pins and needles feelings"), lack of coordinated movements, muscle weakness, or impaired speech, hearing and walking
- **Exposure** is through ingestion of mercury or inhalation of mercury vapors
- **Under surveillance** to identify and mitigate persistent sources of exposure, prevent further or continued exposure through remediation or elimination of sources when possible, identify populations at risk

Developing fetuses and young children are more sensitive to the effects of mercury, which can impact brain development. The U.S. Food and Drug Administration and the U.S. Environmental Protection Agency recommend that women of childbearing age and young children should eat fish with low mercury levels. The Florida Department of Health guidelines for fish consumption are available at Seafood Consumption | Florida Department of Health (floridahealth.gov).

Summary	
Number of cases in 2019	19
5-year trend (2015 to 2019)	

Age (in Years)	
Mean	56
Median	60
Min-max	16 - 78

Gender	Number
Female	9
Male	10
Unknown gender	0

Race	Number
White	14
Black	1
Other	1
Unknown race	3

Ethnicity	Number
Non-Hispanic	15
Hispanic	3
Unknown ethnicity	1

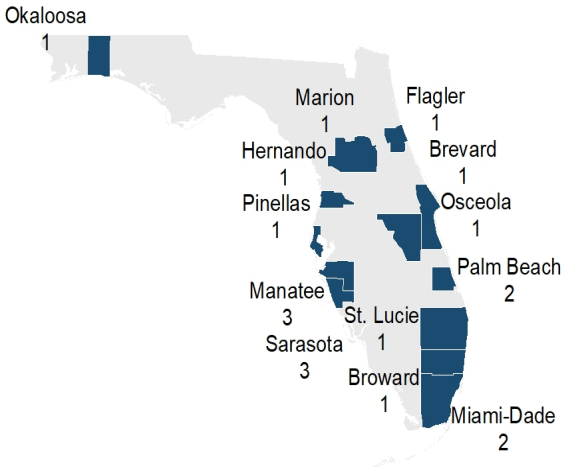
Case Classification	Number
Confirmed	19
Probable	0

Outcome	Number
Interviewed	15
Hospitalized	0
Died	0

Outbreak Status	Number
Sporadic	16
Outbreak-associated	1
Outbreak status unknown	2

Location Where Exposed	Number
Florida	13
Unknown	2
Florida or Maine	1
Florida or New York	1
Florida or Ohio	1

Mercury poisoning cases occurred throughout Florida in 2019. The highest number of cases were in Manatee and Sarasota (3 cases each) and Palm Beach and Miami-Dade (2 cases each).



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

Section 2: Narratives for Uncommon Diseases/Conditions

West Nile Virus

West Nile virus 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. WNV activity can vary greatly from year to year depending on environmental conditions. Approximately 80% of people infected with WNV 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 bitten by a mosquito infected with WNV.

Disease Facts

- **Caused** by West Nile virus (WNV)
- **Illness** can be asymptomatic, mild non-neuroinvasive (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

WNV can also be transmitted to humans via contaminated blood transfusion or organ transplantation. Since 2003, all blood donations are screened for 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. In 2019, 1 asymptomatic WNV-positive blood donor was identified in Bay County. 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 if the county of exposure is known.

During 2019, 2 locally acquired WNV disease cases occurred in Duval and Sumter counties. Activity in 2019 was particularly low compared to previous years. Two additional WNV disease cases included in this report, including on death, were identified in 2018 but not reported until 2019. These cases were identified in Duval and Sumter counties. All 4 cases were neuroinvasive. Case counts and rates from this report may differ from those found in other vector-borne disease reports as different criteria are used to assemble the data.

Summary	
Number of cases in 2019	4
5-year trend (2015 to 2019)	

Age (in Years)	
Mean	62
Median	65
Min-max	43 - 74

Gender	Number
Female	2
Male	2
Unknown gender	0

Race	Number
White	4
Black	0
Other	0
Unknown race	0

Ethnicity	Number
Non-Hispanic	4
Hispanic	0
Unknown ethnicity	0

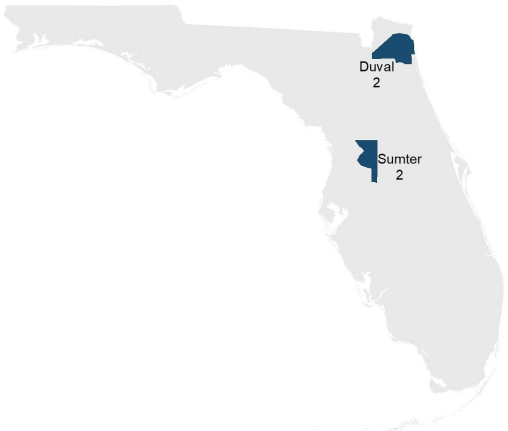
Case Classification	Number
Confirmed	3
Probable	1

Outcome	Number
Interviewed	4
Hospitalized	4
Died	1

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

Location Where Exposed	Number
Florida	4

WNV cases occurred in Duval and Sumter counties in 2019. All cases were acquired in Florida.



