Section 2

Data Summaries for Selected Reportable Diseases/Conditions of Frequent Occurrence

Disease Facts

Cause: HIV

Type of illness: Decreased immune system function allows opportunistic infections and tumors to develop that do not usually affect people who have healthy immune systems

Transmission: Anal or vaginal sex; blood exposure (e.g., sharing drug needles, receiving infected blood transfusion [rare due to donor screening]); or from mother to child during pregnancy, delivery or breastfeeding

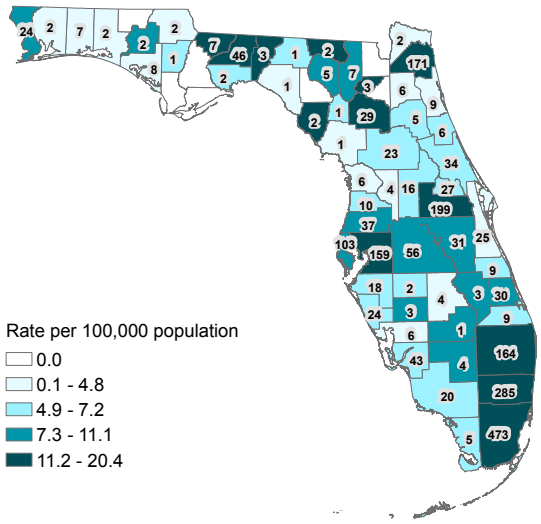
Reason for surveillance: Enhance efforts to prevent HIV transmission, improve allocation of resources for treatment services, and assist in evaluating the impact of public health interventions

Comments: Artificial incidence peaks in 2008 and 2013 were due to expansion of electronic laboratory reporting. Case count decreased 3.2% from 2014 to 2015 and the incidence rate decreased 25.1% from the previous 5-year average. Expanded efforts to link and retain people in care may have contributed to the decrease.

Summary of Case Demographics

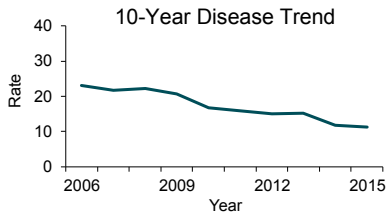
Summary			
Number of cases			2,218
Incidence rate (per 100,000 population)			11.2
Change from 5-year average incidence			-25.1%
Age (in Years)			
Mean			43
Median			44
Min-max			5 - 85
Gender	**Number**	**(Percent)**	**Rate**
Female	675	(30.4)	6.7
Male	1,543	(69.6)	15.9
Unknown gender	0		
Race	**Number**	**(Percent)**	**Rate**
White	990	(44.8)	6.4
Black	1,195	(54.1)	35.7
Other	25	(1.1)	2.4
Unknown race	8		
Ethnicity	**Number**	**(Percent)**	**Rate**
Non-Hispanic	1,717	(78.0)	11.4
Hispanic	483	(22.0)	9.9
Unknown ethnicity	18		

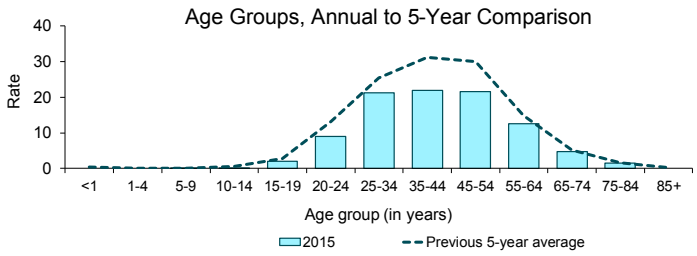
Reported AIDS Cases and Incidence Rates Per 100,000 Population by County of Residence, Florida, 2015 (N=2,218)

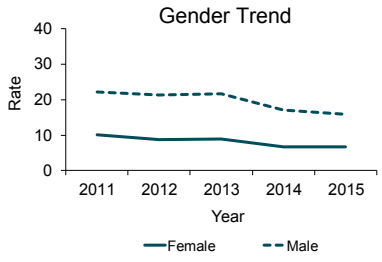


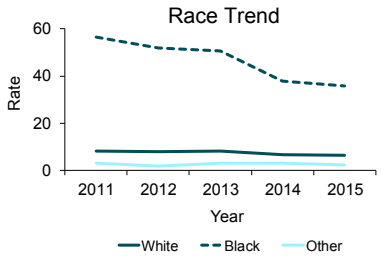
County totals exclude Florida Department of Corrections cases (n=28).
Note that rates based on <20 cases are not reliable and should be interpreted with caution.

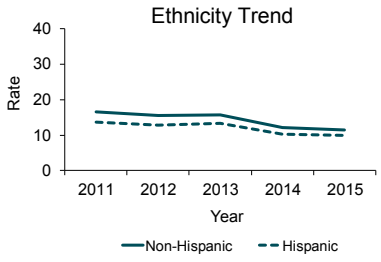
Incidence Rates Per 100,000 Population of Reported AIDS Cases by Year, Age, Gender, Race, and Ethnicity, Florida











Additional Information

For AIDS cases, men are disproportionately impacted compared to women. In 2015 cases reported in adult men, male-to-male sexual contact was the most common risk factor (65.4%), followed by heterosexual contact (24.4%).

In 2015, blacks were over-represented among AIDS cases, accounting for 45.6% of adult cases among men and 65.2% of the adult cases among women.

For information on HIV, please see the HIV chapter within this section (page 47).

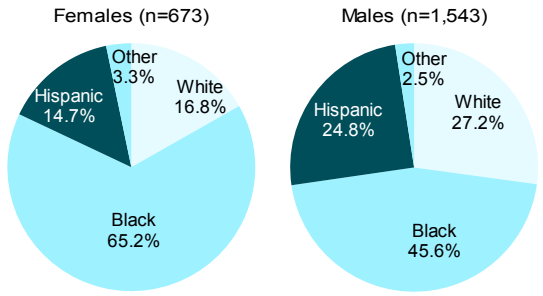
Please visit the AIDS Surveillance website to access additional information at www.FloridaHealth.gov/diseases-and-conditions/aids/surveillance/index.html.

To locate services across the state please visit www.FloridaHealth.gov/diseases-and-conditions/aids/index.html.

Reported Adult (13 Years and Older) AIDS Cases by Gender and Mode of Exposure, Florida, 2015

Mode of Exposure	Females Cases (n=673)		Males Cases (n=1,543)	
	Number	(Percent)	Number	(Percent)
Men who have sex with men (MSM)	NA		1,009	(65.4)
Heterosexual	595	(88.4)	377	(24.4)
Injection drug user (IDU)	73	(10.8)	89	(5.8)
MSM and IDU	NA		61	(4.0)
Other	5	(0.7)	7	(0.5)
Total	673		1,543	

Reported Adult (13 Years and Older) AIDS Cases by Gender and Race/Ethnicity, Florida, 2015



Campylobacteriosis

Disease Facts

Cause: *Campylobacter* bacteria

Type of illness: Gastroenteritis (diarrhea, vomiting)

Transmission: Fecal-oral; including person-to-person, animal-to-person, foodborne, and waterborne

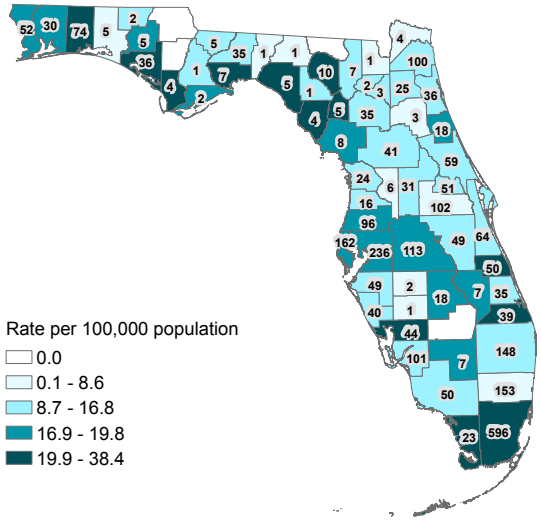
Reason for surveillance: Identify and control outbreaks, identify and mitigate common sources (e.g., contaminated food product, ill food handler), monitor incidence over time, estimate burden of illness

Comments: The use of culture-independent diagnostic testing for *Campylobacter* has increased sharply in recent years. Florida changed the campylobacteriosis surveillance case definition in January and July 2011, as well as in January 2015, increasing the number of reported cases in both years. Campylobacteriosis incidence in children <1 year old and adults ≥45 years old showed notable increases in 2015.

Summary of Case Demographics

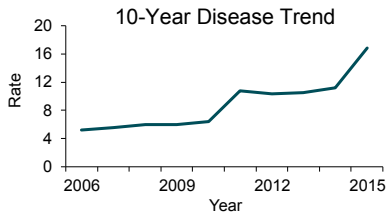
Summary			
Number of cases			3,351
Incidence rate (per 100,000 population)			16.9
Change from 5-year average incidence			+71.3%
Age (in Years)			
Mean			42
Median			46
Min-max			0 - 101
Gender	**Number**	**(Percent)**	**Rate**
Female	1,699	(50.7)	16.8
Male	1,652	(49.3)	17.0
Unknown gender	0		
Race	**Number**	**(Percent)**	**Rate**
White	2,628	(81.3)	17.0
Black	229	(7.1)	6.8
Other	376	(11.6)	36.3
Unknown race	118		
Ethnicity	**Number**	**(Percent)**	**Rate**
Non-Hispanic	2,240	(70.0)	14.9
Hispanic	959	(30.0)	19.8
Unknown ethnicity	152		

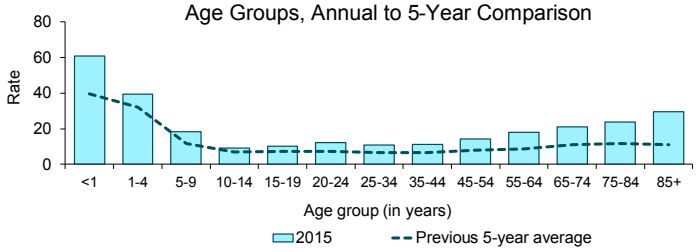
Reported Campylobacteriosis Cases and Incidence Rates Per 100,000 Population (Restricted to Infections Acquired in Florida) by County of Residence, Florida, 2015 (N=2,940)

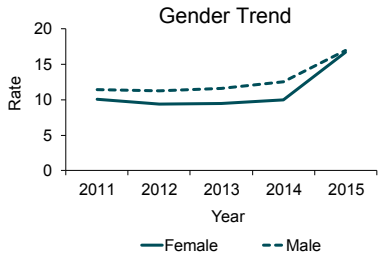


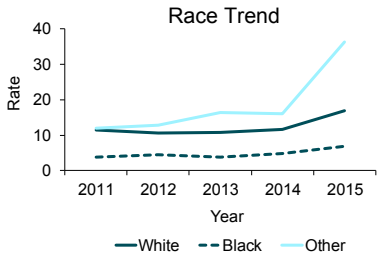
Note that rates based on <20 cases are not reliable and should be interpreted with caution.

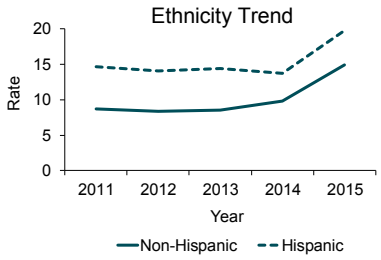
Incidence Rates Per 100,000 Population of Reported Campylobacteriosis Cases by Year, Age, Gender, Race, and Ethnicity, Florida







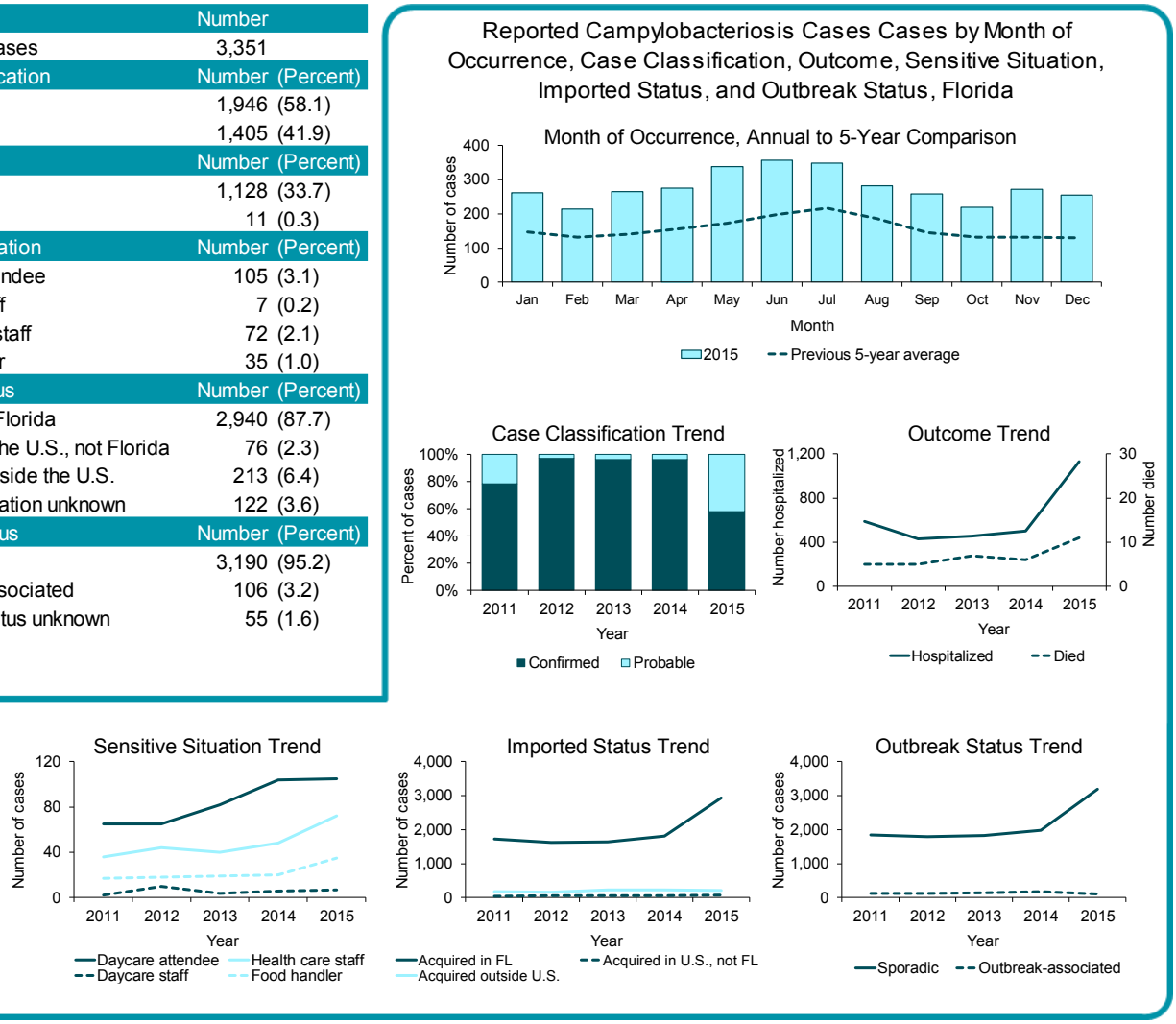




Note that trend graphs should be interpreted with caution when more than 5% of data are missing. Campylobacteriosis cases were missing 6.2% of ethnicity data in 2011, 5.1% of race data in 2011, 6.2% of ethnicity data in 2012, 6.3% of race data in 2012, 5.2% of ethnicity data in 2013, and 5.0% of race data in 2013.

Summary of Case Factors

Summary	Number	
Number of cases	3,351	
Case Classification	**Number**	**(Percent)**
Confirmed	1,946	(58.1)
Probable	1,405	(41.9)
Outcome	**Number**	**(Percent)**
Hospitalized	1,128	(33.7)
Died	11	(0.3)
Sensitive Situation	**Number**	**(Percent)**
Daycare attendee	105	(3.1)
Daycare staff	7	(0.2)
Health care staff	72	(2.1)
Food handler	35	(1.0)
Imported Status	**Number**	**(Percent)**
Acquired in Florida	2,940	(87.7)
Acquired in the U.S., not Florida	76	(2.3)
Acquired outside the U.S.	213	(6.4)
Acquired location unknown	122	(3.6)
Outbreak Status	**Number**	**(Percent)**
Sporadic	3,190	(95.2)
Outbreak-associated	106	(3.2)
Outbreak status unknown	55	(1.6)



Interpretation:
Occurrence is determined by the earliest date associated with the case, which is most frequently the date of onset, but can also be the diagnosis date, the laboratory report date, or the date the county health department was notified of the case. For outcome, a case can be included in the hospitalized count as well as the death count. Hospitalized status means that a person was hospitalized at the time of their illness, though the hospitalization may not necessarily have been due to the illness. Deaths include all people with the illness who died, though the death may not necessarily have been due to the illness. Sensitive situation categories are not mutually exclusive, and most cases do not fall into any of these categories. Imported status refers to where the infection was most likely acquired. Outbreak- associated indicates that two or more cases are epidemiologically linked.

Additional Information

The number of people hospitalized due to campylobacteriosis increased dramatically in 2015; primarily driven by increased rates of hospitalization in children <1 and adults ≥80 years old. The number of campylobacteriosis cases reported in daycare attendees increased in 2013 and 2014, but plateaued in 2015. There have been no reported campylobacteriosis outbreaks in daycares between 2013 and 2015; outbreak-associated cases were reflective of household clusters.

Carbon Monoxide Poisoning

Disease Facts

Cause: Carbon monoxide (CO) gas

Type of illness: Common symptoms include headache, dizziness, weakness, nausea, vomiting, chest pain, and confusion; high levels of CO inhalation can cause loss of consciousness and death

Exposure: Inhaling CO gas from combustion fumes (produced by cars and trucks, generators, stoves, lanterns, burning charcoal and wood, and gas ranges and heating systems)

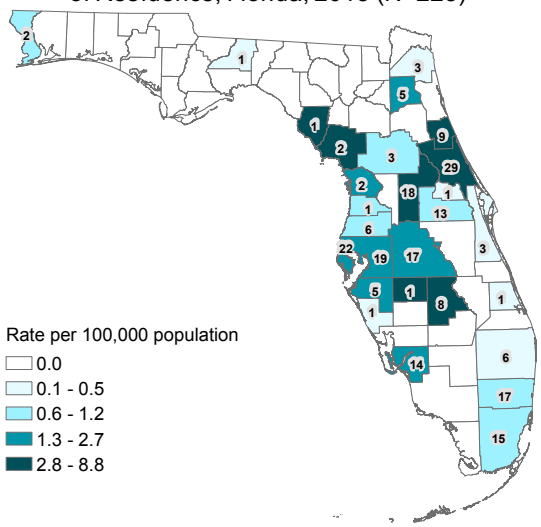
Reason for surveillance: Identify and mitigate persistent sources of exposure, identify populations at risk, evaluate trends in environmental conditions, measure impact of public health interventions

Comments: CO poisoning became a reportable condition in Florida in late 2008, so only cases from 2009 to 2015 are presented in this report. CO poisonings are more common in people ≥35 years old. CO poisonings tend to increase during cold winter months and during large power outages when generator use increases.

Summary of Case Demographics

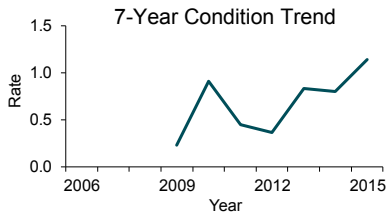
Summary			
Number of cases			227
Incidence rate (per 100,000 population)			1.1
Change from 5-year average incidence			+70.0%
Age (in Years)			
Mean			45
Median			48
Min-max			0 - 91
Gender	**Number**	**(Percent)**	**Rate**
Female	93	(41.0)	0.9
Male	134	(59.0)	1.4
Unknown gender	0		
Race	**Number**	**(Percent)**	**Rate**
White	165	(73.7)	1.1
Black	44	(19.6)	1.3
Other	15	(6.7)	NA
Unknown race	3		
Ethnicity	**Number**	**(Percent)**	**Rate**
Non-Hispanic	188	(84.3)	1.3
Hispanic	35	(15.7)	0.7
Unknown ethnicity	4		

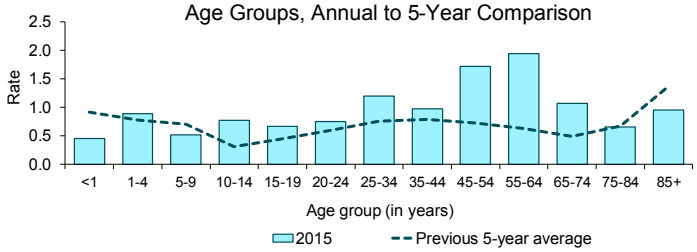
Reported Carbon Monoxide Poisoning Cases and Incidence Rates Per 100,000 Population (Restricted to Exposures Occurring in Florida) by County of Residence, Florida, 2015 (N=225)

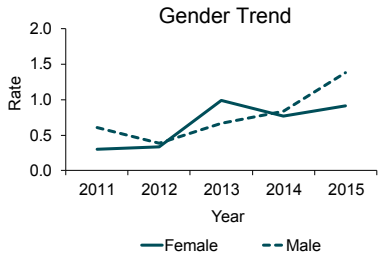


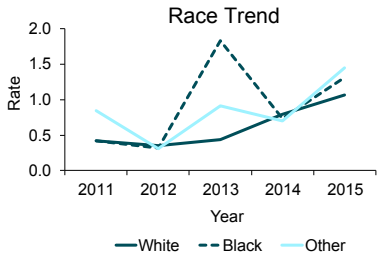
Note that rates based on <20 cases are not reliable and should be interpreted with caution.

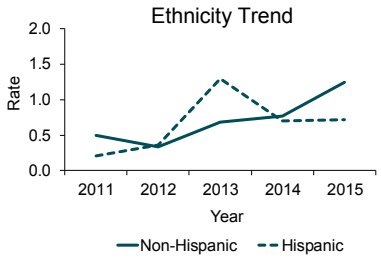
Incidence Rates Per 100,000 Population of Reported Carbon Monoxide Poisoning Cases by Year, Age, Gender, Race, and Ethnicity, Florida







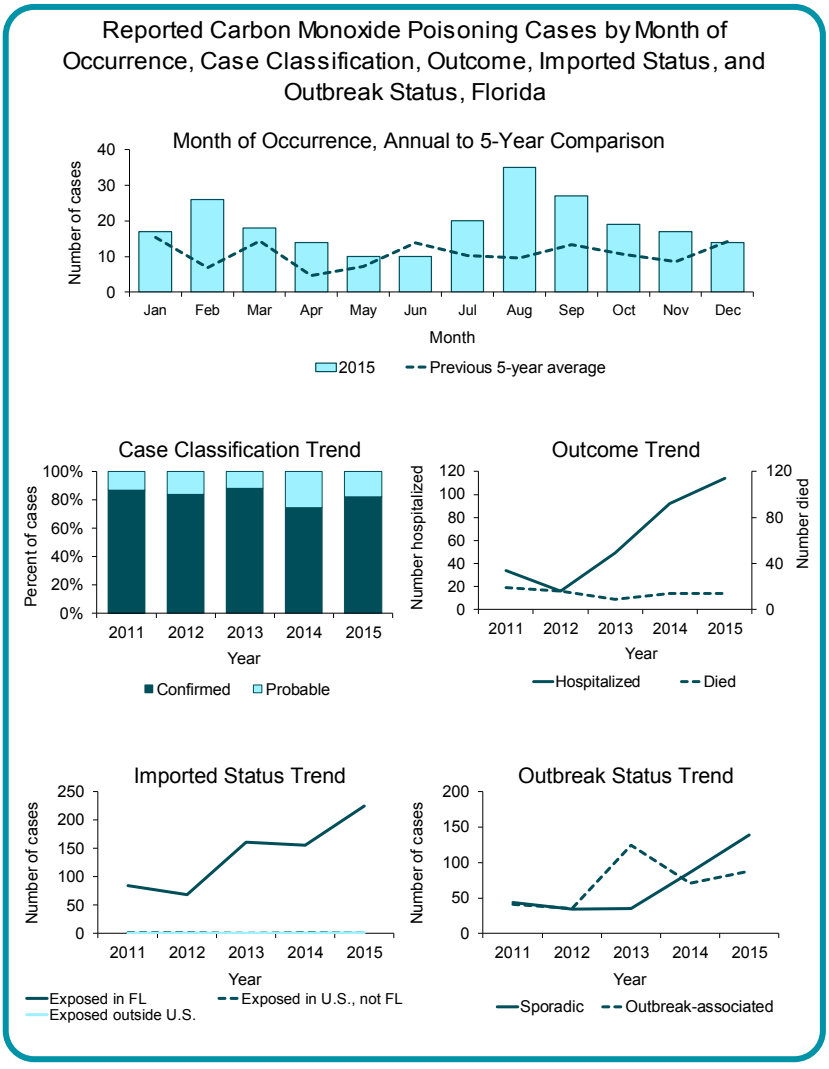




Note that trend graphs should be interpreted with caution when more than 5% of data are missing. Carbon monoxide poisoning cases were missing 5.8% of ethnicity data in 2012, 16.8% of race data in 2013, and 6.4% of ethnicity data in 2014.

Summary of Case Factors

Summary	Number	
Number of cases	227	
Case Classification	**Number**	**(Percent)**
Confirmed	187	(82.4)
Probable	40	(17.6)
Outcome	**Number**	**(Percent)**
Hospitalized	114	(50.2)
Died	14	(6.2)
Imported Status	**Number**	**(Percent)**
Exposed in Florida	225	(99.1)
Exposed in the U.S., not Florida	1	(0.4)
Exposed outside the U.S.	1	(0.4)
Exposed location unknown	0	(0.0)
Outbreak Status	**Number**	**(Percent)**
Sporadic	139	(61.2)
Outbreak-associated	88	(38.8)
Outbreak status unknown	0	(0.0)
Exposure Type	**Number**	**(Percent)**
Smoking	54	(23.8)
Automobile/RV	34	(15.0)
Fuel-burning appliances	27	(11.9)
Generator	22	(9.7)
Power tools (including mower)	19	(8.4)
Fire	14	(6.2)
Portable fuel-burning grill/stove	7	(3.1)
Other	5	(2.2)
Boat	1	(0.4)
Unknown	44	(19.4)



Interpretation:
Occurrence is determined by the earliest date associated with the case, which is most frequently the date of onset, but can also be the diagnosis date, the laboratory report date, or the date the county health department was notified of the case. For outcome, a case can be included in the hospitalized count as well as the death count. Hospitalized status means that a person was hospitalized at the time of their illness, though the hospitalization may not necessarily have been due to the illness. Deaths include all people with the illness who died, though the death may not necessarily have been due to the illness. Imported status refers to where the exposure most likely occurred. Outbreak-associated indicates that two or more cases are epidemiologically linked.

Additional Information

CO poisoning cases have increased over the past 5 years due to improved outbreak detection and reporting. CO poisoning was more common in men, which is consistent with the U.S. trend. In 2015, cases in Florida peaked in February, August, and September, which is not consistent with U.S. trends. The most common exposures causing CO poisoning vary by season. In February, 16 (61.5%) of 26 cases were caused by exposure to fuel-burning appliances. In August, 12 (34.3%) of 35 cases were caused by exposure to power tools. In September, 12 (44.4%) of 27 cases were caused by generator use during power outages. These 12 cases were related to two clusters. One cluster of seven cases in Pinellas County was caused by a generator running in the garage of a house. In an unrelated incident in Clay County a week later, a family of five was exposed when a diesel generator ran overnight near an air conditioning unit.

Chikungunya Fever

Disease Facts

Cause: Chikungunya virus

Type of illness: Acute febrile illness with joint and muscle pain, headache, joint swelling, and rash; some symptoms can persist for months to years and relapse can occur

Transmission: Bite of infective mosquito, rarely by blood transfusion or organ transplant

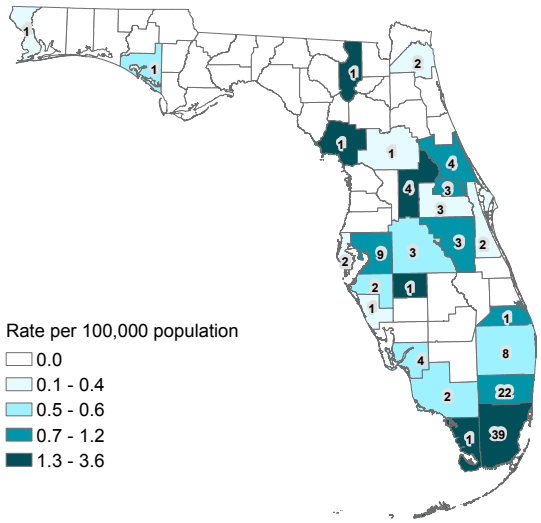
Reason for surveillance: Identify individual cases and implement control measures to prevent endemicity, monitor incidence over time, estimate burden of illness

Comments: 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, 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 in 2015.

Summary of Case Demographics

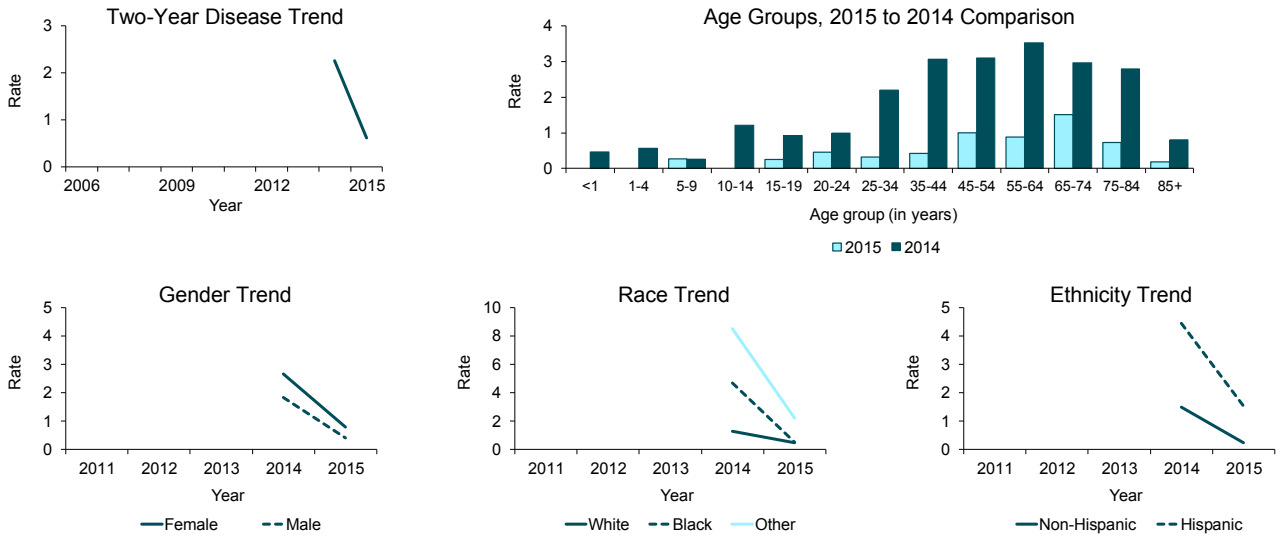
Summary			
Number of cases			121
Incidence rate (per 100,000 population)			0.6
Change from previous year incidence			-73.1%
Age (in Years)			
Mean			53
Median			57
Min-max			6 - 86
Gender	**Number**	**(Percent)**	**Rate**
Female	81	(66.9)	0.8
Male	40	(33.1)	0.4
Unknown gender	0		
Race	**Number**	**(Percent)**	**Rate**
White	74	(64.9)	0.5
Black	17	(14.9)	NA
Other	23	(20.2)	2.2
Unknown race	7		
Ethnicity	**Number**	**(Percent)**	**Rate**
Non-Hispanic	37	(33.0)	0.2
Hispanic	75	(67.0)	1.5
Unknown ethnicity	9		

Reported Chikungunya Fever Cases and Incidence Rates Per 100,000 Population by County of Residence, Florida, 2015 (N=121)



Note that rates based on <20 cases are not reliable and should be interpreted with caution.

Incidence Rates Per 100,000 Population of Reported Chikungunya Fever Cases by Year, Age, Gender, Race, and Ethnicity, Florida

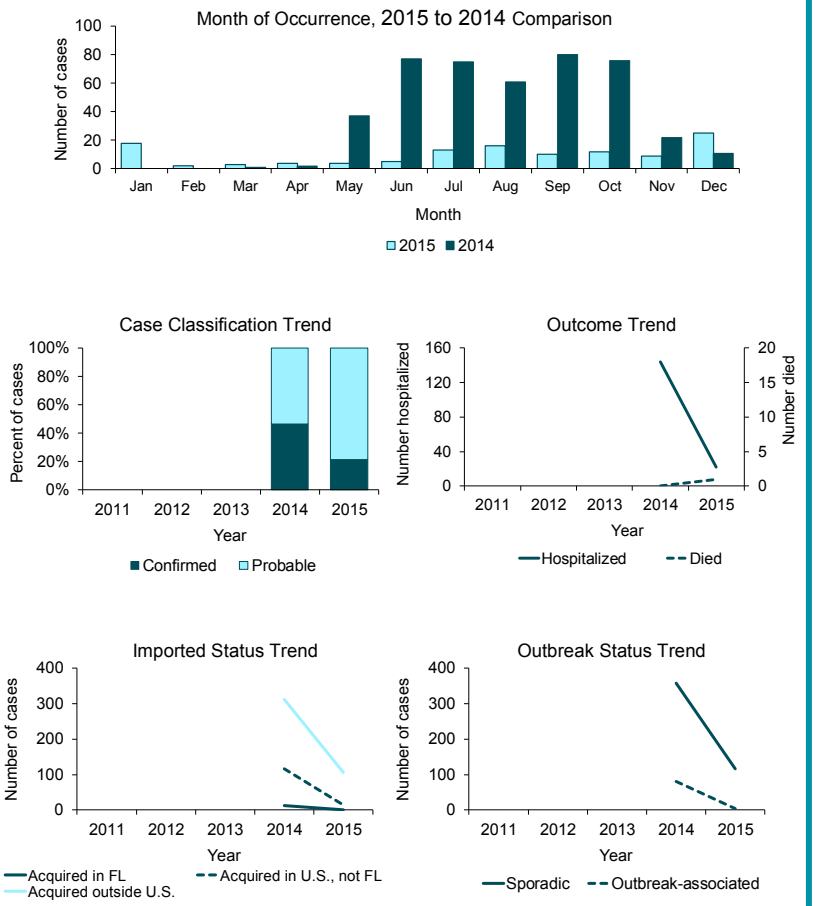


Note that trend graphs should be interpreted with caution when more than 5% of data are missing. Chikungunya fever cases were missing 7.4% of ethnicity data in 2015 and 5.8% of race data in 2015.

Additional Information

Summary	Number	
Number of cases	121	
Case Classification	**Number**	**(Percent)**
Confirmed	26	(21.5)
Probable	95	(78.5)
Outcome	**Number**	**(Percent)**
Hospitalized	22	(18.2)
Died	1	(0.8)
Imported Status	**Number**	**(Percent)**
Acquired in Florida	0	(0.0)
Acquired in the U.S., not Florida	14	(11.6)
Acquired outside the U.S.	107	(88.4)
Acquired location unknown	0	(0.0)
Outbreak Status	**Number**	**(Percent)**
Sporadic	117	(96.7)
Outbreak-associated	4	(3.3)
Outbreak status unknown	0	(0.0)
Region Where Infection Acquired	**Number**	**(Percent)**
Central America/Caribbean	80	(66.1)
South America	23	(19.0)
Puerto Rico (U.S.)	12	(9.9)
Asia	2	(1.7)
South Pacific	2	(1.7)
Virgin Islands (U.S.)	2	(1.7)
Reason for Travel	**Number**	**(Percent)**
Visiting friends/relatives	106	(87.6)
Missionary or dependent	3	(2.5)
Business	2	(1.7)
Refugee/immigrant	1	(0.8)
Student/teacher	1	(0.8)
Tourism	1	(0.8)
Other	2	(1.7)
Unknown	5	(4.1)

Reported Chikungunya Fever Cases by Month of Occurrence, Case Classification, Outcome, Imported Status, and Outbreak Status, Florida



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. Other reports may use illness onset date instead of report date, or county of exposure instead of county of residence.

Interpretation:
Occurrence is determined by the earliest date associated with the case, which is most frequently the date of onset, but can also be the diagnosis date, the laboratory report date, or the date the county health department was notified of the case. For outcome, a case can be included in the hospitalized count as well as the death count. Hospitalized status means that a person was hospitalized at the time of their illness, though the hospitalization may not necessarily have been due to the illness. Deaths include all people with the illness who died, though the death may not necessarily have been due to the illness. Imported status refers to where the infection was most likely acquired. Outbreak- associated indicates that two or more cases are epidemiologically linked.

Additional Information

There was a large decrease in imported chikungunya fever cases reported in 2015 (121 cases) compared to 2014 (428 cases). Unlike dengue fever, infection with chikungunya virus leads to lifetime immunity, which is believed to be the biggest reason for this decrease. Extensive spread in Central and South America and the Caribbean in 2014 resulted in immunity for many people in those areas. For the 14 cases acquired outside Florida in the U.S. in 2015, 12 infections were acquired in Puerto Rico and two in the U.S. Virgin Islands. Compared to other mosquito-borne diseases like dengue fever and malaria, the incidence rate of chikungunya fever is much higher in women than men. Chikungunya fever was also identified in one non-Florida resident while traveling in Florida (note that this report only includes Florida residents in case counts). It is important to note that both 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.

Chlamydia

Disease Facts

Cause: *Chlamydia trachomatis* bacteria

Type of illness: Frequently asymptomatic; abnormal discharge from vagina or penis, burning sensation when urinating; severe complications can include pelvic inflammatory disease, infertility, and ectopic pregnancies.

Transmission: Sexually transmitted disease (STD) spread by anal, vaginal, or oral sex and sometimes from mother to child during pregnancy or delivery

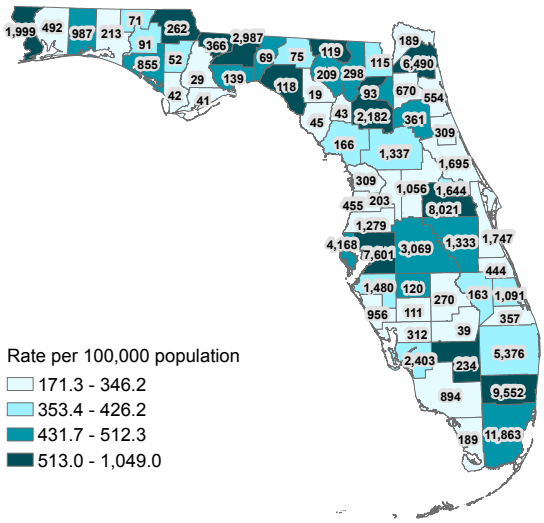
Reason for surveillance: Implement effective interventions immediately for every case, monitor incidence over time, estimate burden of illness, evaluate treatment and prevention programs

Comments: Chlamydia is the most commonly reported STD in Florida and the U.S; incidence rates have been slowly increasing the past decade. Incidence is highest among 15- to 24-year-old women and non-Hispanic blacks. Because chlamydia is frequently asymptomatic, screening is necessary to identify most infections.

Summary of Case Demographics

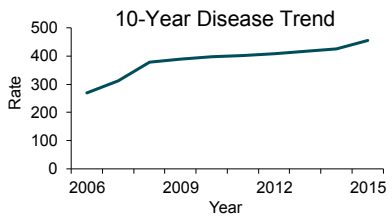
Summary			
Number of cases			90,650
Incidence rate (per 100,000 population)			456.4
Change from 5-year average incidence			+11.2%
Age (in Years)			
Mean			24
Median			22
Min-max			0 - 98
Gender	**Number**	**(Percent)**	**Rate**
Female	62,170	(68.6)	612.9
Male	28,393	(31.4)	292.2
Unknown gender	87		
Race	**Number**	**(Percent)**	**Rate**
White	34,210	(48.5)	221.0
Black	35,594	(50.4)	1,064.6
Other	766	(1.1)	73.9
Unknown race	20,080		
Ethnicity	**Number**	**(Percent)**	**Rate**
Non-Hispanic	55,590	(80.2)	370.4
Hispanic	13,767	(19.8)	283.6
Unknown ethnicity	21,293		

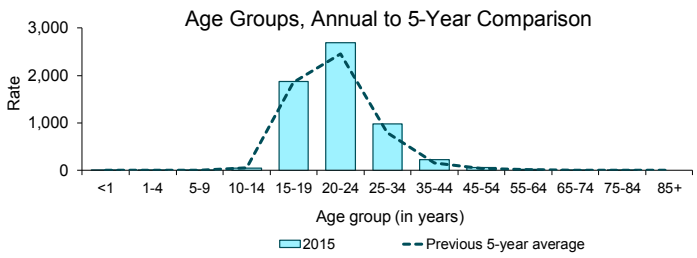
Reported Chlamydia Cases and Incidence Rates Per 100,000 Population by County of Residence, Florida, 2015 (N=90,650)

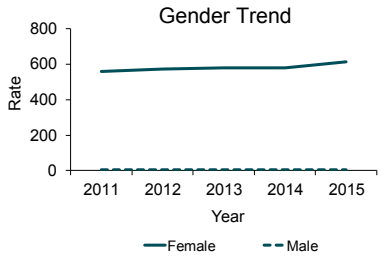


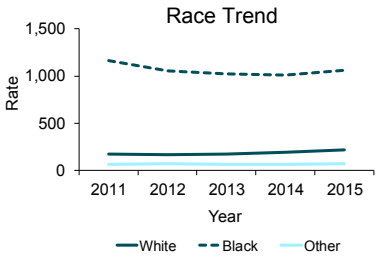
Note that rates based on <20 cases are not reliable and should be interpreted with caution.

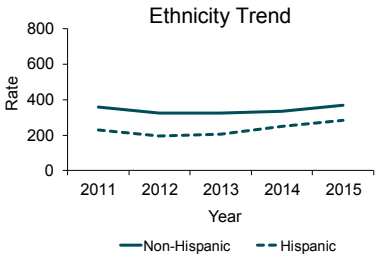
Incidence Rates Per 100,000 Population of Reported Chlamydia Cases by Year, Age, Gender, Race, and Ethnicity, Florida











Note that trend graphs should be interpreted with caution when more than 5% of data are missing. Chlamydia cases were missing 18.1% of ethnicity data in 2011, 17.8% of race data in 2011, 28.3% of ethnicity data in 2012, 24.1% of race data in 2012, 29.2% of ethnicity data in 2013, 25.4% of race data in 2013, 26.1% of ethnicity data in 2014, 23.8% of race data in 2014, 23.5% of ethnicity data in 2015, and 22.2% of race data in 2015.

Ciguatera Fish Poisoning

Disease Facts

Cause: Ciguatoxins produced by marine dinoflagellates associated with tropical/subtropical reef fish

Type of illness: Nausea, vomiting, and neurologic symptoms (e.g., tingling fingers or toes, temperature reversal); anecdotal evidence of long-term periodic recurring symptoms

Exposure: Foodborne; consuming fish contaminated with ciguatoxins

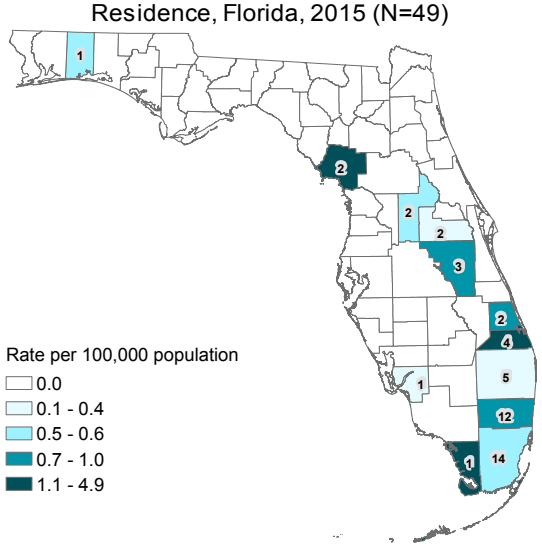
Reason for surveillance: Identify and control outbreaks, identify high-risk products (e.g., barracuda, grouper)

Comments: Outbreaks are usually associated with multiple people sharing an implicated fish. While case finding in Florida is thought to be more complete than in other states, under-reporting is still likely due to lack of recognition and reporting by medical practitioners. Marine dinoflagellates are typically found in tropical and subtropical waters and are eaten by herbivorous fish that are in turn eaten by larger carnivorous fish, causing the toxins to bioaccumulate in larger fish such as barracuda or grouper.