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

Section 3

Narratives for Uncommon Diseases and Conditions—2020

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 anaplasmosis cases reported in Florida are exposed in the northeastern and midwestern U.S. Although uncommon, *Anaplasma* infections can be acquired in Florida.

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

Anaplasmosis incidence in Florida decreased in 2020 (7 cases) compared to 2019 (21 cases), Exposure location was known for all cases and all were acquired in the United States. Nationally, cases are most common in males and adults >40 years old. In Florida, males represented 57% of all cases in 2020. All cases were >40 years old with the median age being 66. All cases were hospitalized but none died.

Case counts from this report may differ from those found in other vector-borne disease reports as different criteria are used to assemble the data.

With the exception of 2018 and 2019, less than 10 anaplasmosis cases are reported each year; 7 cases were reported in 2020. Cases occurred in adults and more commonly in males. Most 2020 cases were in whites and non-Hispanics. All cases were sporadic.

Summary	
Number of cases in 2020	7
5-year trend (2016 to 2020)	

Age (in Years)	
Mean	64
Median	66
Min-max	45 - 83

Gender	Number
Female	3
Male	4
Unknown gender	0

Race	Number
White	5
Black	0
Other	2
Unknown race	0

Ethnicity	Number
Non-Hispanic	7
Hispanic	0
Unknown ethnicity	0

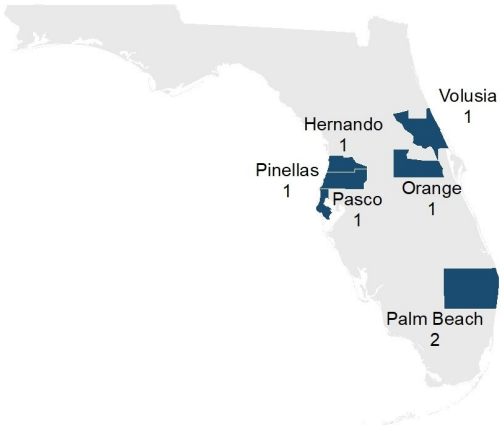
Case Classification	Number
Confirmed	6
Probable	1

Outcome	Number
Interviewed	5
Hospitalized	5
Died	0

Outbreak Status	Number
Sporadic	7
Outbreak-associated	0
Outbreak status unknown	0

Location Where Exposed	Number
Massachusetts	2
Connecticut	1
Florida	1
Maine	1
Pennsylvania	1
Rhode Island	1

Imported anaplasmosis cases were identified in residents of 6 Florida counties in 2020. Palm Beach County was the only one to have 2 cases identified in residents. All infections except 1 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

Arsenic poisoning incidence decreased slightly in 2020 (9 cases) compared to 2019 (11 cases). Most cases occurred in adults in their 50s. Arsenic poisoning cases occur year-round at low levels. All cases reported in 2020 were sporadic. Nine cases had known exposures, including consumption of fish or shellfish (5 cases), consumption of well/cistern water (1 case), consumption of homeopathic medicines (1 case), contact with CCA-treated wood (1 case), and occupational contact (1 case). For the remaining 5 cases, the source of exposure was unknown.

Between 9 and 21 arsenic poisoning cases have been identified each year from 2016 to 2020. Cases occurred adults and more commonly in females in 2020. Most 2020 cases were in Hispanic whites. All cases were sporadic and most were acquired in Florida.

Summary	
Number of cases in 2020	9
5-year trend (2016 to 2020)	

Age (in Years)	
Mean	52
Median	57
Min-max	18 - 71

Gender	Number
Female	5
Male	4
Unknown gender	0

Race	Number
White	6
Black	1
Other	1
Unknown race	1

Ethnicity	Number
Non-Hispanic	3
Hispanic	4
Unknown ethnicity	2

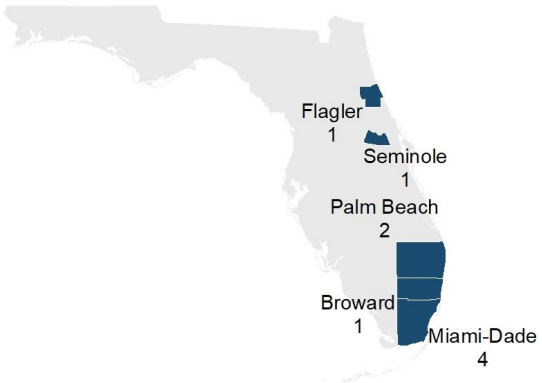
Case Classification	Number
Confirmed	8
Probable	1

Outcome	Number
Interviewed	5
Hospitalized	1
Died	0

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

Location Where Exposed	Number
Florida	7
Unknown	2

Arsenic poisoning cases occurred in residents of 5 Florida counties in 2020. Only 2 counties identified more than 1 case (Miami-Dade [4 cases] and Palm Beach [2 cases]).