Summary of Case Demographics

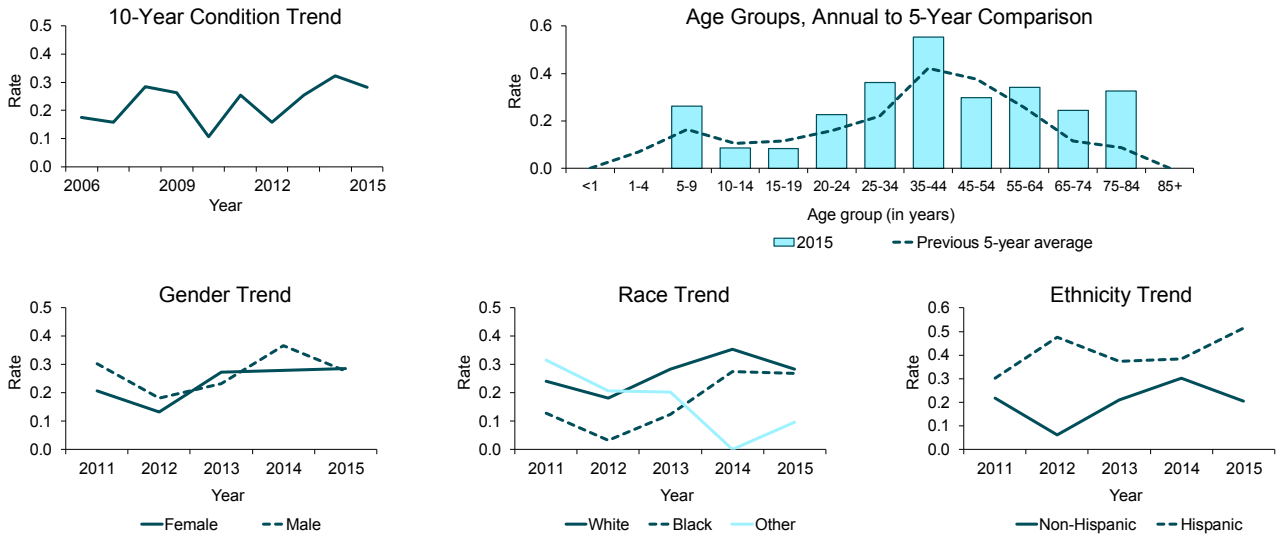
Summary			
Number of cases			56
Incidence rate (per 100,000 population)			0.3
Change from 5-year average incidence			+29.0%
Age (in Years)			
Mean			45
Median			44
Min-max			6 - 82
Gender	**Number**	**(Percent)**	**Rate**
Female	29	(51.8)	0.3
Male	27	(48.2)	0.3
Unknown gender	0		
Race	**Number**	**(Percent)**	**Rate**
White	44	(81.5)	0.3
Black	9	(16.7)	NA
Other	1	(1.9)	NA
Unknown race	2		
Ethnicity	**Number**	**(Percent)**	**Rate**
Non-Hispanic	31	(55.4)	0.2
Hispanic	25	(44.6)	0.5
Unknown ethnicity	0		

Reported Ciguatera Fish Poisoning Cases and Incidence Rates Per 100,000 Population (Restricted to Exposures Occurring in Florida) by County of Residence, Florida, 2015 (N=49)



Note that rates based on <20 cases are not reliable and should be interpreted with caution.

Incidence Rates Per 100,000 Population of Reported Ciguatera Fish Poisoning Cases by Year, Age, Gender, Race, and Ethnicity, Florida

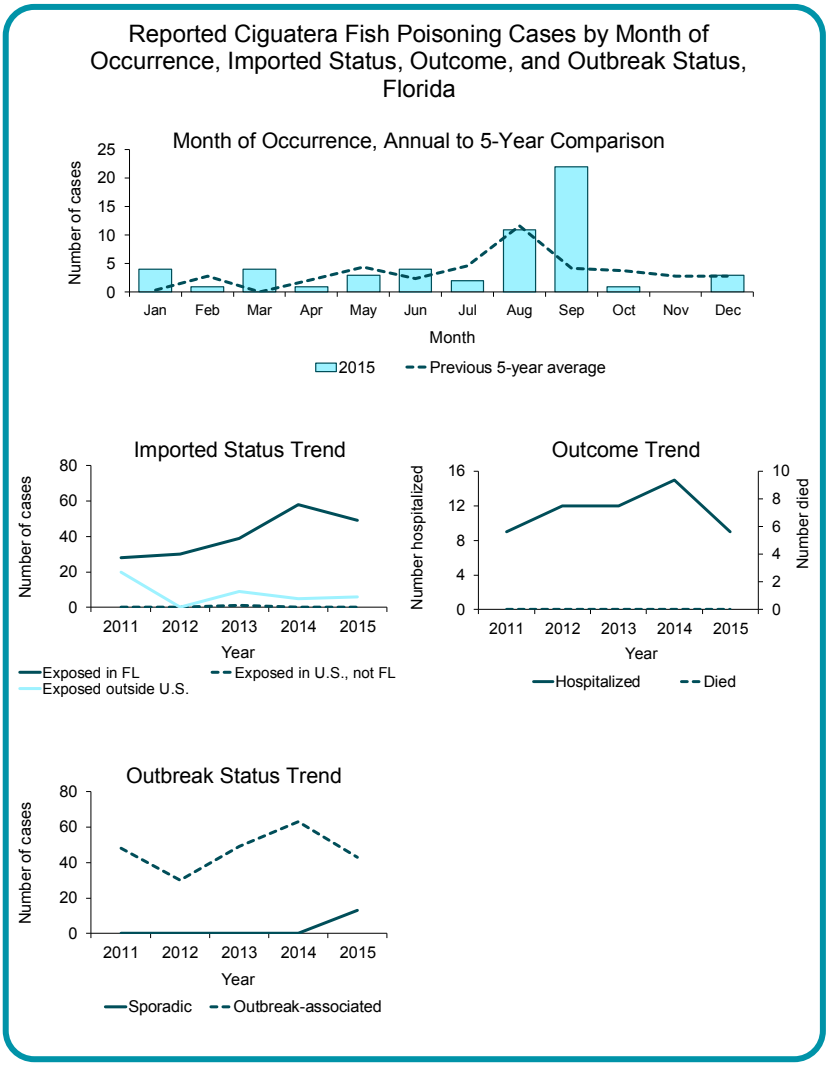


Note that trend graphs should be interpreted with caution when more than 5% of data are missing. Ciguatera fish poisoning cases were missing 6.3% of ethnicity data in 2011 and 10.4% of race data in 2011.

Ciguatera Fish Poisoning

Summary of Case Factors

Summary	Number	
Number of cases	56	
Outcome	**Number**	**(Percent)**
Hospitalized	9	(16.1)
Died	0	(0.0)
Imported Status	**Number**	**(Percent)**
Exposed in Florida	49	(87.5)
Exposed in the U.S., not Florida	0	(0.0)
Exposed outside the U.S.	6	(10.7)
Exposed location unknown	1	(1.8)
Outbreak Status	**Number**	**(Percent)**
Sporadic	13	(23.2)
Outbreak-associated	43	(76.8)
Outbreak status unknown	0	(0.0)



Interpretation:
Occurrence is determined by the earliest date associated with the case, which is most frequently the date of onset, but can also be the diagnosis date, the laboratory report date, or the date the county health department was notified of the case. For outcome, a case can be included in the hospitalized count as well as the death count. Hospitalized status means that a person was hospitalized at the time of their illness, though the hospitalization may not necessarily have been due to the illness. Deaths include all people with the illness who died, though the death may not necessarily have been due to the illness. Imported status refers to where the exposure most likely occurred. Outbreak- associated indicates that two or more cases are epidemiologically linked.

Additional Information

Sixteen outbreaks were identified in 2015 involving 43 cases. Outbreak size ranged from two cases per outbreak to six, with an average of three. Outbreaks were associated with eating barracuda (7), amberjack (4), snapper (1), grouper (1), sea urchin (1), and kingfish (1). One outbreak was associated with consumption of two fish known to carry ciguatoxin (amberjack and hogfish). Two large outbreaks were identified during the month of September, which accounts for the larger-than-normal peak in 2015. Outbreaks were more commonly associated with recreationally caught fish.

In Florida, one case of ciguatera fish poisoning is considered an outbreak for public health purposes and prior to 2015, all cases were reported as outbreak-associated. One case is still considered an outbreak in Florida, but in 2015, cases were classified as sporadic in the reportable disease surveillance system unless they were epidemiologically linked to another case. This change supports better characterization of epidemiologically-linked cases.

Cryptosporidiosis

Disease Facts

Cause: *Cryptosporidium* parasites

Type of illness: Gastroenteritis (diarrhea, vomiting)

Transmission: Fecal-oral; including person-to-person, animal-to-person, waterborne, and foodborne

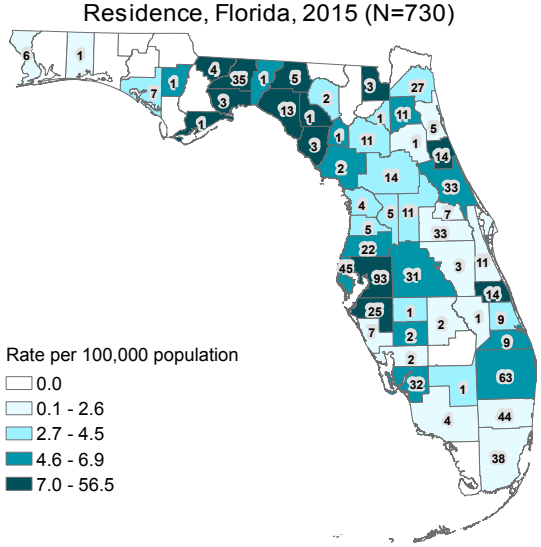
Reason for surveillance: Identify and control outbreaks, identify and mitigate common sources (e.g., contaminated food/water source, ill food handler), monitor incidence over time, estimate burden of illness

Comments: Diagnostic capabilities have improved over the years, making it easier to identify illnesses caused by this parasite. Cryptosporidiosis in Florida and the U.S. has a seasonal and cyclic trend. Cases increased starting in 2006 and declined in 2008. Following a sharp increase in cases in 2014 in all genders, races, and ethnicities, cases decreased in 2015, though remained well above the rates from 2010 to 2013. The largest concentration of cases was in and around Hillsborough County.

Summary of Case Demographics

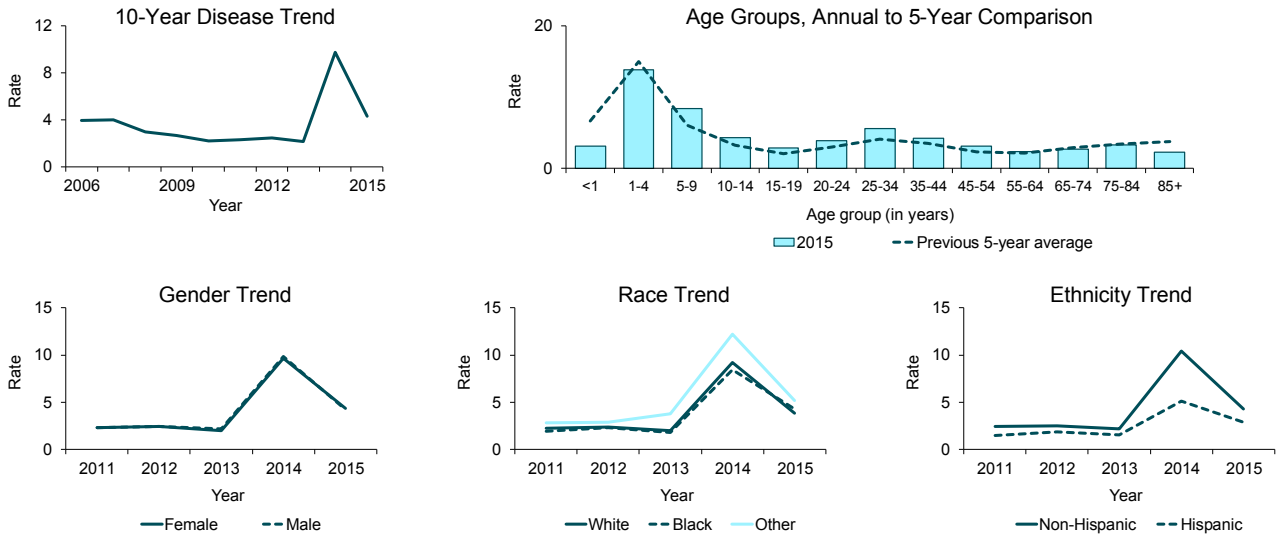
Summary			
Number of cases			856
Incidence rate (per 100,000 population)			4.3
Change from 5-year average incidence			+14.6%
Age (in Years)			
Mean			32
Median			29
Min-max			0 - 93
Gender	**Number**	**(Percent)**	**Rate**
Female	444	(51.9)	4.4
Male	412	(48.1)	4.2
Unknown gender	0		
Race	**Number**	**(Percent)**	**Rate**
White	601	(75.3)	3.9
Black	143	(17.9)	4.3
Other	54	(6.8)	5.2
Unknown race	58		
Ethnicity	**Number**	**(Percent)**	**Rate**
Non-Hispanic	645	(82.1)	4.3
Hispanic	141	(17.9)	2.9
Unknown ethnicity	70		

Reported Cryptosporidiosis Cases and Incidence Rates Per 100,000 Population (Restricted to Infections Acquired in Florida) by County of Residence, Florida, 2015 (N=730)



Note that rates based on <20 cases are not reliable and should be interpreted with caution.

Incidence Rates Per 100,000 Population of Reported Cryptosporidiosis Cases by Year, Age, Gender, Race, and Ethnicity, Florida

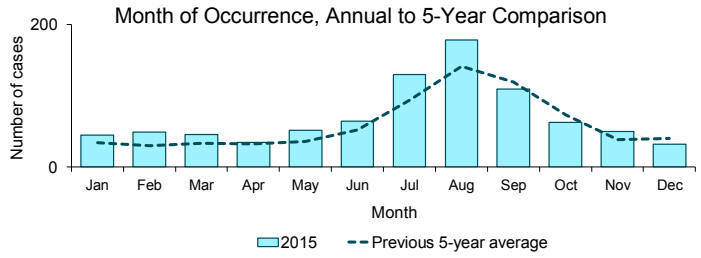


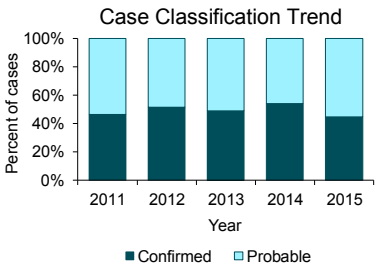
Note that trend graphs should be interpreted with caution when more than 5% of data are missing. Cryptosporidiosis cases were missing 5.8% of ethnicity data in 2014, 5.2% of race data in 2014, 8.2% of ethnicity data in 2015, and 6.8% of race data in 2015.

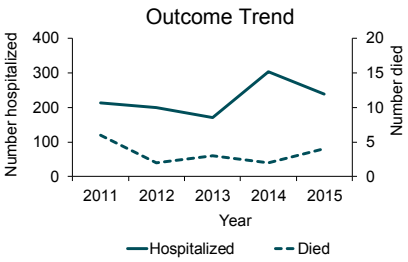
Summary of Case Factors

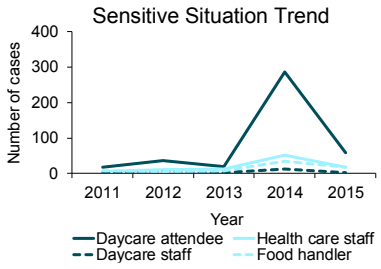
Summary	Number	
Number of cases	856	
Case Classification	**Number**	**(Percent)**
Confirmed	384	(44.9)
Probable	472	(55.1)
Outcome	**Number**	**(Percent)**
Hospitalized	239	(27.9)
Died	4	(0.5)
Sensitive Situation	**Number**	**(Percent)**
Daycare attendee	59	(6.9)
Daycare staff	2	(0.2)
Health care staff	18	(2.1)
Food handler	17	(2.0)
Imported Status	**Number**	**(Percent)**
Acquired in Florida	730	(85.3)
Acquired in the U.S., not Florida	24	(2.8)
Acquired outside the U.S.	52	(6.1)
Acquired location unknown	50	(5.8)
Outbreak Status	**Number**	**(Percent)**
Sporadic	630	(73.6)
Outbreak-associated	201	(23.5)
Outbreak status unknown	25	(2.9)

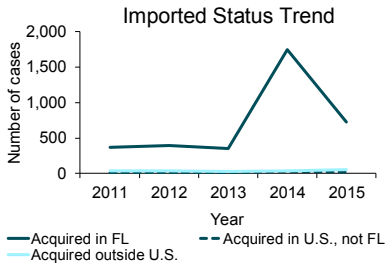
Reported Cryptosporidiosis Cases by Month of Occurrence, Case Classification, Outcome, Sensitive Situation, Imported Status, and Outbreak Status, Florida

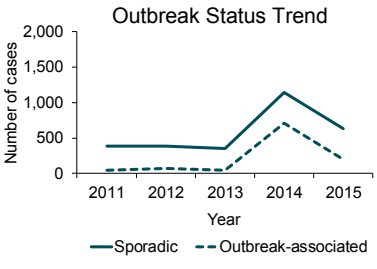












Interpretation:
Occurrence is determined by the earliest date associated with the case, which is most frequently the date of onset, but can also be the diagnosis date, the laboratory report date, or the date the county health department was notified of the case. For outcome, a case can be included in the hospitalized count as well as the death count. Hospitalized status means that a person was hospitalized at the time of their illness, though the hospitalization may not necessarily have been due to the illness. Deaths include all people with the illness who died, though the death may not necessarily have been due to the illness. Sensitive situation categories are not mutually exclusive, and most cases do not fall into any of these categories. Imported status refers to where the infection was most likely acquired. Outbreak- associated indicates that two or more cases are epidemiologically linked.

Additional Information

In 2015, five waterborne *Cryptosporidium* outbreaks were investigated. These outbreaks included 47 cases associated with swimming pools, recreational water parks, kiddie pools, and a temporary water slide. Identified contributing factors for these outbreaks included patrons still swimming when ill or within two weeks of being ill, diaper/toddler-aged children using these venues, lack of supplemental disinfection, and malfunctioning or inadequate filtration for recreational water systems. Additional community-wide outbreaks were associated with person-to-person transmission and daycares.

Cyclosporiasis

Disease Facts

Cause: *Cyclospora* parasites

Type of illness: Gastroenteritis (diarrhea, vomiting)

Transmission: Fecal-oral; foodborne and less commonly waterborne

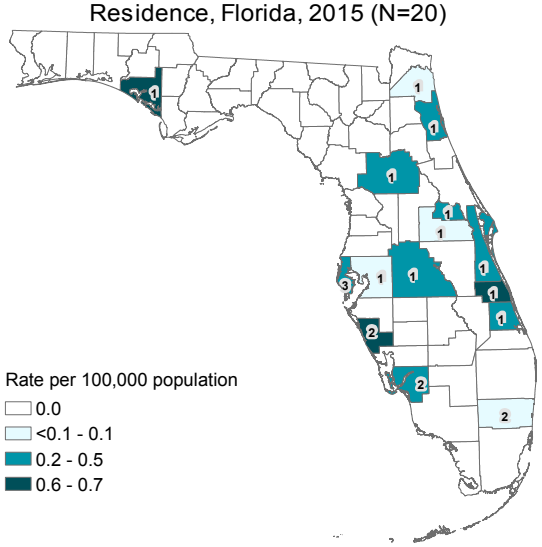
Reason for surveillance: Identify and control outbreaks, identify and mitigate common sources (e.g., contaminated food product), monitor incidence over time, estimate burden of illness

Comments: Incidence is strongly seasonal, peaking annually in June and July. Large, multistate outbreaks of cyclosporiasis were identified in 2013, 2014, and 2015. In the U.S., foodborne cyclosporiasis outbreaks have been linked to various types of imported fresh produce, including raspberries, basil, snow peas, and mesclun lettuce.

Summary of Case Demographics

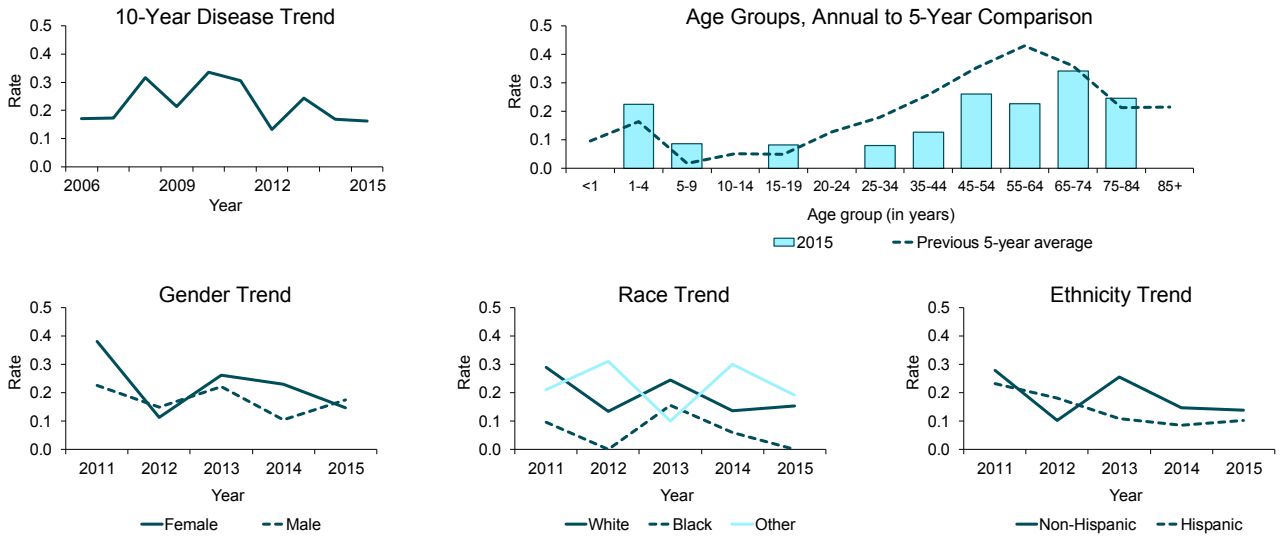
Summary			
Number of cases			32
Incidence rate (per 100,000 population)			0.2
Change from 5-year average incidence			-32.0%
Age (in Years)			
Mean			51
Median			57
Min-max			1 - 80
Gender	**Number**	**(Percent)**	**Rate**
Female	15	(46.9)	NA
Male	17	(53.1)	NA
Unknown gender	0		
Race	**Number**	**(Percent)**	**Rate**
White	24	(92.3)	0.2
Black	0	(0.0)	NA
Other	2	(7.7)	NA
Unknown race	6		
Ethnicity	**Number**	**(Percent)**	**Rate**
Non-Hispanic	21	(80.8)	0.1
Hispanic	5	(19.2)	NA
Unknown ethnicity	6		

Reported Cyclosporiasis Cases and Incidence Rates Per 100,000 Population (Restricted to Infections Acquired in Florida) by County of Residence, Florida, 2015 (N=20)



Note that rates based on <20 cases are not reliable and should be interpreted with caution.

Incidence Rates Per 100,000 Population of Reported Cyclosporiasis Cases by Year, Age, Gender, Race, and Ethnicity, Florida

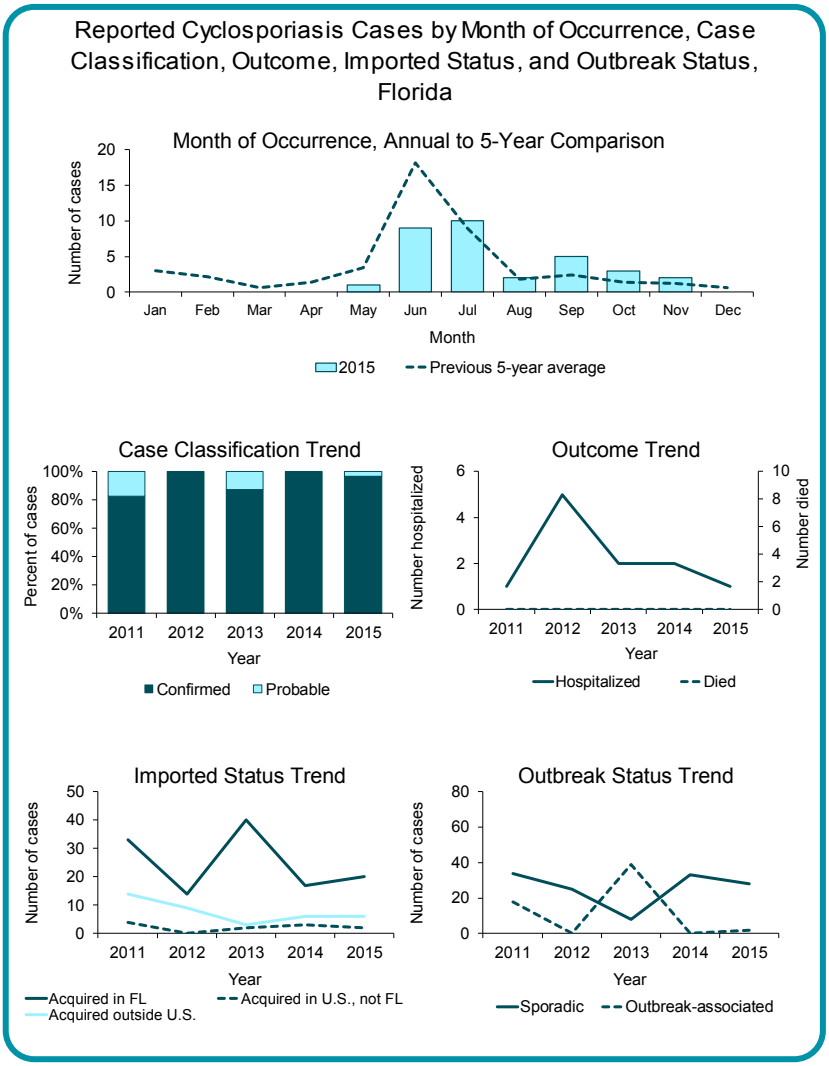


Note that trend graphs should be interpreted with caution when more than 5% of data are missing. Cyclosporiasis cases were missing 12.1% of ethnicity data in 2011, 17.2% of race data in 2011, 8.0% of ethnicity data in 2012, 8.0% of race data in 2012, 8.5% of ethnicity data in 2013, 8.5% of race data in 2013, 21.2% of ethnicity data in 2014, 21.2% of race data in 2014, 18.8% of ethnicity data in 2015, and 18.8% of race data in 2015.

Cyclosporiasis

Summary of Case Factors

Summary	Number	
Number of cases	32	
Case Classification	**Number**	**(Percent)**
Confirmed	31	(96.9)
Probable	1	(3.1)
Outcome	**Number**	**(Percent)**
Hospitalized	1	(3.1)
Died	0	(0.0)
Imported Status	**Number**	**(Percent)**
Acquired in Florida	20	(62.5)
Acquired in the U.S., not Florida	2	(6.3)
Acquired outside the U.S.	6	(18.8)
Acquired location unknown	4	(12.5)
Outbreak Status	**Number**	**(Percent)**
Sporadic	28	(87.5)
Outbreak-associated	2	(6.3)
Outbreak status unknown	2	(6.3)



Interpretation:
Occurrence is determined by the earliest date associated with the case, which is most frequently the date of onset, but can also be the diagnosis date, the laboratory report date, or the date the county health department was notified of the case. For outcome, a case can be included in the hospitalized count as well as the death count. Hospitalized status means that a person was hospitalized at the time of their illness, though the hospitalization may not necessarily have been due to the illness. Deaths include all people with the illness who died, though the death may not necessarily have been due to the illness. Imported status refers to where the infection was most likely acquired. Outbreak- associated indicates that two or more cases are epidemiologically linked.

Additional Information

In 2015, 546 *Cyclospora* infections were reported to the CDC from 23 states. Most of these people experienced onset of illness on or after May 1, 2015 and reported no international travel (58% of cases). Florida identified 13 cases that fit these criteria. Clusters in Wisconsin and Texas identified cilantro as a suspected vehicle. No common vehicle was identified for the Florida cases. Two outbreak-associated cases were from a single household. Two cases initially reported with unknown outbreak status were determined to be sporadic after the close of the 2015 morbidity database. These cases are still listed as unknown outbreak status in the morbidity database and the figures above.

Dengue Fever

Disease Facts

Cause: Dengue viruses (DENV-1, DENV-2, DENV-3, DENV-4)

Type of illness: Acute febrile illness with headache, joint and muscle pain, rash, and eye pain; dengue hemorrhagic fever or dengue shock syndrome symptoms include severe abdominal pain, vomiting, and mucosal bleeding

Transmission: Bite of infective mosquito, rarely by blood transfusion or organ transplant

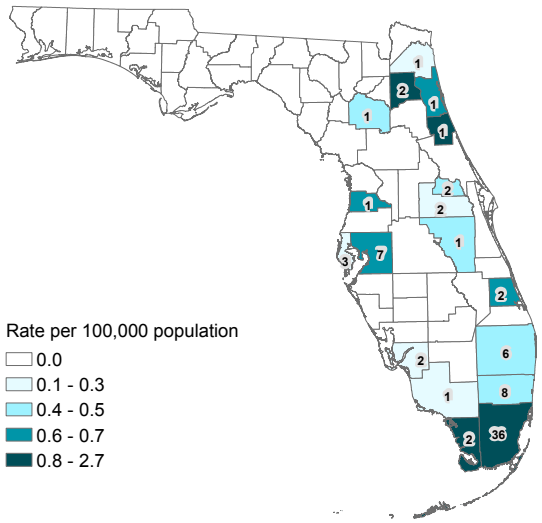
Reason for surveillance: Identify individual cases and implement control measures to prevent endemicity, monitor incidence over time, estimate burden of illness

Comments: An outbreak of locally acquired dengue fever occurred in Monroe County in 2009 and 2010 and in Martin County in 2013. In 2014, there were five unrelated local introductions in Miami-Dade County, resulting in seven locally acquired cases. In 2015, there was one local introduction in Broward County.

Summary of Case Demographics

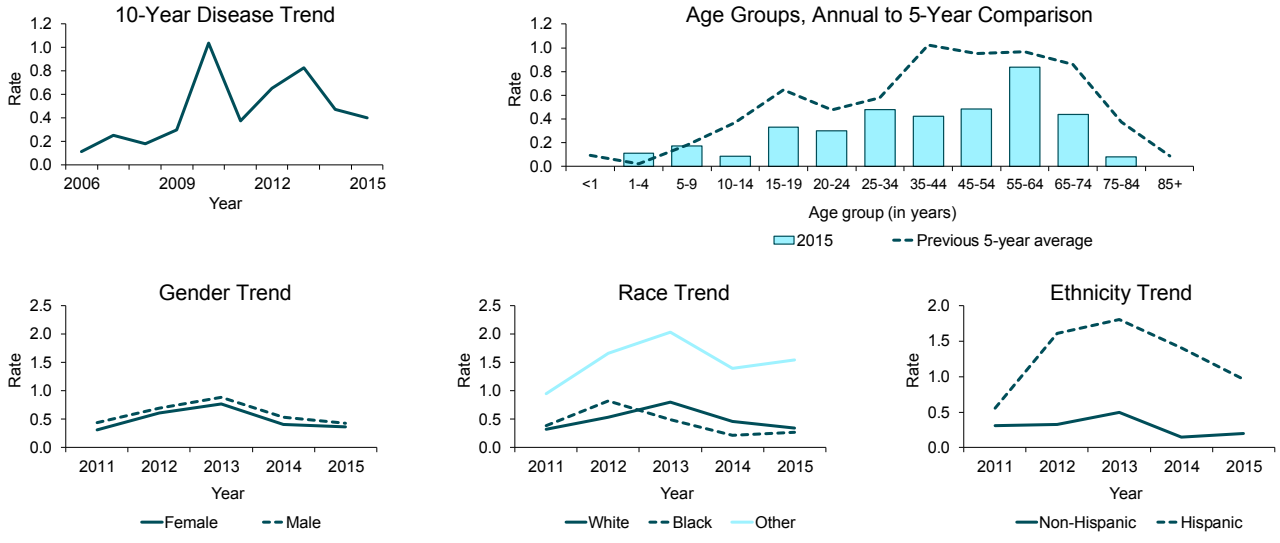
Summary			
Number of cases			79
Incidence rate (per 100,000 population)			0.4
Change from 5-year average incidence			-40.8%
Age (in Years)			
Mean			45
Median			48
Min-max			1 - 77
Gender	**Number**	**(Percent)**	**Rate**
Female	37	(46.8)	0.4
Male	42	(53.2)	0.4
Unknown gender	0		
Race	**Number**	**(Percent)**	**Rate**
White	53	(67.9)	0.3
Black	9	(11.5)	NA
Other	16	(20.5)	NA
Unknown race	1		
Ethnicity	**Number**	**(Percent)**	**Rate**
Non-Hispanic	30	(39.0)	0.2
Hispanic	47	(61.0)	1.0
Unknown ethnicity	2		

Reported Dengue Fever Cases and Incidence Rates Per 100,000 Population by County of Residence, Florida, 2015 (N=79)



Note that rates based on <20 cases are not reliable and should be interpreted with caution.

Incidence Rates Per 100,000 Population of Reported Dengue Fever Cases by Year, Age, Gender, Race, and Ethnicity, Florida



Note that the majority of dengue fever cases are acquired outside of Florida.

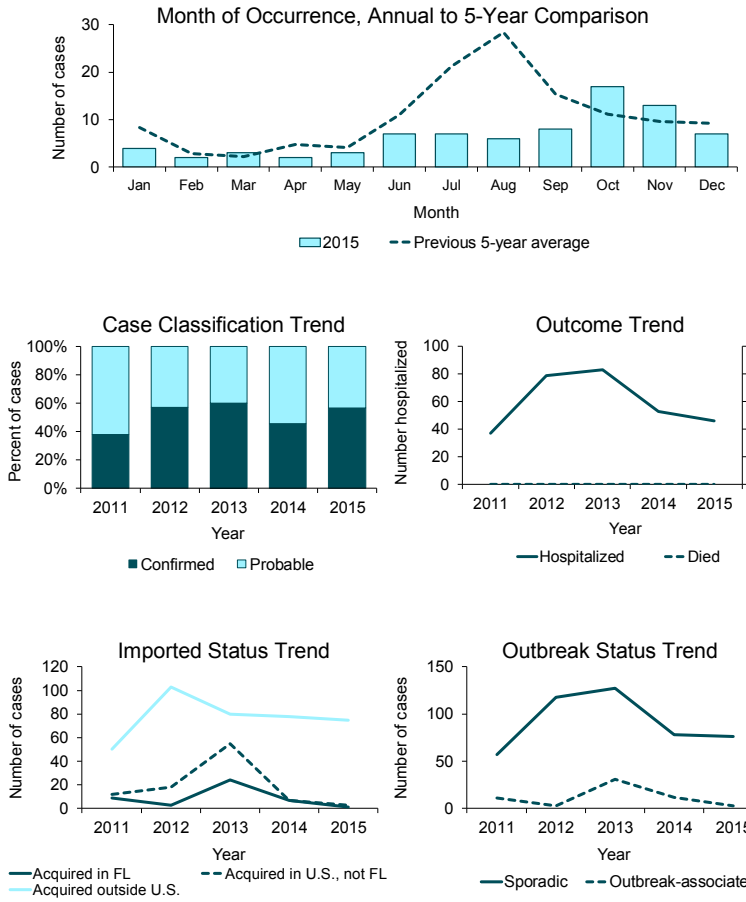
Dengue Fever

Summary of Case Factors

Summary	Number	
Number of cases	79	
Case Classification	**Number**	**(Percent)**
Confirmed	45	(57.0)
Probable	34	(43.0)
Outcome	**Number**	**(Percent)**
Hospitalized	46	(58.2)
Died	0	(0.0)
Imported Status	**Number**	**(Percent)**
Acquired in Florida	1	(1.3)
Acquired in the U.S., not Florida	3	(3.8)
Acquired outside the U.S.	75	(94.9)
Acquired location unknown	0	(0.0)
Outbreak Status	**Number**	**(Percent)**
Sporadic	76	(96.2)
Outbreak-associated	3	(3.8)
Outbreak status unknown	0	(0.0)
Region Where Infection Acquired	**Number**	**(Percent)**
Central America/Caribbean	55	(70.5)
South America	11	(14.1)
Asia	9	(11.5)
Other U.S. state	3	(3.8)

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. Other reports may use illness onset date instead of report date, or county of exposure instead of county of residence.

Reported Dengue Fever Cases by Month of Occurrence, Case Classification, Outcome, Imported Status, and Outbreak Status, Florida



Interpretation:
Occurrence is determined by the earliest date associated with the case, which is most frequently the date of onset, but can also be the diagnosis date, the laboratory report date, or the date the county health department was notified of the case. For outcome, a case can be included in the hospitalized count as well as the death count. Hospitalized status means that a person was hospitalized at the time of their illness, though the hospitalization may not necessarily have been due to the illness. Deaths include all people with the illness who died, though the death may not necessarily have been due to the illness. Imported status refers to where the infection was most likely acquired. Outbreak- associated indicates that two or more cases are epidemiologically linked.

Additional Information

One DENV-3 infection was acquired in Broward County. No additional transmission was identified related to that local introduction. Three infections were acquired in Hawaii. The remaining infections were primarily acquired in Central America or the Caribbean. In 2015, seven dengue fever cases were identified in non-Florida residents while traveling in Florida (note that this report only includes Florida residents in case counts). It is important to note that both infected residents and non-residents who are infectious and bitten by mosquitoes while in Florida could pose a potential risk for introduction of dengue fever.

Giardiasis, Acute

Disease Facts

Cause: *Giardia* parasites

Type of illness: Gastroenteritis (diarrhea, vomiting)

Transmission: Fecal-oral; including person-to-person, animal-to-person, waterborne, and foodborne

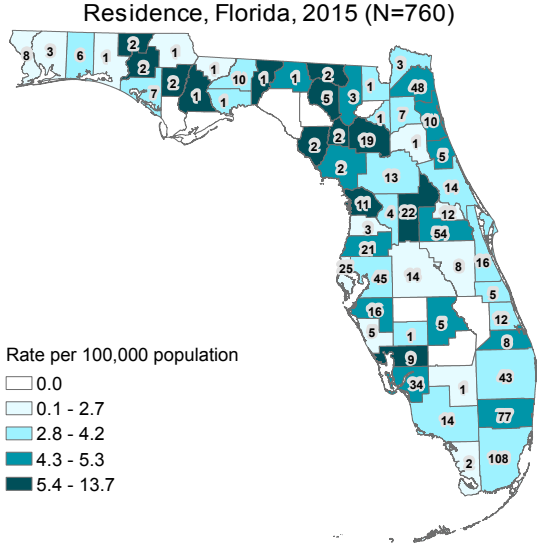
Reason for surveillance: Identify and control outbreaks, identify and mitigate common sources (e.g., contaminated food/water source, ill food handler), monitor incidence over time, estimate burden of illness

Comments: From August 2008 to January 2011, laboratory-confirmed cases no longer had to be symptomatic to meet the confirmed case definition, resulting in an increase in reported cases in 2009 and 2010. The percentage of cases reported in people in sensitive situations (i.e., food handlers, daycares, and health care settings) is typically ~10%, but it decreased in 2013 (7.9%) and returned to a more characteristic level in 2014 and 2015 (9.6% and 9.1% respectively).

Summary of Case Demographics

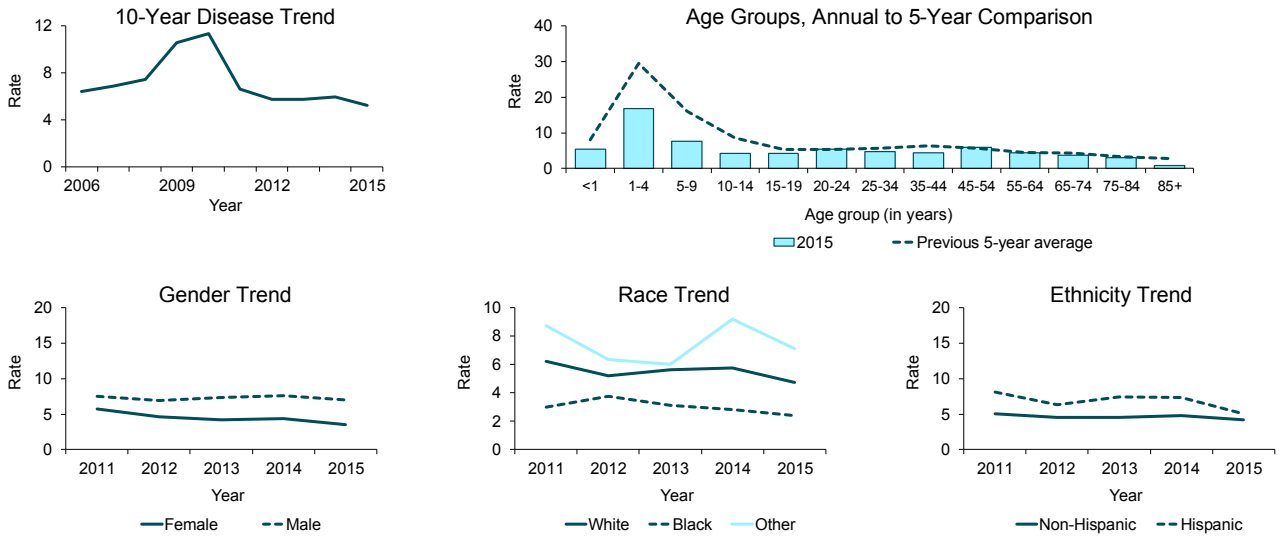
Summary			
Number of cases			1,038
Incidence rate (per 100,000 population)			5.2
Change from 5-year average incidence			-26.3%
Age (in Years)			
Mean			34
Median			32
Min-max			0 - 90
Gender	**Number**	**(Percent)**	**Rate**
Female	360	(34.7)	3.5
Male	678	(65.3)	7.0
Unknown gender	0		
Race	**Number**	**(Percent)**	**Rate**
White	734	(82.7)	4.7
Black	80	(9.0)	2.4
Other	74	(8.3)	7.1
Unknown race	150		
Ethnicity	**Number**	**(Percent)**	**Rate**
Non-Hispanic	628	(71.9)	4.2
Hispanic	245	(28.1)	5.0
Unknown ethnicity	165		

Reported Acute Giardiasis Cases and Incidence Rates Per 100,000 Population (Restricted to Infections Acquired in Florida) by County of Residence, Florida, 2015 (N=760)



Note that rates based on <20 cases are not reliable and should be interpreted with caution.

Incidence Rates Per 100,000 Population of Reported Acute Giardiasis Cases by Year, Age, Gender, Race, and Ethnicity, Florida



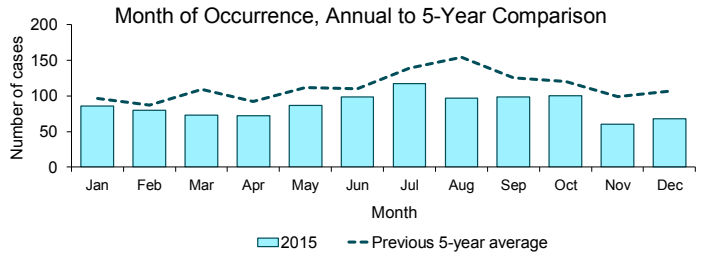
Note that trend graphs should be interpreted with caution when more than 5% of data are missing. Acute giardiasis cases were missing 13.0% of ethnicity data in 2011, 12.3% of race data in 2011, 13.3% of ethnicity data in 2012, 12.5% of race data in 2012, 9.1% of ethnicity data in 2013, 9.5% of race data in 2013, 8.8% of ethnicity data in 2014, 8.8% of race data in 2014, 15.9% of ethnicity data in 2015, and 14.5% of race data in 2015.

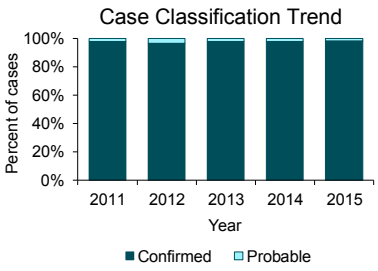
Giardiasis, Acute

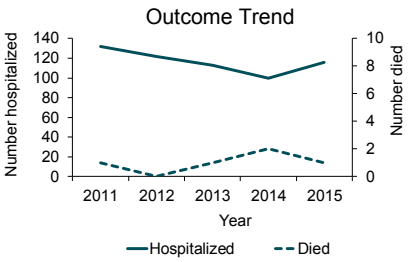
Summary of Case Factors

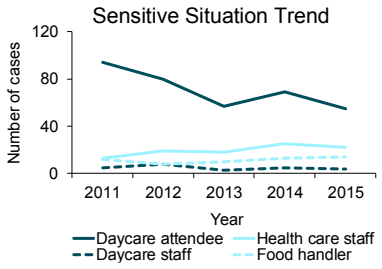
Summary	Number	
Number of cases	1,038	
Case Classification	**Number**	**(Percent)**
Confirmed	1,023	(98.6)
Probable	15	(1.4)
Outcome	**Number**	**(Percent)**
Hospitalized	116	(11.2)
Died	1	(0.1)
Sensitive Situation	**Number**	**(Percent)**
Daycare attendee	55	(5.3)
Daycare staff	4	(0.4)
Health care staff	22	(2.1)
Food handler	14	(1.3)
Imported Status	**Number**	**(Percent)**
Acquired in Florida	760	(73.2)
Acquired in the U.S., not Florida	27	(2.6)
Acquired outside the U.S.	170	(16.4)
Acquired location unknown	81	(7.8)
Outbreak Status	**Number**	**(Percent)**
Sporadic	935	(90.1)
Outbreak-associated	63	(6.1)
Outbreak status unknown	40	(3.9)

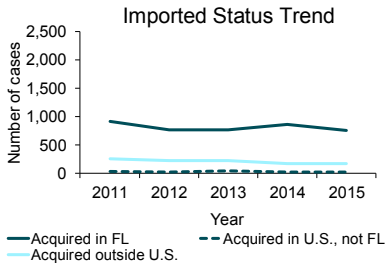
Reported Acute Giardiasis Cases by Month of Occurrence, Case Classification, Outcome, Sensitive Situation, Imported Status, and Outbreak Status, Florida

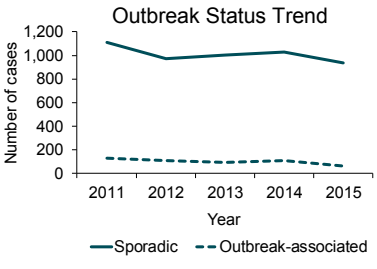












Interpretation:
Occurrence is determined by the earliest date associated with the case, which is most frequently the date of onset, but can also be the diagnosis date, the laboratory report date, or the date the county health department was notified of the case. For outcome, a case can be included in the hospitalized count as well as the death count. Hospitalized status means that a person was hospitalized at the time of their illness, though the hospitalization may not necessarily have been due to the illness. Deaths include all people with the illness who died, though the death may not necessarily have been due to the illness. Sensitive situation categories are not mutually exclusive, and most cases do not fall into any of these categories. Imported status refers to where the infection was most likely acquired. Outbreak- associated indicates that two or more cases are epidemiologically linked.

Gonorrhea

Disease Facts

Cause: *Neisseria gonorrhoeae* bacteria

Type of illness: Frequently asymptomatic; sometimes abnormal discharge from vagina or penis or burning sensation when urinating

Transmission: Sexually transmitted disease (STD) spread by anal, vaginal, or oral sex and sometimes from mother to child during pregnancy or delivery

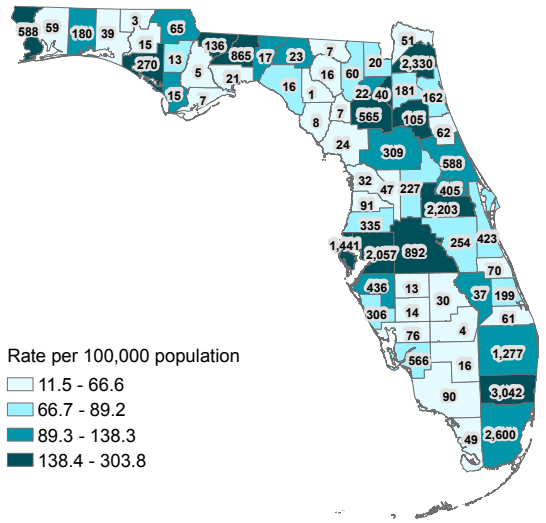
Reason for surveillance: Implement effective interventions immediately for every case, monitor incidence over time, estimate burden of illness, evaluate treatment and prevention programs

Comments: Incidence is highest among men, blacks, and 20- to 24-year-olds. Incidence decreased overall from 2006 to 2014, but increased 15.3% in 2015 compared to the previous 5-year average. The largest increase was in 20- to 24-year-old men.

Summary of Case Demographics

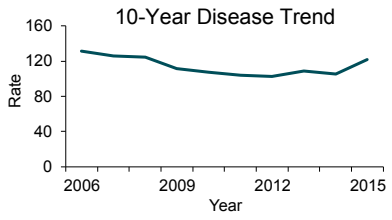
Summary			
Number of cases			24,188
Incidence rate (per 100,000 population)			121.8
Change from 5-year average incidence			+15.3%
Age (in Years)			
Mean			28
Median			25
Min-max			0 - 87
Gender	**Number**	**(Percent)**	**Rate**
Female	10,101	(41.8)	99.6
Male	14,079	(58.2)	144.9
Unknown gender	8		
Race	**Number**	**(Percent)**	**Rate**
White	8,342	(39.2)	53.9
Black	12,752	(60.0)	381.4
Other	165	(0.8)	15.9
Unknown race	2,929		
Ethnicity	**Number**	**(Percent)**	**Rate**
Non-Hispanic	18,033	(86.6)	120.2
Hispanic	2,784	(13.4)	57.4
Unknown ethnicity	3,371		

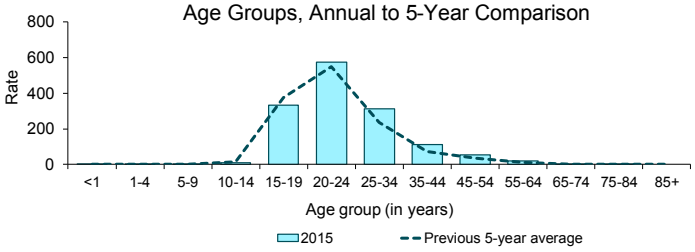
Reported Gonorrhea Cases and Incidence Rates Per 100,000 Population by County of Residence, Florida, 2015 (N=24,188)

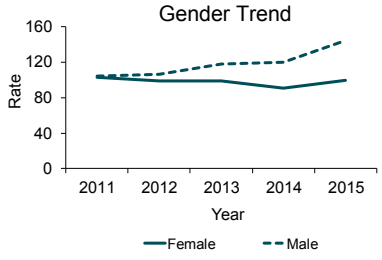


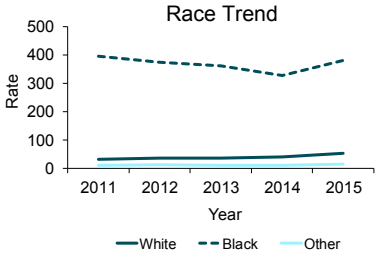
Note that rates based on <20 cases are not reliable and should be interpreted with caution.

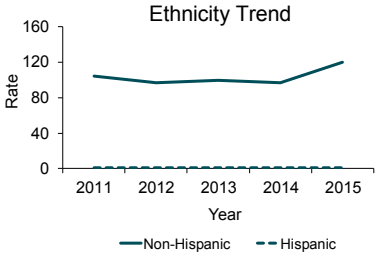
Incidence Rates Per 100,000 Population of Reported Gonorrhea Cases by Year, Age, Gender, Race, and Ethnicity, Florida











Note that trend graphs should be interpreted with caution when more than 5% of data are missing. Gonorrhea cases were missing 13.9% of ethnicity data in 2011, 11.7% of race data in 2011, 17.9% of ethnicity data in 2012, 10.3% of race data in 2012, 21.6% of ethnicity data in 2013, 17.4% of race data in 2013, 19.7% of ethnicity data in 2014, 17.3% of race data in 2014, 13.9% of ethnicity data in 2015, and 12.1% of race data in 2015.

Haemophilus influenzae Invasive Disease in Children <5 Years Old

Disease Facts

Cause: *Haemophilus influenzae* bacteria

Type of illness: Can present as pneumonia, bacteremia, septicemia, meningitis, epiglottitis, septic arthritis, cellulitis, or purulent pericarditis; less frequently endocarditis and osteomyelitis

Transmission: Person-to-person; inhalation of infective respiratory tract droplets or direct contact with infective respiratory tract secretions

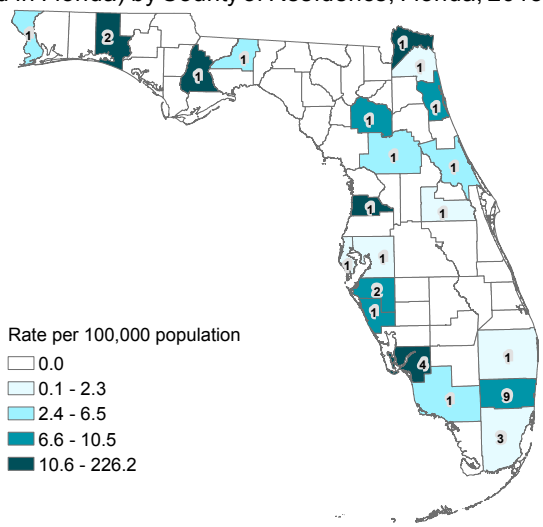
Reason for surveillance: Identify and control outbreaks, monitor incidence over time, monitor effectiveness of immunization programs and vaccines

Comments: *H. influenzae* serotype b (Hib) is a vaccine-preventable disease. Meningitis and septicemia due to Hib in children <5 years old have almost been eliminated since the introduction of effective Hib conjugate vaccines.

Summary of Case Demographics

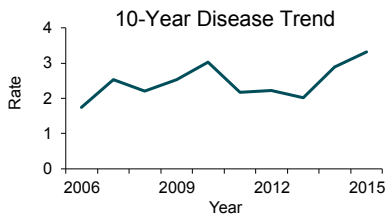
Summary			
Number of cases			37
Incidence rate (per 100,000 population)			3.3
Change from 5-year average incidence			+34.8%
Age (in Years)			
Mean			1
Median			0
Min-max			0 - 4
Gender	**Number**	**(Percent)**	**Rate**
Female	20	(54.1)	3.7
Male	17	(45.9)	NA
Unknown gender	0		
Race	**Number**	**(Percent)**	**Rate**
White	16	(45.7)	NA
Black	17	(48.6)	NA
Other	2	(5.7)	NA
Unknown race	2		
Ethnicity	**Number**	**(Percent)**	**Rate**
Non-Hispanic	32	(91.4)	4.2
Hispanic	3	(8.6)	NA
Unknown ethnicity	2		

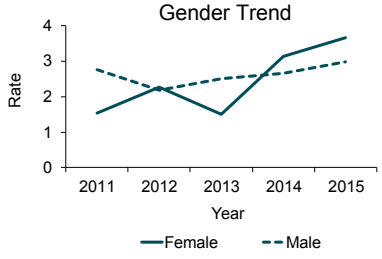
Reported *H. influenzae* Invasive Disease Cases in Children <5 Years Old and Incidence Rates Per 100,000 Population (Restricted to Infections Acquired in Florida) by County of Residence, Florida, 2015 (N=36)

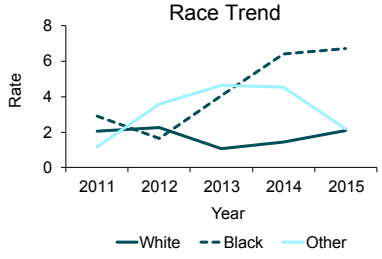


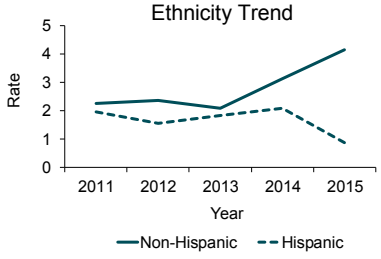
Note that rates based on <20 cases are not reliable and should be interpreted with caution.

Incidence Rates Per 100,000 Population of Reported *H. influenzae* Invasive Disease Cases in Children <5 Years Old by Year, Age, Gender, Race, and Ethnicity, Florida







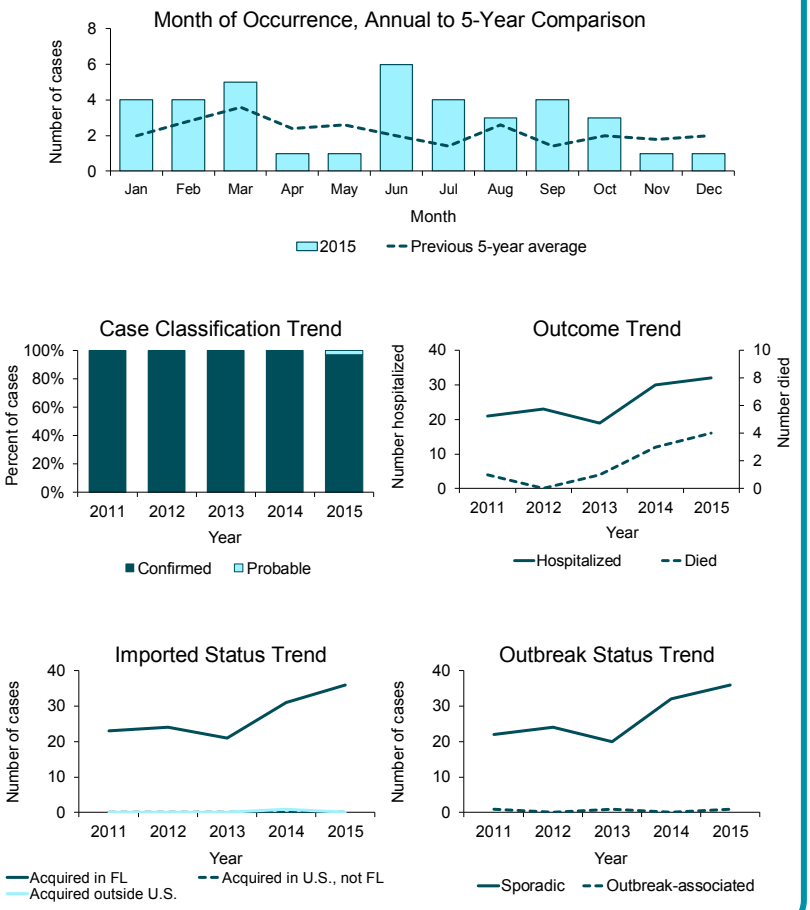


Note that trend graphs should be interpreted with caution when more than 5% of data are missing. *H. influenzae* invasive disease cases in children <5 years old were missing 5.4% of ethnicity data in 2015 and 5.4% of race data in 2015.

Summary of Case Factors

Summary	Number	
Number of cases	37	
Case Classification	**Number**	**(Percent)**
Confirmed	36	(97.3)
Probable	1	(2.7)
Outcome	**Number**	**(Percent)**
Hospitalized	32	(86.5)
Died	4	(10.8)
Imported Status	**Number**	**(Percent)**
Acquired in Florida	36	(97.3)
Acquired in the U.S., not Florida	0	(0.0)
Acquired outside the U.S.	0	(0.0)
Acquired location unknown	1	(2.7)
Outbreak Status	**Number**	**(Percent)**
Sporadic	36	(97.3)
Outbreak-associated	1	(2.7)
Outbreak status unknown	0	(0.0)
Serotype	**Number**	**(Percent)**
Type A	3	(8.1)
Type B	0	(0.0)
Type C	0	(0.0)
Type D	0	(0.0)
Type E	1	(2.7)
Type F	2	(5.4)
Not Type B	1	(2.7)
Unknown	6	(16.2)
Nontypeable	24	(64.9)

Reported *H. influenzae* Invasive Disease Cases in Children <5 Years Old by Month of Occurrence, Case Classification, Outcome, Imported Status, and Outbreak Status, Florida



Interpretation:
Occurrence is determined by the earliest date associated with the case, which is most frequently the date of onset, but can also be the diagnosis date, the laboratory report date, or the date the county health department was notified of the case. For outcome, a case can be included in the hospitalized count as well as the death count. Hospitalized status means that a person was hospitalized at the time of their illness, though the hospitalization may not necessarily have been due to the illness. Deaths include all people with the illness who died, though the death may not necessarily have been due to the illness. Imported status refers to where the infection was most likely acquired. Outbreak- associated indicates that two or more cases are epidemiologically linked.

Additional Information

No Hib case in children <5 years old were reported in 2015, compared to four in 2014 and one in 2013. In 2014, one case was up to date for Hib vaccine, the others had no or unknown Hib vaccine history. Two 2014 cases were likely imported. No deaths have been reported for Hib cases in children <5 years old from 2013-2015. One case was reported as outbreak-associated; this case represents vertical transmission from mother to infant.

Hansen's Disease (Leprosy)

Disease Facts

Cause: *Mycobacterium leprae* bacteria

Type of illness: Wide range of clinical manifestations related to skin, peripheral nerves, and nasal mucosa

Transmission: Not clearly defined; thought to be person-to-person in respiratory droplets following extended close contact with an infected person; the role of infected armadillos and possibly contaminated soil is not well characterized and is being investigated further

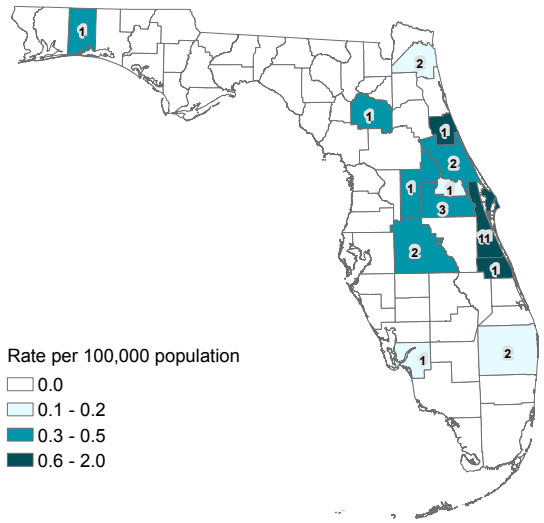
Reason for surveillance: Facilitate early diagnosis and appropriate treatment by an expert to minimize permanent nerve damage and prevent further transmission

Comments: The significant increase in cases in 2015 is at least partially attributed to increased clinician recognition, including increased awareness that the infection can occur in persons without international travel history, improved diagnostic tests to detect early infections, and delayed reporting.

Summary of Case Demographics

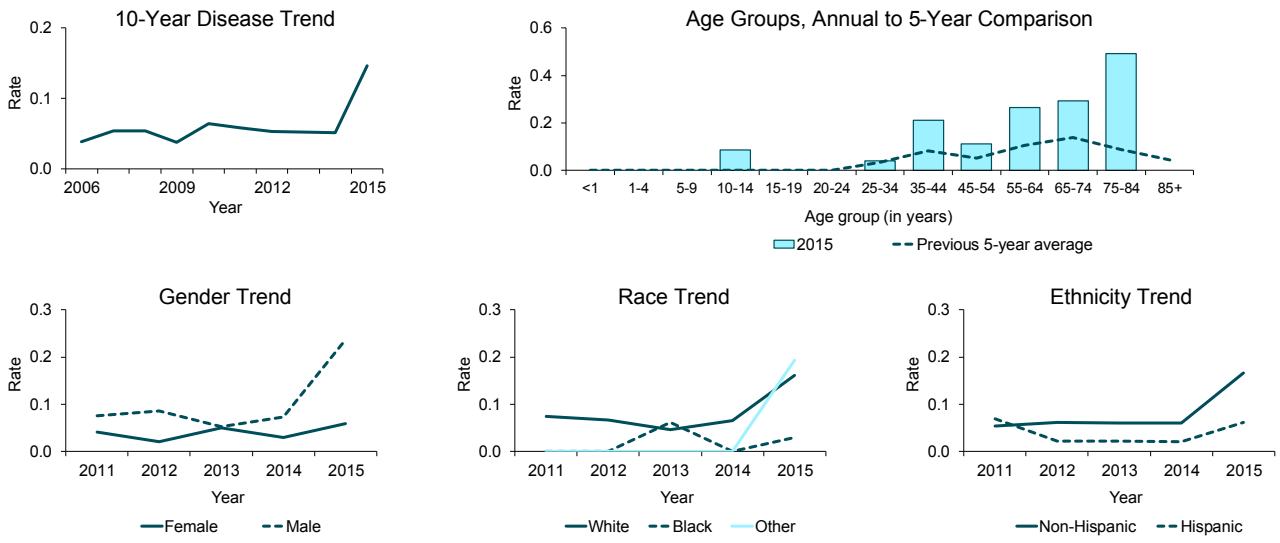
Summary			
Number of cases			29
Incidence rate (per 100,000 population)			0.1
Change from 5-year average incidence			+163.3%
Age (in Years)			
Mean			59
Median			61
Min-max			12 - 81
Gender	**Number**	**(Percent)**	**Rate**
Female	6	(20.7)	NA
Male	23	(79.3)	0.2
Unknown gender	0		
Race	**Number**	**(Percent)**	**Rate**
White	25	(89.3)	0.2
Black	1	(3.6)	NA
Other	2	(7.1)	NA
Unknown race	1		
Ethnicity	**Number**	**(Percent)**	**Rate**
Non-Hispanic	25	(89.3)	0.2
Hispanic	3	(10.7)	NA
Unknown ethnicity	1		

Reported Hansen's Disease (Leprosy) Cases and Incidence Rates Per 100,000 Population by County of Residence, Florida, 2015 (N=29)



Note that rates based on <20 cases are not reliable and should be interpreted with caution.

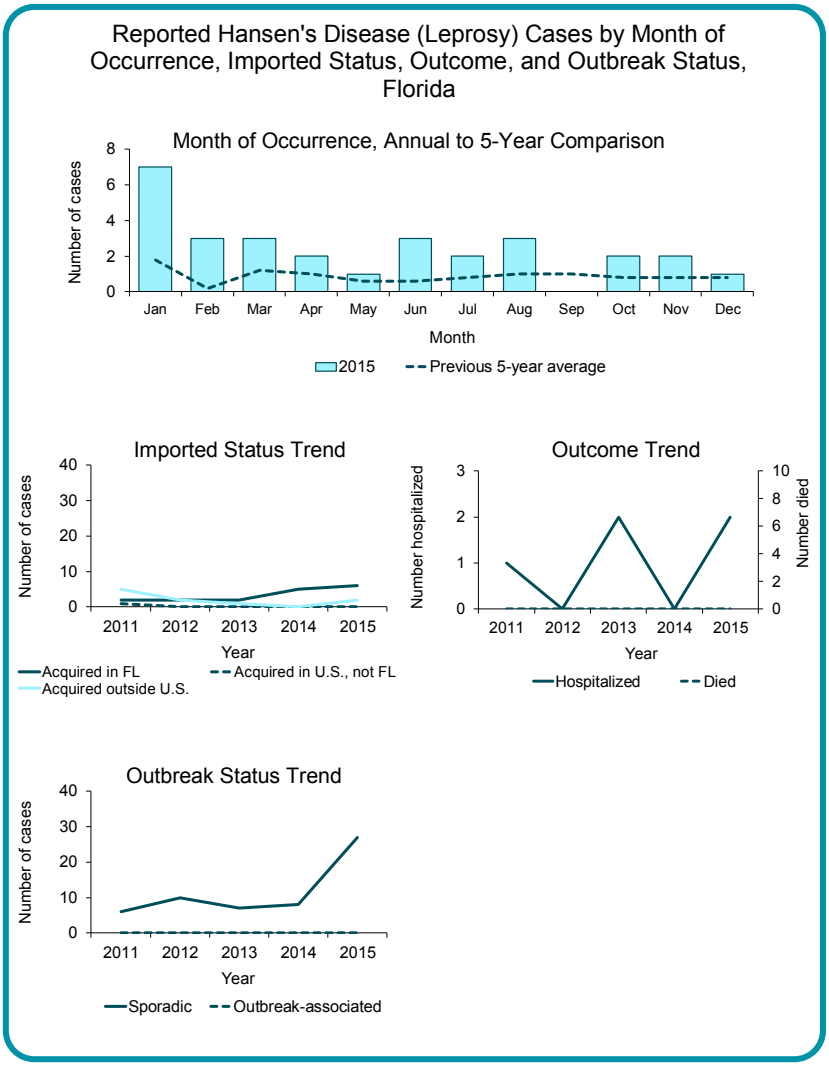
Incidence Rates Per 100,000 Population of Reported Hansen's Disease (Leprosy) Cases by Year, Age, Gender, Race, and Ethnicity, Florida



Note that trend graphs should be interpreted with caution when more than 5% of data are missing. Hansen's disease (leprosy) cases were missing 10.0% of race data in 2013.

Summary of Case Factors

Summary	Number	
Number of cases	29	
Outcome	**Number**	**(Percent)**
Hospitalized	2	(6.9)
Died	0	(0.0)
Imported Status	**Number**	**(Percent)**
Acquired in Florida	6	(20.7)
Acquired in the U.S., not Florida	0	(0.0)
Acquired outside the U.S.	2	(6.9)
Acquired location unknown	21	(72.4)
Outbreak Status	**Number**	**(Percent)**
Sporadic	27	(93.1)
Outbreak-associated	0	(0.0)
Outbreak status unknown	2	(6.9)



Interpretation:
Occurrence is determined by the earliest date associated with the case, which is most frequently the date of onset, but can also be the diagnosis date, the laboratory report date, or the date the county health department was notified of the case. For outcome, a case can be included in the hospitalized count as well as the death count. Hospitalized status means that a person was hospitalized at the time of their illness, though the hospitalization may not necessarily have been due to the illness. Deaths include all people with the illness who died, though the death may not necessarily have been due to the illness. Imported status refers to where the infection was most likely acquired. Outbreak- associated indicates that two or more cases are epidemiologically linked.

Hepatitis A

Disease Facts

Cause: Hepatitis A virus (HAV)

Type of illness: Inflammation of the liver; sometimes asymptomatic; symptoms can include fever, malaise, loss of appetite, nausea, vomiting, abdominal discomfort, and jaundice

Transmission: Fecal-oral; including person-to-person, foodborne, and waterborne

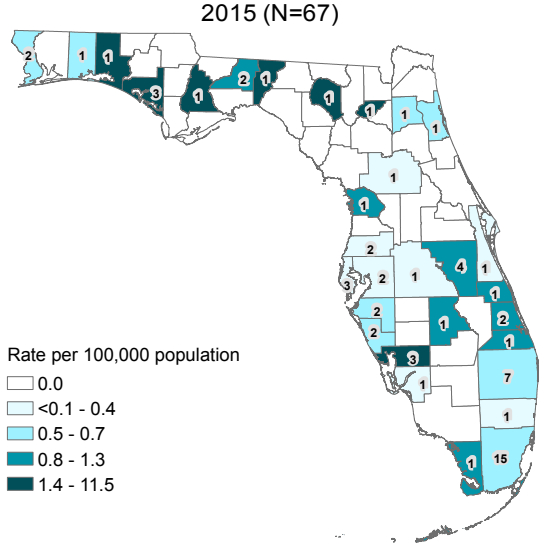
Reason for surveillance: Identify and control outbreaks, identify and mitigate common sources (e.g., contaminated food product, ill food handler), monitor effectiveness of immunization programs

Comments: Hepatitis A is a vaccine-preventable disease. Incidence has continued to decline in Florida and nationally, likely due to increased use of vaccine as part of the routine childhood immunization schedule. A large portion of infections are acquired among unvaccinated people traveling internationally to countries that lack routine immunization programs and as a result have a high incidence of hepatitis A (39.3% in 2015).

Summary of Case Demographics

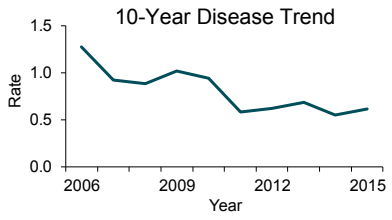
Summary			
Number of cases			122
Incidence rate (per 100,000 population)			0.6
Change from 5-year average incidence			-9.2%
Age (in Years)			
Mean			47
Median			50
Min-max			4 - 83
Gender	**Number**	**(Percent)**	**Rate**
Female	54	(44.3)	0.5
Male	68	(55.7)	0.7
Unknown gender	0		
Race	**Number**	**(Percent)**	**Rate**
White	90	(81.8)	0.6
Black	6	(5.5)	NA
Other	14	(12.7)	NA
Unknown race	12		
Ethnicity	**Number**	**(Percent)**	**Rate**
Non-Hispanic	70	(66.0)	0.5
Hispanic	36	(34.0)	0.7
Unknown ethnicity	16		

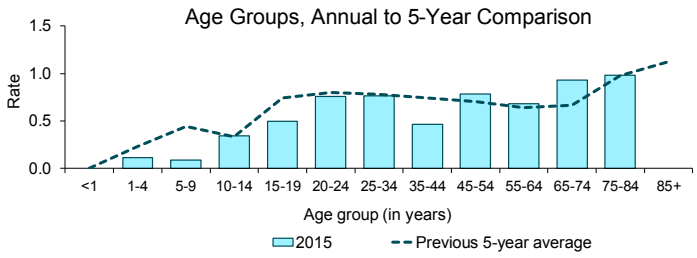
Reported Hepatitis A Cases and Incidence Rates Per 100,000 Population (Restricted to Infections Acquired in Florida) by County of Residence, Florida, 2015 (N=67)

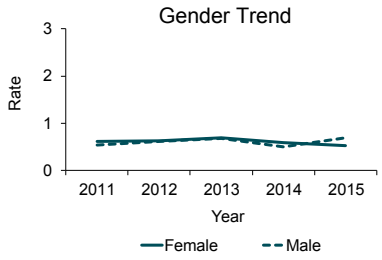


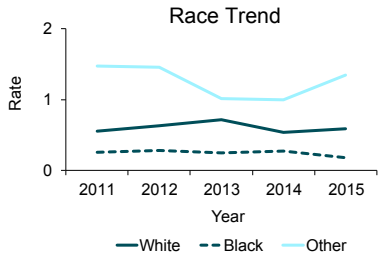
Note that rates based on <20 cases are not reliable and should be interpreted with caution.

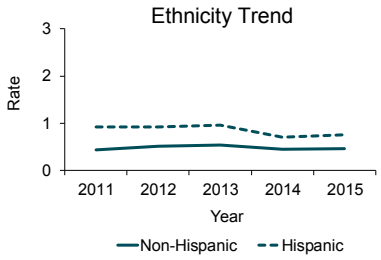
Incidence Rates Per 100,000 Population of Reported Hepatitis A Cases by Year, Age, Gender, Race, and Ethnicity, Florida









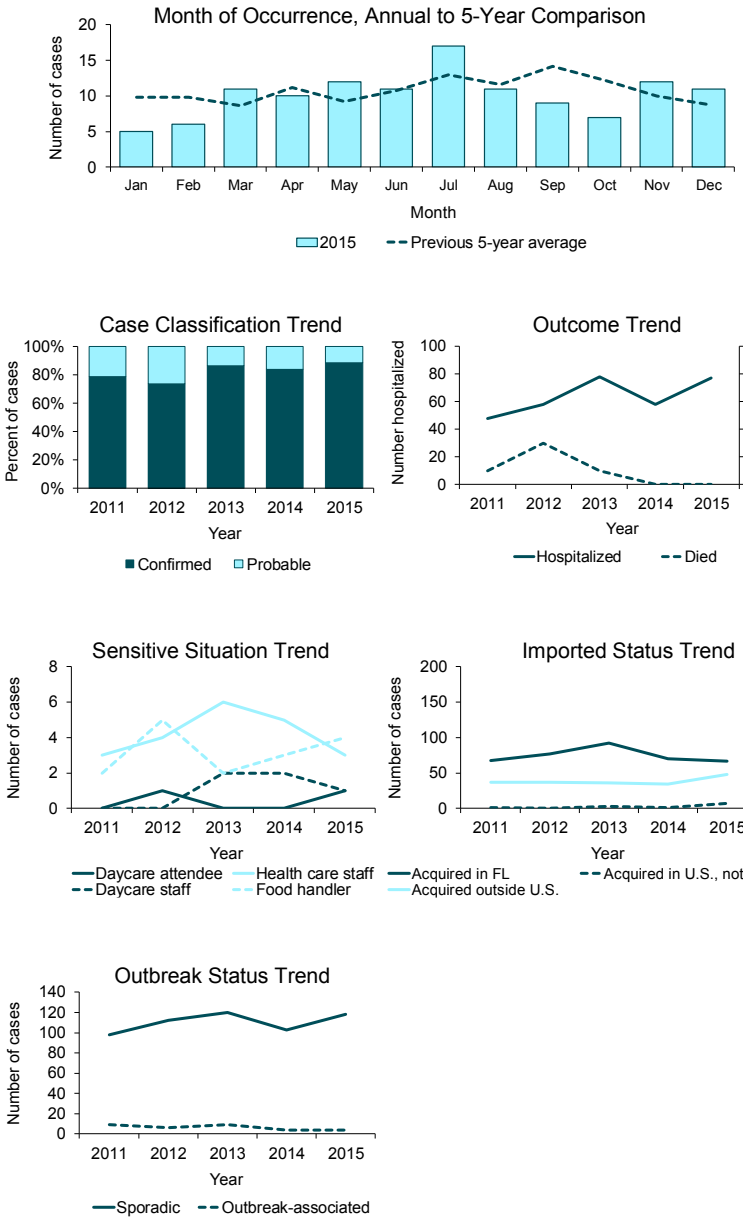


Note that trend graphs should be interpreted with caution when more than 5% of data are missing. Hepatitis A cases were missing 6.8% of ethnicity data in 2013, 5.3% of race data in 2013, 5.6% of ethnicity data in 2014, 5.6% of race data in 2014, 13.1% of ethnicity data in 2015, and 9.8% of race data in 2015.

Summary of Case Factors

Summary	Number	
Number of cases	122	
Case Classification	**Number**	**(Percent)**
Confirmed	108	(88.5)
Probable	14	(11.5)
Outcome	**Number**	**(Percent)**
Hospitalized	77	(63.1)
Died	0	(0.0)
Sensitive Situation	**Number**	**(Percent)**
Daycare attendee	1	(0.8)
Daycare staff	1	(0.8)
Health care staff	3	(2.5)
Food handler	4	(3.3)
Imported Status	**Number**	**(Percent)**
Acquired in Florida	67	(54.9)
Acquired in the U.S., not Florida	7	(5.7)
Acquired outside the U.S.	48	(39.3)
Acquired location unknown	0	(0.0)
Outbreak Status	**Number**	**(Percent)**
Sporadic	118	(96.7)
Outbreak-associated	4	(3.3)
Outbreak status unknown	0	(0.0)
Region Where Infection Acquired	**Number**	**(Percent)**
Central America/Caribbean	19	(34.5)
South America	16	(29.1)
Asia	8	(14.5)
Other U.S. state	4	(7.3)
Multiple Regions	2	(3.6)
Unknown	6	(10.9)

Reported Hepatitis A Cases by Month of Occurrence, Case Classification, Outcome, Sensitive Situation, Imported Status, and Outbreak Status, Florida



Interpretation:
Occurrence is determined by the earliest date associated with the case, which is most frequently the date of onset, but can also be the diagnosis date, the laboratory report date, or the date the county health department was notified of the case. For outcome, a case can be included in the hospitalized count as well as the death count. Hospitalized status means that a person was hospitalized at the time of their illness, though the hospitalization may not necessarily have been due to the illness. Deaths include all people with the illness who died, though the death may not necessarily have been due to the illness. Sensitive situation categories are not mutually exclusive, and most cases do not fall into any of these categories. Imported status refers to where the infection was most likely acquired. Outbreak-associated indicates that two or more cases are epidemiologically linked.

Additional Information

In 2015, there were no reported multistate outbreaks of hepatitis A. Three cases of hepatitis A were associated with a single outbreak. Two infections were acquired while traveling in Peru. A third infection was likely acquired via sexual contact once the travelers returned to Florida. One case initially reported as outbreak-associated was determined to be sporadic after the close of the 2015 morbidity database. This case is still listed as unknown outbreak status in the morbidity database and the figures above.

Hepatitis B, Acute

Disease Facts

Cause: Hepatitis B virus (HBV)

Type of illness: Inflammation of the liver; sometimes asymptomatic; symptoms can include malaise, loss of appetite, nausea, vomiting, abdominal discomfort, and jaundice; 2-6% of infections in adults become chronic

Transmission: Blood exposure, anal or vaginal sex, percutaneous exposure (e.g., tattooing, needle sticks), or from mother to child during pregnancy or delivery

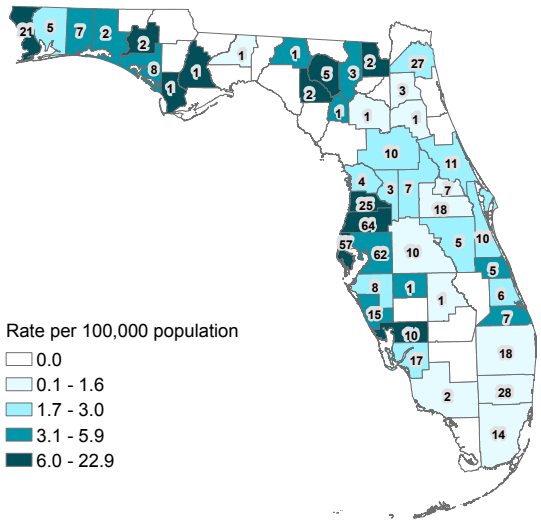
Reason for surveillance: Enhance efforts to prevent HBV transmission, identify and prevent outbreaks, improve allocation of resources for treatment services, assist in evaluating the impact of public health interventions, monitor effectiveness of immunization programs

Comments: Hepatitis B is a vaccine-preventable disease. Incidence is highest in white, non-Hispanic men and in counties in the Panhandle and western part of the state.

Summary of Case Demographics

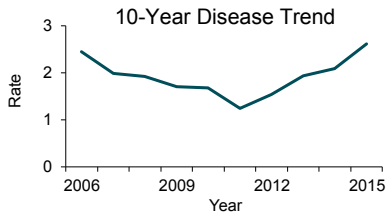
Summary			
Number of cases			519
Incidence rate (per 100,000 population)			2.6
Change from 5-year average incidence			+54.1%
Age (in Years)			
Mean			44
Median			43
Min-max			4 - 87
Gender	**Number**	**(Percent)**	**Rate**
Female	197	(38.0)	1.9
Male	322	(62.0)	3.3
Unknown gender	0		
Race	**Number**	**(Percent)**	**Rate**
White	409	(86.5)	2.6
Black	48	(10.1)	1.4
Other	16	(3.4)	NA
Unknown race	46		
Ethnicity	**Number**	**(Percent)**	**Rate**
Non-Hispanic	421	(93.8)	2.8
Hispanic	28	(6.2)	0.6
Unknown ethnicity	70		

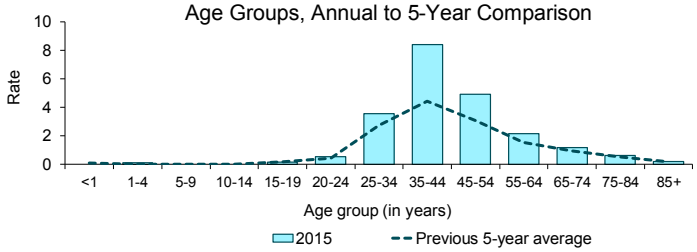
Reported Acute Hepatitis B Cases and Incidence Rates Per 100,000 Population by County of Residence, Florida, 2015 (N=519)

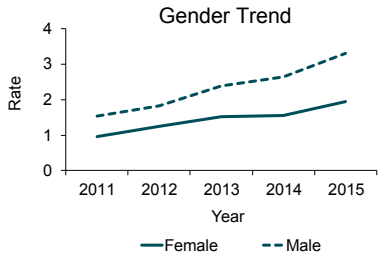


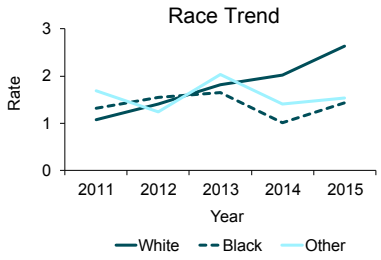
Note that rates based on <20 cases are not reliable and should be interpreted with caution.

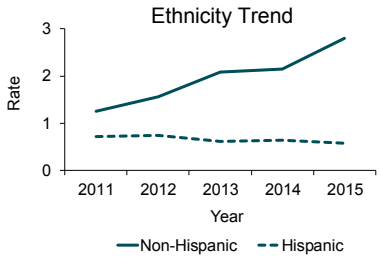
Incidence Rates Per 100,000 Population of Reported Acute Hepatitis B Cases by Year, Age, Gender, Race, and Ethnicity, Florida











Note that trend graphs should be interpreted with caution when more than 5% of data are missing. Acute hepatitis B cases were missing 8.9% of ethnicity data in 2011, 7.2% of race data in 2011, 10.3% of ethnicity data in 2012, 6.8% of race data in 2012, 10.1% of ethnicity data in 2013, 7.5% of race data in 2013, 14.2% of ethnicity data in 2014, 12.3% of race data in 2014, 13.5% of ethnicity data in 2015, and 8.9% of race data in 2015.