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 those species. 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. *Brucella* cattle vaccine RB51 infections have also been associated with consumption of raw milk. 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; relapses can occur

Transmitted primarily via ingestion of raw milk products or less commonly undercooked meat, inhalation of bacteria, or skin/mucous membrane contact with infected animals

Under surveillance to target areas of high risk for prevention education, identify potentially contaminated products (e.g., food, transfusion, organ transplant products), provide prophylaxis to prevent laboratory exposure-related infections, identify and respond to a bioterrorism incident

The number of brucellosis cases reported varies by year with no clear trend. Cases occurred in adults and more commonly in males, whites, and non-Hispanics. Two cases were hospitalized; no deaths occurred.

Brucellosis cases occurred in residents of 4 Florida counties in 2020. Three infections were acquired in Florida and 1 was acquired in Mexico.

Summary	
Number of cases in 2020	4
5-year trend (2016 to 2020)	

Age (in Years)	
Mean	47
Median	47
Min-max	20 - 76

Gender	Number
Female	1
Male	3
Unknown gender	0

Race	Number
White	3
Black	0
Other	1
Unknown race	0

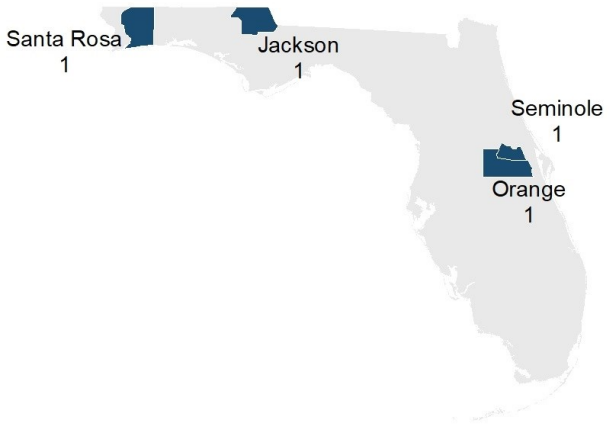
Ethnicity	Number
Non-Hispanic	3
Hispanic	0
Unknown ethnicity	1

Case Classification	Number
Confirmed	3
Probable	1

Outcome	Number
Interviewed	2
Hospitalized	2
Died	0

Outbreak Status	Number
Sporadic	2
Outbreak-associated	1
Outbreak status unknown	1

Location Where Exposed	Number
Florida	3
Mexico	1



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 illnesses caused by a group of bacterial pathogens. At least 3 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, called *Ehrlichia muris eauclairensis*, has been reported in a small number of cases in Minnesota and Wisconsin; it is transmitted by the black-legged tick (*Ixodes scapularis*).

Disease Facts

- **Caused** by *Ehrlichia chaffeensis*, *Ehrlichia ewingii*, *Ehrlichia muris eauclairensis* bacteria
- **Illness** includes fever, headache, fatigue and muscle aches
- **Transmitted** via bite of infective tick; rarely through blood transfusion and organ transplant
- **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 *E. muris eauclairensis* are most frequently identified in immunocompromised patients. Severe illness is most frequent in adults ≥70 years old, children <10 years old and those who are immunocompromised. Delays in treatment can increase risk for severe outcomes across all age groups. At least 44% of cases had to seek medical care more than once before rickettsial illness was suspected.
Erhlichiosis incidence in Florida decreased notably in 2020 and may be due to clinician focus on COVID-19. The majority of cases were in males. In 2020, most cases were also in whites and non-Hispanics, which may in part be due to more homogenous population demographics in northern and central Florida where most exposures occur.

Between 9 and 40 ehrlichiosis cases have been identified each year from 2016 to 2020. Cases occurred in children and adults and more commonly in males. Most 2020 cases were in non-Hispanic whites. All cases were sporadic and most were acquired in Florida.

Cases occurred in residents of eight Florida counties in 2020. Only 1 county identified more than 1 case (Lee [2 cases]).