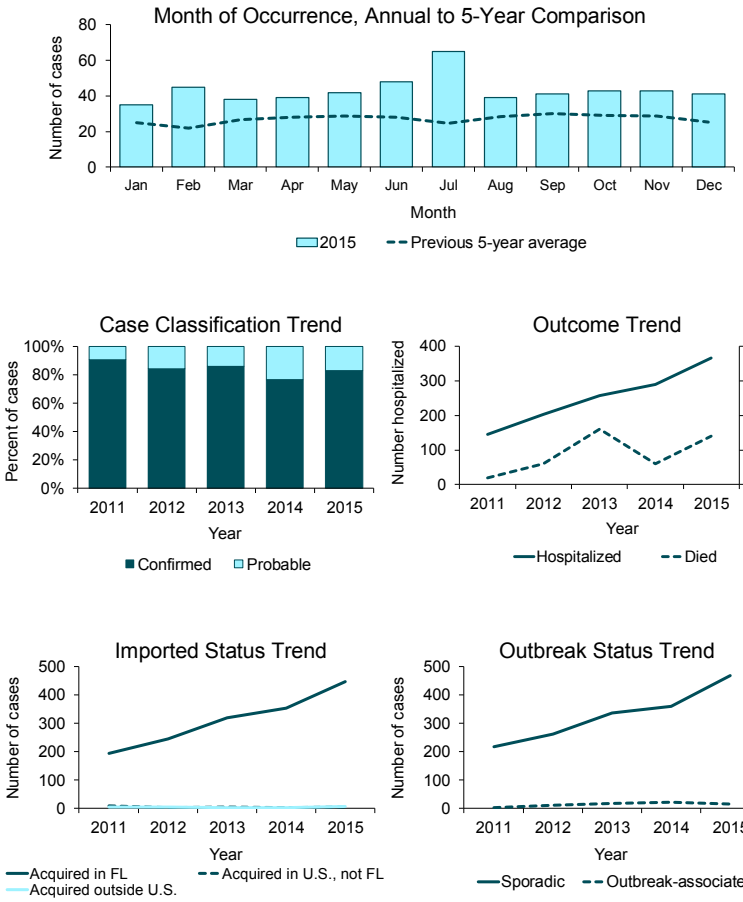
Summary of Case Factors

Summary	Number	
Number of cases	519	
Case Classification	**Number**	**(Percent)**
Confirmed	432	(83.2)
Probable	87	(16.8)
Outcome	**Number**	**(Percent)**
Hospitalized	367	(70.7)
Died	7	(1.3)
Imported Status	**Number**	**(Percent)**
Acquired in Florida	447	(86.1)
Acquired in the U.S., not Florida	5	(1.0)
Acquired outside the U.S.	8	(1.5)
Acquired location unknown	59	(11.4)
Outbreak Status	**Number**	**(Percent)**
Sporadic	468	(90.2)
Outbreak-associated	15	(2.9)
Outbreak status unknown	36	(6.9)

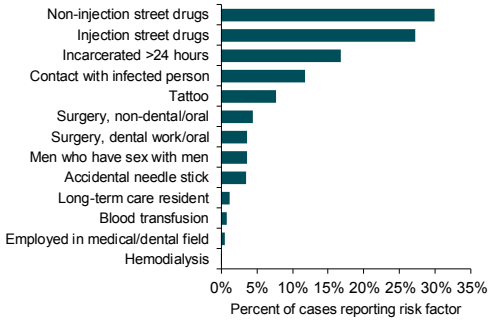
Acute clinical symptoms or prior negative laboratory results are required to differentiate acute hepatitis B from chronic, making surveillance challenging. Incidence declined over the last decade due to increased vaccination, but started increasing in 2011 and continued to increase in 2015. The identified increase is likely due to an enhanced surveillance project focusing on chronic infections in young adults initiated in 2012, changes in risk behaviors in young adults, and updated laboratory reporting guidance in June 2014 requiring laboratories participating in electronic laboratory reporting to submit all negative hepatitis results.

In 2015, 496 cases (95.6%) were investigated and 336 cases (64.7%) were interviewed to determine possible risk factors. Risk factors reported are shown to the right. Note that a person can report multiple risk factors. New infections of viral hepatitis are frequently associated with drug use and sharing of injection equipment. The top three risk factors include both injection and non-injection drug use as well as incarceration, which is similar to past years. Of 15 outbreak-associated cases, 12 (80.0%) were sexual contacts, two (13.3%) were household contacts, and one (6.7%) shared needles with a known case.

Reported Acute Hepatitis B Cases by Month of Occurrence, Case Classification, Outcome, Imported Status, and Outbreak Status, Florida



Risk Factors for Reported Acute Hepatitis B Cases, Florida, 2015



Interpretation:
Occurrence is determined by the earliest date associated with the case, which is most frequently the date of onset, but can also be the diagnosis date, the laboratory report date, or the date the county health department was notified of the case. For outcome, a case can be included in the hospitalized count as well as the death count. Hospitalized status means that a person was hospitalized at the time of their illness, though the hospitalization may not necessarily have been due to the illness. Deaths include all people with the illness who died, though the death may not necessarily have been due to the illness. Imported status refers to where the infection was most likely acquired. Outbreak-associated indicates that two or more cases are epidemiologically linked.

Hepatitis B, Chronic

Disease Facts

Cause: Hepatitis B virus (HBV)

Type of illness: Most often asymptomatic; many people have chronic liver disease including cirrhosis and liver cancer; 2-6% of infections in adults become chronic

Transmission: Blood exposure, anal or vaginal sex, percutaneous exposure (e.g., tattooing, needle sticks), or from mother to child during pregnancy or delivery

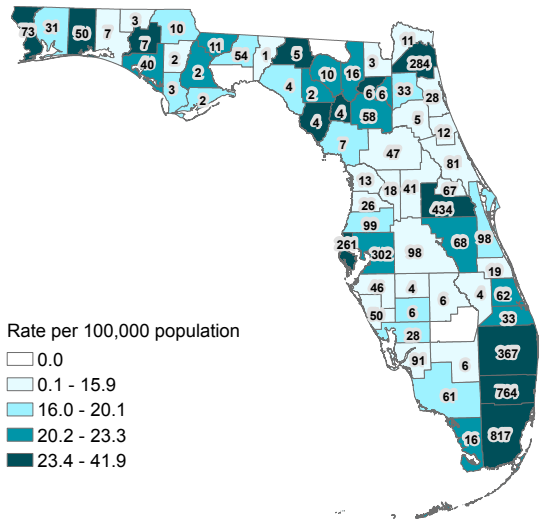
Reason for surveillance: Enhance efforts to prevent HBV transmission, identify acute infections and prevent outbreaks, improve allocation of resources for treatment services, assist in evaluating the impact of public health interventions, monitor effectiveness of immunization programs

Comments: Hepatitis B is a vaccine-preventable disease. Incidence is highest in adults 35 to 44 years old. Incidence remained relatively stable from 2009 to 2013, increased slightly in 2014, and remained high in 2015.

Summary of Case Demographics

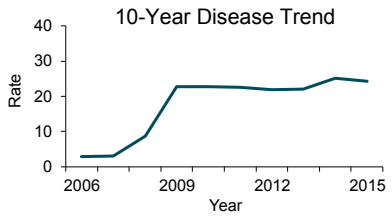
Summary			
Number of cases			4,827
Incidence rate (per 100,000 population)			24.3
Change from 5-year average incidence			+6.2%
Age (in Years)			
Mean			47
Median			46
Min-max			0 - 95
Gender	**Number**	**(Percent)**	**Rate**
Female	2,094	(43.5)	20.6
Male	2,718	(56.5)	28.0
Unknown gender	15		
Race	**Number**	**(Percent)**	**Rate**
White	1,239	(55.4)	8.0
Black	618	(27.6)	18.5
Other	381	(17.0)	36.7
Unknown race	2,589		
Ethnicity	**Number**	**(Percent)**	**Rate**
Non-Hispanic	1,442	(79.8)	9.6
Hispanic	365	(20.2)	7.5
Unknown ethnicity	3,020		

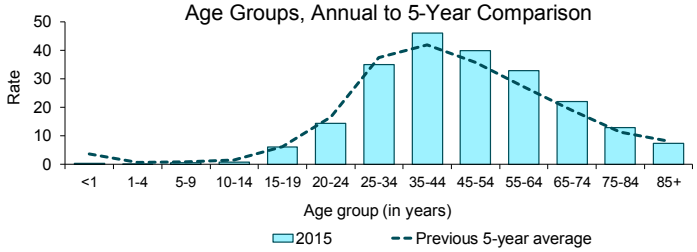
Reported Chronic Hepatitis B Cases and Incidence Rates Per 100,000 Population by County of Residence, Florida, 2015 (N=4,827)

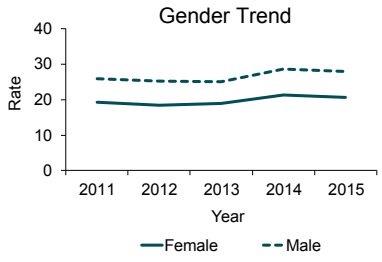


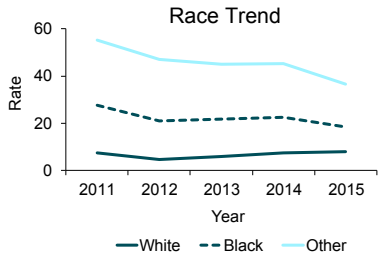
Note that rates based on <20 cases are not reliable and should be interpreted with caution.

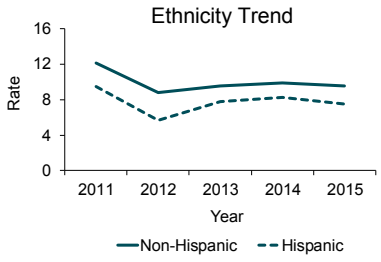
Incidence Rates Per 100,000 Population of Reported Chronic Hepatitis B Cases by Year, Age, Gender, Race, and Ethnicity, Florida









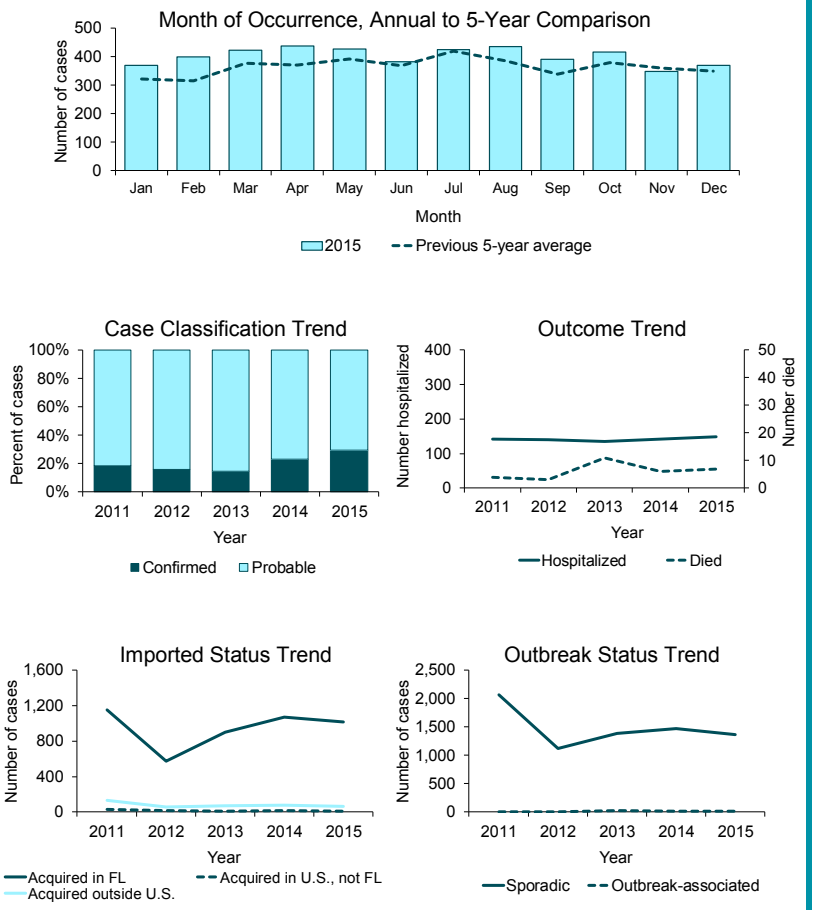


Note that trend graphs should be interpreted with caution when more than 5% of data are missing. Chronic hepatitis B cases were missing 48.6% of ethnicity data in 2011, 41.4% of race data in 2011, 63.0% of ethnicity data in 2012, 55.8% of race data in 2012, 58.4% of ethnicity data in 2013, 51.6% of race data in 2013, 62.1% of ethnicity data in 2014, 52.3% of race data in 2014, 62.4% of ethnicity data in 2015, and 53.2% of race data in 2015.

Summary of Case Factors

Summary	Number	
Number of cases	4,827	
Case Classification	**Number**	**(Percent)**
Confirmed	1,423	(29.5)
Probable	3,404	(70.5)
Outcome	**Number**	**(Percent)**
Hospitalized	149	(3.1)
Died	7	(0.1)
Imported Status	**Number**	**(Percent)**
Acquired in Florida	1,020	(21.1)
Acquired in the U.S., not Florida	10	(0.2)
Acquired outside the U.S.	67	(1.4)
Acquired location unknown	3,730	(77.3)
Outbreak Status	**Number**	**(Percent)**
Sporadic	1,365	(28.3)
Outbreak-associated	12	(0.2)
Outbreak status unknown	3,450	(71.5)

Reported Chronic Hepatitis B Cases by Month of Occurrence, Case Classification, Outcome, Imported Status, and Outbreak Status, Florida



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Additional Information

This is the first year that chronic hepatitis B has been described in this report. Given the large burden of chronic hepatitis and limited county resources, there have been concerns regarding data completeness and case ascertainment in the past. Earlier data are less reliable, particularly prior to 2009. Since 2009, improvements in electronic laboratory reporting (ELR) and increased focus on surveillance have improved case ascertainment. Automated case classification and reporting logic in the surveillance application have improved data quality and sensitivity. In 2014, reporting requirements were updated to include mandatory reporting of all positive and negative hepatitis results as well as all liver function tests to support the identification of acute hepatitis B cases. ELR has continued to expand and in 2015, 97% of all chronic hepatitis B laboratory results were received by the Department electronically. Acute clinical symptoms or prior negative laboratory results are required to differentiate acute hepatitis B from chronic. Given the volume of laboratory results received electronically for which no clinical information is available, it is likely that acute HBV infections are misclassified as chronic. An enhanced surveillance project focusing on chronic hepatitis infections in young adults was initiated in 2012 to help identify risk factors and acute infections.

Hepatitis B, Surface Antigen in Pregnant Women

Disease Facts

Cause: Hepatitis B virus (HBV)

Type of illness: Acute or chronic illness; infection is identified when a woman tests positive for hepatitis B surface antigen (HBsAg) during pregnancy, regardless of symptoms; up to 90% of perinatal infections become chronic

Transmission: Anal or vaginal sex, blood exposure, percutaneous exposure (e.g., tattooing, needle sticks), or from mother to child during pregnancy or delivery

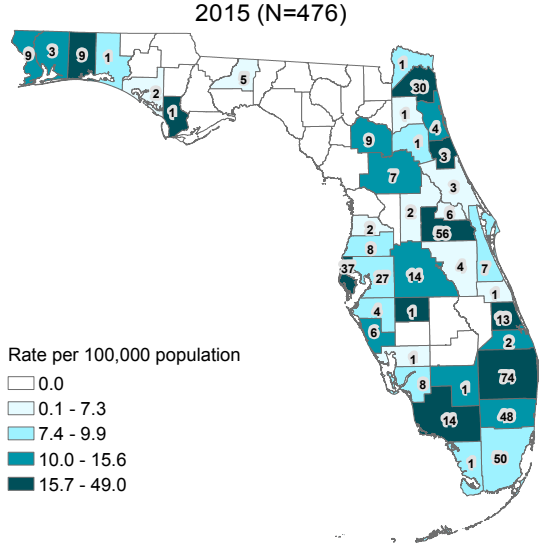
Reason for surveillance: Identify individual cases and implement control measures to prevent HBV transmission from mother to baby; evaluate effectiveness of screening programs

Comments: Hepatitis B is a vaccine-preventable disease. Identification of HBsAg in pregnant women allows for appropriate treatment of their infants, significantly reducing the infants' risk of contracting HBV. In the U.S., Asians have a high HBsAg carrier rate (7-16%) and account for most infections in the "other" race category.

Summary of Case Demographics

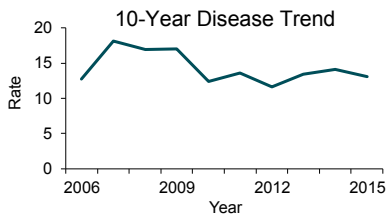
Summary			
Number of cases			476
Incidence rate (per 100,000 population)			13.1
Change from 5-year average incidence			+0.4%
Age (in Years)			
Mean			31
Median			32
Min-max			16 - 45
Gender	**Number**	**(Percent)**	**Rate**
Female	474	(99.6)	13.0
Male	NA	NA	NA
Unknown gender	NA		
Race	**Number**	**(Percent)**	**Rate**
White	87	(19.8)	3.3
Black	175	(39.9)	23.6
Other	177	(40.3)	76.8
Unknown race	37		
Ethnicity	**Number**	**(Percent)**	**Rate**
Non-Hispanic	396	(93.4)	15.2
Hispanic	28	(6.6)	2.7
Unknown ethnicity	52		

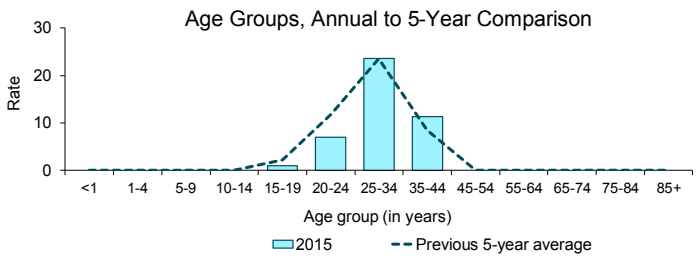
Reported Hepatitis B Surface Antigen in Pregnant Women Cases and Incidence Rates Per 100,000 Population by County of Residence, Florida, 2015 (N=476)

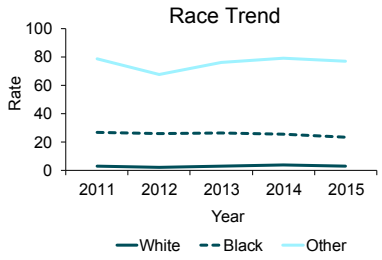


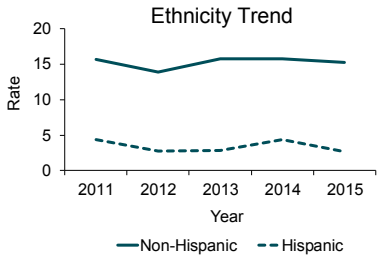
Note that rates based on <20 cases are not reliable and should be interpreted with caution.

Incidence Rates Per 100,000 Population of Reported Hepatitis B Surface Antigen Cases in Pregnant Women by Year, Age, Race, and Ethnicity, Florida









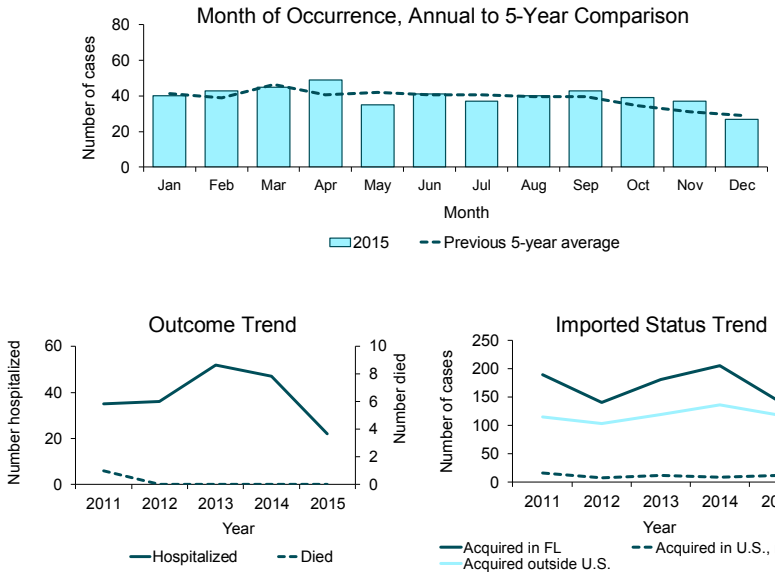
Note that trend graphs should be interpreted with caution when more than 5% of data are missing. Hepatitis B surface antigen cases in pregnant women were missing 6.7% of ethnicity data in 2011, 5.6% of race data in 2011, 6.3% of ethnicity data in 2012, 9.1% of ethnicity data in 2013, 7.3% of race data in 2013, 10.4% of ethnicity data in 2014, 7.6% of race data in 2014, 10.5% of ethnicity data in 2015, and 7.4% of race data in 2015.

Hepatitis B, Surface Antigen in Pregnant Women

Summary of Case Factors

Summary	Number	
Number of cases	476	
Outcome	**Number**	**(Percent)**
Hospitalized	22	(4.6)
Died	0	(0.0)
Imported Status	**Number**	**(Percent)**
Acquired in Florida	143	(30.0)
Acquired in the U.S., not Florida	12	(2.5)
Acquired outside the U.S.	118	(24.8)
Acquired location unknown	203	(42.6)

Reported Hepatitis B Surface Antigen in Pregnant Women Cases by Month of Occurrence, Outcome, and Imported Status, Florida



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Additional Information

According to the 2013 National Immunization Survey, the estimated HBV vaccination coverage for birth dose administered from birth through 3 days of age was 72.4% ± 1.5% in the U.S. and 53.2% ± 9.2% in Florida. In Florida, birthing hospitals increasingly have a standing order to administer the birth dose of hepatitis B vaccine. However, pediatricians sometimes choose to wait to give the first dose in their private offices. Florida is working with the American Academy of Pediatrics to provide education reminding health care providers that the recommendation to provide the birth dose within three days of birth is important to help decrease hepatitis B infections.

Hepatitis C, Acute (Including Perinatal)

Disease Facts

Cause: Hepatitis C virus (HCV)

Type of illness: Inflammation of the liver; sometimes asymptomatic; symptoms can include fever, malaise, loss of appetite, nausea, vomiting, abdominal discomfort, and jaundice; ~70-85% of acute infections become chronic

Transmission: Blood exposure, percutaneous exposure (e.g., tattooing, needle sticks), from mother to child during pregnancy or delivery, or rarely anal or vaginal sex.

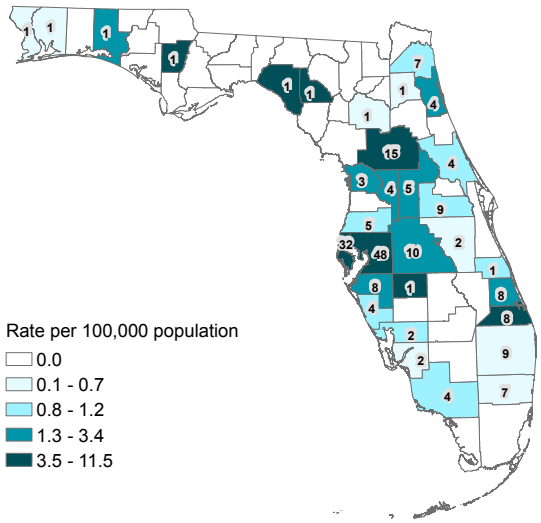
Reason for surveillance: Enhance efforts to prevent HCV transmission, identify and prevent outbreaks, improve allocation of resources for treatment services, assist in evaluating the impact of public health interventions and screening programs

Comments: Similar to past years, 2015 incidence was highest in the non-Hispanic white population and in the western part of central Florida. There was a noticeable increase in the rate among men in Florida in 2015.

Summary of Case Demographics

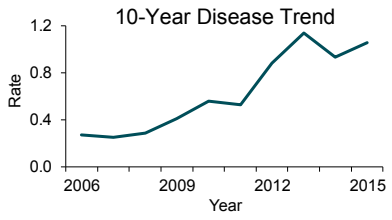
Summary			
Number of cases			210
Incidence rate (per 100,000 population)			1.1
Change from 5-year average incidence			+30.8%
Age (in Years)			
Mean			35
Median			32
Min-max			0 - 83
Gender	**Number**	**(Percent)**	**Rate**
Female	79	(37.6)	0.8
Male	131	(62.4)	1.3
Unknown gender	0		
Race	**Number**	**(Percent)**	**Rate**
White	176	(89.3)	1.1
Black	9	(4.6)	NA
Other	12	(6.1)	NA
Unknown race	13		
Ethnicity	**Number**	**(Percent)**	**Rate**
Non-Hispanic	162	(87.1)	1.1
Hispanic	24	(12.9)	0.5
Unknown ethnicity	24		

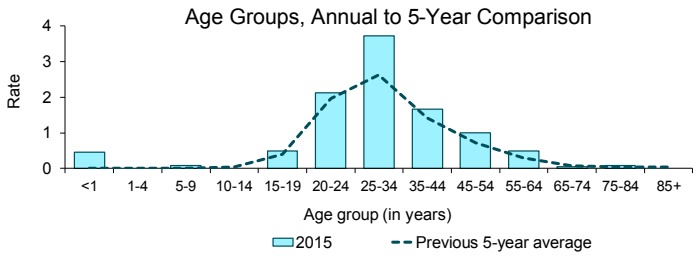
Reported Acute Hepatitis C Cases (Including Perinatal) and Incidence Rates Per 100,000 Population by County of Residence, Florida, 2015 (N=210)

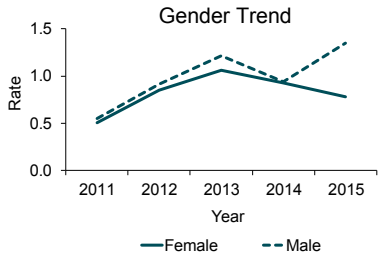


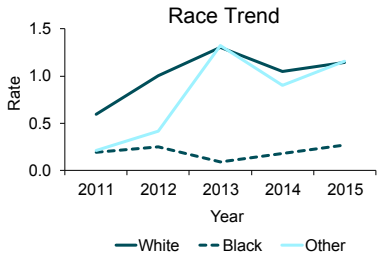
Note that rates based on <20 cases are not reliable and should be interpreted with caution.

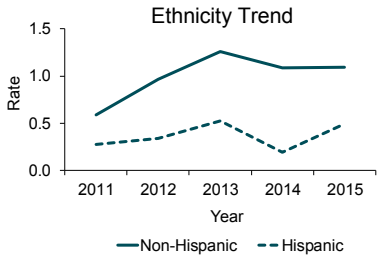
Incidence Rates Per 100,000 Population of Reported Acute Hepatitis C Cases (Including Perinatal) by Year, Age, Gender, Race, and Ethnicity, Florida











Note that trend graphs should be interpreted with caution when more than 5% of data are missing. Acute hepatitis C cases (including perinatal) were missing 6.5% of ethnicity data in 2012, 6.0% of ethnicity data in 2014, 11.4% of ethnicity data in 2015, and 6.2% of race data in 2015.

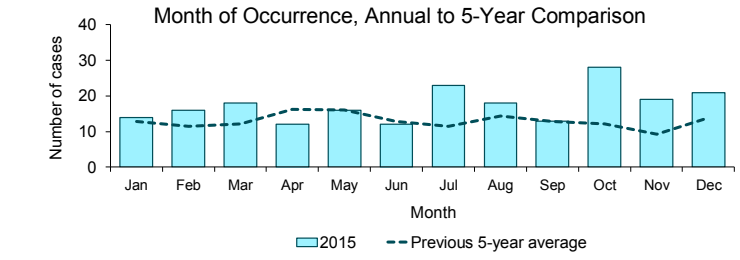
Summary of Case Factors

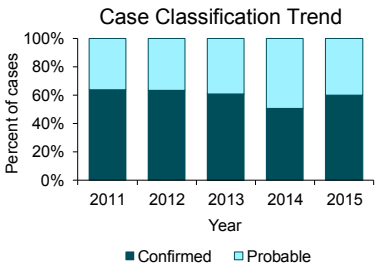
Summary	Number	
Number of cases	210	
Case Classification	**Number**	**(Percent)**
Confirmed	126	(60.0)
Probable	84	(40.0)
Outcome	**Number**	**(Percent)**
Hospitalized	141	(67.1)
Died	7	(3.3)
Imported Status	**Number**	**(Percent)**
Acquired in Florida	160	(76.2)
Acquired in the U.S., not Florida	6	(2.9)
Acquired outside the U.S.	0	(0.0)
Acquired location unknown	44	(21.0)
Outbreak Status	**Number**	**(Percent)**
Sporadic	185	(88.1)
Outbreak-associated	7	(3.3)
Outbreak status unknown	18	(8.6)

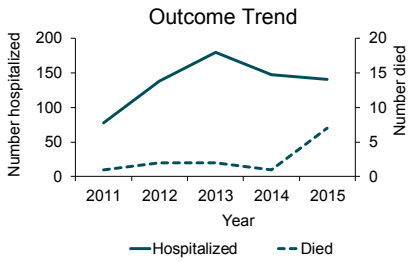
Acute clinical symptoms or prior negative laboratory results are required to differentiate acute hepatitis C from chronic, making surveillance challenging. Incidence has increased since 2007, likely due to a change in case definition in 2008, an enhanced surveillance project focusing on chronic infections in young adults initiated in 2012, changes in risk behaviors in young adults, and updated laboratory reporting guidance in June 2014 requiring some laboratories participating in electronic laboratory reporting to submit all negative hepatitis results.

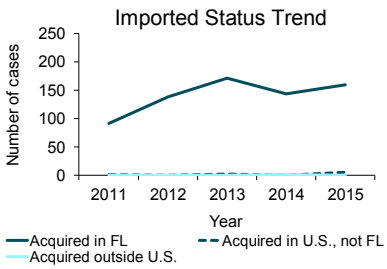
In 2015, 201 cases (95.7%) were investigated and 105 (50.0%) were interviewed to determine possible risk factors. Risk factors reported are shown to the right. Note that a person can report multiple risk factors. Injection drug use and non-injection drug use still remain the most commonly reported risk factors. Infections of viral hepatitis are frequently associated with drug use and sharing of injection equipment. Of the seven outbreak-associated cases, four (57.1%) were sexual contacts, one (14.3%) was a household contact of a known chronic hepatitis C case, one (14.3%) was a perinatally infected infant (the mother was a known chronic hepatitis C case), and one (14.3%) case had multiple risk factors (sexual contact and shared home tattoo ink with a known chronic hepatitis C case).

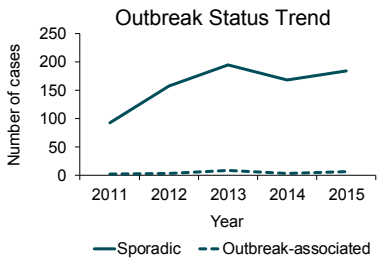
Reported Acute Hepatitis C Cases by Month of Occurrence, Case Classification, Outcome, Imported Status, and Outbreak Status, Florida

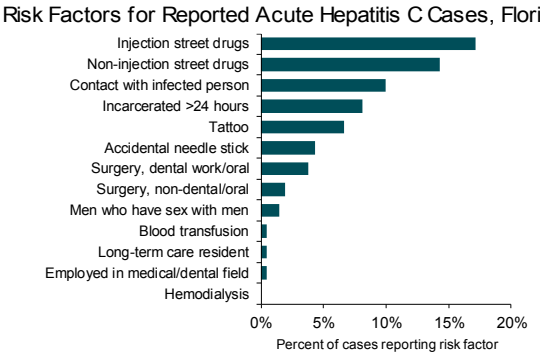












Interpretation:
Occurrence is determined by the earliest date associated with the case, which is most frequently the date of onset, but can also be the diagnosis date, the laboratory report date, or the date the county health department was notified of the case. For outcome, a case can be included in the hospitalized count as well as the death count. Hospitalized status means that a person was hospitalized at the time of their illness, though the hospitalization may not necessarily have been due to the illness. Deaths include all people with the illness who died, though the death may not necessarily have been due to the illness. Imported status refers to where the infection was most likely acquired. Outbreak-associated indicates that two or more cases are epidemiologically linked.

Hepatitis C, Chronic (Including Perinatal)

Disease Facts

Cause: Hepatitis C virus (HCV)

Type of illness: Inflammation of the liver; most often asymptomatic; many people have chronic liver disease including cirrhosis and liver cancer; ~70-85% of acute infections become chronic

Transmission: Blood exposure, percutaneous exposure (e.g., tattooing, needle sticks), from mother to child during pregnancy or delivery, or rarely anal or vaginal sex.

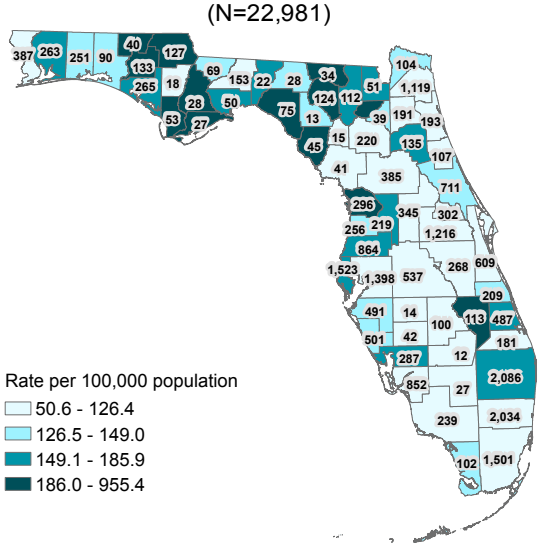
Reason for surveillance: Enhance efforts to prevent HCV transmission, identify acute infections and prevent outbreaks, improve allocation of resources for treatment services, assist in evaluating the impact of public health interventions and screening programs

Comments: Chronic hepatitis C is one of the most common reportable diseases in Florida. Incidence has been increasing in Florida over the past 10 years, partially due to better reporting and surveillance practices.

Summary of Case Demographics

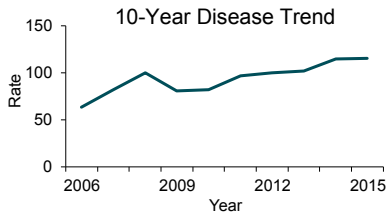
Summary			
Number of cases			22,981
Incidence rate (per 100,000 population)			115.7
Change from 5-year average incidence			+16.6%
Age (in Years)			
Mean			46
Median			49
Min-max			0 - 114
Gender	**Number**	**(Percent)**	**Rate**
Female	9,236	(40.3)	91.1
Male	13,686	(59.7)	140.8
Unknown gender	59		
Race	**Number**	**(Percent)**	**Rate**
White	8,475	(85.3)	54.7
Black	948	(9.5)	28.4
Other	510	(5.1)	49.2
Unknown race	13,048		
Ethnicity	**Number**	**(Percent)**	**Rate**
Non-Hispanic	5,586	(85.0)	37.2
Hispanic	986	(15.0)	20.3
Unknown ethnicity	16,409		

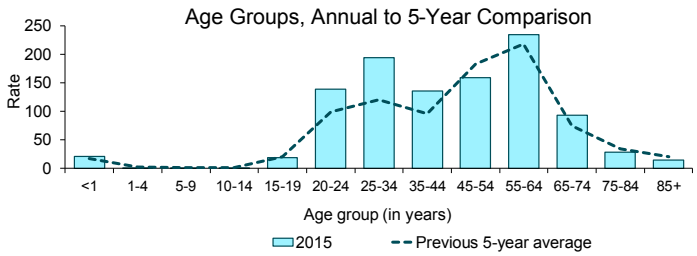
Reported Chronic Hepatitis C Cases (Including Perinatal) and Incidence Rates Per 100,000 Population by County of Residence, Florida, 2015 (N=22,981)

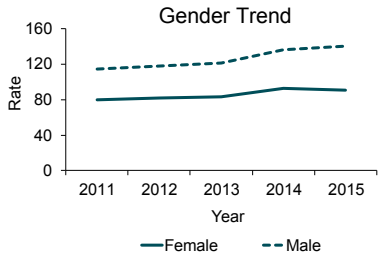


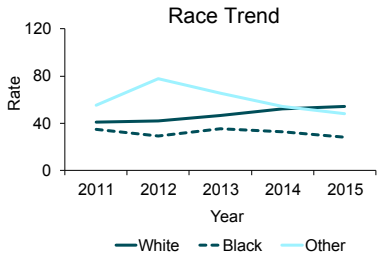
Note that rates based on <20 cases are not reliable and should be interpreted with caution.

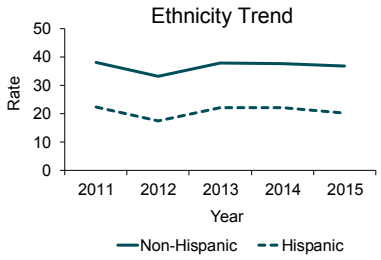
Incidence Rates Per 100,000 Population of Reported Chronic Hepatitis C Cases (Including Perinatal) by Year, Age, Gender, Race, and Ethnicity, Florida











Note that trend graphs should be interpreted with caution when more than 5% of data are missing. Chronic hepatitis C cases (including perinatal) were missing 64.2% of ethnicity data in 2011, 57.6% of race data in 2011, 70.0% of ethnicity data in 2012, 57.8% of race data in 2012, 66.3% of ethnicity data in 2013, 54.5% of race data in 2013, 70.0% of ethnicity data in 2014, 56.5% of race data in 2014, 71.1% of ethnicity data in 2015, and 56.2% of race data in 2015.

Summary of Case Factors

Summary	Number	
Number of cases	22,981	
Case Classification	**Number**	**(Percent)**
Confirmed	22,793	(99.2)
Probable	188	(0.8)
Outcome	**Number**	**(Percent)**
Hospitalized	914	(4.0)
Died	21	(0.1)
Imported Status	**Number**	**(Percent)**
Acquired in Florida	3,542	(15.4)
Acquired in the U.S., not Florida	95	(0.4)
Acquired outside the U.S.	29	(0.1)
Acquired location unknown	19,315	(84.0)
Outbreak Status	**Number**	**(Percent)**
Sporadic	5,267	(22.9)
Outbreak-associated	69	(0.3)
Outbreak status unknown	17,645	(76.8)

Reported Chronic Hepatitis C (Including Perinatal) Cases by Month of Occurrence, Case Classification, Outcome, Imported Status, and Outbreak Status, Florida

Interpretation:
Occurrence is determined by the earliest date associated with the case, which is most frequently the date of onset, but can also be the diagnosis date, the laboratory report date, or the date the county health department was notified of the case. For outcome, a case can be included in the hospitalized count as well as the death count. Hospitalized status means that a person was hospitalized at the time of their illness, though the hospitalization may not necessarily have been due to the illness. Deaths include all people with the illness who died, though the death may not necessarily have been due to the illness. Imported status refers to where the infection was most likely acquired. Outbreak-associated indicates that two or more cases are epidemiologically linked.

Additional Information

This is the first year that chronic hepatitis C has been described in this report. Changes in treatment options for HCV have led to an increased focus on identifying HCV infections. Given the large burden of chronic hepatitis C and limited county resources, there have been concerns regarding data completeness and case ascertainment in the past. Earlier data are less reliable. Over the past few years, improvements in electronic laboratory reporting (ELR) and increased focus on surveillance are believed to have improved case ascertainment. Automated case classification and reporting logic in the surveillance application have improved data quality and sensitivity. In 2014, reporting requirements were updated to include mandatory reporting of all positive and negative hepatitis results as well as all liver function tests to support the identification of acute hepatitis C cases. ELR has continued to expand and in 2015, 95% of all chronic hepatitis C laboratory results were received by the Department electronically. Acute clinical symptoms or prior negative laboratory results are required to differentiate acute hepatitis C from chronic. Given the volume of laboratory results received electronically for which no clinical information is available, it is likely that many acute HCV infections are misclassified as chronic.

HCV was not discovered until 1989. Lower infection control standards in the 1970s and 80s and use of blood products prior to the availability of diagnostic testing and the implementation of blood screening programs in 1992 is recognized to contribute to higher rates in adults. Incidence of hepatitis C is highest in the “baby boomers”, adults born between 1946 and 1965 who would be between 50 and 70 years old in 2015. Most baby boomers were likely infected in the 1960s, 70s, and 80s when transmission of hepatitis C was highest. The high rate of chronic infections in young adults (an age group who should not be chronically infected yet) also supports the theory that acute infections are not initially identified. An enhanced surveillance project focusing on chronic infections in young adults was initiated in 2012 to help identify risk factors and acute infections. In future reports, perinatal hepatitis C will be characterized separately from other chronic hepatitis C.

HIV Infection (Including Perinatal)

Disease Facts

Cause: HIV

Type of illness: Flu-like illness at primary infection, causes severe damage to immune system leading to AIDS

Transmission: Anal or vaginal sex; blood exposure (e.g., sharing drug needles, receiving infected blood transfusion [rare due to donor screening]); or from mother to child during pregnancy, delivery, or breastfeeding

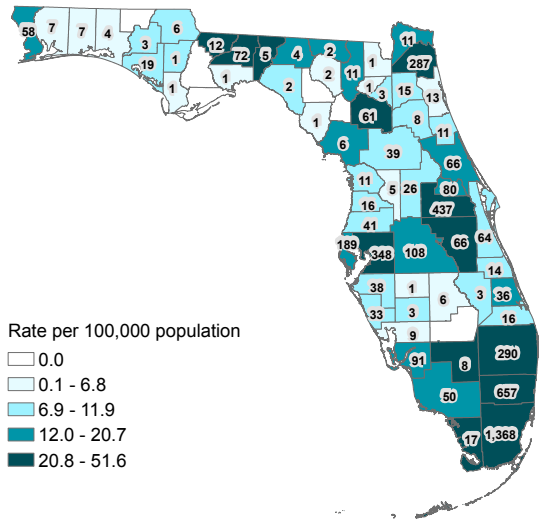
Reason for surveillance: Enhance efforts to prevent HIV transmission, improve allocation of resources for treatment services, and assist in evaluating the impact of public health interventions

Comments: The expansion of electronic laboratory reporting in 2007 and 2012 led to artificial peaks in newly reported cases in 2008 and 2013. HIV infection cases in 2014 increased 6% from the previous year. Incidence rates are >3.5 times higher in men than women, and >3 times higher in blacks than whites. Increases in infected men who have sex with men contributed to the statewide increase in 2015.

Summary of Case Demographics

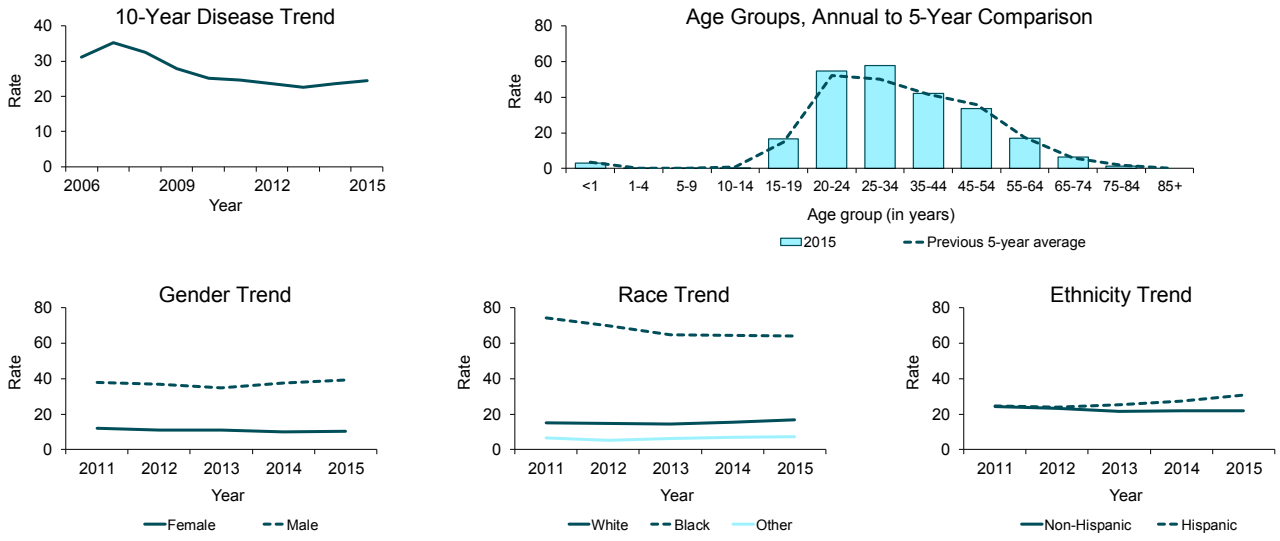
Summary			
Number of cases			4,868
Incidence rate (per 100,000 population)			24.5
Change from 5-year average incidence			+2.5%
Age (in Years)			
Mean			38
Median			35
Min-max			0 - 83
Gender	**Number**	**(Percent)**	**Rate**
Female	1,036	(21.3)	10.2
Male	3,832	(78.7)	39.4
Unknown gender	0		
Race	**Number**	**(Percent)**	**Rate**
White	2,604	(54.0)	16.8
Black	2,141	(44.4)	64.0
Other	76	(1.6)	7.3
Unknown race	47		
Ethnicity	**Number**	**(Percent)**	**Rate**
Non-Hispanic	3,304	(68.9)	22.0
Hispanic	1,494	(31.1)	30.8
Unknown ethnicity	70		

Reported HIV Infection Cases (Including Perinatal) and Incidence Rates Per 100,000 Population by County of Residence, Florida, 2015 (N=4,868)



County totals exclude Florida Department of Corrections cases (n=97).
Note that rates based on <20 cases are not reliable and should be interpreted with caution.