Summary	
Number of cases in 2020	9
5-year trend (2016 to 2020)	

Age (in Years)	
Mean	64
Median	68
Min-max	46 - 75

Gender	Number
Female	3
Male	6
Unknown gender	0

Race	Number
White	8
Black	0
Other	1
Unknown race	0

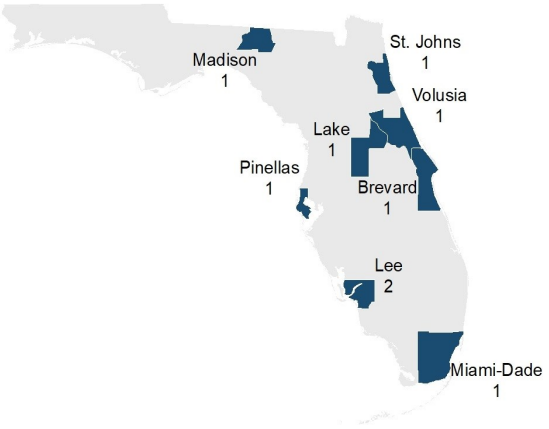
Ethnicity	Number
Non-Hispanic	7
Hispanic	2
Unknown ethnicity	0

Case Classification	Number
Confirmed	6
Probable	3

Outcome	Number
Interviewed	5
Hospitalized	6
Died	0

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

Location Where Exposed	Number
Florida	5
U.S., non-Florida	3
Unknown	1



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

Section 2: Narratives for Uncommon Diseases/Conditions

Haemophilus influenzae Invasive Disease in Children <5 Years Old

There are 6 identifiable serotypes of *H. influenzae*, named “a” through “f.” Only *H. influenzae* serotype b (Hib) is vaccine-preventable. Meningitis and septicemia due to invasive Hib in children <5 years old have almost been eliminated since the introduction of effective Hib conjugate vaccines in the late 1980s. There were no cases of invasive Hib reported from 2018 to 2020. Prior to that there were 2 cases reported in 2017. *H. influenzae* invasive disease can sometimes result in serious complications and even death. There were no deaths among cases in 2020.

Disease Facts

- **Caused** by *Haemophilus influenzae* bacteria
- **Illness** can present as pneumonia, bacteremia, septicemia, meningitis, epiglottitis, septic arthritis, cellulitis or purulent pericarditis; less frequently endocarditis and osteomyelitis
- **Transmitted** person to person by inhalation of infective respiratory tract droplets or direct contact with infective respiratory tract secretions
- **Under surveillance** to identify and control outbreaks, monitor incidence over time, monitor effectiveness of immunization programs and vaccines

Between 19 and 48 Hib cases in children <5 years have been identified each year from 2016 to 2020. Most 2020 cases were in non -Hispanic whites. Of those with known outbreak status, all cases were sporadic and most were acquired in Florida.

Summary	
Number of cases in 2020	19
5-year trend (2016 to 2020)	

Age (in Years)	
Mean	1
Median	0
Min-max	0 - 4

Gender	Number
Female	9
Male	10
Unknown gender	0

Race	Number
White	11
Black	7
Other	1
Unknown race	0

Ethnicity	Number
Non-Hispanic	15
Hispanic	4
Unknown ethnicity	0

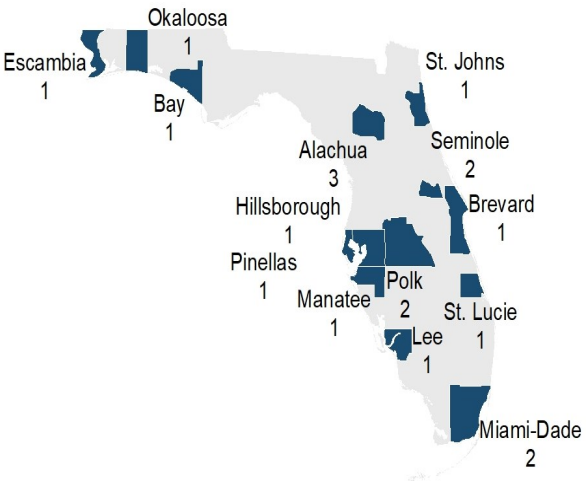
Case Classification	Number
Confirmed	19
Probable	0

Outcome	Number
Interviewed	4
Hospitalized	15
Died	0

Outbreak Status	Number
Sporadic	15
Outbreak-associated	0
Outbreak status unknown	4

Location Where Exposed	Number
Florida	13
Location Where Exposed	5
Florida or Georgia	1

Cases occurred in residents of 14 Florida counties in 2020. Several counties identified more than 1 case (Alachua [3 cases], Seminole [2 cases], Polk [2 cases] and Miami-Dade [2 cases]).