Incidence Rates Per 100,000 Population of Reported HIV Infection Cases (Including Perinatal) by Year, Age, Gender, Race, and Ethnicity, Florida



Additional Information

HIV infection cases tend to represent a more current picture of the AIDS epidemic as they are indicative of recent exposure. For HIV infection cases in men reported in 2015, male-to-male sexual contact was the most common risk factor (78.3%), followed by heterosexual contact (16.6%).

In 2015, 59.0% of infected adult women were black compared to only 38.0% of infected adult men.

From 1979 to 2015, 1,230 perinatally infected newborns were born in Florida. The number of HIV-infected babies rose from 1979 through 1993. In April 1994, the U.S. Public Health Service released guidelines for use of zidovudine (ZDV), also known as azidothymidine (AZT), to reduce perinatal HIV transmission. Beginning in October 1996, Florida law required the offering of HIV testing to pregnant women, resulting in more HIV-positive women being offered ZDV during their pregnancies. Enhanced perinatal surveillance systems have documented increased use of ZDV among exposed infants and HIV-infected mothers at the prenatal, intrapartum, delivery and neonatal stages.

In the past few years, the use of other medical therapies, including protease inhibitors, has supplemented the use of ZDV for both infected mothers and their babies. The use of these medical therapies has resulted in a dramatic decline in perinatally acquired HIV/AIDS since 1994. Other initiatives in Florida have also contributed to the reduction in perinatal cases, including Targeted Outreach to Pregnant Women Act programs, the assignment of perinatal nurses to the most heavily impacted counties, social marketing and provider education. Combined, these successful initiatives have resulted in a 91.7% decline in perinatally infected newborns in Florida from 109 cases in 1993 to nine cases in 2015.

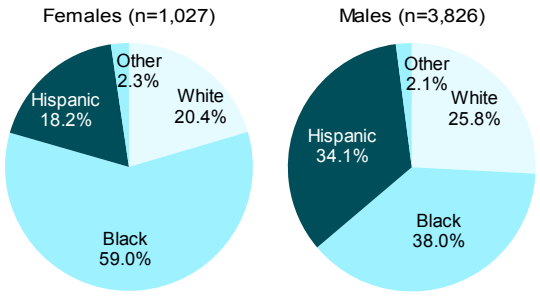
For information on AIDS, please see the AIDS chapter within this section (page 11).

Please visit the AIDS Surveillance website to access additional information at www.FloridaHealth.gov/diseases-and-conditions/aids/surveillance/index.html.

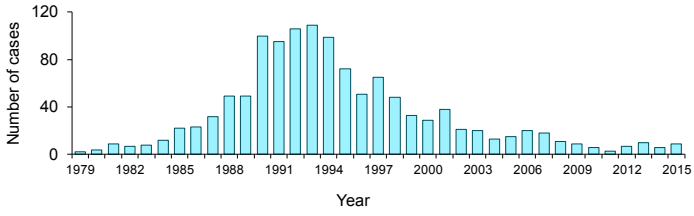
Reported Adult (13 Years and Older) HIV Infection Cases by Gender and Mode of Exposure, Florida, 2015

Mode of Exposure	Females Cases (n=1,027)		Males Cases (n=3,826)	
	Number	(Percent)	Number	(Percent)
Men who have sex with men (MSM)	NA		2,997	(78.3)
Heterosexual	920	(89.6)	634	(16.6)
Injection drug user (IDU)	105	(10.2)	104	(2.7)
MSM and IDU	NA		90	(2.4)
Other	2	(0.2)	1	(0.0)
Total	1,027		3,826	

Reported Adult (13 Years and Older) HIV Infection Cases by Gender and Race/Ethnicity, Florida, 2015



Reported Perinatal HIV Infection Cases by Year of Birth, Florida, 1979-2015



To locate services across the state please visit www.FloridaHealth.gov/diseases-and-conditions/aids/index.html.

Lead Poisoning in Adults ≥16 Years Old

Disease Facts

Cause: Lead

Type of illness: Often asymptomatic; can cause arthralgia, headache, cognitive dysfunction, adverse reproductive outcomes, gastrointestinal difficulties, renal failure, hypertension, and encephalopathy

Exposure: Inhalation or ingestion of lead dust or fumes

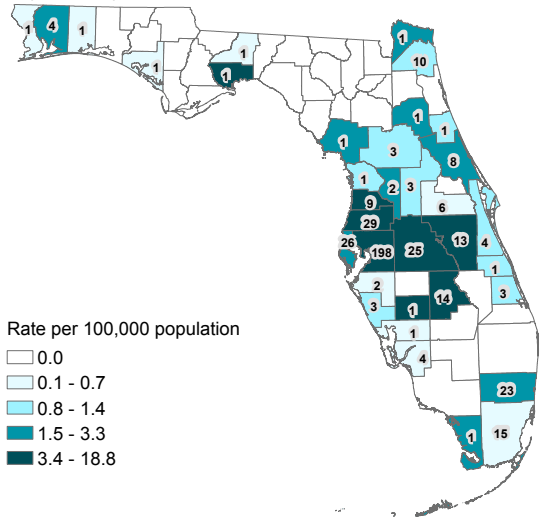
Reason for surveillance: Identify cases among adults in high-risk occupations, prevent new cases and exacerbation of illness, help target future public health interventions for high-risk populations

Comments: Prior to 2010, lead poisoning case data were primarily stored outside the state's reportable disease surveillance system; therefore only cases from 2010 to 2015 are presented in this report. The rate of lead poisoning in adults is much higher in men than women because men are more likely to have occupations and hobbies that expose them to lead.

Summary of Case Demographics

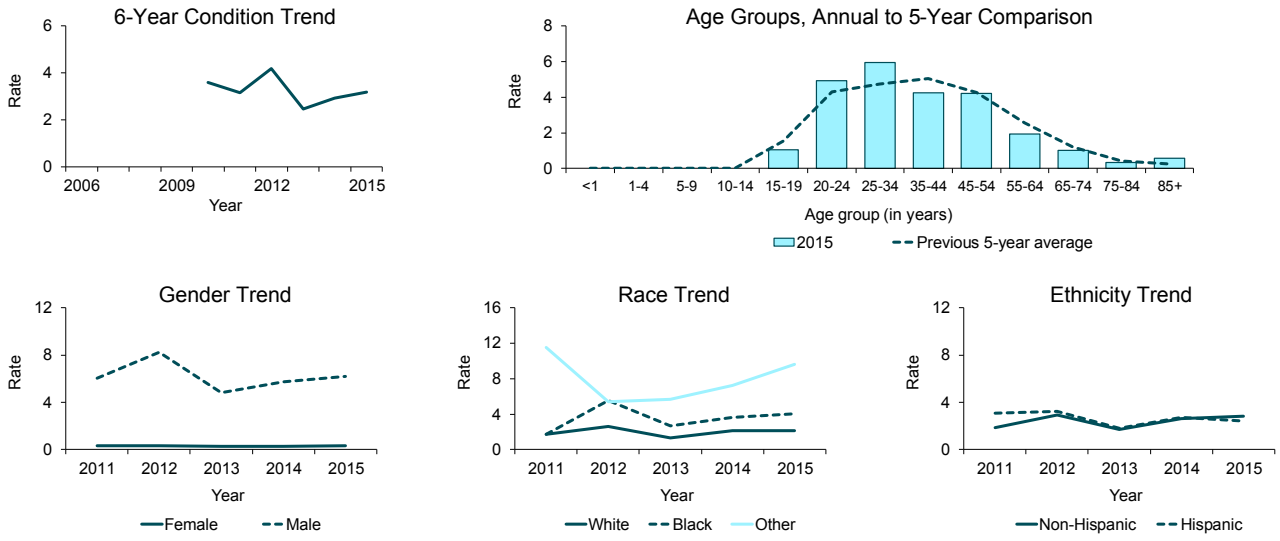
Summary			
Number of cases			515
Incidence rate (per 100,000 population)			3.2
Change from 5-year average incidence			-2.6%
Age (in Years)			
Mean			40
Median			38
Min-max			16 - 99
Gender	**Number**	**(Percent)**	**Rate**
Female	29	(5.6)	0.3
Male	486	(94.4)	6.2
Unknown gender	0		
Race	**Number**	**(Percent)**	**Rate**
White	272	(60.7)	2.1
Black	103	(23.0)	4.1
Other	73	(16.3)	9.6
Unknown race	67		
Ethnicity	**Number**	**(Percent)**	**Rate**
Non-Hispanic	350	(79.5)	2.8
Hispanic	90	(20.5)	2.4
Unknown ethnicity	75		

Reported Lead Poisoning Cases in Adults ≥16 Years Old and Incidence Rates Per 100,000 Population (Restricted to Exposures Occurring in Florida) by County of Residence, Florida, 2015 (N=418)



Note that rates based on <20 cases are not reliable and should be interpreted with caution.

Incidence Rates Per 100,000 Population of Reported Lead Poisoning Cases in Adults ≥16 Years Old by Year, Age, Gender, Race, and Ethnicity, Florida

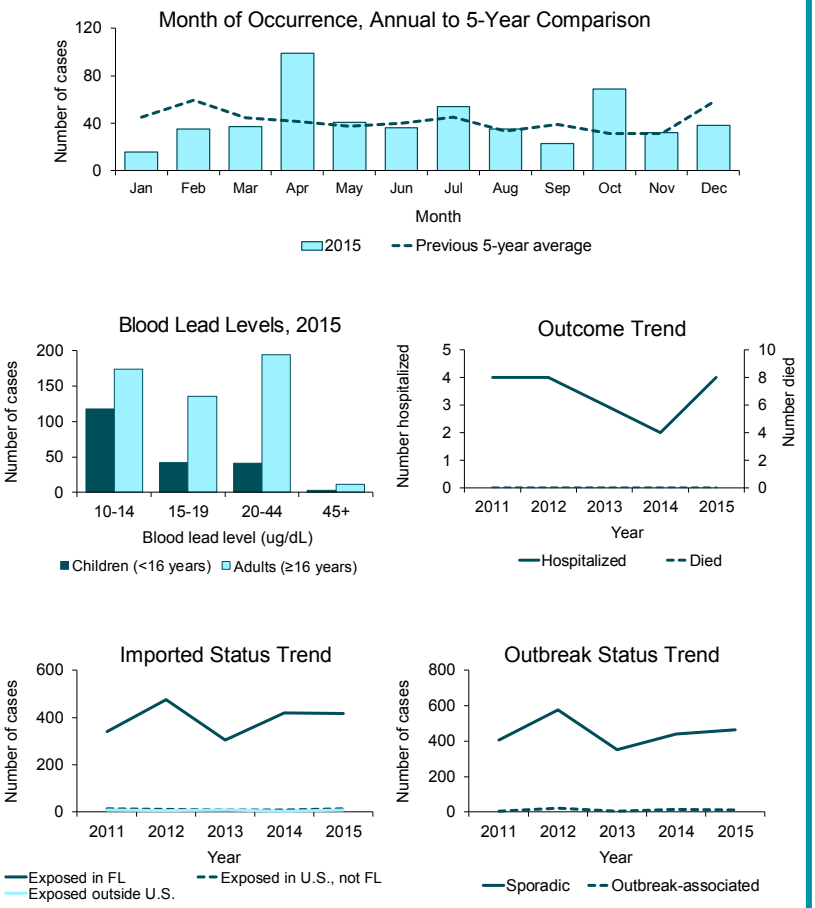


Note that trend graphs should be interpreted with caution when more than 5% of data are missing. Lead poisoning cases in adults ≥16 years old were missing 32.2% of ethnicity data in 2011, 31.3% of race data in 2011, 28.2% of ethnicity data in 2012, 23.3% of race data in 2012, 30.4% of ethnicity data in 2013, 30.4% of race data in 2013, 9.2% of ethnicity data in 2014, 12.0% of race data in 2014, 14.6% of ethnicity data in 2015, and 13.0% of race data in 2015.

Summary of Case Factors

Summary	Number	
Number of cases	515	
Outcome	**Number**	**(Percent)**
Hospitalized	4	(0.8)
Died	0	(0.0)
Imported Status	**Number**	**(Percent)**
Exposed in Florida	418	(81.2)
Exposed in the U.S., not Florida	13	(2.5)
Exposed outside the U.S.	9	(1.7)
Exposed location unknown	75	(14.6)
Outbreak Status	**Number**	**(Percent)**
Sporadic	463	(89.9)
Outbreak-associated	10	(1.9)
Outbreak status unknown	42	(8.2)

Reported Lead Poisoning Cases in Adults ≥16 Years Old by Month of Occurrence, Blood Lead Level, Outcome, Imported Status, and Outbreak Status, Florida



Interpretation:
Occurrence is determined by the earliest date associated with the case, which is most frequently the date of onset, but can also be the diagnosis date, the laboratory report date, or the date the county health department was notified of the case. For outcome, a case can be included in the hospitalized count as well as the death count. Hospitalized status means that a person was hospitalized at the time of their illness, though the hospitalization may not necessarily have been due to the illness. Deaths include all people with the illness who died, though the death may not necessarily have been due to the illness. Imported status refers to where the exposure most likely occurred. Outbreak-associated indicates that two or more cases are epidemiologically linked.

Additional Information

Adult lead poisoning is primarily caused by exposure to lead in the workplace or during certain activities where lead is used. High-risk occupations include battery manufacturing, painting, nonferrous smelting, radiator repair, scrap metal recycling, work at firing ranges, and construction and renovation. High-risk activities include recreational target shooting, home remodeling, casting bullets and fishing weights, stained glass making, and consuming traditional remedies. The Occupational Safety and Health Administration requires regular lead screening for employees in high-risk occupations, making occupational lead poisoning cases more easily identifiable. Adults with non-occupational exposures are unlikely to be tested, making identification difficult. More lead poisoning cases were reported during April and October due to an increase in employment in occupations at high-risk for lead exposure.

In Florida, a blood lead level (BLL) ≥10 µg/dL meets the surveillance case definition for lead poisoning. Compared to children, adults have much higher BLLs, peaking in the 20-44 µg/dL range. Hillsborough, Pinellas, Pasco, and Polk counties have high rates of lead poisoning cases due to the number of battery recycling plants and metal recycling plants located in those counties.

Lead Poisoning in Children <16 Years Old

Disease Facts

Cause: Lead

Type of illness: Wide range of adverse health effects, from difficulty learning, sluggishness, and fatigue to seizures, coma, and death

Exposure: For children, most commonly ingestion of paint dust in houses built prior to elimination of lead in paints in 1978

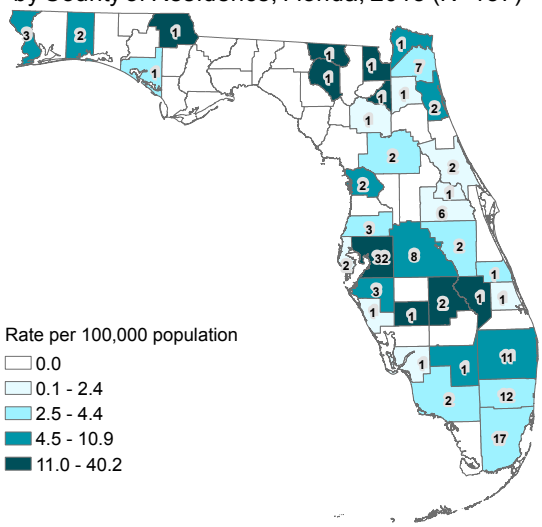
Reason for surveillance: Estimate burden among children, ensure follow-up care for identified cases, prevent new cases and exacerbation of illness, help target future public health interventions

Comments: Prior to 2010, lead poisoning case data were primarily stored outside the state's reportable disease surveillance system; therefore only cases from 2010 to 2015 are presented in this report. Lead poisoning is most often identified in children as part of routine screening.

Summary of Case Demographics

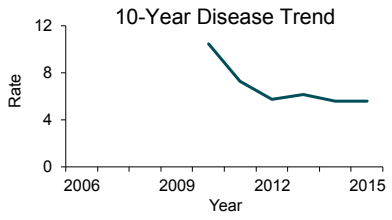
Summary			
Number of cases			204
Incidence rate (per 100,000 population)			5.6
Change from 5-year average incidence			-20.8%
Age (in Years)			
Mean			4
Median			3
Min-max			0 - 15
Gender	**Number**	**(Percent)**	**Rate**
Female	85	(41.7)	4.7
Male	119	(58.3)	6.4
Unknown gender	0		
Race	**Number**	**(Percent)**	**Rate**
White	92	(46.9)	3.6
Black	59	(30.1)	7.2
Other	45	(23.0)	16.2
Unknown race	8		
Ethnicity	**Number**	**(Percent)**	**Rate**
Non-Hispanic	123	(63.7)	4.9
Hispanic	70	(36.3)	6.3
Unknown ethnicity	11		

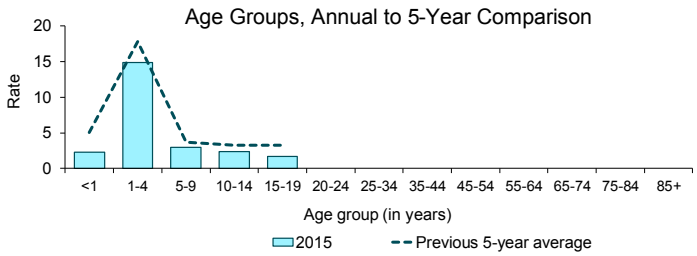
Reported Lead Poisoning Cases in Children <16 Years Old and Incidence Rates Per 100,000 Population (Restricted to Exposures Occurring in Florida) by County of Residence, Florida, 2015 (N=137)

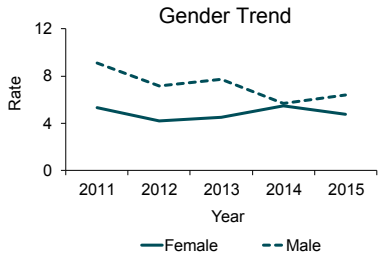


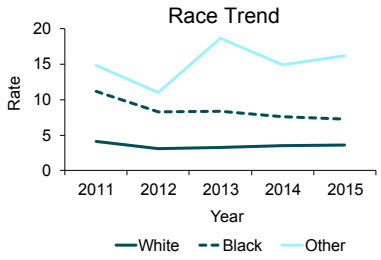
Note that rates based on <20 cases are not reliable and should be interpreted with caution.

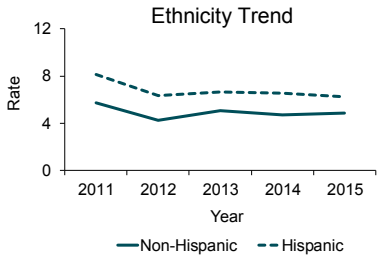
Incidence Rates Per 100,000 Population of Reported Lead Poisoning Cases in Children <16 Years Old by Year, Age, Gender, Race, and Ethnicity, Florida









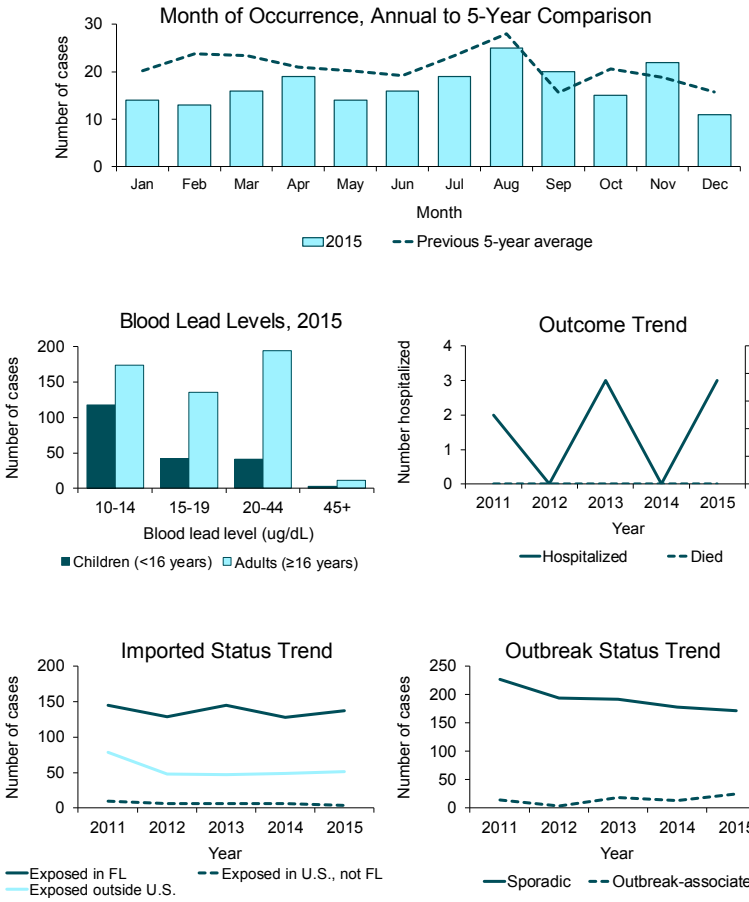


Note that trend graphs should be interpreted with caution when more than 5% of data are missing. Lead poisoning cases in children <16 years old were missing 12.5% of ethnicity data in 2011, 11.7% of race data in 2011, 15.7% of ethnicity data in 2012, 16.2% of race data in 2012, 10.0% of ethnicity data in 2013, 10.0% of race data in 2013, 5.9% of ethnicity data in 2014, 5.4% of race data in 2014, and 5.4% of ethnicity data in 2015.

Summary of Case Factors

Summary	Number	
Number of cases	204	
Outcome	**Number**	**(Percent)**
Hospitalized	3	(1.5)
Died	0	(0.0)
Imported Status	**Number**	**(Percent)**
Exposed in Florida	137	(67.2)
Exposed in the U.S., not Florida	4	(2.0)
Exposed outside the U.S.	51	(25.0)
Exposed location unknown	12	(5.9)
Outbreak Status	**Number**	**(Percent)**
Sporadic	172	(84.3)
Outbreak-associated	25	(12.3)
Outbreak status unknown	7	(3.4)

Reported Lead Poisoning Cases in Children <16 Years Old by Month of Occurrence, Blood Lead Level, Outcome, Imported Status, and Outbreak Status, Florida



Interpretation:
Occurrence is determined by the earliest date associated with the case, which is most frequently the date of onset, but can also be the diagnosis date, the laboratory report date, or the date the county health department was notified of the case. For outcome, a case can be included in the hospitalized count as well as the death count. Hospitalized status means that a person was hospitalized at the time of their illness, though the hospitalization may not necessarily have been due to the illness. Deaths include all people with the illness who died, though the death may not necessarily have been due to the illness. Imported status refers to where the exposure most likely occurred. Outbreak-associated indicates that two or more cases are epidemiologically linked.

Additional Information

Lead screening is required for children <6 years old who are Medicaid-enrolled or eligible, and recommended for children who are foreign-born or otherwise identified as high-risk. Children in this age group are more likely to put lead-contaminated hands, toys, or paint chips in their mouths making them more vulnerable to lead poisoning than older children. The most common source of lead exposure for children include paint dust, flakes, or chips in houses built prior to elimination of lead in paints in 1978. Less common sources include glazed ceramic dishes, children's toys or jewelry, parental occupations or hobbies involving lead, and folk medicines or cosmetics from other countries. Compared to lead poisoning in adults where occupational exposure results in much higher incidence rates in men than women, cases in children are more evenly distributed between boys and girls. Most children with lead poisoning have BLLs in the 10-14 µg/dL range, which is much lower than BLLs in adults, which peak in the 24-44 µg/dL range. For children ≥6 years old, screening is only recommended for those who are foreign-born or otherwise identified as high-risk. Since less screening is done, fewer lead poisoning cases are identified in older children. Compared to younger children, children ≥6 years old are more likely to be clinically ill (22.4% of cases versus 11.0% of cases), foreign-born (56.9% of cases versus 13.0% of cases), and a refugee (50.0% of cases versus 6.8% of cases).

Legionellosis

Disease Facts

Cause: *Legionella* bacteria

Type of illness: Common symptoms include fever, muscle pain, cough, and pneumonia

Transmission: Airborne; inhalation of aerosolized water containing the bacteria

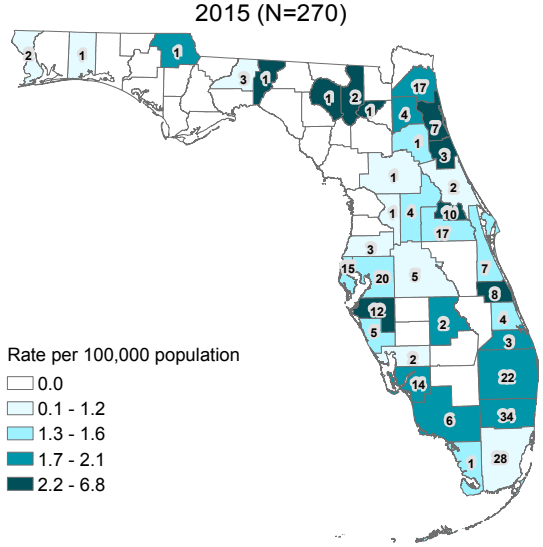
Reason for surveillance: Identify and control outbreaks, identify and mitigate common reservoirs, monitor incidence over time, estimate burden of illness

Comments: Recently identified sources in Florida and the U.S. include decorative fountains, hot tubs, cooling towers (air-conditioning units for large buildings), and potable water systems. Increasing incidence in Florida is consistent with the increase observed nationally over the past decade. This increase is likely due to a number of factors, including aging infrastructure and a greater percentage of the population aged ≥64 years. The elderly and those with weakened immune systems are at highest risk for developing disease.

Summary of Case Demographics

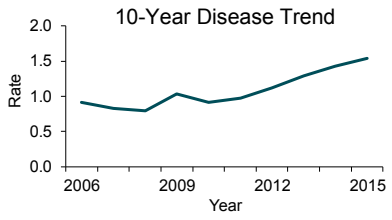
Summary			
Number of cases			306
Incidence rate (per 100,000 population)			1.5
Change from 5-year average incidence			+34.3%
Age (in Years)			
Mean			64
Median			64
Min-max			16 - 98
Gender	**Number**	**(Percent)**	**Rate**
Female	109	(35.6)	1.1
Male	197	(64.4)	2.0
Unknown gender	0		
Race	**Number**	**(Percent)**	**Rate**
White	235	(78.3)	1.5
Black	53	(17.7)	1.6
Other	12	(4.0)	NA
Unknown race	6		
Ethnicity	**Number**	**(Percent)**	**Rate**
Non-Hispanic	261	(89.1)	1.7
Hispanic	32	(10.9)	0.7
Unknown ethnicity	13		

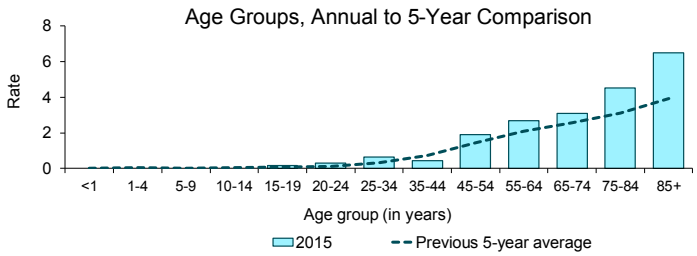
Reported Legionellosis Cases and Incidence Rates Per 100,000 Population (Restricted to Infections Acquired in Florida) by County of Residence, Florida, 2015 (N=270)

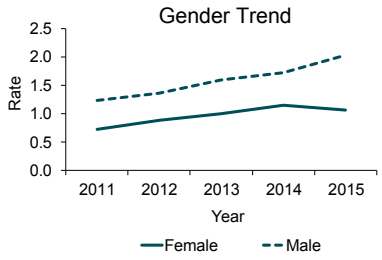


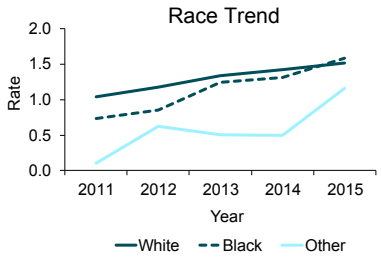
Note that rates based on <20 cases are not reliable and should be interpreted with caution.

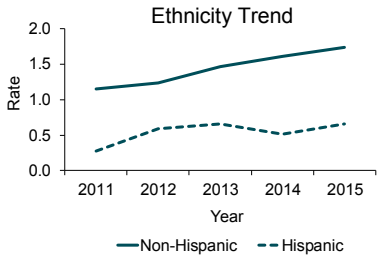
Incidence Rates Per 100,000 Population of Reported Legionellosis Cases by Year, Age, Gender, Race, and Ethnicity, Florida









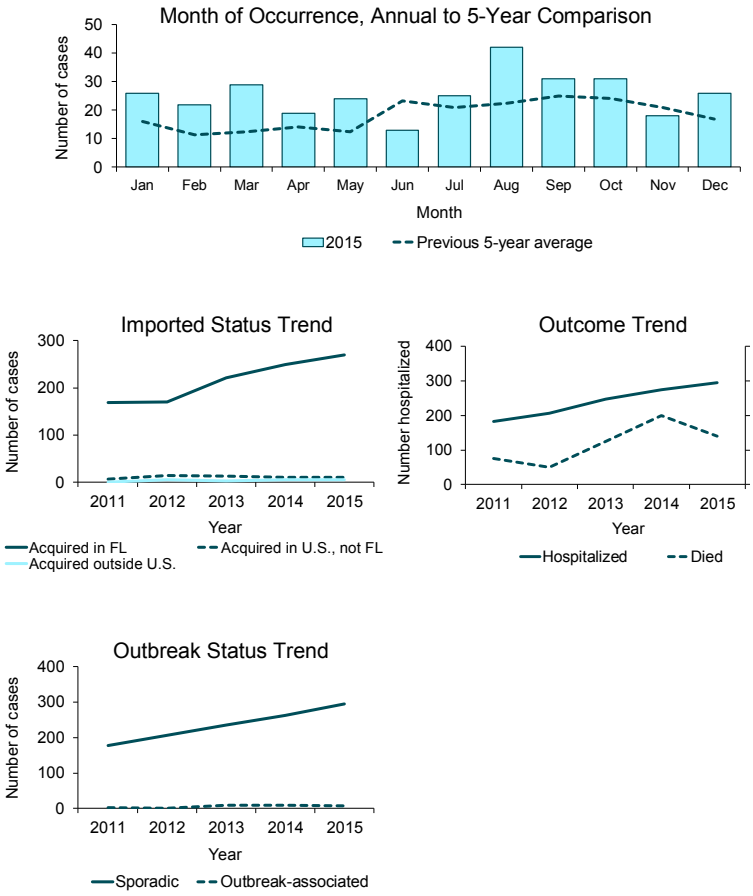


Note that trend graphs should be interpreted with caution when more than 5% of data are missing. Legionellosis cases were missing 5.7% of ethnicity data in 2014.

Summary of Case Factors

Summary	Number	
Number of cases	306	
Outcome	**Number**	**(Percent)**
Hospitalized	296	(96.7)
Died	28	(9.2)
Imported Status	**Number**	**(Percent)**
Acquired in Florida	270	(88.2)
Acquired in the U.S., not Florida	11	(3.6)
Acquired outside the U.S.	6	(2.0)
Acquired location unknown	19	(6.2)
Outbreak Status	**Number**	**(Percent)**
Sporadic	295	(96.4)
Outbreak-associated	7	(2.3)
Outbreak status unknown	4	(1.3)

Reported Legionellosis Cases by Month of Occurrence, Imported Status, Outcome, and Outbreak Status, Florida



Interpretation:
Occurrence is determined by the earliest date associated with the case, which is most frequently the date of onset, but can also be the diagnosis date, the laboratory report date, or the date the county health department was notified of the case. For outcome, a case can be included in the hospitalized count as well as the death count. Hospitalized status means that a person was hospitalized at the time of their illness, though the hospitalization may not necessarily have been due to the illness. Deaths include all people with the illness who died, though the death may not necessarily have been due to the illness. Imported status refers to where the infection was most likely acquired. Outbreak- associated indicates that two or more cases are epidemiologically linked.

Additional Information

In Florida, sporadic cases of both Legionnaires' disease and Pontiac fever (two distinct presentations of legionellosis) are monitored. Thirteen outbreaks involving 32 cases were identified in Florida in 2015 associated with hospitals, nursing homes, correctional facilities, and hotels. Most of the cases identified in these outbreaks were residents of other states and therefore are not included in Florida case counts. Of note, one facility associated with a 2014 outbreak also had an outbreak in 2015. This facility had not fully implemented the premise plumbing water management plan recommended during the 2014 investigation and subsequently had a second outbreak in 2015 causing seven illnesses with two deaths.

Listeriosis

Disease Facts

Cause: *Listeria monocytogenes* bacteria

Type of illness: Most people infected with *Listeria* have invasive infection, in which the bacteria has spread beyond the gastrointestinal tract; initial illness is often characterized by fever and diarrhea

Transmission: Foodborne; can be transmitted to fetus during pregnancy

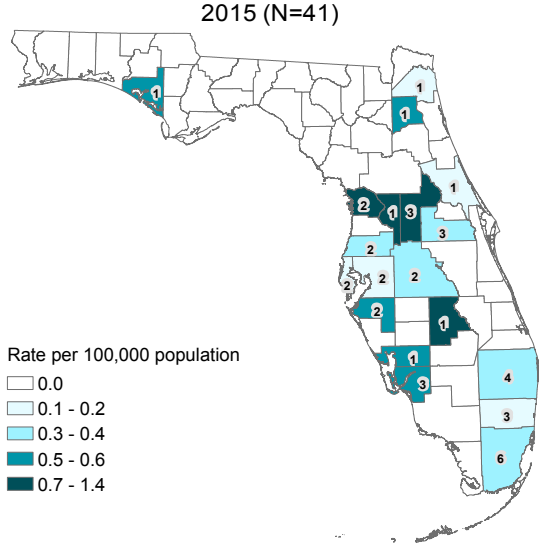
Reason for surveillance: Identify and control outbreaks, identify and mitigate common sources (e.g., contaminated food product), monitor incidence over time, estimate burden of illness, reduce stillbirths

Comments: Listeriosis primarily affects pregnant women, infants born to infected mothers, older adults, and people with weakened immune systems. Infection during pregnancy can cause fetal loss, preterm labor, stillbirths, and illness or death in newborn infants. Incidence is highest in infants and people ≥85 years old.

Summary of Case Demographics

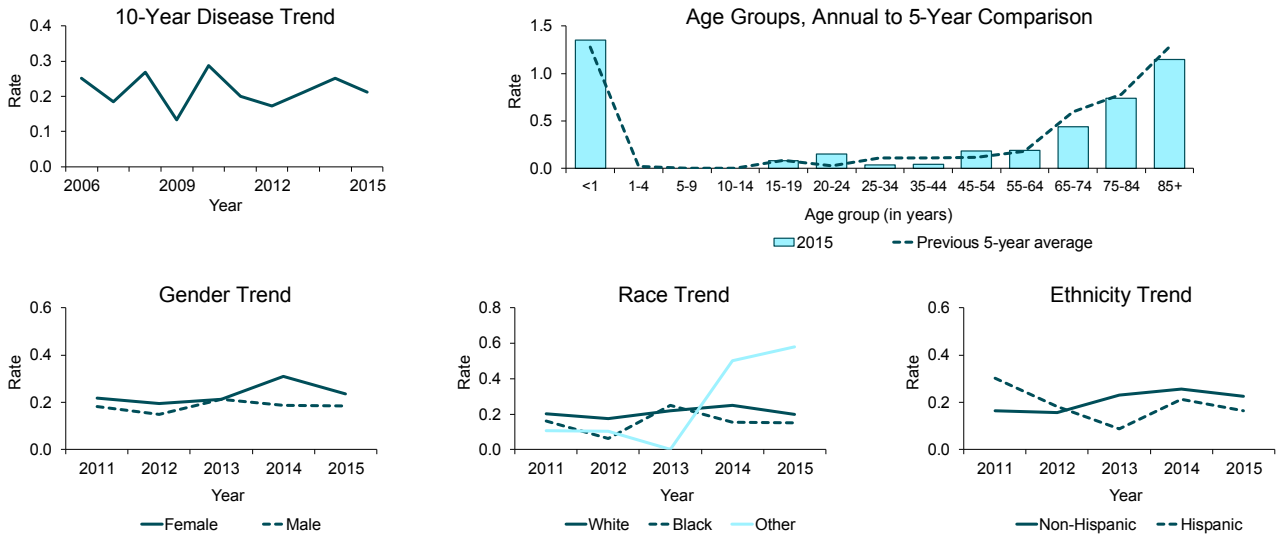
Summary			
Number of cases			42
Incidence rate (per 100,000 population)			0.2
Change from 5-year average incidence			-5.9%
Age (in Years)			
Mean			60
Median			68
Min-max			0 - 92
Gender	**Number**	**(Percent)**	**Rate**
Female	24	(57.1)	0.2
Male	18	(42.9)	NA
Unknown gender	0		
Race	**Number**	**(Percent)**	**Rate**
White	31	(73.8)	0.2
Black	5	(11.9)	NA
Other	6	(14.3)	NA
Unknown race	0		
Ethnicity	**Number**	**(Percent)**	**Rate**
Non-Hispanic	34	(81.0)	0.2
Hispanic	8	(19.0)	NA
Unknown ethnicity	0		

Reported Listeriosis Cases and Incidence Rates Per 100,000 Population (Restricted to Infections Acquired in Florida) by County of Residence, Florida, 2015 (N=41)



Note that rates based on <20 cases are not reliable and should be interpreted with caution.

Incidence Rates Per 100,000 Population of Reported Listeriosis Cases by Year, Age, Gender, Race, and Ethnicity, Florida

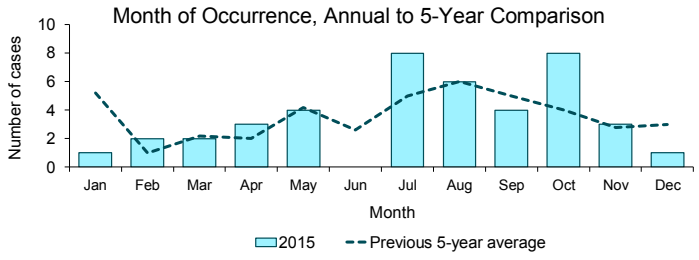


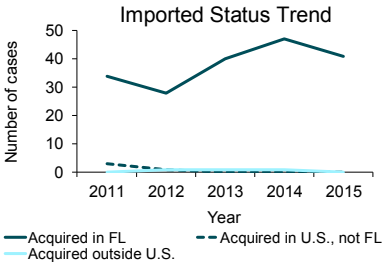
Note that trend graphs should be interpreted with caution when more than 5% of data are missing. Listeriosis cases were missing 5.3% of race data in 2011, 6.1% of ethnicity data in 2012, 12.1% of race data in 2012, and 7.3% of ethnicity data in 2013.

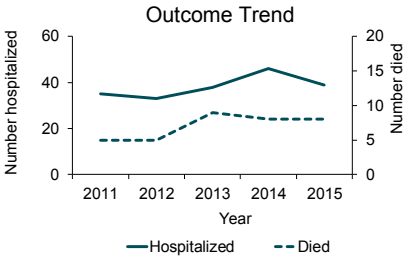
Summary of Case Factors

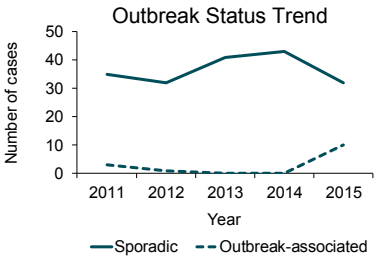
Summary	Number	
Number of cases	42	
Outcome	**Number**	**(Percent)**
Hospitalized	39	(92.9)
Died	8	(19.0)
Imported Status	**Number**	**(Percent)**
Acquired in Florida	41	(97.6)
Acquired in the U.S., not Florida	0	(0.0)
Acquired outside the U.S.	0	(0.0)
Acquired location unknown	1	(2.4)
Outbreak Status	**Number**	**(Percent)**
Sporadic	32	(76.2)
Outbreak-associated	10	(23.8)
Outbreak status unknown	0	(0.0)

Reported Listeriosis Cases by Month of Occurrence, Imported Status, Outcome, and Outbreak Status, Florida









Interpretation:
Occurrence is determined by the earliest date associated with the case, which is most frequently the date of onset, but can also be the diagnosis date, the laboratory report date, or the date the county health department was notified of the case. For outcome, a case can be included in the hospitalized count as well as the death count. Hospitalized status means that a person was hospitalized at the time of their illness, though the hospitalization may not necessarily have been due to the illness. Deaths include all people with the illness who died, though the death may not necessarily have been due to the illness. Imported status refers to where the infection was most likely acquired. Outbreak- associated indicates that two or more cases are epidemiologically linked.

Additional Information

Florida had 10 outbreak-associated cases reported in 2015. Four of those cases were associated with two separate instances of perinatal transmission. Eight cases in 2015 were associated with two multistate clusters and one in-state cluster. Additionally, six cases reported in 2014 and one reported in 2013 were later linked to clusters in 2015 due to improved laboratory diagnostics. Whole genome sequencing conducted on the isolates from the one in-state cluster determined that cases were highly related. In-depth interviews identified a common retail grocery establishment. The Florida Department of Agriculture and Consumer Services conducted an environmental assessment and found *Listeria monocytogenes* in the environment of the retail grocery store. A total of nine cases were associated with this outbreak with onset dates ranging from September 28, 2013 to August 18, 2015. For additional information on this outbreak, see Section 4: Notable Outbreaks and Case Investigations.

Lyme Disease

Disease Facts

Cause: *Borrelia burgdorferi* bacteria

Type of illness: Acute illness or late manifestation; common acute symptoms include fever, headache, fatigue, and erythema migrans (characteristic bull's-eye rash); late manifestation symptoms can include Bell's palsy, severe joint pain and swelling, and shooting pain

Transmission: Tick-borne; bite of infective *Ixodes scapularis* tick

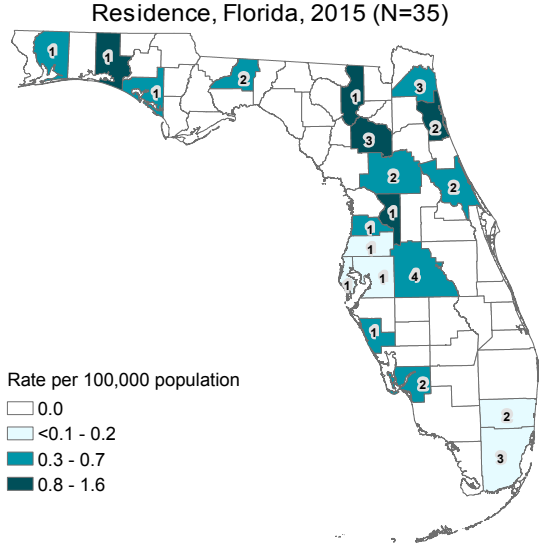
Reason for surveillance: Monitor incidence over time, estimate burden of illness and degree of endemicity, target areas of high incidence for prevention education

Comments: Lyme disease is the most common tick-borne disease in the U.S. The case definition changed in 2008; expanding the acceptable laboratory criteria contributed to the increase in cases starting in 2008. Other contributing factors include increased incidence, recognition, and geographic distribution of ticks.

Summary of Case Demographics

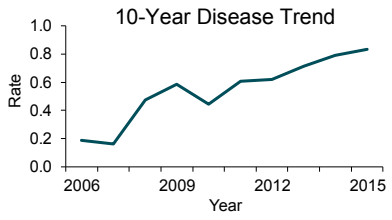
Summary			
Number of cases			166
Incidence rate (per 100,000 population)			0.8
Change from 5-year average incidence			+31.4%
Age (in Years)			
Mean			43
Median			44
Min-max			5 - 91
Gender	**Number**	**(Percent)**	**Rate**
Female	72	(43.4)	0.7
Male	94	(56.6)	1.0
Unknown gender	0		
Race	**Number**	**(Percent)**	**Rate**
White	146	(98.0)	0.9
Black	0	(0.0)	NA
Other	3	(2.0)	NA
Unknown race	17		
Ethnicity	**Number**	**(Percent)**	**Rate**
Non-Hispanic	139	(93.3)	0.9
Hispanic	10	(6.7)	NA
Unknown ethnicity	17		

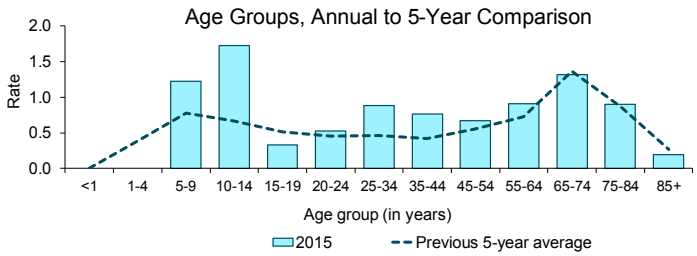
Reported Lyme Disease Cases and Incidence Rates Per 100,000 Population (Restricted to Infections Acquired in Florida) by County of Residence, Florida, 2015 (N=35)

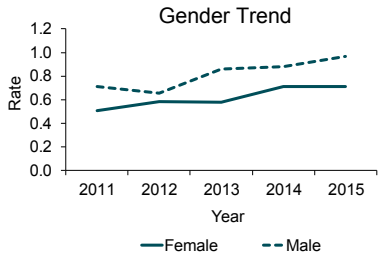


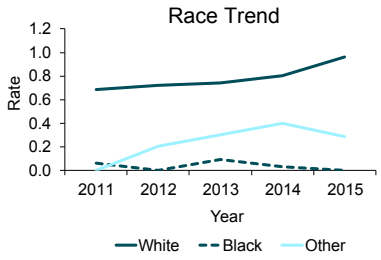
Note that rates based on <20 cases are not reliable and should be interpreted with caution.

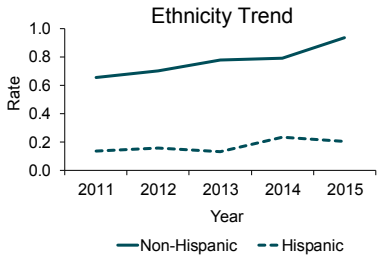
Incidence Rates Per 100,000 Population of Reported Lyme Disease Cases by Year, Age, Gender, Race, and Ethnicity, Florida











Note that trend graphs should be interpreted with caution when more than 5% of data are missing. Lyme disease cases were missing 11.3% of ethnicity data in 2011, 9.6% of race data in 2011, 7.6% of ethnicity data in 2012, 7.6% of race data in 2012, 12.3% of ethnicity data in 2013, 14.5% of race data in 2013, 16.1% of ethnicity data in 2014, 16.8% of race data in 2014, 10.8% of ethnicity data in 2015, and 10.8% of race data in 2015.

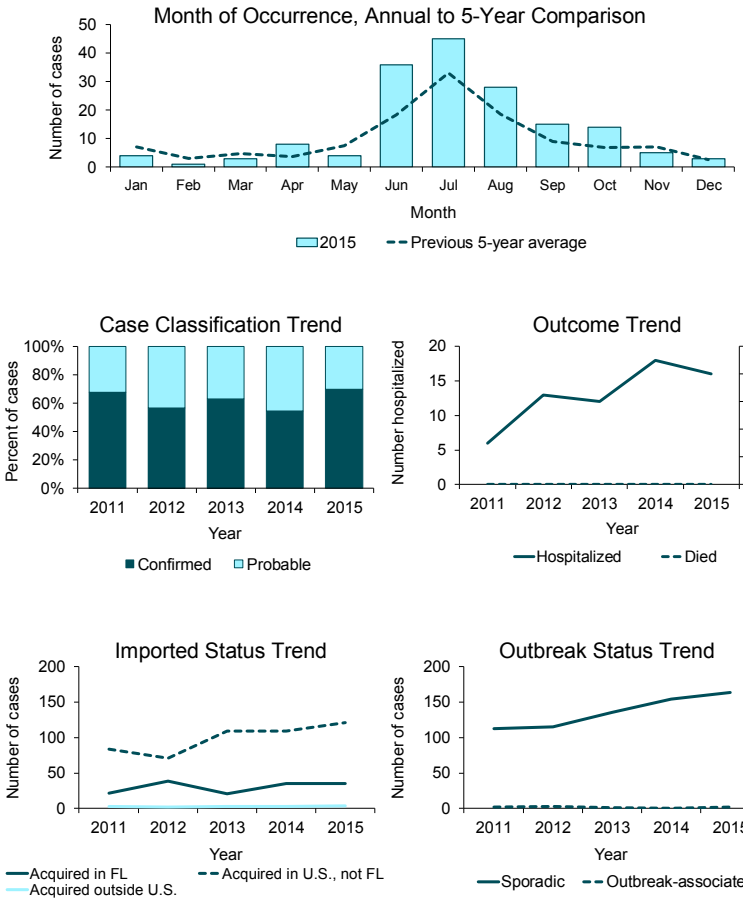
Note that the majority of Lyme disease cases are acquired outside of Florida.

Summary of Case Factors

Summary	Number	
Number of cases	166	
Case Classification	**Number**	**(Percent)**
Confirmed	116	(69.9)
Probable	50	(30.1)
Outcome	**Number**	**(Percent)**
Hospitalized	16	(9.6)
Died	0	(0.0)
Imported Status	**Number**	**(Percent)**
Acquired in Florida	35	(21.1)
Acquired in the U.S., not Florida	121	(72.9)
Acquired outside the U.S.	4	(2.4)
Acquired location unknown	6	(3.6)
Outbreak Status	**Number**	**(Percent)**
Sporadic	164	(98.8)
Outbreak-associated	2	(1.2)
Outbreak status unknown	0	(0.0)

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. Other reports may use illness onset date instead of report date, or county of exposure instead of county of residence.

Reported Lyme Disease Cases by Month of Occurrence, Case Classification, Outcome, Imported Status, and Outbreak Status, Florida



Interpretation:
Occurrence is determined by the earliest date associated with the case, which is most frequently the date of onset, but can also be the diagnosis date, the laboratory report date, or the date the county health department was notified of the case. For outcome, a case can be included in the hospitalized count as well as the death count. Hospitalized status means that a person was hospitalized at the time of their illness, though the hospitalization may not necessarily have been due to the illness. Deaths include all people with the illness who died, though the death may not necessarily have been due to the illness. Imported status refers to where the infection was most likely acquired. Outbreak- associated indicates that two or more cases are epidemiologically linked.

Additional Information

Erythema migrans rash associated with acute Lyme disease may also be seen with southern tick-associated rash illness (STARI), although chronic symptoms are not reported with STARI. There is also increased recognition of post-treatment Lyme disease syndrome, which is managed symptomatically and with lifestyle modifications. Similar to past years, most cases (72.9%) were imported from other states, primarily the Northeast and upper Midwest U.S. The increase in cases over the past decade may be due to the slowly expanding geographic range of the disease due to ecological factors.

Malaria

Disease Facts

Cause: *Plasmodium vivax, P. falciparum, P. malariae, P. ovale* parasites

Type of illness: Uncomplicated or severe illness; common symptoms include high fever with chills, rigor, sweats, headache, nausea, and vomiting

Transmission: Bite of infective mosquito; rarely by blood transfusion or organ transplant

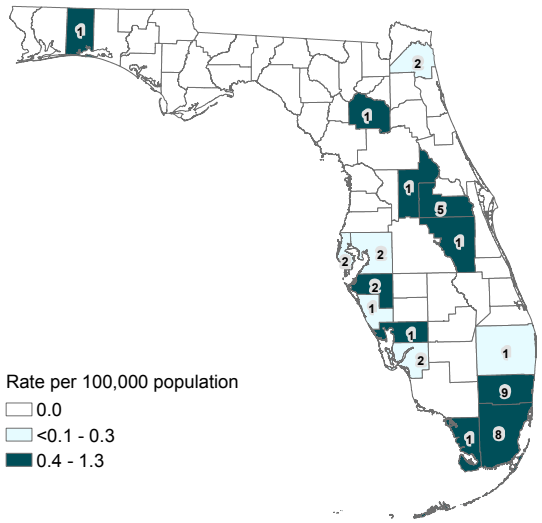
Reason for surveillance: Identify individual cases and implement control measures to prevent endemicity, monitor incidence over time, estimate burden of illness

Comments: All infections were among people traveling to countries with endemic transmission (primarily visiting friends and family in African countries). Imported malaria cases peaked in 2010 after the January 2010 earthquake in Haiti resulted in an influx of Haitians in Florida, but decreased from 2011 to 2015. The last malaria case possibly acquired in Florida was in 2010 in a Duval County resident.

Summary of Case Demographics

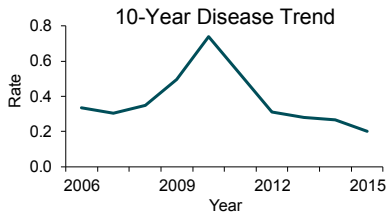
Summary			
Number of cases			40
Incidence rate (per 100,000 population)			0.2
Change from 5-year average incidence			-52.4%
Age (in Years)			
Mean			43
Median			45
Min-max			3 - 81
Gender	**Number**	**(Percent)**	**Rate**
Female	12	(30.0)	NA
Male	28	(70.0)	0.3
Unknown gender	0		
Race	**Number**	**(Percent)**	**Rate**
White	17	(42.5)	NA
Black	21	(52.5)	0.6
Other	2	(5.0)	NA
Unknown race	0		
Ethnicity	**Number**	**(Percent)**	**Rate**
Non-Hispanic	31	(79.5)	0.2
Hispanic	8	(20.5)	NA
Unknown ethnicity	1		

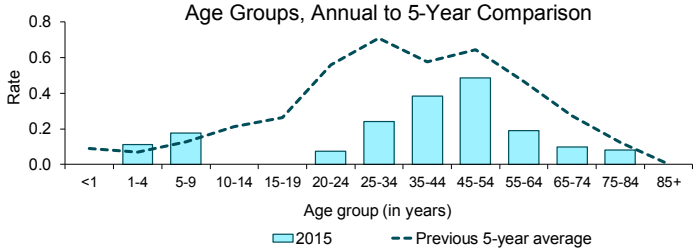
Reported Malaria Cases and Incidence Rates Per 100,000 Population by County of Residence, Florida, 2015 (N=40)

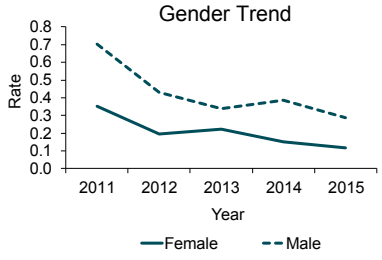


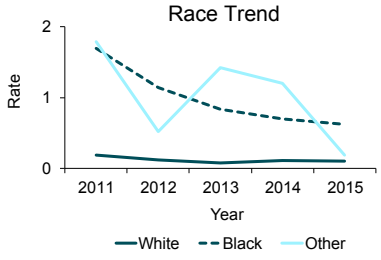
Note that rates based on <20 cases are not reliable and should be interpreted with caution.

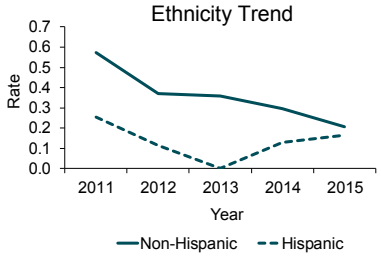
Incidence Rates Per 100,000 Population of Reported Malaria Cases by Year, Age, Gender, Race, and Ethnicity, Florida









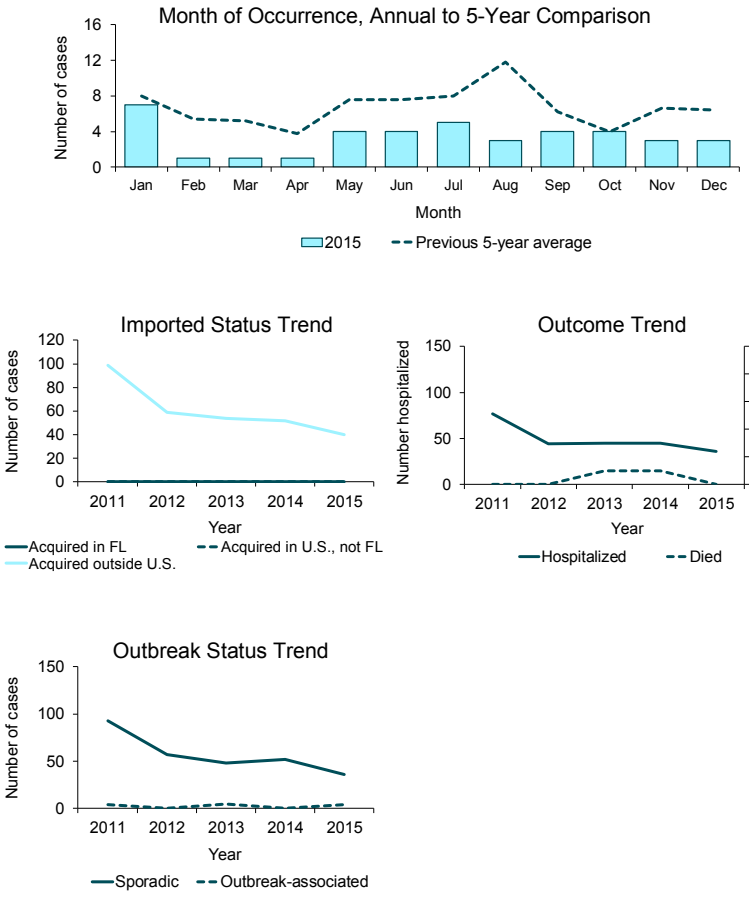


Note that the majority of malaria cases are acquired outside of Florida.

Summary of Case Factors

Summary	Number	
Number of cases	40	
Outcome	**Number**	**(Percent)**
Hospitalized	36	(90.0)
Died	0	(0.0)
Imported Status	**Number**	**(Percent)**
Acquired in Florida	0	(0.0)
Acquired in the U.S., not Florida	0	(0.0)
Acquired outside the U.S.	40	(100.0)
Acquired location unknown	0	(0.0)
Outbreak Status	**Number**	**(Percent)**
Sporadic	36	(90.0)
Outbreak-associated	4	(10.0)
Outbreak status unknown	0	(0.0)
Region Where Infection Acquired	**Number**	**(Percent)**
Africa	24	(60.0)
Central America/Caribbean	9	(22.5)
Asia	2	(5.0)
Multiple Regions	2	(5.0)
Middle East	1	(2.5)
South America	1	(2.5)
South Pacific	1	(2.5)
Reason for Travel	**Number**	**(Percent)**
Visiting friends/relatives	16	(40.0)
Tourism	7	(17.5)
Business	5	(12.5)
Refugee/immigrant	4	(10.0)
Missionary or dependent	2	(5.0)
Airline/ship crew	1	(2.5)
Military	1	(2.5)
Other	4	(10.0)

Reported Malaria Cases by Month of Occurrence, Imported Status, Outcome, and Outbreak Status, Florida



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. Other reports may use illness onset date instead of report date, or county of exposure instead of county of residence.

Interpretation:
Occurrence is determined by the earliest date associated with the case, which is most frequently the date of onset, but can also be the diagnosis date, the laboratory report date, or the date the county health department was notified of the case. For outcome, a case can be included in the hospitalized count as well as the death count. Hospitalized status means that a person was hospitalized at the time of their illness, though the hospitalization may not necessarily have been due to the illness. Deaths include all people with the illness who died, though the death may not necessarily have been due to the illness. Imported status refers to where the infection was most likely acquired. Outbreak- associated indicates that two or more cases are epidemiologically linked.

Additional Information

In 2015, there was one death from cerebral malaria associated with *Plasmodium falciparum* infection. This person was a non-Florida resident who was visiting Florida on vacation, and therefore is not included in this report. It is important to note that both infected residents and non-residents pose a potential malaria introduction risk since the malaria vector *Anopheles quadrimaculatus* is common. In 2015, 14 non-Florida residents were diagnosed with malaria while traveling in Florida. Four outbreak-associated cases were reported in 2015. Two cases were in men traveling together to Ghana for business, and two were in a father and son visiting the Dominican Republic on vacation.

Meningococcal Disease

Disease Facts

Cause: *Neisseria meningitidis* bacteria

Type of illness: Neurological (meningitis) or bloodstream infections (septicemia) most common

Transmission: Person-to-person; direct contact or inhalation of respiratory droplets from nose or throat of colonized or infected person

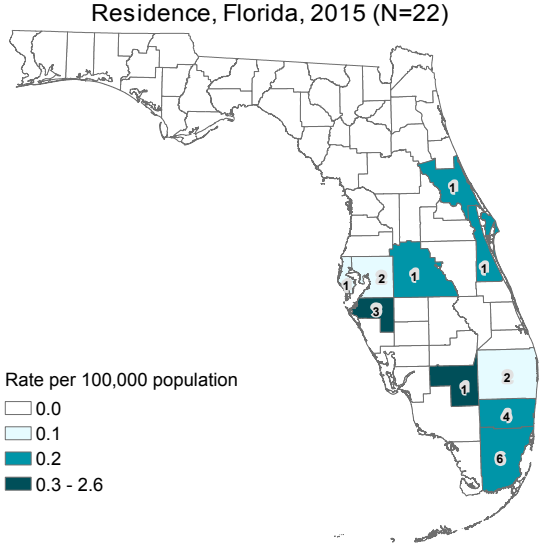
Reason for surveillance: Immediate public health actions are taken in response to every suspected meningococcal disease case to prevent secondary transmission; monitor effectiveness of immunization programs and vaccines

Comments: Five *N. meningitidis* serogroups cause almost all invasive disease (A, B, C, Y and W). Vaccines provide protection against serogroups A, B, C, Y, and W. In 2015, the reported incidence rate of meningococcal disease reached a historic low.

Summary of Case Demographics

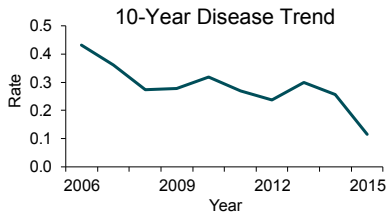
Summary			
Number of cases			23
Incidence rate (per 100,000 population)			0.1
Change from 5-year average incidence			-58.1%
Age (in Years)			
Mean			39
Median			50
Min-max			0 - 81
Gender	**Number**	**(Percent)**	**Rate**
Female	8	(34.8)	NA
Male	15	(65.2)	NA
Unknown gender	0		
Race	**Number**	**(Percent)**	**Rate**
White	16	(69.6)	NA
Black	6	(26.1)	NA
Other	1	(4.3)	NA
Unknown race	0		
Ethnicity	**Number**	**(Percent)**	**Rate**
Non-Hispanic	16	(69.6)	NA
Hispanic	7	(30.4)	NA
Unknown ethnicity	0		

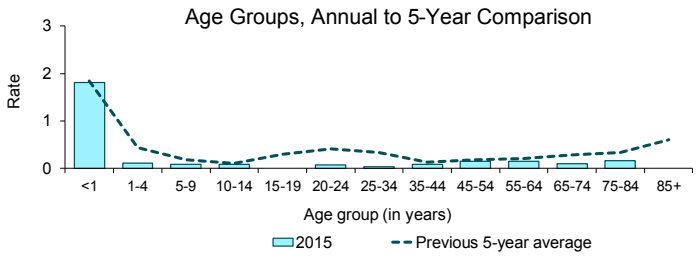
Reported Meningococcal Disease Cases and Incidence Rates Per 100,000 Population (Restricted to Infections Acquired in Florida) by County of Residence, Florida, 2015 (N=22)

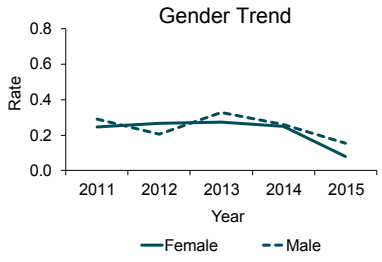


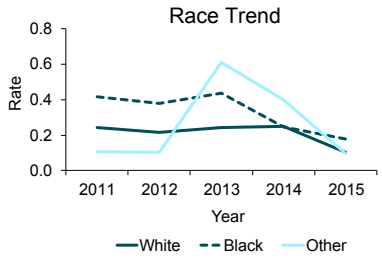
Note that rates based on <20 cases are not reliable and should be interpreted with caution.

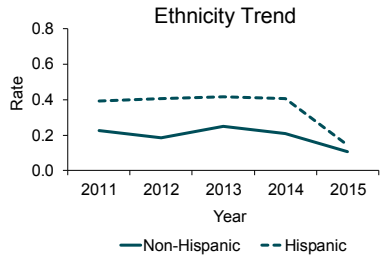
Incidence Rates Per 100,000 Population of Reported Meningococcal Disease Cases by Year, Age, Gender, Race, and Ethnicity, Florida







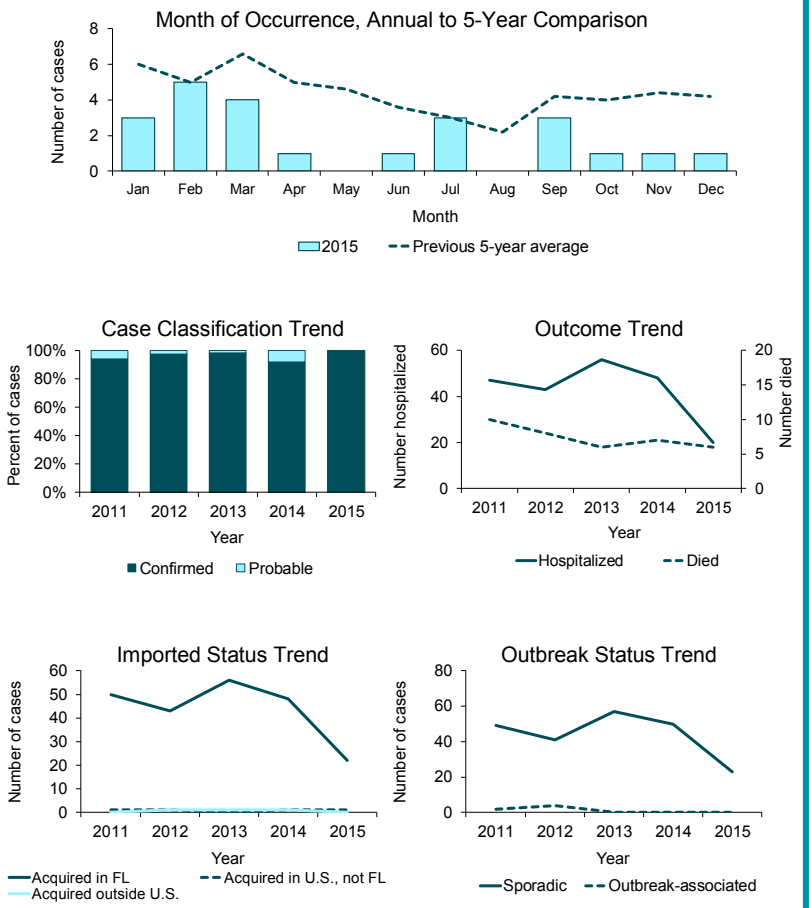




Summary of Case Factors

Summary	Number	
Number of cases	23	
Case Classification	**Number**	**(Percent)**
Confirmed	23	(100.0)
Probable	0	(0.0)
Outcome	**Number**	**(Percent)**
Hospitalized	20	(87.0)
Died	6	(26.1)
Imported Status	**Number**	**(Percent)**
Acquired in Florida	22	(95.7)
Acquired in the U.S., not Florida	1	(4.3)
Acquired outside the U.S.	0	(0.0)
Acquired location unknown	0	(0.0)
Outbreak Status	**Number**	**(Percent)**
Sporadic	23	(100.0)
Outbreak-associated	0	(0.0)
Outbreak status unknown	0	(0.0)
Serogroup	**Number**	**(Percent)**
Group W	11	(47.8)
Group B	6	(26.1)
Group Y	4	(17.4)
Non-groupable	1	(4.3)
Unknown	1	(4.3)

Reported Meningococcal Disease Cases by Month of Occurrence, Case Classification, Outcome, Imported Status, and Outbreak Status, Florida



Interpretation:
Occurrence is determined by the earliest date associated with the case, which is most frequently the date of onset, but can also be the diagnosis date, the laboratory report date, or the date the county health department was notified of the case. For outcome, a case can be included in the hospitalized count as well as the death count. Hospitalized status means that a person was hospitalized at the time of their illness, though the hospitalization may not necessarily have been due to the illness. Deaths include all people with the illness who died, though the death may not necessarily have been due to the illness. Imported status refers to where the infection was most likely acquired. Outbreak- associated indicates that two or more cases are epidemiologically linked.

Additional Information

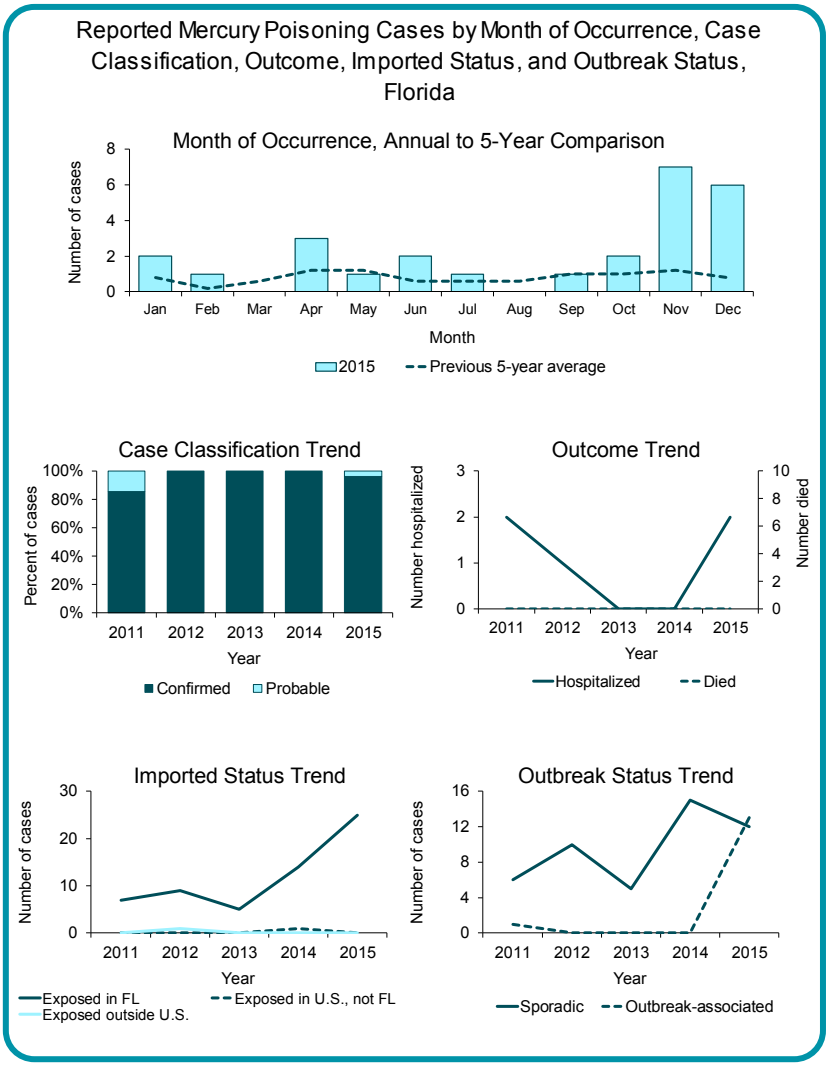
Serogroup W continued to be the most frequently identified serogroup causing infection in Florida, which differs significantly from national trends where serogroup B is the most frequently identified serogroup. Beginning in late 2008, a dominant clone of *N. meningitidis* serogroup W emerged in south Florida. This *N. meningitidis* clone has caused the majority of invasive meningococcal disease cases in south Florida over the past eight years and has also caused an increase in invasive meningococcal disease in the region. In 2015, the reported incidence of serogroup W infections decreased and the geographic distribution of detected cases did not expand.

For additional information on the initial cluster, please see the article below.

Doyle TJ, Mejia-Echeverry A, Fiorella P, Leguen F, Livengood J, Kay R, et al. 2010. Cluster of Serogroup W135 Meningococci, Southeastern Florida, 2008–2009. *Emerging Infectious Diseases*, 16(1):113-115. Available at wwwnc.cdc.gov/eid/article/16/1/09-1026_article.

Summary of Case Factors

Summary	Number	
Number of cases	26	
Case Classification	**Number**	**(Percent)**
Confirmed	25	(96.2)
Probable	1	(3.8)
Outcome	**Number**	**(Percent)**
Hospitalized	2	(7.7)
Died	0	(0.0)
Imported Status	**Number**	**(Percent)**
Exposed in Florida	25	(96.2)
Exposed in the U.S., not Florida	0	(0.0)
Exposed outside the U.S.	0	(0.0)
Exposed location unknown	1	(3.8)
Outbreak Status	**Number**	**(Percent)**
Sporadic	12	(46.2)
Outbreak-associated	13	(50.0)
Outbreak status unknown	1	(3.8)



Interpretation:
Occurrence is determined by the earliest date associated with the case, which is most frequently the date of onset, but can also be the diagnosis date, the laboratory report date, or the date the county health department was notified of the case. For outcome, a case can be included in the hospitalized count as well as the death count. Hospitalized status means that a person was hospitalized at the time of their illness, though the hospitalization may not necessarily have been due to the illness. Deaths include all people with the illness who died, though the death may not necessarily have been due to the illness. Imported status refers to where the exposure most likely occurred. Outbreak-associated indicates that two or more cases are epidemiologically linked.

Additional Information

Half of the cases reported in 2015 were outbreak-associated and related to elemental mercury exposure in a daycare in Hillsborough County in late November/early December (see Section 4: Notable Outbreaks and Case Investigations for additional information on this outbreak). The outbreak accounted for the large increase in overall rate and rate in children <5 years old compared to the previous 5-year average. Among the remaining 13 non-outbreak-associated cases, eleven were in people reporting fish consumption within the month prior to illness onset, and two cases did not report any high-risk exposures.

Pertussis

Disease Facts

Cause: *Bordetella pertussis* bacteria

Type of illness: Respiratory infection; early symptoms last 1-2 weeks and include runny nose, low-grade fever, mild cough, and apnea; progresses to paroxysmal cough or “whoop” with posttussive vomiting and exhaustion

Transmission: Person-to-person; inhalation of infective, aerosolized respiratory tract droplets

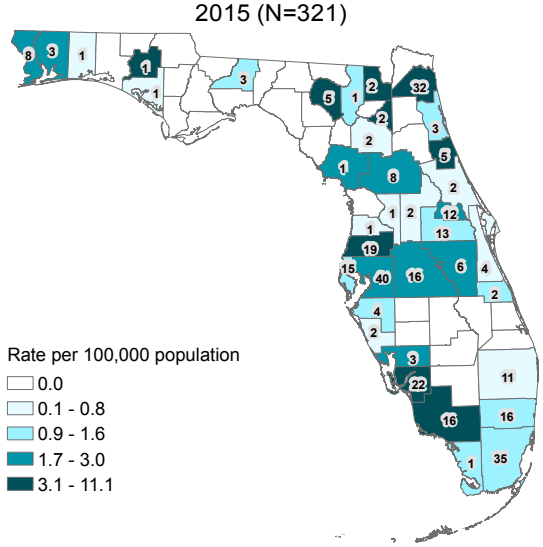
Reason for surveillance: Identify cases for treatment to prevent death, identify and prevent outbreaks, limit transmission in settings with infants or others who may transmit to infants, monitor effectiveness of immunization programs and vaccines

Comments: Pertussis incidence has increased nationwide since the 1980s. There was sharp increase in incidence in Florida in 2012 and 2013. Cases decreased slightly in 2014 and dramatically in 2015; factors contributing to the decrease are not well understood. Incidence remained highest in infants <1 year old.

Summary of Case Demographics

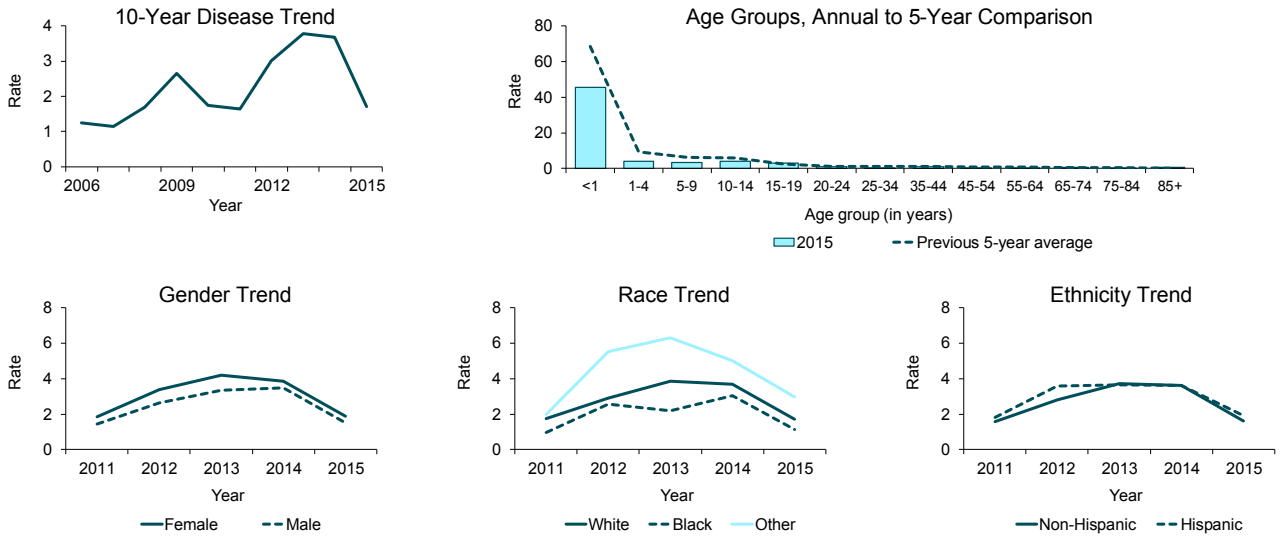
Summary			
Number of cases			339
Incidence rate (per 100,000 population)			1.7
Change from 5-year average incidence			-38.5%
Age (in Years)			
Mean			16
Median			9
Min-max			0 - 89
Gender	**Number**	**(Percent)**	**Rate**
Female	191	(56.3)	1.9
Male	148	(43.7)	1.5
Unknown gender	0		
Race	**Number**	**(Percent)**	**Rate**
White	267	(79.5)	1.7
Black	38	(11.3)	1.1
Other	31	(9.2)	3.0
Unknown race	3		
Ethnicity	**Number**	**(Percent)**	**Rate**
Non-Hispanic	241	(71.9)	1.6
Hispanic	94	(28.1)	1.9
Unknown ethnicity	4		

Reported Pertussis Cases and Incidence Rates Per 100,000 Population (Restricted to Infections Acquired in Florida) by County of Residence, Florida, 2015 (N=321)



Note that rates based on <20 cases are not reliable and should be interpreted with caution.

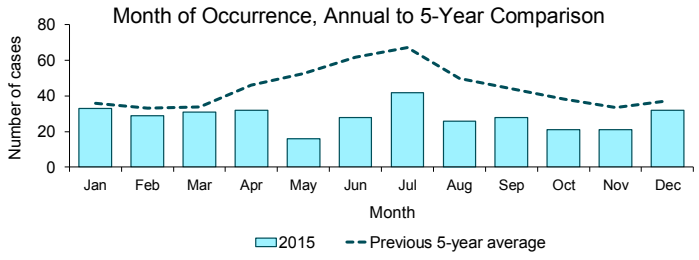
Incidence Rates Per 100,000 Population of Reported Pertussis Cases by Year, Age, Gender, Race, and Ethnicity, Florida

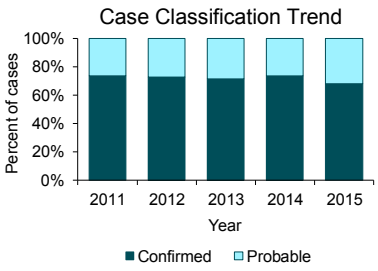


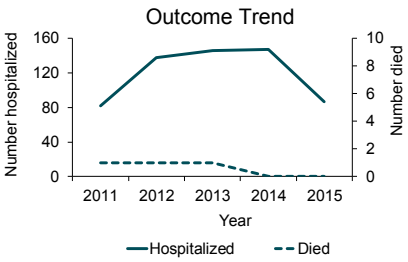
Summary of Case Factors

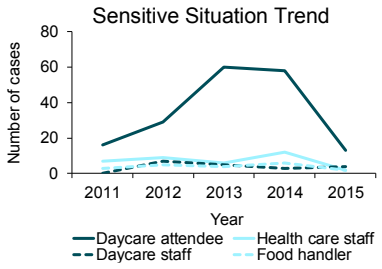
Summary	Number	
Number of cases	339	
Case Classification	**Number**	**(Percent)**
Confirmed	232	(68.4)
Probable	107	(31.6)
Outcome	**Number**	**(Percent)**
Hospitalized	87	(25.7)
Died	0	(0.0)
Sensitive Situation	**Number**	**(Percent)**
Daycare attendee	13	(3.8)
Daycare staff	4	(1.2)
Health care staff	2	(0.6)
Food handler	2	(0.6)
Imported Status	**Number**	**(Percent)**
Acquired in Florida	321	(94.7)
Acquired in the U.S., not Florida	12	(3.5)
Acquired outside the U.S.	3	(0.9)
Acquired location unknown	3	(0.9)
Outbreak Status	**Number**	**(Percent)**
Sporadic	187	(55.2)
Outbreak-associated	150	(44.2)
Outbreak status unknown	2	(0.6)

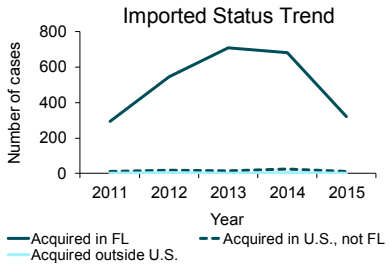
Reported Pertussis Cases by Month of Occurrence, Case Classification, Outcome, Sensitive Situation, Imported Status, and Outbreak Status, Florida

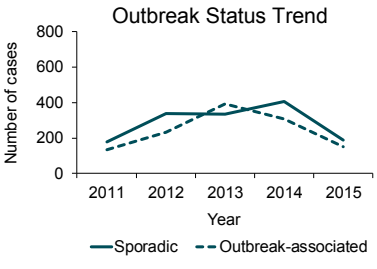












Interpretation:
Occurrence is determined by the earliest date associated with the case, which is most frequently the date of onset, but can also be the diagnosis date, the laboratory report date, or the date the county health department was notified of the case. For outcome, a case can be included in the hospitalized count as well as the death count. Hospitalized status means that a person was hospitalized at the time of their illness, though the hospitalization may not necessarily have been due to the illness. Deaths include all people with the illness who died, though the death may not necessarily have been due to the illness. Sensitive situation categories are not mutually exclusive, and most cases do not fall into any of these categories. Imported status refers to where the infection was most likely acquired. Outbreak- associated indicates that two or more cases are epidemiologically linked.

Additional Information

Older adults often have milder infections and serve as the reservoirs and sources of infection for infants and young children. The highest rate of pertussis is in infants <1 year old who are too young to be vaccinated, underscoring the importance of pregnant women and family members of infants getting vaccinated to protect infants from exposure. One dose of Tdap (tetanus, diphtheria, pertussis) vaccine became a requirement for children entering, attending, or transferring to the seventh grade during the 2009-2010 school year.

The number of pertussis cases that were outbreak-associated decreased from 307 (42.7%) in 2014 to 150 (44.2%) in 2015. The decrease in outbreak-associated cases follows the overall decrease in pertussis cases in 2015. Note that the proportion of cases that were outbreak-associated actually increased slightly from 2014 to 2015. There were 24 pertussis outbreaks with ≥3 cases in 2015 with the majority (19) occurring in households, one occurring in a daycare, and four with mixed transmission settings.

Pertussis mortality is rare in Florida and though there were no deaths in 2015, one to two deaths in a year is not uncommon.

Pesticide-Related Illness and Injury, Acute

Disease Facts

Cause: Pesticides

Type of illness: Respiratory, gastrointestinal, neurological, dermal, etc., depending on the agent

Exposure: Depends on agent; dermal, inhalation, and ingestion are most common

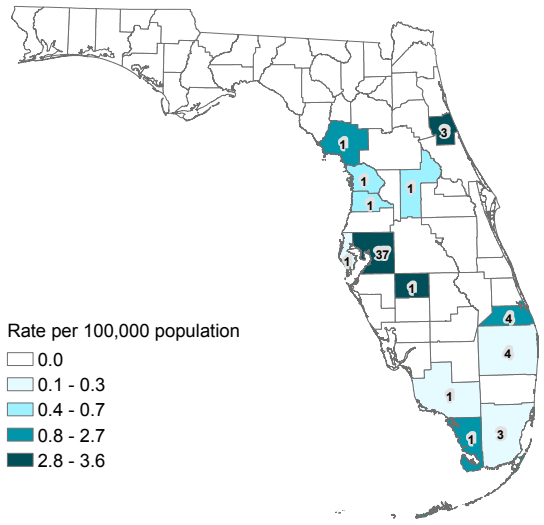
Reason for surveillance: Identify and mitigate persistent sources of exposure, identify populations at risk, evaluate trends in environmental conditions and occupational exposure, improve administration and proper use of pesticides to reduce exposure

Comments: Starting in January 2012, suspect sporadic cases (i.e., not part of a cluster) and suspect cases associated with non-occupational exposures (typically limited household exposures) were no longer counted in totals of reportable cases, resulting in a substantially decreased number of cases reported in 2012. Note that suspect cases are included in acute pesticide-related illness and injury case counts and rates in this report.

Summary of Case Demographics

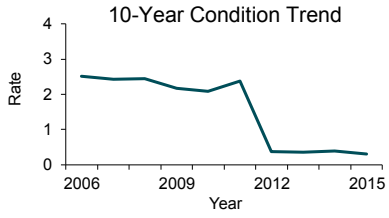
Summary			
Number of cases			59
Incidence rate (per 100,000 population)			0.3
Change from 5-year average incidence			-73.3%
Age (in Years)			
Mean			44
Median			49
Min-max			3 - 76
Gender	**Number**	**(Percent)**	**Rate**
Female	38	(64.4)	0.4
Male	21	(35.6)	0.2
Unknown gender	0		
Race	**Number**	**(Percent)**	**Rate**
White	53	(93.0)	0.3
Black	3	(5.3)	NA
Other	1	(1.8)	NA
Unknown race	2		
Ethnicity	**Number**	**(Percent)**	**Rate**
Non-Hispanic	53	(93.0)	0.4
Hispanic	4	(7.0)	NA
Unknown ethnicity	2		

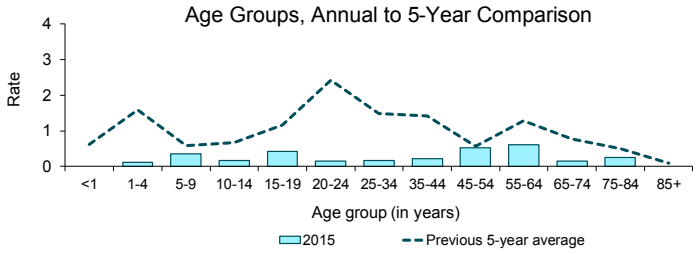
Reported Acute Pesticide-Related Illness and Injury Cases and Incidence Rates Per 100,000 Population by County of Residence, Florida, 2015 (N=59)

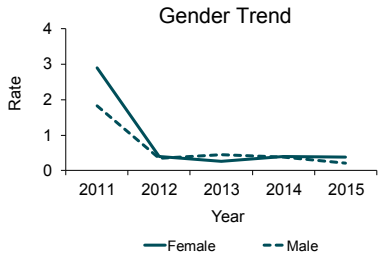


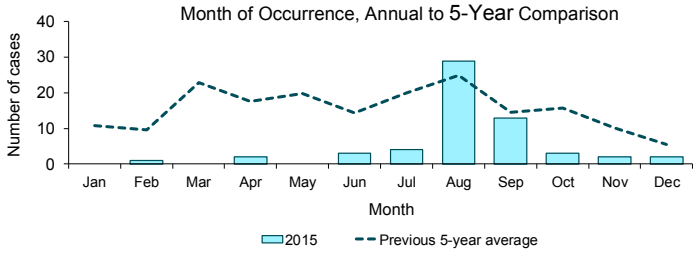
Note that rates based on <20 cases are not reliable and should be interpreted with caution.