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 and mortality with an estimated 20 million HEV infections and tens of thousands of deaths each year. 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 2020, 2 (40%) cases reported travel outside the U.S. during their exposure period. No common risk factors for infection were identified among the 2020 cases.

Less than 10 hepatitis E cases are reported each year; 5 cases were reported in 2020. All cases occurred in adults and most commonly in females. Most cases were in whites and non-Hispanics. All cases were sporadic. Three cases in 2020 were hospitalized; no deaths occurred.

Summary	
Number of cases in 2020	5
5-year trend (2016 to 2020)	

Age (in Years)	
Mean	46
Median	40
Min-max	24 - 71

Gender	Number
Female	4
Male	1
Unknown gender	0

Race	Number
White	2
Black	1
Other	2
Unknown race	0

Ethnicity	Number
Non-Hispanic	5
Hispanic	0
Unknown ethnicity	0

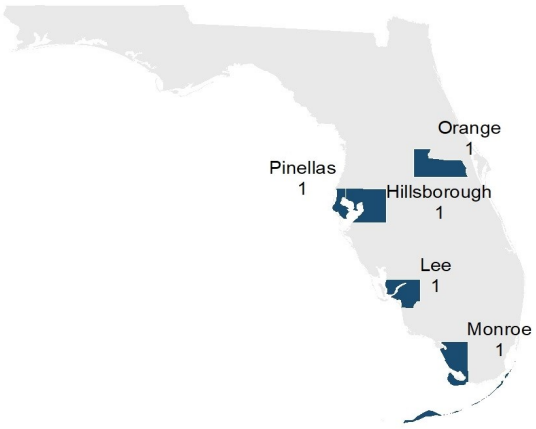
Case Classification	Number
Confirmed	5
Probable	0

Outcome	Number
Interviewed	3
Hospitalized	3
Died	0

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

Location Where Exposed	Number
Florida	2
Florida or Haiti	1
Florida or India	1
Unknown	1

Hepatitis E cases occurred in residents of 5 Florida counties in 2020. Each county reported 1 case. A definitive exposure location was not able to be determined for 3 of the infections.



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

Section 2: Narratives for Uncommon Diseases/Conditions

Malaria

The number of cases imported from Central America and the Caribbean has increased in recent years, though most cases are still infected in Africa. All cases in 2020 were among people traveling to countries with endemic transmission (primarily African countries) with many travelling to visit friends and relatives (61%). Eleven of the cases were diagnosed with *P. falciparum*, 4 with *P. vivax* and 2 with P. ovale infections. The infecting species was unable to be identified for 1 case.
Four of the 18 cases had illness onset in late December 2019 and were not identified and reported until 2020.

Disease Facts

Caused by *Plasmodium falciparum, P. malariae*, *P. ovale, P. vivax* parasites; a zoonotic malaria in non-human primates, *P. knowlesi,* can also infect people

Illness can be uncomplicated or severe; common symptoms include high fever with chills, rigor, sweats, headache, nausea and vomiting

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 introduction and active transmission, monitor incidence over time, estimate burden of illness

One additional case was identified in 2020 but was not reported until 2021 and will therefore not be included in the 2020 report. Malaria incidence was abnormally low in 2020 compared to previous years, likely due to travel restrictions related to the COVID-19 pandemic.
It is important to note that infected residents and non-residents pose a potential malaria introduction risk since the malaria vector *Anopheles quadrimaculatus* is common in Florida; however, cases in non-Florida residents are not included in counts in this report. In 2020, 4 non-Florida residents were diagnosed with malaria while traveling in Florida. Non-residents were from Africa (Kenya), Asia (India), the Caribbean (Dominican Republic) and Central America (Venezuela). Two were infected with *P. falciparum* (Kenya and Dominican Republic residents) and 2 with *P. vivax* (India and Venezuela residents).

Summary	
Number of cases in 2020	18
5-year trend (2016 to 2020)	

Age (in Years)	
Mean	49
Median	52
Min-max	5 - 74

Gender	Number
Female	3
Male	15
Unknown gender	0

Race	Number
White	5
Black	10
Other	3
Unknown race	0

Ethnicity	Number
Non-Hispanic	17
Hispanic	1
Unknown ethnicity	0

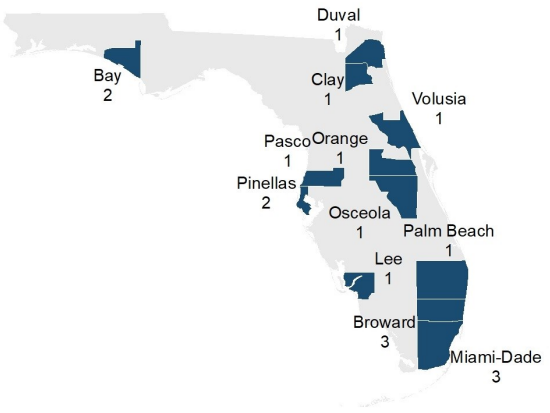
Case Classification	Number
Confirmed	18
Probable	0

Outcome	Number
Interviewed	16
Hospitalized	14
Died	0

Outbreak Status	Number
Sporadic	18
Outbreak-associated	0
Outbreak status unknown	0

Location Where Exposed	Number
Acquired outside the U.S.	18

Imported malaria cases occurred in residents of 12 Florida counties in 2020. 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

Mercury Poisoning

In August 2008, the case definition was updated to require clinically compatible illness, leading to a decrease in cases in subsequent years. The number of cases increased dramatically in 2017 and 2018 with more cases than any year since the 2008 case definition change. In 2019, the number of cases dropped to average level and again dropped in 2020. This increase and decrease in number of cases is not well understood due to the small number.

Forms of mercury most likely encountered by the general public include elemental mercury vapor (found in some thermometers and dental amalgam), methylmercury (associated with fish consumption), ethylmercury (found in some medical preservatives) and inorganic mercury (mercuric salts). Eating fish is healthy and can reduce the risk of heart attack and stroke, but eating too much of certain fish can increase exposure to mercury.

Developing fetuses and young children are more sensitive to the effects of mercury, which can impact brain development. The U.S. Food and Drug Administration and the U.S. Environmental Protection Agency recommend that women of childbearing age and young children should eat fish with low mercury levels. The Florida Department of Health guidelines for fish consumption are available at Seafood Consumption | Florida Department of Health (floridahealth.gov).

Disease Facts

- **Caused** by mercury (elemental or metallic mercury, organic mercury compounds, inorganic mercury compounds)
- **Illness** includes impaired neurological development, impaired peripheral vision; disturbed sensations (e.g., "pins and needles feelings"), lack of coordinated movements, muscle weakness, or impaired speech, hearing and walking
- **Exposure** is through ingestion of mercury or inhalation of mercury vapors
- **Under surveillance** to identify and mitigate persistent sources of exposure, prevent further or continued exposure through remediation or elimination of sources when possible, identify populations at risk

Summary	
Number of cases in 2020	9
5-year trend (2016 to 2020)	

Age (in Years)	
Mean	65
Median	70
Min-max	37 - 94

Gender	Number
Female	5
Male	4
Unknown gender	0

Race	Number
White	8
Black	0
Other	1
Unknown race	0

Ethnicity	Number
Non-Hispanic	8
Hispanic	1
Unknown ethnicity	0

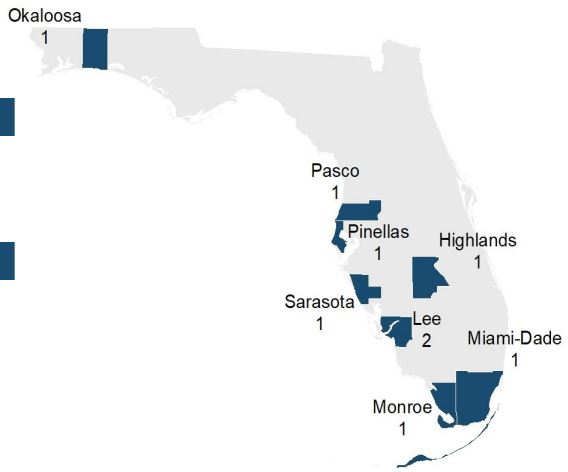
Case Classification	Number
Confirmed	9
Probable	0

Outcome	Number
Interviewed	9
Hospitalized	1
Died	0

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

Location Where Exposed	Number
Florida	9

Mercury poisoning cases occurred mostly in southern Florida with the exception of Okaloosa. Only 1 county reported more than 1 case (Lee [2 cases]).



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

Section 2: Narratives for Uncommon Diseases/Conditions

Meningococcal Disease

Five *Neisseria meningitidis* serogroups cause almost all invasive disease (A, B, C, Y, and W). Vaccines are available to provide protection against these serogroups. In 2020, the incidence of meningococcal disease reached a historic low in Florida. Prior to 2020, the lowest reported number was 18 cases in 2016. The number of cases reported each year since has remained relatively stable.

The most commonly identified serogroup causing meningococcal disease can vary year to year. In 2020, serogroup B was the most frequently identified serogroup in Florida, which aligns with national trends.