Incidence Rates Per 100,000 Population of Reported Acute Pesticide-Related Illness and Injury Cases by Year, Age, Gender, and Month of Occurrence, Florida







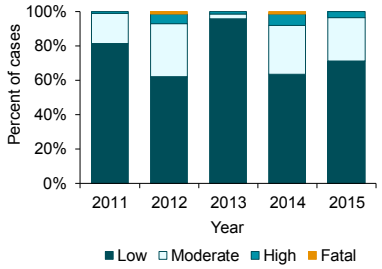


Occurrence is determined by the earliest date associated with the case, which is most frequently the date of onset, but can also be the diagnosis date, the laboratory report date, or the date the local health office was notified of the case.

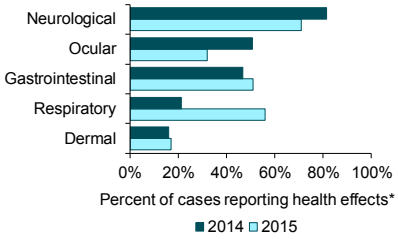
Additional Information

Reported Acute Pesticide-Related Illness and Injury Cases by Severity of Illness and Health Effects,* Florida

5-Year Trend for Severity of Illness

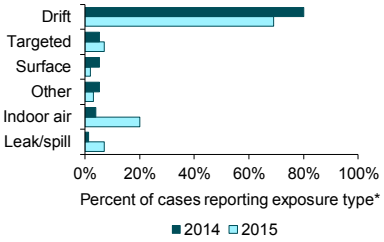


Health Effects,* 2014-2015

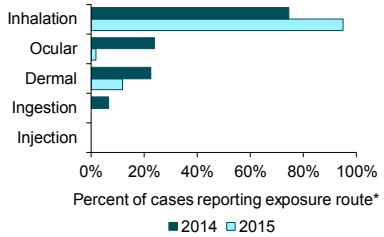


Reported Acute Pesticide-Related Illness and Injury Cases by Exposure Type,* Exposure Route,* Occupational Exposure, and Type of Activity at Time of Exposure, Florida

Exposure Type,* 2014-2015

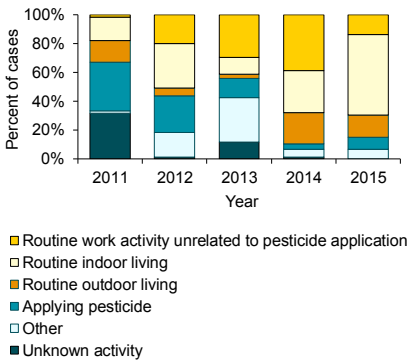


Exposure Route,* 2014-2015



5-Year Occupational Exposure Trend

5-Year Trend for Activity at Time of Exposure



*Note that there may be multiple exposure types and routes for one case, and multiple categories of health effects may be reported for one case.

Definitions of exposure types:

- Drift: Person was exposed via the movement of pesticides away from the treatment site.
- Targeted: Person was exposed to an application of a pesticide material released at the target site, and not carried from the target site by air.
- Indoor air: Person was exposed via indoor air contamination (this includes residential, commercial and greenhouse indoor air).
- Surface: Person was exposed via contact with pesticide residues on a treated surface (e.g., plant material, carpets, a treated animal) or entry into an outdoor treated area.
- Leak/spill: Person was exposed to a leak or spill of pesticide material (e.g., from a leaking container or equipment, flood waters, emergency response).

Additional Information

In 2015, most cases experienced neurological symptoms (e.g., headache, weakness, dizziness) and had low severity of illness following pesticide exposure. No deaths were reported related to pesticide exposure.

In 2015, 38 (64.4%) of 59 cases were related to Paladin odor, a soil fumigant with dimethyl disulfide (DMDS) as the active ingredient. Paladin was applied in Hillsborough County in August and September, accounting for the clustering of cases in that count and the increased case count during those months.

All people with Paladin exposure had inhalational exposure following pesticide drift, accounting for the increased proportion of cases via inhalation in 2015 compared to 2014. A larger proportion of cases in 2015 were exposure during routine indoor living activities compared to past years. Of the 38 Paladin-related cases, 28 (73.7%) reported that they were doing routine indoor living activities when they were exposed, nine (23.7%) reported routine outdoor living activities, and one (2.6%) reported routine work activity not related to pesticide application. For additional information on Paladin and pesticide-related illness and injury, please see Section 4: Notable Outbreaks and Case Investigations in the *2015 Florida Morbidity Statistics Report*.

Rabies, Animal and Possible Human Exposure

Disease Facts

Cause: Rabies virus

Type of illness in humans: Fever, headache, insomnia, confusion, hallucinations, increase in saliva, difficulty swallowing, and fear of water; death usually occurs within days of symptom onset

Transmission: Infectious saliva or nervous tissue in contact with open wound or mucous membrane via bite

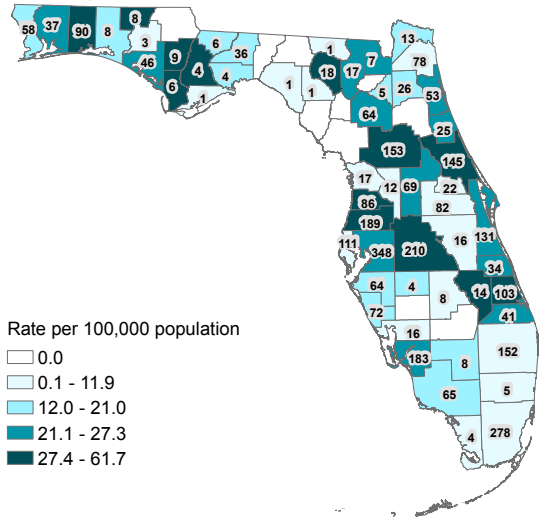
Reason for surveillance: Identify and mediate sources of exposure, evaluate adherence to guidance on rabies post-exposure prophylaxis (PEP)

Comments: Incidence of human exposures to suspected rabid animals for which PEP is recommended has increased since case reporting was initiated primarily due to PEP recommendations related to dog bites. Reasons for the increase could include more animal bites, lack of rabies PEP training, and decreased local resources to find and confine or test biting animals.

Summary of Case Demographics

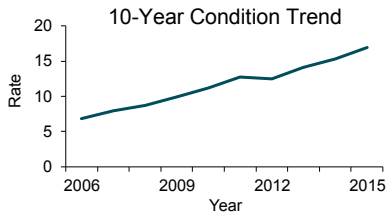
Possible human exposure to rabies			
Number of cases with PEP recommended	3,364		
Incidence rate (per 100,000 population)	16.9		
Change from 5-year average incidence	+28.7%		
Age (in Years)			
Mean	36		
Median	34		
Min-max	0 - 102		
Gender	**Number**	**(Percent)**	**Rate**
Female	1,748	(52.0)	17.2
Male	1,616	(48.0)	16.6
Unknown gender	0		
Race	**Number**	**(Percent)**	**Rate**
White	2,420	(85.7)	15.6
Black	274	(9.7)	8.2
Other	131	(4.6)	12.6
Unknown race	539		
Ethnicity	**Number**	**(Percent)**	**Rate**
Non-Hispanic	2,367	(83.1)	15.8
Hispanic	482	(16.9)	9.9
Unknown ethnicity	515		

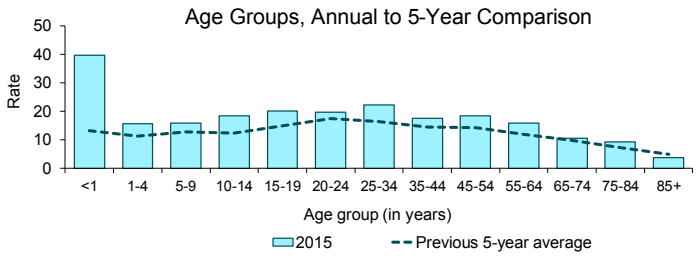
Reported Possible Human Exposure to Rabies Cases and Incidence Rates Per 100,000 Population (Restricted to Exposures Occurring in Florida) by County of Residence, Florida, 2015 (N=3,267)

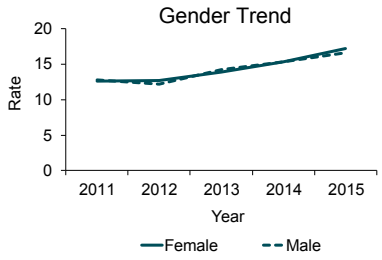


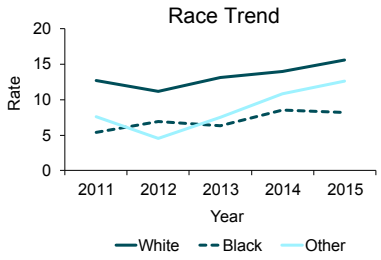
Note that rates based on <20 cases are not reliable and should be interpreted with caution.

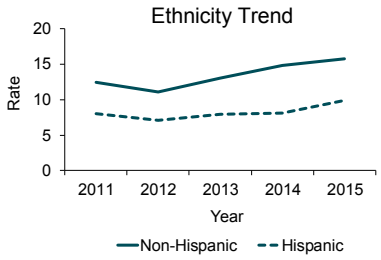
Incidence Rates Per 100,000 Population of Reported Possible Human Exposure to Rabies Cases by Year, Age, Gender, Race, and Ethnicity, Florida











Note that trend graphs should be interpreted with caution when more than 5% of data are missing. Possible human exposure to rabies cases were missing 9.8% of ethnicity data in 2011, 11.8% of race data in 2011, 18.3% of ethnicity data in 2012, 18.2% of race data in 2012, 15.7% of ethnicity data in 2013, 16.7% of race data in 2013, 13.4% of ethnicity data in 2014, 15.6% of race data in 2014, 15.3% of ethnicity data in 2015, and 16.0% of race data in 2015.

Additional Information

The last case of human rabies acquired in Florida was in 1948. The animals most frequently diagnosed with rabies in Florida are raccoons, bats, unvaccinated cats, and foxes. Rabies is endemic in the raccoon and bat populations of Florida. Rabies frequently spreads from raccoons, and occasionally bats, to other animal species such as foxes and cats.

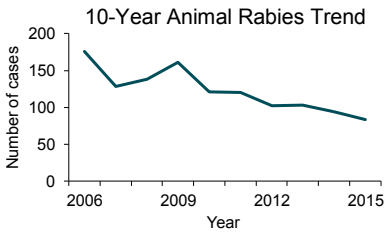
Laboratory testing for animal rabies is only done when animals potentially expose (e.g., bite) humans or domestic animals; thus, these data do not necessarily correlate with the true prevalence of rabies by animal species in Florida. A total of 83 laboratory-confirmed rabid animals were reported in 2015, which was a 23.1% decrease from the previous 5-year average.

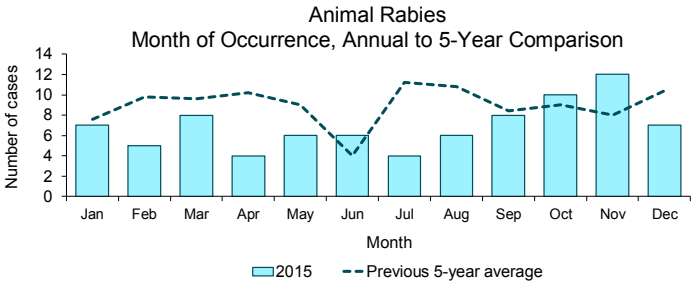
Case counts in this report may differ from those found in other rabies reports as different criteria are used to assemble the data. Other reports use the calendar year, while this report uses report year. For additional information on calendar year versus report year, please see the paragraph on Determining How Cases are Counted: Reporting Period and Cases Included within Interpreting the Data in the Introduction (page vii).

In 2015, Sarasota County reported the first ever rabid goats in Florida. All mammals can be infected by rabies, although the primary reservoirs are meat-eating mammals and bats. The number of rabid animals remained low in 2015, which could be in part due to natural cycles in disease, strict use of testing criteria, or increased reliance on rabies PEP rather than animal testing or observation.

There is generally a much greater risk for rabies exposure to people when domestic animals are infected versus wildlife. Properly administered rabies vaccines are highly effective in protecting domestic animals like cats and dogs against rabies infection, and rabies vaccination is required by state law for these animals.

Reported Animal Rabies
by Year, Month of Occurrence, Animal, and County, Florida

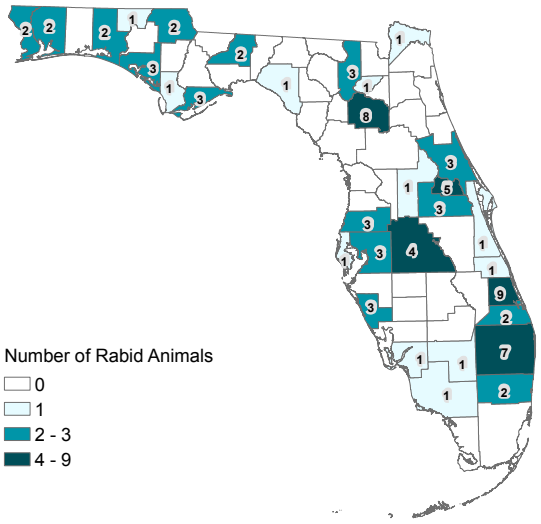




Laboratory-Confirmed Rabid Animals by Type of Animal, Florida, 2014 and 2015

Type of animal	2014		2015	
	Number	(Percent)	Number	(Percent)
Raccoon	51	(54.3)	45	(54.2)
Bat	19	(20.2)	15	(18.1)
Fox	5	(5.3)	10	(12.0)
Cat	16	(17.0)	8	(9.6)
Goat	0	(0.0)	2	(2.4)
Dog	2	(2.1)	2	(2.4)
Skunk	0	(0.0)	1	(1.2)
Horse	1	(1.1)	0	(0.0)
Total	94		83	

Laboratory-Confirmed Rabid Animals by County, Florida, 2015 (N=83)



Rocky Mountain Spotted Fever and Spotted Fever Rickettsiosis

Disease Facts

Cause: Certain *Rickettsia* bacteria, most commonly *Rickettsia rickettsii*, *R. parkeri*, *R. africae*, *R. conorii*

Type of illness: Fever, headache, abdominal pain, vomiting, and muscle pain; rash develops in 80% of cases

Transmission: Tick-borne; bite of infective tick

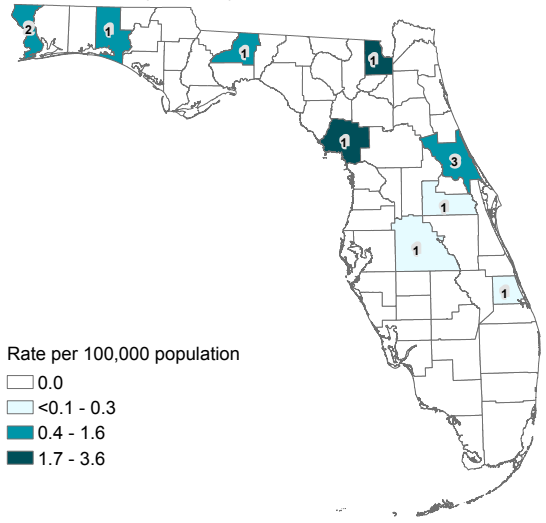
Reason for surveillance: Monitor incidence over time, estimate burden of illness, monitor geographical and temporal occurrence, target areas of high incidence for prevention education

Comments: Most infections are acquired within Florida, primarily in the northern and central regions of the state. Cases are reported year-round without distinct seasonality, though peak transmission typically occurs during the summer months. The principal tick vectors in Florida are the American dog tick (*Dermacentor variabilis*) and the Gulf Coast tick (*Amblyomma maculatum*).

Summary of Case Demographics

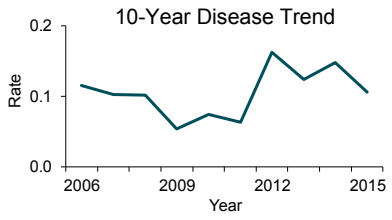
Summary			
Number of cases			21
Incidence rate (per 100,000 population)			0.1
Change from 5-year average incidence			-7.8%
Age (in Years)			
Mean			52
Median			54
Min-max			15 - 87
Gender	**Number**	**(Percent)**	**Rate**
Female	3	(14.3)	NA
Male	18	(85.7)	NA
Unknown gender	0		
Race	**Number**	**(Percent)**	**Rate**
White	15	(88.2)	NA
Black	1	(5.9)	NA
Other	1	(5.9)	NA
Unknown race	4		
Ethnicity	**Number**	**(Percent)**	**Rate**
Non-Hispanic	17	(100.0)	NA
Hispanic	0	(0.0)	NA
Unknown ethnicity	4		

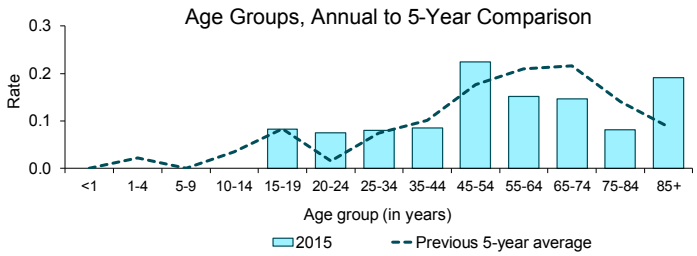
Reported Rocky Mountain Spotted Fever and Spotted Fever Rickettsiosis Cases and Incidence Rates Per 100,000 Population (Restricted to Infections Acquired in Florida) by County of Residence, Florida, 2015 (N=12)

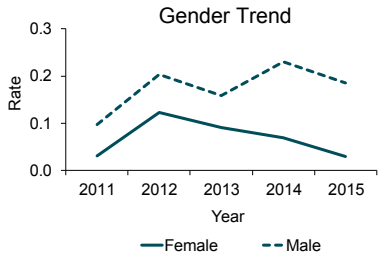


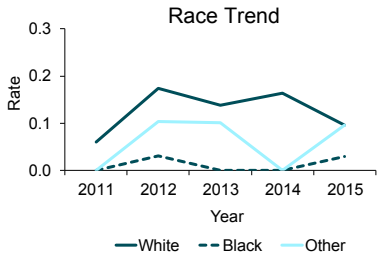
Note that rates based on <20 cases are not reliable and should be interpreted with caution.

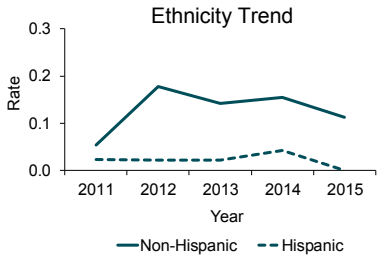
Incidence Rates Per 100,000 Population of Reported Rocky Mountain Spotted Fever Cases by Year, Age, Gender, Race, and Ethnicity, Florida











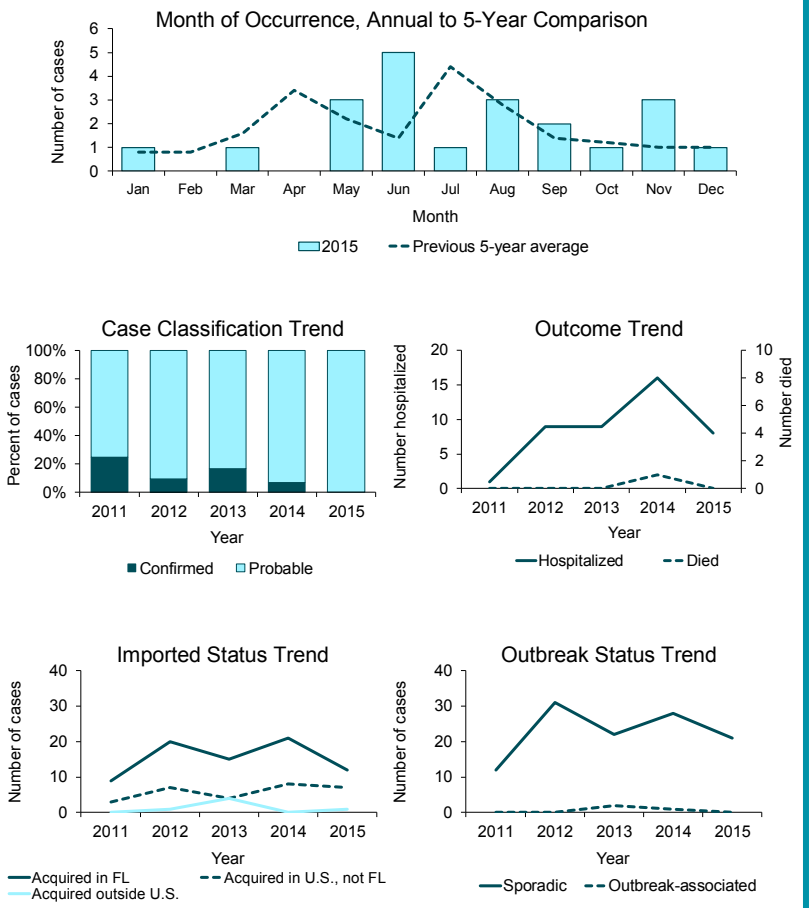
Note that trend graphs should be interpreted with caution when more than 5% of data are missing. Rocky Mountain spotted fever and spotted fever rickettsiosis cases were missing 25.0% of ethnicity data in 2011, 25.0% of race data in 2011, 12.9% of ethnicity data in 2012, 9.7% of race data in 2012, 8.3% of ethnicity data in 2013, 8.3% of race data in 2013, 13.8% of ethnicity data in 2014, 13.8% of race data in 2014, 19.0% of ethnicity data in 2015, and 19.0% of race data in 2015.

Summary of Case Factors

Summary	Number	
Number of cases	21	
Case Classification	**Number**	**(Percent)**
Confirmed	0	(0.0)
Probable	21	(100.0)
Outcome	**Number**	**(Percent)**
Hospitalized	8	(38.1)
Died	0	(0.0)
Imported Status	**Number**	**(Percent)**
Acquired in Florida	12	(57.1)
Acquired in the U.S., not Florida	7	(33.3)
Acquired outside the U.S.	1	(4.8)
Acquired location unknown	1	(4.8)
Outbreak Status	**Number**	**(Percent)**
Sporadic	21	(100.0)
Outbreak-associated	0	(0.0)
Outbreak status unknown	0	(0.0)

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. Other reports may use illness onset date instead of report date, or county of exposure instead of county of residence.

Reported Rocky Mountain Spotted Fever and Spotted Fever Rickettsiosis Cases by Month of Occurrence, Case Classification, Outcome, Imported Status, and Outbreak Status, Florida



Interpretation:
Occurrence is determined by the earliest date associated with the case, which is most frequently the date of onset, but can also be the diagnosis date, the laboratory report date, or the date the county health department was notified of the case. For outcome, a case can be included in the hospitalized count as well as the death count. Hospitalized status means that a person was hospitalized at the time of their illness, though the hospitalization may not necessarily have been due to the illness. Deaths include all people with the illness who died, though the death may not necessarily have been due to the illness. Imported status refers to where the infection was most likely acquired. Outbreak- associated indicates that two or more cases are epidemiologically linked.

Additional Information

In addition to Rocky Mountain spotted fever (RMSF), several other tick-borne species of *Rickettsia* are known to cause human infections. These species are grouped under spotted fever rickettsiosis (SFR). In 2010, the national reporting criteria were expanded to include both RMSF and other SFR. Florida adopted this change in June 2014. 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*. In addition, commercial antibody testing to differentiate other SFRs from RMSF is currently limited. The probable case definition lacks specificity and most cases are never confirmed; no cases in 2015 were confirmed.

Salmonellosis

Disease Facts

Cause: *Salmonella* bacteria (excluding *Salmonella* serotype Typhi, which causes typhoid fever and is described in Section 3: Narratives for Selected Reportable Diseases/Conditions of Infrequent Occurrence)

Type of illness: Gastroenteritis (diarrhea, vomiting)

Transmission: Fecal-oral; including person-to-person, animal-to-person, foodborne, and waterborne

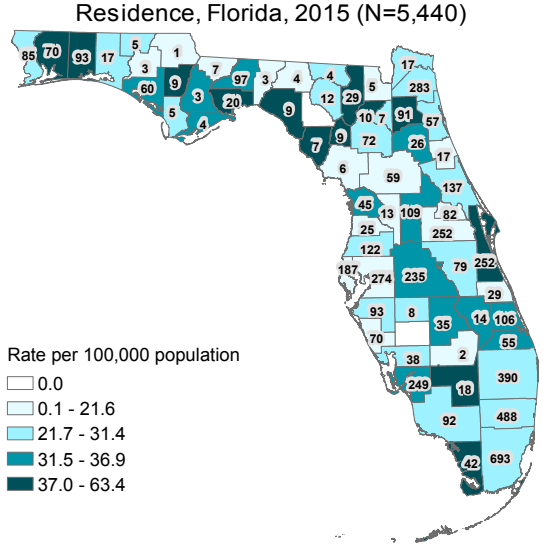
Reason for surveillance: Identify and control outbreaks, identify and mitigate common sources (e.g., contaminated food product, ill food handler), monitor incidence over time, estimate burden of illness

Comments: In recent years, Florida has had the highest number and one of the highest rates of salmonellosis cases of any state in the U.S. Salmonellosis rates are very high in <1-year-olds and decrease dramatically with age. The seasonal pattern is very strong, peaking in late summer. Geographic distribution of cases is relatively consistent across years, though not well understood. Rates are frequently highest in lower population counties.

Summary of Case Demographics

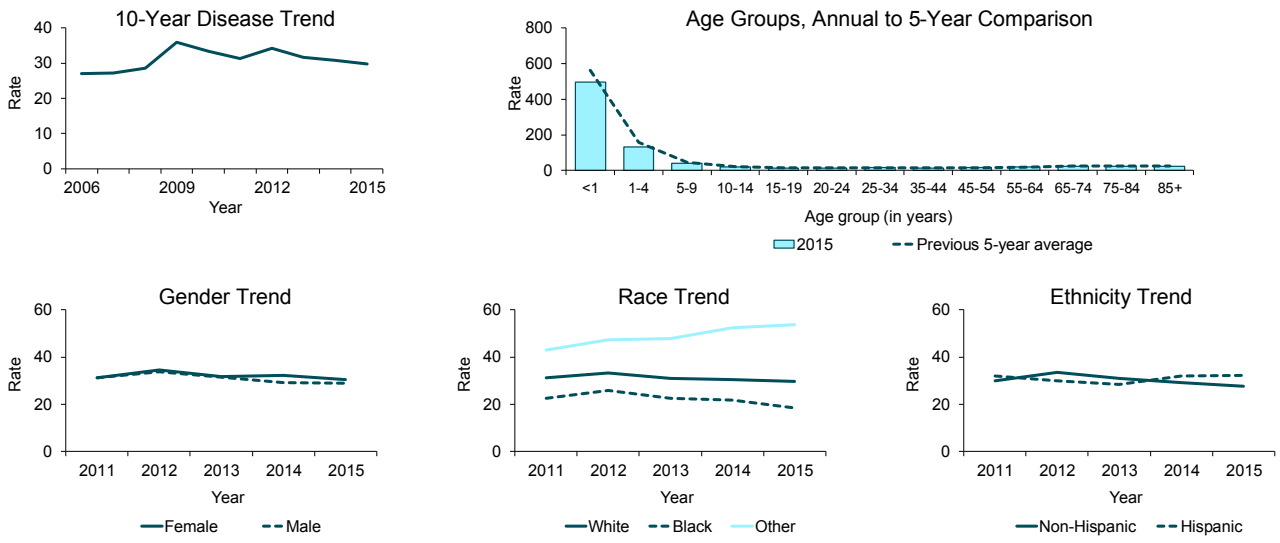
Summary			
Number of cases			5,924
Incidence rate (per 100,000 population)			29.8
Change from 5-year average incidence			-7.6%
Age (in Years)			
Mean			27
Median			14
Min-max			0 - 104
Gender	**Number**	**(Percent)**	**Rate**
Female	3,099	(52.3)	30.6
Male	2,825	(47.7)	29.1
Unknown gender	0		
Race	**Number**	**(Percent)**	**Rate**
White	4,582	(79.6)	29.6
Black	618	(10.7)	18.5
Other	558	(9.7)	53.8
Unknown race	166		
Ethnicity	**Number**	**(Percent)**	**Rate**
Non-Hispanic	4,140	(72.5)	27.6
Hispanic	1,569	(27.5)	32.3
Unknown ethnicity	215		

Reported Salmonellosis Cases and Incidence Rates Per 100,000 Population (Restricted to Infections Acquired in Florida) by County of Residence, Florida, 2015 (N=5,440)



Note that rates based on <20 cases are not reliable and should be interpreted with caution.

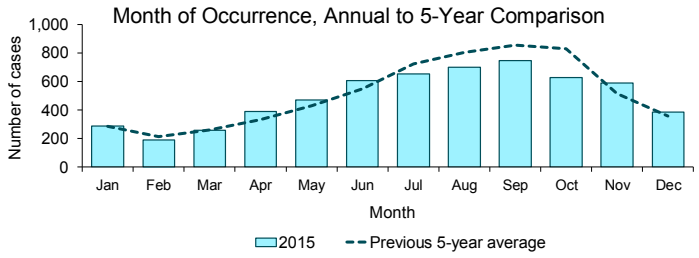
Incidence Rates Per 100,000 Population of Reported Salmonellosis Cases by Year, Age, Gender, Race, and Ethnicity, Florida

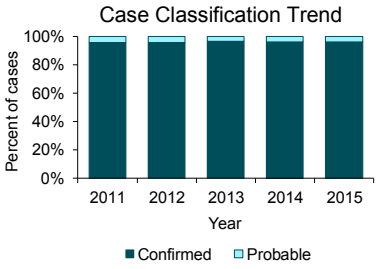


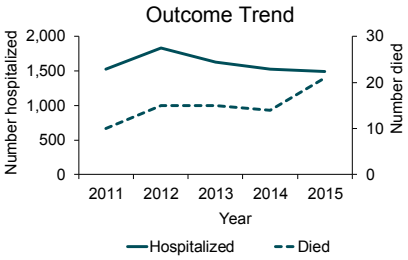
Summary of Case Factors

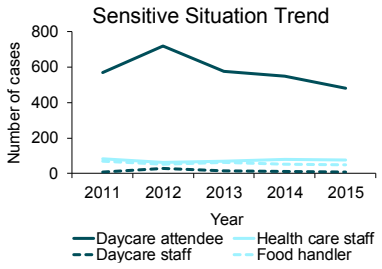
Summary	Number	
Number of cases	5,924	
Case Classification	**Number**	**(Percent)**
Confirmed	5,702	(96.3)
Probable	222	(3.7)
Outcome	**Number**	**(Percent)**
Hospitalized	1,490	(25.2)
Died	21	(0.4)
Sensitive Situation	**Number**	**(Percent)**
Daycare attendee	481	(8.1)
Daycare staff	8	(0.1)
Health care staff	78	(1.3)
Food handler	48	(0.8)
Imported Status	**Number**	**(Percent)**
Acquired in Florida	5,440	(91.8)
Acquired in the U.S., not Florida	99	(1.7)
Acquired outside the U.S.	182	(3.1)
Acquired location unknown	203	(3.4)
Outbreak Status	**Number**	**(Percent)**
Sporadic	5,271	(89.0)
Outbreak-associated	576	(9.7)
Outbreak status unknown	77	(1.3)

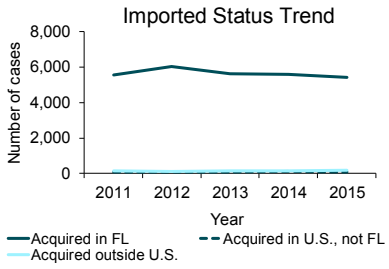
Reported Salmonellosis Cases by Month of Occurrence, Case Classification, Outcome, Sensitive Situation, Imported Status, and Outbreak Status, Florida

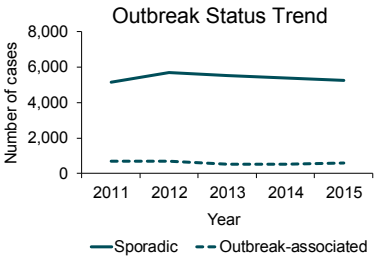












Interpretation:
Occurrence is determined by the earliest date associated with the case, which is most frequently the date of onset, but can also be the diagnosis date, the laboratory report date, or the date the county health department was notified of the case. For outcome, a case can be included in the hospitalized count as well as the death count. Hospitalized status means that a person was hospitalized at the time of their illness, though the hospitalization may not necessarily have been due to the illness. Deaths include all people with the illness who died, though the death may not necessarily have been due to the illness. Sensitive situation categories are not mutually exclusive, and most cases do not fall into any of these categories. Imported status refers to where the infection was most likely acquired. Outbreak- associated indicates that two or more cases are epidemiologically linked.

Additional Information

Most outbreak-associated cases are due to household clusters; however, some outbreak-associated cases are part of national or multistate outbreaks linked to a particular source. In 2015, Florida had 59 outbreak-associated cases that were part of 29 different multistate outbreaks. Analysis of pulsed-field gel electrophoresis data identified an additional 15 outbreak-associated cases that were part of three different in-state clusters. No common vehicle was identified for any in-state cluster.

Shiga Toxin-Producing *Escherichia coli* (STEC) Infection

Disease Facts

Cause: Shiga toxin-producing *Escherichia coli* (STEC) bacteria

Type of illness: Gastroenteritis (diarrhea, vomiting); less frequently hemolytic uremic syndrome (HUS)

Transmission: Fecal-oral; including person-to-person, animal-to-person, waterborne and foodborne

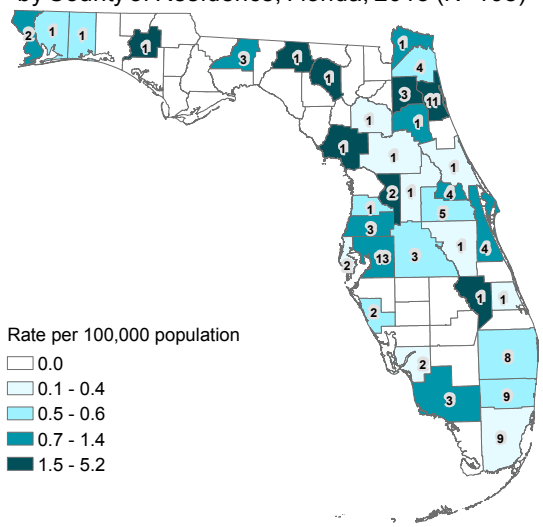
Reason for surveillance: Identify and control outbreaks, identify and mitigate common sources (e.g., contaminated food product, ill food handler), monitor incidence over time, estimate burden of illness

Comments: STEC incidence has generally increased over the past 10 years, likely due to advancements in laboratory techniques resulting in improved identification of STEC infection. Incidence is highest in children <5 years old, a group particularly vulnerable to STEC infection. STEC incidence in women has remained steadily higher than men, except in 2014 when it decreased to a rate similar to men. Incidence is lowest in black people, and has been increasing in people of other races since 2013.

Summary of Case Demographics

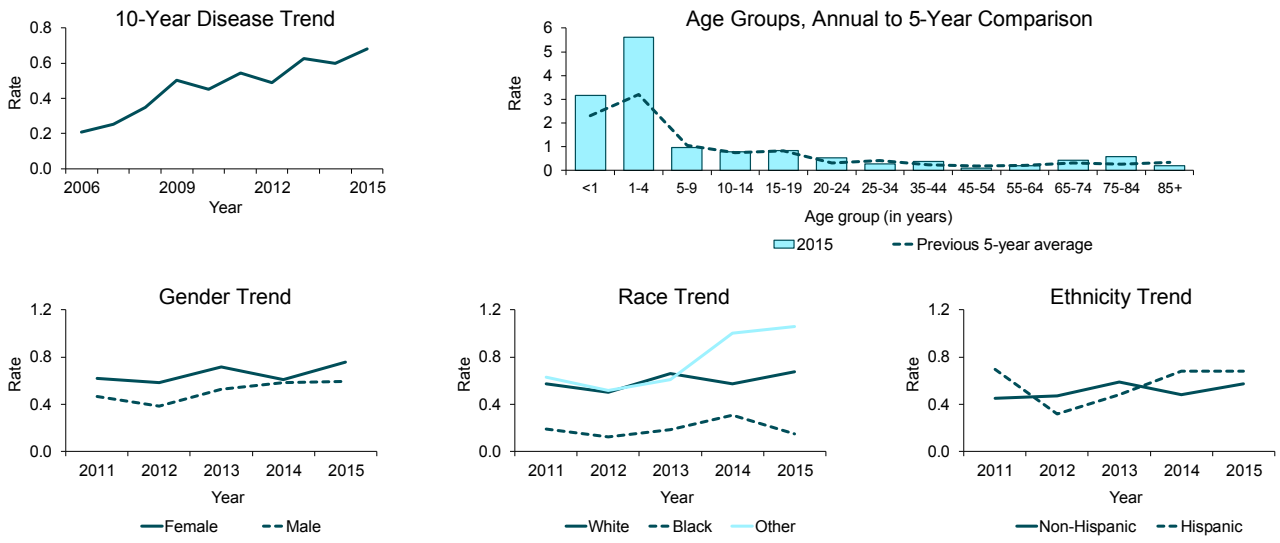
Summary			
Number of cases			135
Incidence rate (per 100,000 population)			0.7
Change from 5-year average incidence			+25.5%
Age (in Years)			
Mean			21
Median			9
Min-max			0 - 85
Gender	**Number**	**(Percent)**	**Rate**
Female	77	(57.0)	0.8
Male	58	(43.0)	0.6
Unknown gender	0		
Race	**Number**	**(Percent)**	**Rate**
White	105	(86.8)	0.7
Black	5	(4.1)	NA
Other	11	(9.1)	NA
Unknown race	14		
Ethnicity	**Number**	**(Percent)**	**Rate**
Non-Hispanic	86	(72.3)	0.6
Hispanic	33	(27.7)	0.7
Unknown ethnicity	16		

Reported Shiga Toxin-Producing *E. coli* Infection Cases and Incidence Rates Per 100,000 Population (Restricted to Infections Acquired in Florida) by County of Residence, Florida, 2015 (N=108)



Note that rates based on <20 cases are not reliable and should be interpreted with caution.

Incidence Rates Per 100,000 Population of Reported Shiga Toxin-Producing *E. coli* Infection Cases by Year, Age, Gender, Race, and Ethnicity, Florida

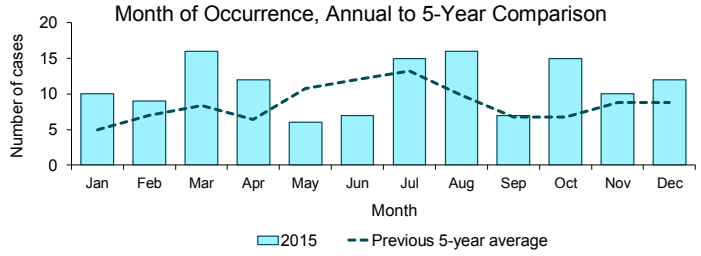


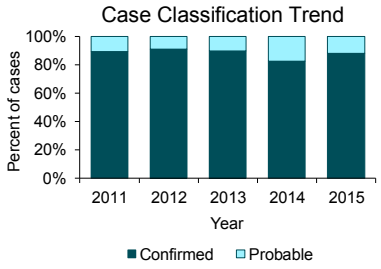
Note that trend graphs should be interpreted with caution when more than 5% of data are missing. Shiga toxin-producing *E. coli* infection cases were missing 6.8% of ethnicity data in 2011, 5.8% of race data in 2011, 10.8% of ethnicity data in 2012, 9.7% of race data in 2012, 9.9% of ethnicity data in 2013, 7.4% of race data in 2013, 11.1% of ethnicity data in 2014, 7.7% of race data in 2014, 11.9% of ethnicity data in 2015, and 10.4% of race data in 2015.

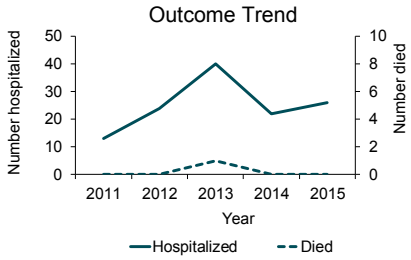
Summary of Case Factors

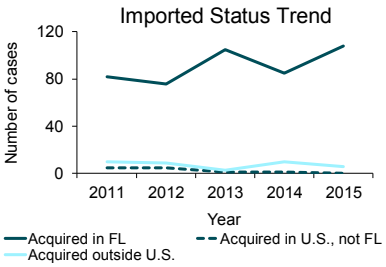
Summary	Number	
Number of cases	135	
Case Classification	**Number**	**(Percent)**
Confirmed	119	(88.1)
Probable	16	(11.9)
Outcome	**Number**	**(Percent)**
Hospitalized	26	(19.3)
Died	0	(0.0)
Sensitive Situation	**Number**	**(Percent)**
Daycare attendee	23	(17.0)
Daycare staff	0	(0.0)
Health care staff	3	(2.2)
Food handler	2	(1.5)
Imported Status	**Number**	**(Percent)**
Acquired in Florida	108	(80.0)
Acquired in the U.S., not Florida	0	(0.0)
Acquired outside the U.S.	6	(4.4)
Acquired location unknown	21	(15.6)
Outbreak Status	**Number**	**(Percent)**
Sporadic	95	(70.4)
Outbreak-associated	35	(25.9)
Outbreak status unknown	5	(3.7)
Serogroup	**Number**	**(Percent)**
O157	41	(34.5)
O26	21	(17.6)
O103	17	(14.3)
O111	12	(10.1)
O145	7	(5.9)
O45	3	(2.5)
O121	1	(0.8)
Other	17	(14.3)

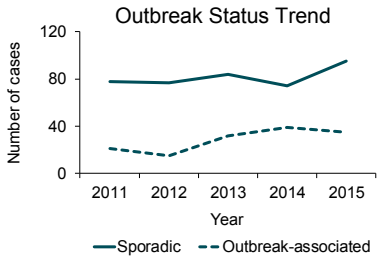
Reported Shiga Toxin-Producing *E. coli* Infection Cases by Month of Occurrence, Case Classification, Outcome, Sensitive Situation, Imported Status, and Outbreak Status, Florida

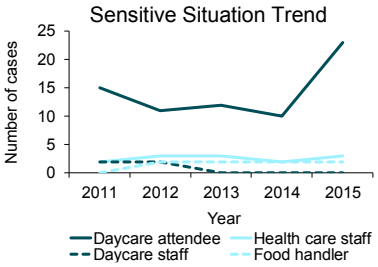












While O157 remains the most common serogroup identified in STEC infections, the top six non-O157 serogroups (O26, O45, O103, O111, O121, O145) are being increasingly identified due to advances in laboratory testing techniques.

Most outbreak-associated cases are due to household clusters; however, some cases are part of larger clusters or outbreaks. In 2015, Florida identified an in-state outbreak of 10 cases caused by *E. coli* serogroup O26 in a single daycare. This outbreak is the cause of the notable increase in cases in daycare attendees and children 1-4 years old in 2015 compared to previous years. Outbreak-associated cases can also be associated with national or multistate outbreaks linked to particular food items. In 2015, Florida identified two cases associated with a multistate outbreak of *E. coli* serogroup O157 where the likely vehicle was pre-packaged mixed greens.

Interpretation:
Occurrence is determined by the earliest date associated with the case, which is most frequently the date of onset, but can also be the diagnosis date, the laboratory report date, or the date the county health department was notified of the case. For outcome, a case can be included in the hospitalized count as well as the death count. Hospitalized status means that a person was hospitalized at the time of their illness, though the hospitalization may not necessarily have been due to the illness. Deaths include all people with the illness who died, though the death may not necessarily have been due to the illness. Sensitive situation categories are not mutually exclusive, and most cases do not fall into any of these categories. Imported status refers to where the infection was most likely acquired. Outbreak- associated indicates that two or more cases are epidemiologically linked.

Shigellosis

Disease Facts

Cause: *Shigella* bacteria

Type of illness: Gastroenteritis (diarrhea, vomiting)

Transmission: Fecal-oral; including person-to-person, foodborne, and waterborne

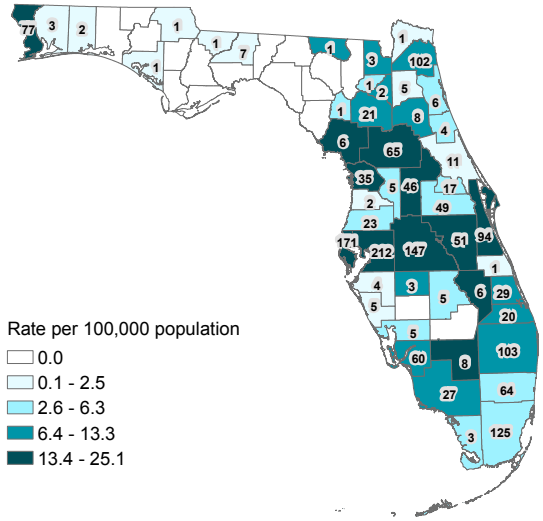
Reason for surveillance: Identify and control outbreaks, identify and mitigate common sources (e.g., ill daycare attendee), monitor incidence over time, estimate burden of illness

Comments: Shigellosis has a cyclic temporal pattern with large, community-wide outbreaks, frequently involving daycare centers, occurring every 3-5 years. Shigellosis incidence is highest in children aged 1 to 9 years and black people. A large portion of cases are outbreak-associated, primarily due to outbreaks in daycare centers. Consistent with Florida's cyclical pattern, shigellosis incidence increased substantially in 2014, with a rate similar to the last large peak in 2011, followed by a decrease in 2015.

Summary of Case Demographics

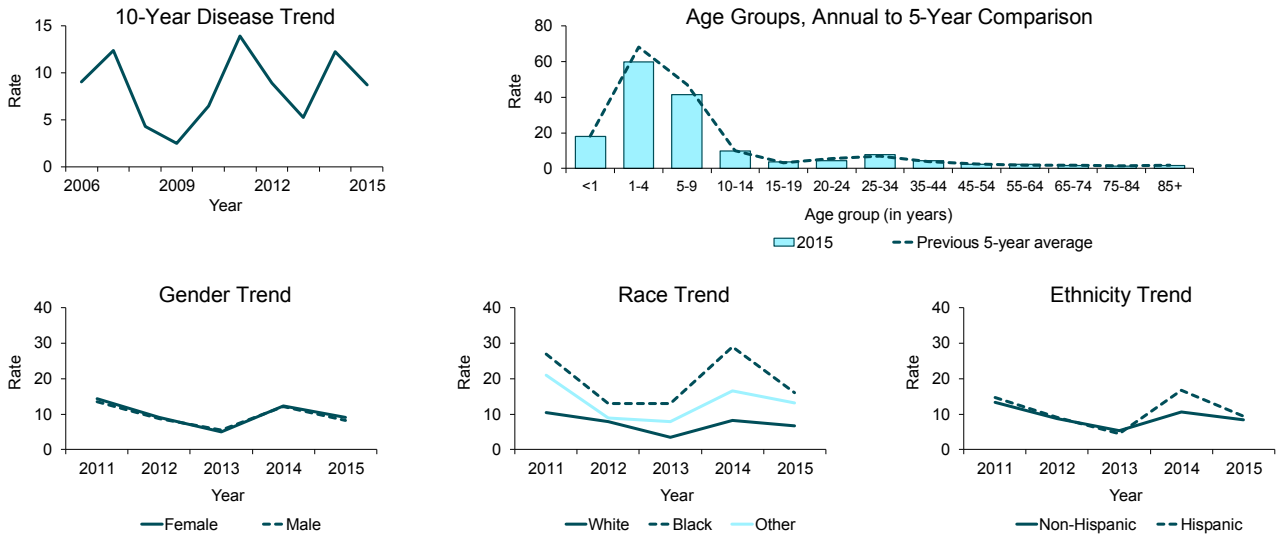
Summary			
Number of cases			1,737
Incidence rate (per 100,000 population)			8.7
Change from 5-year average incidence			-6.6%
Age (in Years)			
Mean			16
Median			7
Min-max			0 - 96
Gender	**Number**	**(Percent)**	**Rate**
Female	930	(53.5)	9.2
Male	807	(46.5)	8.3
Unknown gender	0		
Race	**Number**	**(Percent)**	**Rate**
White	1,050	(60.9)	6.8
Black	536	(31.1)	16.0
Other	137	(8.0)	13.2
Unknown race	14		
Ethnicity	**Number**	**(Percent)**	**Rate**
Non-Hispanic	1,260	(73.3)	8.4
Hispanic	458	(26.7)	9.4
Unknown ethnicity	19		

Reported Shigellosis Cases and Incidence Rates Per 100,000 Population (Restricted to Infections Acquired in Florida) by County of Residence, Florida, 2015 (N=1,649)



Note that rates based on <20 cases are not reliable and should be interpreted with caution.

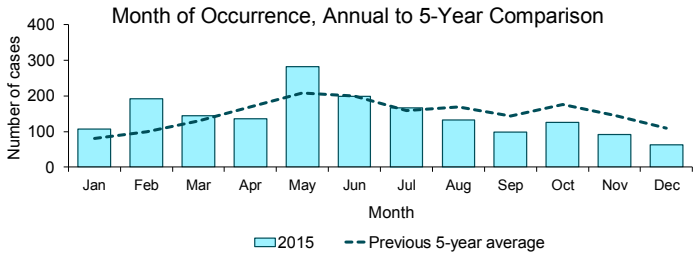
Incidence Rates Per 100,000 Population of Reported Shigellosis Cases by Year, Age, Gender, Race, and Ethnicity, Florida

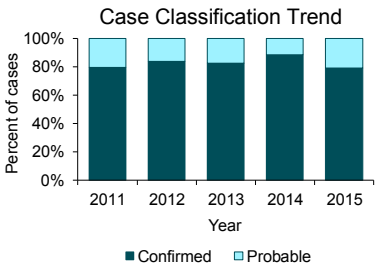


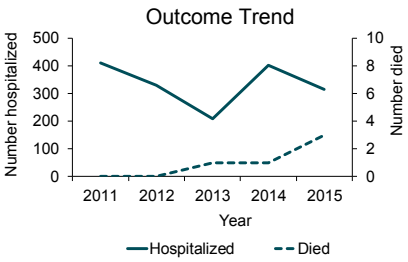
Summary of Case Factors

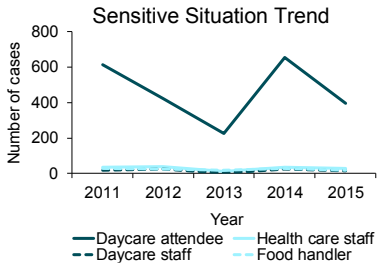
Summary	Number	
Number of cases	1,737	
Case Classification	**Number**	**(Percent)**
Confirmed	1,376	(79.2)
Probable	361	(20.8)
Outcome	**Number**	**(Percent)**
Hospitalized	315	(18.1)
Died	3	(0.2)
Sensitive Situation	**Number**	**(Percent)**
Daycare attendee	396	(22.8)
Daycare staff	15	(0.9)
Health care staff	28	(1.6)
Food handler	20	(1.2)
Imported Status	**Number**	**(Percent)**
Acquired in Florida	1,649	(94.9)
Acquired in the U.S., not Florida	15	(0.9)
Acquired outside the U.S.	44	(2.5)
Acquired location unknown	29	(1.7)
Outbreak Status	**Number**	**(Percent)**
Sporadic	970	(55.8)
Outbreak-associated	739	(42.5)
Outbreak status unknown	28	(1.6)

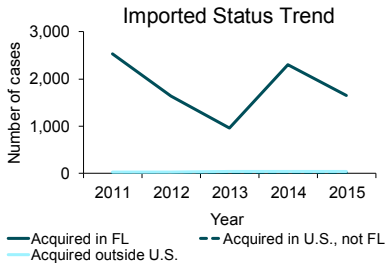
Reported Shigellosis Cases by Month of Occurrence, Case Classification, Outcome, Sensitive Situation, Imported Status, and Outbreak Status, Florida

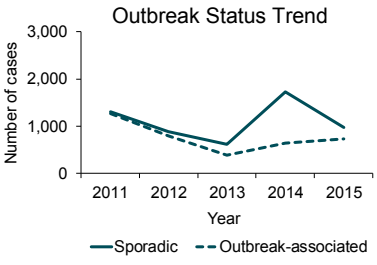












Interpretation:
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Additional Information

In 2015, the highest incidence rates were in central Florida, including both high- and low-population counties (compared to south Florida counties in 2014). In 2015, 239 (32.3%) outbreak-associated shigellosis cases were in daycare attendees, highlighting the important role of transmission in daycare settings which tends to drive community transmission. Counties with the largest number of daycare-associated cases tend to be the counties with the highest incidence rates.

In the U.S., most *Shigella* is already resistant to ampicillin and trimethoprim/sulfamethoxazole, causing health care providers to rely on alternative drugs such as ciprofloxacin and azithromycin to treat *Shigella* infections. Antimicrobial susceptibility testing (AST) results were available for 429 cases (24.7%) reported in 2015. While AST is regularly conducted on clinical specimens, treatment of shigellosis with antibiotics is not routinely recommended.

Resistance to Antibiotics for 429 Shigellosis Cases, Florida

Antibiotic	Resistant	
	Number	(Percent)
Trimethoprim/sulfamethoxazole	156	(36.4)
Ampicillin	57	(13.3)
Trimethoprim/sulfamethoxazole and ampicillin	31	(7.2)
Ciprofloxacin	3	(0.7)
Azithromycin	0	(0.0)

Syphilis (Excluding Congenital)

Disease Facts

Cause: *Treponema pallidum* bacteria

Type of illness: Sores on genitals, anus, or mouth, or a rash on the body

Transmission: Sexually transmitted disease (STD) spread by anal, vaginal, or oral sex and sometimes from mother to infant during pregnancy or delivery

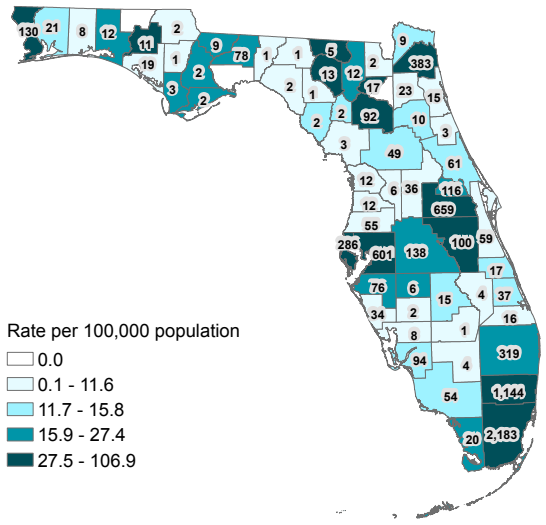
Reason for surveillance: Implement effective interventions immediately for every case, monitor incidence over time, estimate burden of illness, evaluate treatment and prevention programs

Comments: Syphilis is separated into early syphilis (i.e., syphilis <1 year duration; the infectious stage) and late or late latent syphilis (i.e., syphilis diagnosed >1 year after infection). Rates are higher in men and the black population. Men who have sex with men (MSM) have a higher incidence of early syphilis than non-MSM men and are also more likely to be co-infected with HIV. Incidence has increased each year since 2009.

Summary of Case Demographics

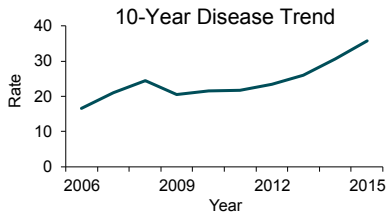
Summary			
Number of cases			7,118
Incidence rate (per 100,000 population)			35.8
Change from 5-year average incidence			+45.4%
Age (in Years)			
Mean			36
Median			34
Min-max			6 - 95
Gender	**Number**	**(Percent)**	**Rate**
Female	1,140	(16.0)	11.2
Male	5,978	(84.0)	61.5
Unknown gender	0		
Race	**Number**	**(Percent)**	**Rate**
White	3,936	(60.5)	25.4
Black	2,492	(38.3)	74.5
Other	76	(1.2)	7.3
Unknown race	614		
Ethnicity	**Number**	**(Percent)**	**Rate**
Non-Hispanic	4,249	(65.5)	28.3
Hispanic	2,237	(34.5)	46.1
Unknown ethnicity	632		

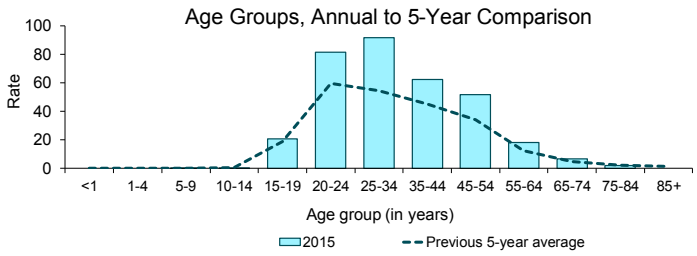
Reported Syphilis Cases (Excluding Congenital) and Incidence Rates Per 100,000 Population by County of Residence, Florida, 2015 (N=7,118)

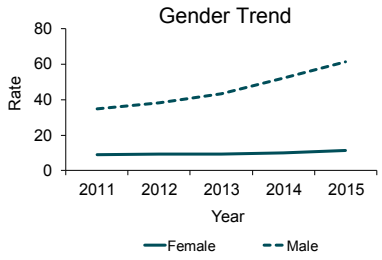


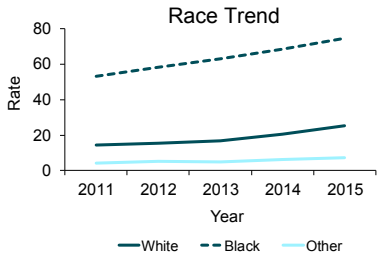
Note that rates based on <20 cases are not reliable and should be interpreted with caution.

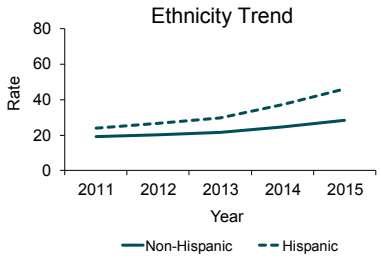
Incidence Rates Per 100,000 Population of Reported Syphilis Cases (Excluding Congenital) by Year, Age, Gender, Race, and Ethnicity, Florida











Note that trend graphs should be interpreted with caution when more than 5% of data are missing. Syphilis cases (excluding congenital) were missing 6.4% of ethnicity data in 2011, 6.0% of race data in 2011, 6.9% of ethnicity data in 2012, 6.1% of race data in 2012, 9.1% of ethnicity data in 2013, 7.9% of race data in 2013, 9.6% of ethnicity data in 2014, 8.4% of race data in 2014, 8.9% of ethnicity data in 2015, and 8.6% of race data in 2015.

Disease Facts

Cause: *Mycobacterium tuberculosis* bacteria

Type of illness: Usually respiratory (severe cough, pain in chest), but can affect all parts of the body including kidneys, spine, or brain

Transmission: Person-to-person; inhalation of aerosolized droplets from people with active tuberculosis (TB)

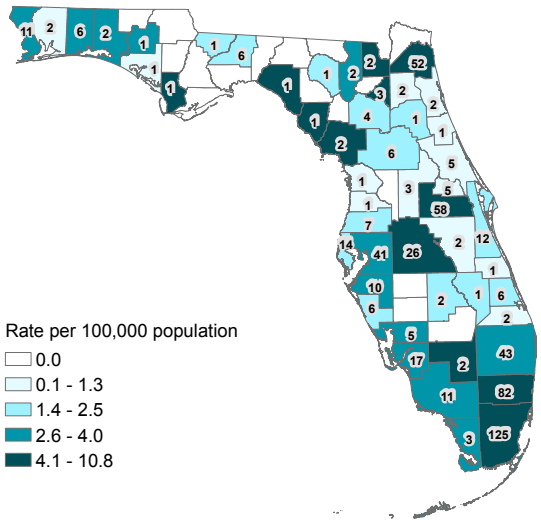
Reason for surveillance: Implement effective interventions immediately for every case to prevent further transmission, monitor directly observed therapy prevention programs, evaluate trends

Comments: TB continues to be a public health threat in Florida though incidence has declined over the past decade and remained stable in 2015. Medically underserved and low-income populations, including racial and ethnic minorities, have high rates of TB. In most countries and in Florida, TB incidence is much higher in men than women. Southeast Florida has the highest rate of TB and accounted for >40% of reported cases in 2015.

Summary of Case Demographics

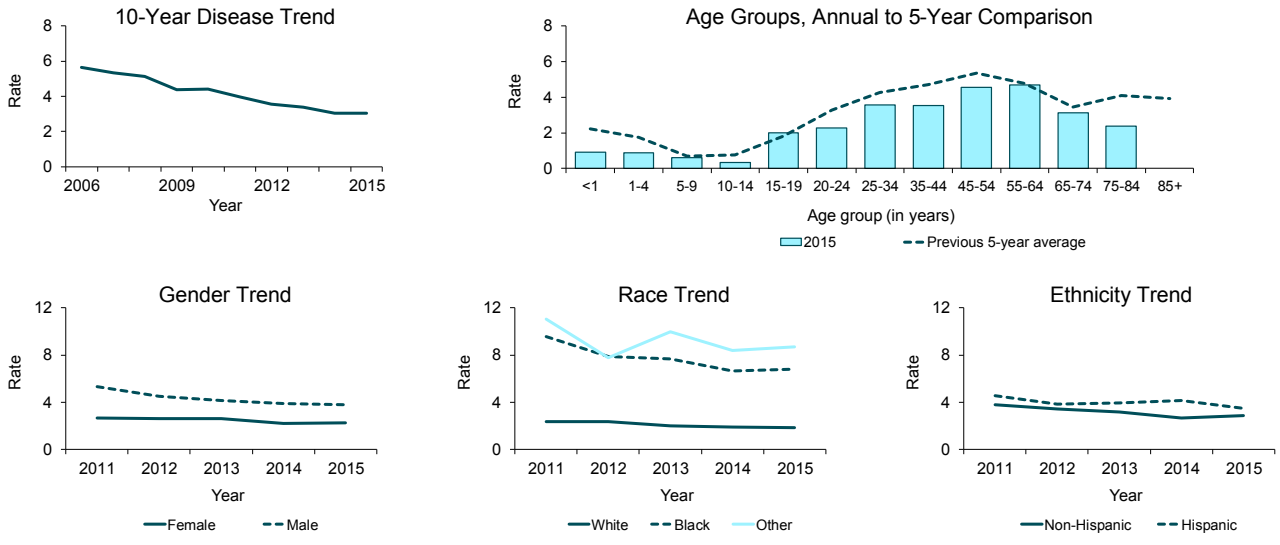
Summary			
Number of cases			602
Incidence rate (per 100,000 population)			3.0
Change from 5-year average incidence			-17.6%
Age (in Years)			
Mean			48
Median			49
Min-max			0 - 97
Gender	**Number**	**(Percent)**	**Rate**
Female	231	(38.4)	2.3
Male	371	(61.6)	3.8
Unknown gender	0		
Race	**Number**	**(Percent)**	**Rate**
White	285	(47.3)	1.8
Black	227	(37.7)	6.8
Other	90	(15.0)	8.7
Unknown race	0		
Ethnicity	**Number**	**(Percent)**	**Rate**
Non-Hispanic	433	(71.9)	2.9
Hispanic	169	(28.1)	3.5
Unknown ethnicity	0		

Reported Tuberculosis Cases and Incidence Rates Per 100,000 Population by County of Residence, Florida, 2015 (N=602)



Note that rates based on <20 cases are not reliable and should be interpreted with caution.

Incidence Rates Per 100,000 Population of Reported Tuberculosis Cases by Year, Age, Gender, Race, and Ethnicity, Florida



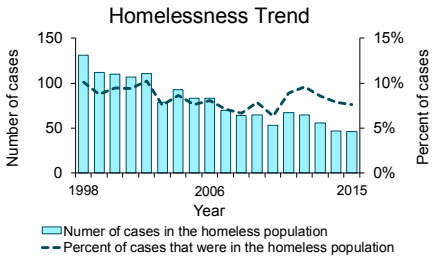
Additional Information

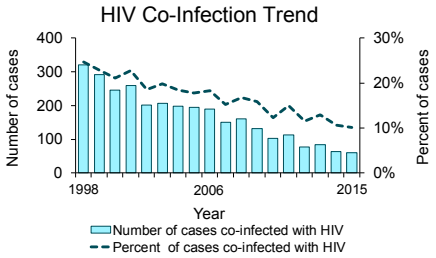
People experiencing homelessness are at increased risk for disease and are a focus for TB prevention and control efforts in Florida. Since 1998, the total number of TB cases among the homeless population in Florida has decreased by over 50%; however, in the same time period the percent of people with TB who are homeless has remained relatively stable. In 2015, 7.6% of TB cases were in the homeless population.

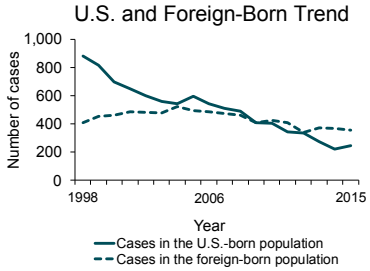
TB and HIV co-infection has been declining modestly but steadily over time in Florida. In 2015, 10.1% of TB cases were co-infected with HIV. Untreated HIV infection remains the biggest risk factor for developing active TB disease following infection with TB and is a focus for TB prevention and control efforts in Florida.

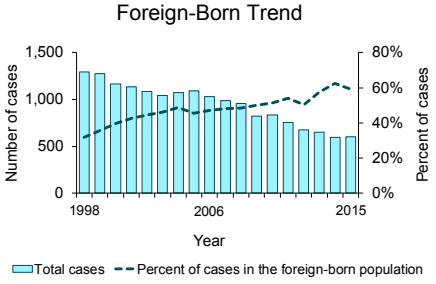
The rate of TB in the U.S.-born population in Florida has been decreasing faster than the rate among the foreign-born population. Being born in a country where TB is prevalent is one of the most significant risk factors for developing TB and is a focus for TB prevention and control efforts in Florida. In 2015, 59.1% of the total cases counted in Florida were in the foreign-born population. The most common countries of origin in 2015 included Haiti, the Philippines, Mexico, Cuba, and Guatemala, accounting for 211 (59.3%) of 356 cases identified in the-foreign born population.

Reported Tuberculosis by Homeless Status, HIV Co-Infection, and Foreign-Born Status, Florida









Varicella (Chickenpox)

Disease Facts

Cause: Varicella-zoster virus (VZV)

Type of illness: Common symptoms include vesicular rash, itching, tiredness, and fever

Transmission: Person-to-person; contact with or inhalation of aerosolized, infective respiratory tract droplets or secretions, or direct contact with vesicular lesions of people infected with VZV

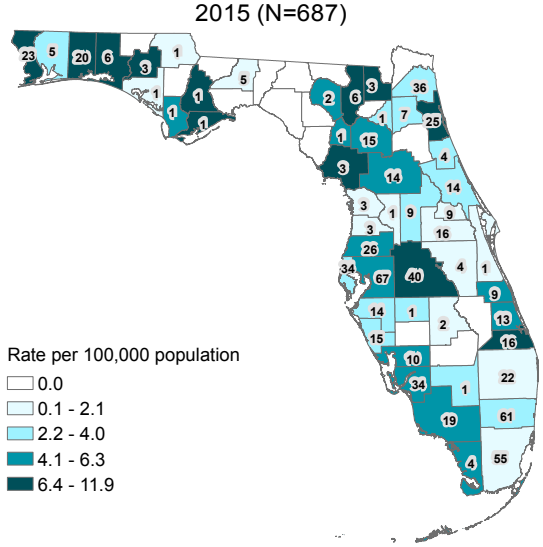
Reason for surveillance: Identify and control outbreaks, monitor effectiveness of immunization programs and vaccines, monitor trends and severe outcomes

Comments: Varicella (chicken pox) is a classic childhood disease; a vaccine was released in the U.S. in 1995. It became reportable in Florida in late 2006 and has shown a steady decrease in incidence since 2008, due to effective vaccination programs. Incidence increased in 2015 for the first time since 2008. Beginning with the 2008-2009 school year, children entering kindergarten were required to receive two doses of varicella vaccine.

Summary of Case Demographics

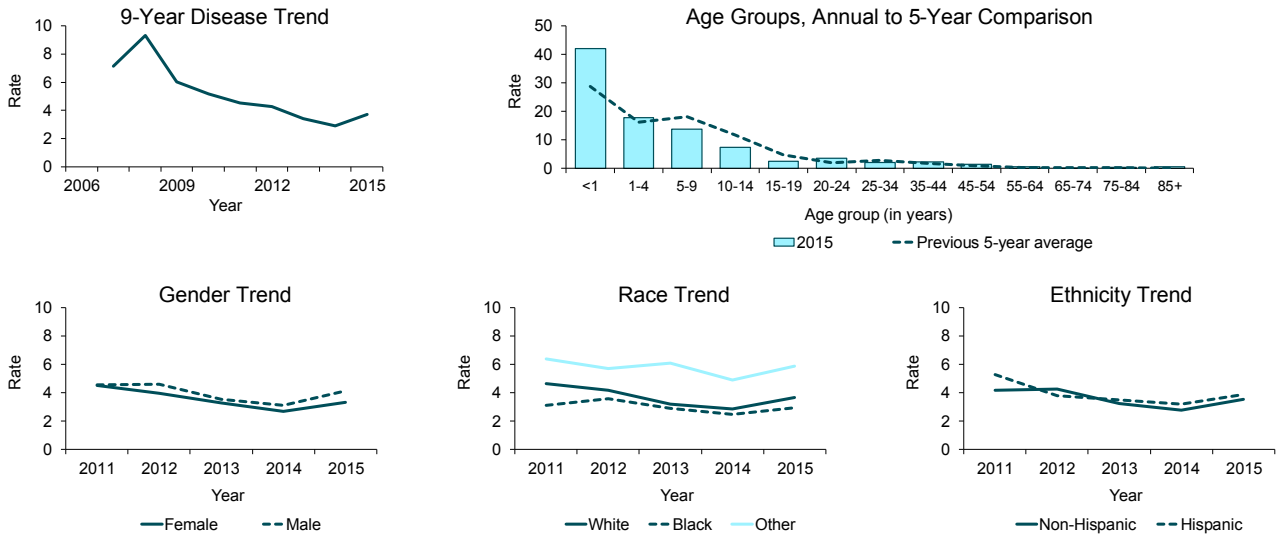
Summary			
Number of cases			740
Incidence rate (per 100,000 population)			3.7
Change from 5-year average incidence			-8.4%
Age (in Years)			
Mean			15
Median			8
Min-max			0 - 89
Gender	**Number**	**(Percent)**	**Rate**
Female	339	(45.8)	3.3
Male	401	(54.2)	4.1
Unknown gender	0		
Race	**Number**	**(Percent)**	**Rate**
White	568	(78.0)	3.7
Black	99	(13.6)	3.0
Other	61	(8.4)	5.9
Unknown race	12		
Ethnicity	**Number**	**(Percent)**	**Rate**
Non-Hispanic	533	(73.8)	3.6
Hispanic	189	(26.2)	3.9
Unknown ethnicity	18		

Reported Varicella Cases and Incidence Rates Per 100,000 Population (Restricted to Infections Acquired in Florida) by County of Residence, Florida, 2015 (N=687)



Note that rates based on <20 cases are not reliable and should be interpreted with caution.

Incidence Rates Per 100,000 Population of Reported Varicella Cases by Year, Age, Gender, Race, and Ethnicity, Florida

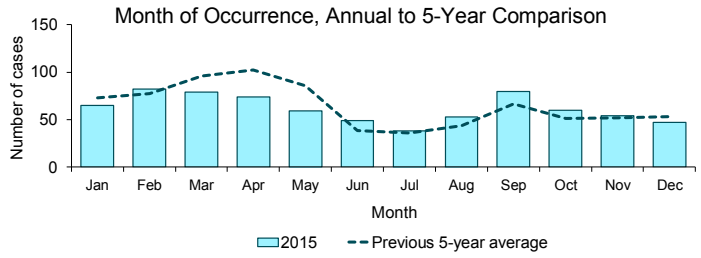


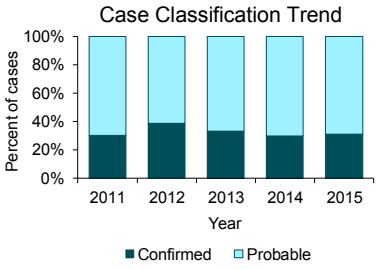
Varicella (Chickenpox)

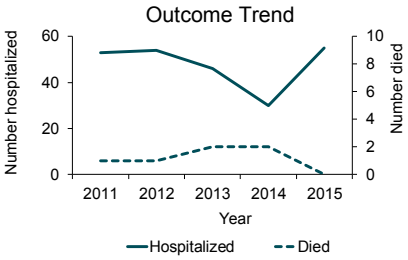
Summary of Case Factors

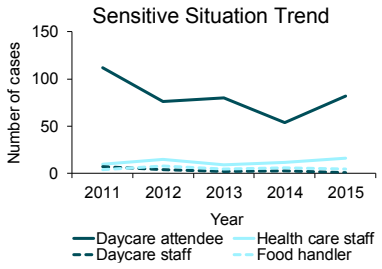
Summary	Number	
Number of cases	740	
Case Classification	**Number**	**(Percent)**
Confirmed	230	(31.1)
Probable	510	(68.9)
Outcome	**Number**	**(Percent)**
Hospitalized	55	(7.4)
Died	0	(0.0)
Sensitive Situation	**Number**	**(Percent)**
Daycare attendee	82	(11.1)
Daycare staff	1	(0.1)
Health care staff	16	(2.2)
Food handler	5	(0.7)
Imported Status	**Number**	**(Percent)**
Acquired in Florida	687	(92.8)
Acquired in the U.S., not Florida	13	(1.8)
Acquired outside the U.S.	19	(2.6)
Acquired location unknown	21	(2.8)
Outbreak Status	**Number**	**(Percent)**
Sporadic	555	(75.0)
Outbreak-associated	174	(23.5)
Outbreak status unknown	11	(1.5)

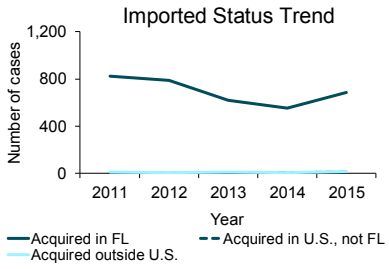
Reported Varicella Cases by Month of Occurrence, Case Classification, Outcome, Sensitive Situation, Imported Status, and Outbreak Status, Florida

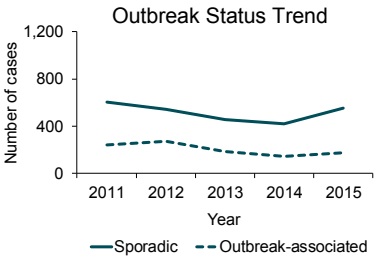












Interpretation:
Occurrence is determined by the earliest date associated with the case, which is most frequently the date of onset, but can also be the diagnosis date, the laboratory report date, or the date the county health department was notified of the case. For outcome, a case can be included in the hospitalized count as well as the death count. Hospitalized status means that a person was hospitalized at the time of their illness, though the hospitalization may not necessarily have been due to the illness. Deaths include all people with the illness who died, though the death may not necessarily have been due to the illness. Sensitive situation categories are not mutually exclusive, and most cases do not fall into any of these categories. Imported status refers to where the infection was most likely acquired. Outbreak- associated indicates that two or more cases are epidemiologically linked.

Additional Information

Varicella incidence increased in 2015 for the first time since 2008; factors contributing to the increase are not well understood. Incidence among infants <1 year old increased noticeably compared to the 5-year average. The number of varicella cases in daycare attendees also increased, suggesting that the increase in 2015 might be at least partially due to increased transmission among infants in daycares. Most cases of varicella occur in winter and spring with the highest incidence in school-aged children. Although the number of varicella deaths decreased in 2015, the number of hospitalizations increased compared to 2014. The number of outbreak-associated cases increased from 143 (25.1%) in 2014 to 174 (23.5%) in 2015. The increase in outbreak-associated cases follows the overall increase in varicella cases in 2015. Note that the proportion of cases that were outbreak-associated actually decreased slightly from 2014 to 2015. Of the 174 outbreak-associated cases identified, most were small household clusters. Four outbreaks (defined as >5 cases linked in a single setting) were identified in schools, one of which involved multiple schools, and three outbreaks were identified in daycares. Counties with ≥10 outbreak-associated cases were concentrated in the central western part of the peninsula: Hillsborough (22), Pinellas (15), Polk (13), Pasco (11), and Sarasota (10). Other counties with ≥10 outbreak-associated cases included St. Johns (19) and Escambia (10). Counties with the highest incidence rates were mostly low-population counties.

Vibriosis (Excluding Cholera)

Disease Facts

Cause: *Vibrio* species bacteria (see following page for list of species included)

Type of illness: Gastroenteritis (diarrhea, vomiting), bacteremia, septicemia, wound infection, cellulitis; other common symptoms include low-grade fever, headache, and chills

Transmission: Foodborne, waterborne, and wound infections from direct contact with brackish water or salt water where the bacteria naturally live or direct contact with marine wildlife

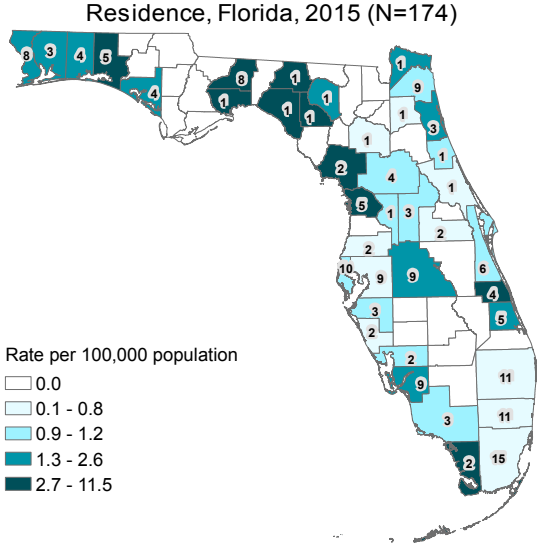
Reason for surveillance: Identify sources of transmission (e.g., shellfish collection area) and mitigate source, monitor incidence over time, estimate burden of illness

Comments: *Vibrio* species are endemic in Florida's seawater. Incidence is typically higher in the summer when exposure to seawater is more common and warmer water is conducive to bacterial growth. Incidence increased slightly in 2015 compared to 2014. Incidence is consistently much higher in men than women.

Summary of Case Demographics

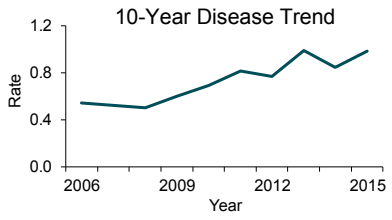
Summary			
Number of cases			196
Incidence rate (per 100,000 population)			1.0
Change from 5-year average incidence			+19.8%
Age (in Years)			
Mean			49
Median			53
Min-max			2 - 98
Gender	**Number**	**(Percent)**	**Rate**
Female	61	(31.1)	0.6
Male	135	(68.9)	1.4
Unknown gender	0		
Race	**Number**	**(Percent)**	**Rate**
White	169	(88.0)	1.1
Black	18	(9.4)	NA
Other	5	(2.6)	NA
Unknown race	4		
Ethnicity	**Number**	**(Percent)**	**Rate**
Non-Hispanic	170	(91.4)	1.1
Hispanic	16	(8.6)	NA
Unknown ethnicity	10		

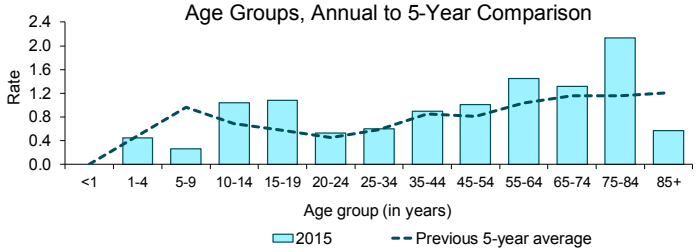
Reported Vibriosis Cases (Excluding Cholera) and Incidence Rates Per 100,000 Population (Restricted to Infections Acquired in Florida) by County of Residence, Florida, 2015 (N=174)

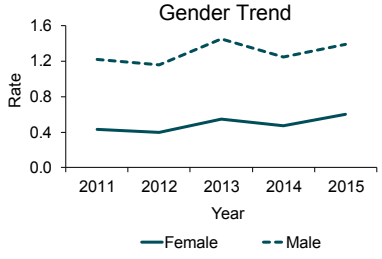


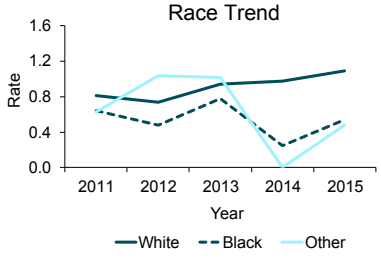
Note that rates based on <20 cases are not reliable and should be interpreted with caution.

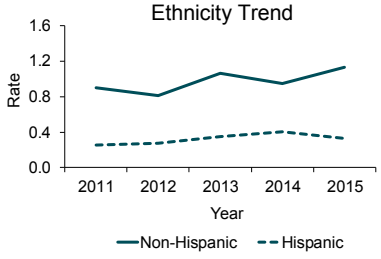
Incidence Rates Per 100,000 Population of Reported Vibriosis Cases (Excluding Cholera) by Year, Age, Gender, Race, and Ethnicity, Florida









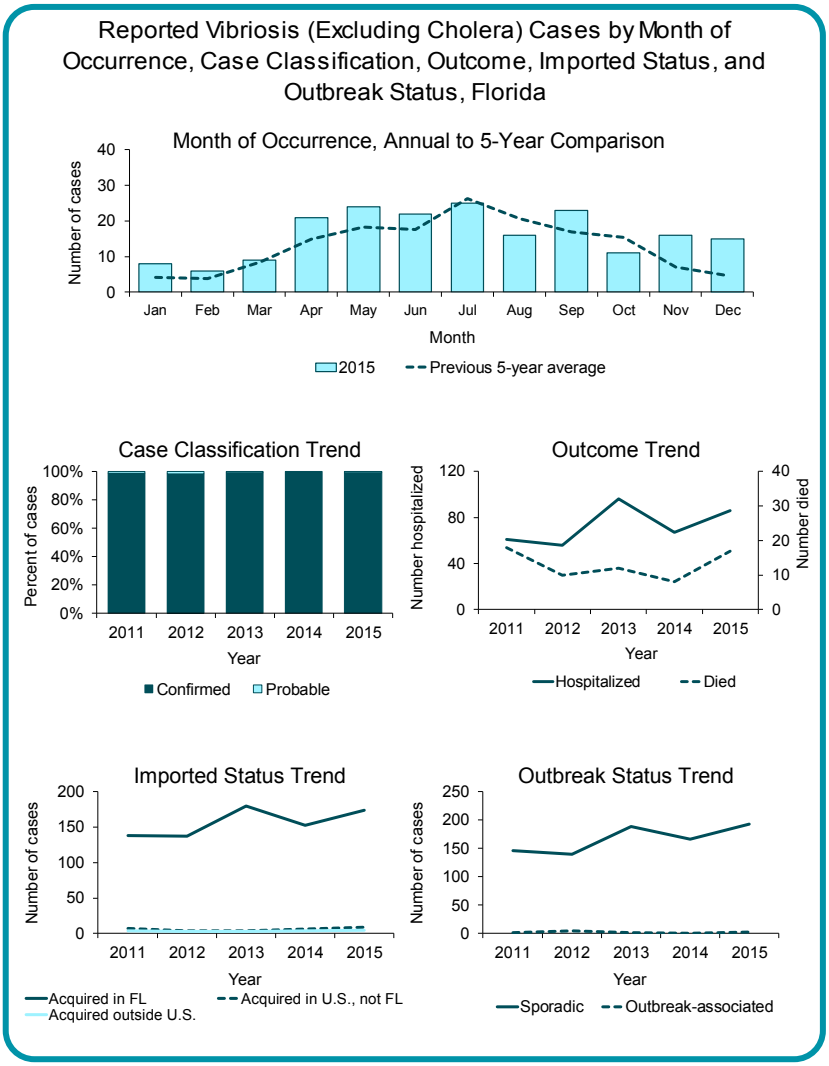


Note that trend graphs should be interpreted with caution when more than 5% of data are missing. Vibriosis cases (excluding cholera) were missing 7.7% of ethnicity data in 2011, 5.2% of race data in 2011, 10.9% of ethnicity data in 2012, 8.2% of race data in 2012, 9.4% of ethnicity data in 2013, 6.8% of race data in 2013, 5.4% of race data in 2014, and 5.1% of ethnicity data in 2015.

Vibriosis (Excluding Cholera)

Summary of Case Factors

Summary	Number	
Number of cases	196	
Case Classification	**Number**	**(Percent)**
Confirmed	195	(99.5)
Probable	1	(0.5)
Outcome	**Number**	**(Percent)**
Hospitalized	86	(43.9)
Died	17	(8.7)
Imported Status	**Number**	**(Percent)**
Acquired in Florida	174	(88.8)
Acquired in the U.S., not Florida	9	(4.6)
Acquired outside the U.S.	5	(2.6)
Acquired location unknown	8	(4.1)
Outbreak Status	**Number**	**(Percent)**
Sporadic	193	(98.5)
Outbreak-associated	3	(1.5)
Outbreak status unknown	0	(0.0)
Species	**Number**	**(Percent)**
Vibrio alginolyticus	58	(29.6)
Vibrio parahaemolyticus	46	(23.5)
Vibrio vulnificus	45	(23.0)
Vibrio fluvialis	14	(7.1)
Vibrio mimicus	11	(5.6)
Vibrio cholerae Type Non-O1	7	(3.6)
Grimontia hollisae	1	(0.5)
Other *Vibrio* species	14	(7.1)



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Additional Information

In 2015, the most commonly reported *Vibrio* infection was *V. alginolyticus*, accounting for 29.6% of cases. This was a decrease from 2014, in which 39.8% of infections were caused by that species. The number of *V. vulnificus* and *V. parahaemolyticus* infections increased in 2015 compared to 2014. *V. vulnificus* can cause particularly severe disease, with about 50% of bloodstream infections being fatal. Of the 45 cases due to *V. vulnificus* in 2015, 40 (88.9%) were hospitalized and 14 (31.1%) died, accounting for 14 of the 17 total deaths reported for vibriosis in 2015. Of the remaining three deaths, two were due to *V. parahaemolyticus* and one was attributed to *V. alginolyticus*. Of the 17 people who died from vibriosis, seven had a wound with seawater exposure or exposure to marine life and two reported consuming seafood. Two people had multiple exposures and six people had other or unknown exposures. *V. vulnificus* infections typically occur in people who have chronic liver disease, a history of alcoholism, or are immunocompromised. Of the 45 cases of *V. vulnificus*, 35 (77.8%) had underlying medical conditions.