Disease Facts

- **Caused** by *Neisseria meningitidis* bacteria
- **Illness** is most commonly neurological (meningitis) or bloodstream infections (septicemia)
- **Transmitted** person to person by direct contact with respiratory droplets from nose or throat of colonized or infected person
- **Under surveillance** to take immediate public health actions in response to every suspected meningococcal disease case to prevent secondary transmission, monitor effectiveness of immunization programs and vaccines

The number of meningococcal disease cases reported decreased notably in 2015. Less than 20 cases were reported each year since. Cases were mostly in females, whites and non-Hispanics. Most cases were sporadic. Most cases were hospitalized; 2 deaths occurred.

Summary	
Number of cases in 2020	17
5-year trend (2016 to 2020)	

Age (in Years)	
Mean	47
Median	34
Min-max	19 - 89

Gender	Number
Female	10
Male	7
Unknown gender	0

Race	Number
White	12
Black	1
Other	4
Unknown race	0

Ethnicity	Number
Non-Hispanic	10
Hispanic	7
Unknown ethnicity	0

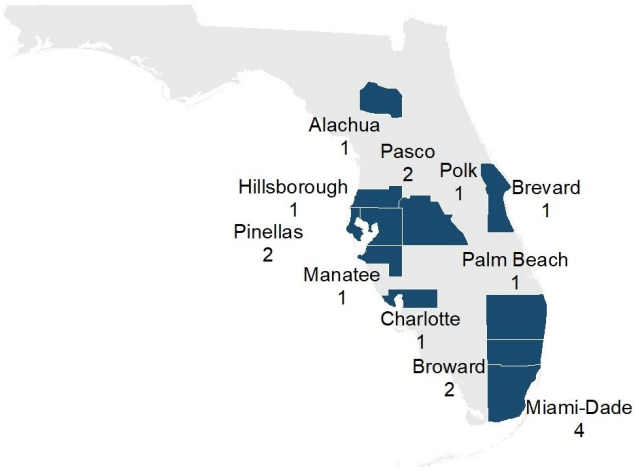
Case Classification	Number
Confirmed	17
Probable	0

Outcome	Number
Interviewed	16
Hospitalized	13
Died	2

Outbreak Status	Number
Sporadic	16
Outbreak-associated	0
Outbreak status unknown	1

Location Where Exposed	Number
Florida	15
Florida or Maine	1
Unknown	1

Meningococcal disease cases occurred in residents of 11 Florida counties in 2020. Each of the 11 counties had 1 or 2 cases identified, except for Dade County which had 4 cases. 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

Pesticide-Related Illness and Injury, Acute

Pesticides are used in agricultural, residential, recreational and other various settings throughout the state. Exposures resulting in illness or injury can occur from pesticide drift, consumption of contaminated food or water, or improper use, storage or application of household pesticides such as insect repellents, foggers, rodent poisons, weed killers and mosquito, flea and tick control products.

Prior to January 2012, suspect sporadic cases (i.e., not part of a cluster) and suspect cases associated with non-occupational exposures (typically limited household exposures) met the surveillance case definition. The case definition was changed in January 2012 to exclude these cases, substantially decreasing the number of cases reported. Incidence since 2012 has remained relatively stable with a slight decrease in 2016.

Disease Facts

- **Caused** by pesticides
- **Illness** can be respiratory, gastrointestinal, neurological, dermal, etc., depending on the agent
- **Exposure** depends on several factors (e.g., agent, application method, environmental conditions); dermal, inhalation and ingestion are most common routes of exposure
- **Under surveillance** to identify and mitigate persistent sources of exposure, identify populations at risk, evaluate trends in environmental conditions and occupational exposure, improve administration and proper use of pesticides to reduce exposure

In 2020, the decline in number of cases may be related to factors related to the COVID-19 pandemic. People may not have visited health care providers or reported their illness after pesticide exposure resulting in underreporting of the cases. Of the 15 total cases, 11 cases (73.3%) had a low severity of illness and 3 cases (20%) had moderate severity of illness. One case had severe illness and no deaths were reported. The 5 outbreak-associated cases in 2020 were associated with 2 in-state outbreaks. One outbreak was associated with residential roach treatment (Leon: 2 cases) and another 1 was associated with a bug bomb used in an apartment complex (Pinellas: 3 cases).

Summary	
Number of cases in 2020	15
5-year trend (2016 to 2020)	

Age (in Years)	
Mean	5
Median	10
Min-max	0

Gender	Number
Female	5
Male	10
Unknown gender	0

Race	Number
White	8
Black	7
Other	0
Unknown race	0

Ethnicity	Number
Non-Hispanic	13
Hispanic	2
Unknown ethnicity	0

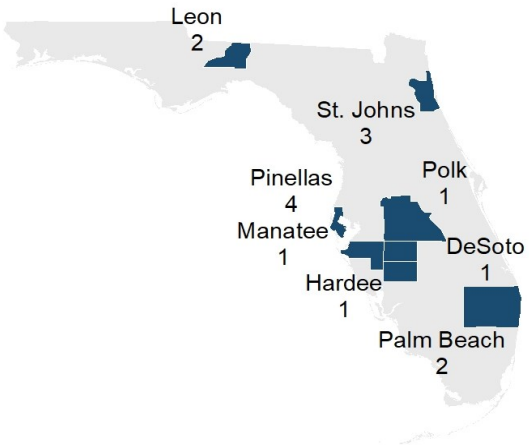
Case Classification	Number
Confirmed	3
Probable	3
Suspect	9

Outcome	Number
Interviewed	12
Hospitalized	2
Died	0

Outbreak Status	Number
Sporadic	10
Outbreak-associated	5
Outbreak status unknown	0

Location Where Exposed	Number
Florida	15

Cases occurred in 8 counties in Florida in 2020. Pinellas County reported the most cases (4 cases). The majority of cases were sporadic.



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

Section 2: Narratives for Uncommon Diseases/Conditions

Rocky Mountain Spotted Fever

Spotted fever rickettsioses (SFRs) are a group of tick-borne diseases caused by closely related *Rickettsia* bacteria. The most serious and commonly reported spotted fever group rickettsiosis in the U.S. is Rocky Mountain spotted fever (RMSF) caused by *R. rickettsii*. Other causes of SFR include *R. parkeri* and 2 that circulate outside the U.S. (*R. africae* and *R. conorii)*. The principal tick vectors in Florida are the American dog tick (*Dermacentor variabilis*) and the Gulf Coast tick (*Amblyomma maculatum*).

Human antibodies to spotted fever rickettsial species such as *R. parkeri*, *R. amblyommii*, *R. africae* and *R. conorii* cross-react with serologic tests for the RMSF organism *R. rickettsii*. Antibody-based testing for RMSF is strongly cross-reactive with other SFR.

Disease Facts

- **Caused** by certain *Rickettsia* bacteria; most commonly *Rickettsia rickettsii*, *R. parkeri*, *R. africae*, *R. conorii*
- **Illness** includes fever, headache, abdominal pain, vomiting and muscle pain; rash develops in 80% of cases; eschar is commonly seen in SFR other than RMSF
- **Transmitted** via bite of infective tick
- **Under surveillance** to monitor incidence over time, estimate burden of illness, monitor geographical and temporal occurrence, target areas of high incidence for prevention education

More than 78% of cases in 2020 were probable because eschar swabs or convalescent serology samples were either not available or not obtained. A fatal illness in a confirmed case involving a 33-year-old male who experienced intra-cranial bleeding was reported. It was unclear if the cause of death was due to RMSF and whether exposure occurred in Florida or another state. A probable *R. parkeri* case was reported in a Lafayette resident. Two RMSF and SFR cases reported in 2020 had symptom onset in 2019.

Summary	
Number of cases in 2020	14
5-year trend (2016 to 2020)	

Age (in Years)	
Mean	55
Median	58
Min-max	28 - 76

Gender	Number
Female	4
Male	10
Unknown gender	0

Race	Number
White	12
Black	1
Other	0
Unknown race	1

Ethnicity	Number
Non-Hispanic	13
Hispanic	0
Unknown ethnicity	1

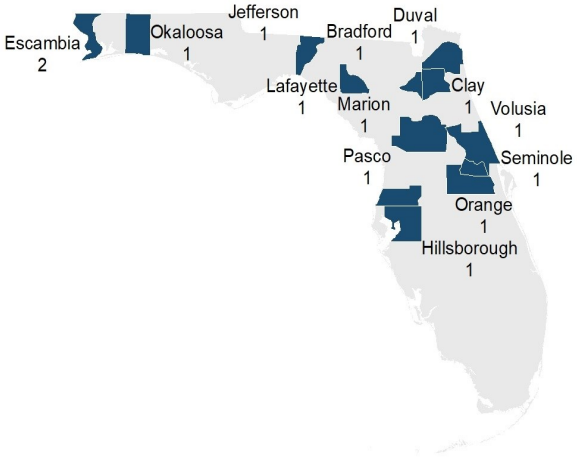
Case Classification	Number
Confirmed	3
Probable	11

Outcome	Number
Interviewed	10
Hospitalized	6
Died	1

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

Location Where Exposed	Number
Florida	9
U.S., non-Florida	3
Unknown	2

RMSF cases occurred in residents of 13 Florida counties in 2020. Twelve counties had 1 case identified and Escambia was the only county to identify 2 cases. Most infections were acquired in Florida.



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