FLORIDA DEPARTMENT OF HEALTH NASSAU COUNTY

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EPIGRAM

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SEASONALITY OF RESPIRATORY SYNCYTIAL VIRUS

Seasonality plays a major role in the epidemiology and transmission of respiratory pathogens. A number of factors may contribute to this, the most important being the increased time spent indoors and in close proximity to others during the fall and winter months. While influenza garners the greatest attention because of its potential impact on a large proportion of the population, a number of viral pathogens contribute to the overall burden of seasonal respiratory infections, including respiratory syncytial virus (RSV).

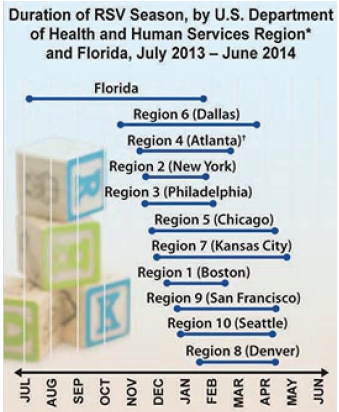

Fig. 1 RSV Seasonality by DHHS Region. Source: CDC http://www.cdc.gov/rsv/research/us-surveillance.html

RSV infections can vary in their clinical presentation, and largely affect infants, children, and the elderly. In infants and children, RSV infections are quite common, with most experiencing mild or moderate cold-like symptoms. Those at greatest risk for severe infections (e.g., bronchiolitis, pneumonia) include infants and children with congenital heart disease, chronic lung disease, or who are otherwise immunocompromised. Prophylactic treatment with Palivizumab, a monoclonal antibody, is available and recommended for high risk infants and children during RSV season. Likewise, the elderly are more susceptible to infection and severe complications due to underlying conditions and compromised immune status.

Unlike most of the country, RSV season onset occurs much earlier and is much longer in the state of Florida (Fig. 1). In Nassau and surrounding counties, RSV season is generally from September to March, with peak transmission seen in November and December. Understanding the seasonality of RSV can assist clinicians and public health practitioners in determining when RSV may be the cause of acute respiratory infections, and will drive the appropriate use of prophylactic treatment in high risk infants and children. Current Bureau of Public Health Laboratories surveillance data indicates an influx in RSV activity across the state, and should be considered in the differential diagnosis of acute respiratory infections, along with influenza. For additional information regarding RSV, please visit: http://www.floridahealth.gov/diseases-and-conditions/respiratory-syncytial-virus/index.html. For additional information and recommendations regarding the use of Palivizumab, please visit: http://pediatrics.aappublications.org/content/134/2/415.full.

DISEASE REPORTING

Phone: (904) 530-6800

Confidential Fax Line:
(904) 277-7286

Afterhours Line:
(904) 813-6801

Bureau of Epidemiology
24 Hour Reporting Line:
(850) 245-4401

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Fernandina Beach, FL 32034
(904) 530-6750

Callahan Clinic
208 Mickler Street
Callahan, FL 32011
(904) 530-6870

Yulee Clinic
528 Page's Dairy Road
Yulee, FL 32097
(904) 530-6840

Hilliard Clinic
37203 Pecan Street
Hilliard, FL 32046
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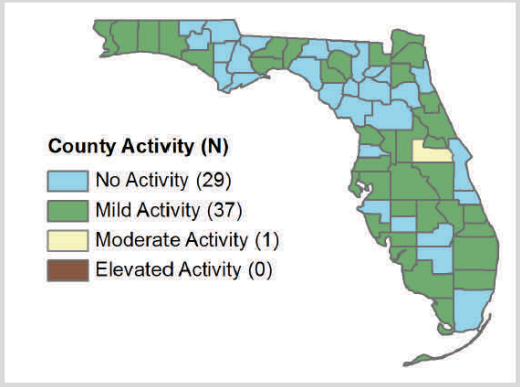
Seasonal Influenza Surveillance: November 29-December 5, 2015

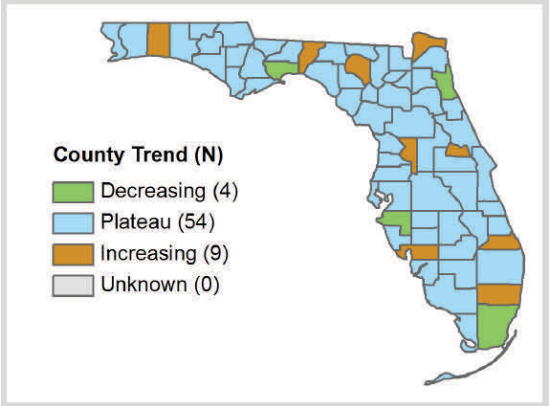
National influenza activity:

- Influenza activity levels remain low nationally but are increasing.
- The predominantly circulating strain identified nationally so far this season is influenza A (H3). Other strains of influenza are also circulating, but at lower levels.
- The CDC recommends vaccination as long as influenza viruses are circulating. To learn more, please visit: http://www.cdc.gov/flu/weekly/.
- Highly pathogenic avian influenza (HPAI) H5 viruses have been identified in U.S. backyard and commercial flocks of birds during the spring and summer of 2015. HPAI H5 has not been identified in Florida birds, but identifications are anticipated. No human HPAI infections have been identified in Florida or the rest of the nation. To learn more about HPAI, please visit: www.floridahealth.gov/novelflu.

Map 1 County Influenza Activity Level for Week 48 Reported by 9:30 a.m. December 9, 2015



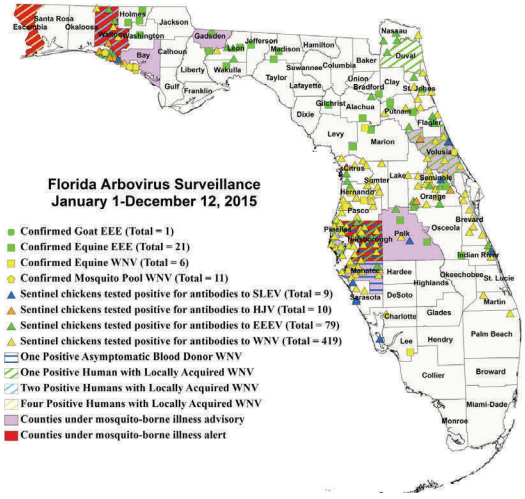
Map 2 County Influenza Activity Trend for Week 48 Reported by 9:30 a.m. December 9, 2015



State influenza and influenza-like illness (ILI) activity:

- Overall the influenza season is off to a slow start. Influenza activity remains low, although, it has increased slightly in recent weeks. Early season low activity levels are not necessarily predictive of an overall mild influenza season.
- Thus far, influenza A (H3) is the predominantly circulating strain. Seasons where influenza A (H3) is the predominately circulating strain are generally more severe, particularly in children <5 years old and adults ≥65 years old than other seasons.
- The preliminary estimated number of deaths due to pneumonia and influenza is near levels seen in previous years at this time.
- In the reporting period, one county reported moderate activity; all other counties reported mild or no influenza activity.
- One influenza-associated pediatric death was reported in week 48. This is the first reported influenza-associated pediatric death of the 2015-16 influenza season. While rare, Florida receives reports of influenza-associated pediatric deaths every year. Most deaths occur in unvaccinated children with underlying health conditions.
- One influenza-like-illness (ILI) outbreak was reported in a nursing home in Hillsborough County in week 48.
- The percent of specimens testing positive for influenza at the Bureau of Public Health Laboratories (BPHL) has increased slightly but remains low in recent weeks and is below levels seen in previous years at this time. The percent of laboratory results testing positive for influenza is expected to increase as the 2015-16 influenza season progresses.
- So far in the 2015-16 season, BPHL has identified influenza A (H3) as the most commonly circulating virus so far in Florida: 64% of 25 influenza positive specimens were typed as influenza A (H3).
- Thus far, the 2015-2016 seasonal influenza vaccine has been a good match for circulating strains of the influenza virus.

Arbovirus Surveillance



Arbovirus surveillance in Florida includes endemic mosquito-borne viruses such as West Nile virus (WNV), Eastern equine encephalitis virus (EEEV), and St. Louis encephalitis virus (SLEV), as well as exotic viruses such as dengue virus (DENV), chikungunya virus (CHIKV) and California encephalitis group viruses (CEV). Malaria, a non-viral mosquito-borne disease is also included. During the period of December 6-12, 2015 the following arboviral activity was recorded in Florida.

WNV activity: One human case of WNV infection was reported this week in Duval County. One asymptomatic blood donor was identified as WNV-positive in Manatee County. No horses with WNV infection were reported this week. Seventeen sentinel chickens tested positive for antibodies to WNV this week in Brevard, Citrus, Hillsborough, Manatee, **Nassau**, Pasco, Pinellas, Seminole, Volusia, and Walton Counties. In 2015, positive samples from ten humans, two blood donors, six horses, 11 mosquito pools, and 419 sentinel chickens have been received from 28 counties.

SLEV activity: No human cases of SLEV infection were reported this week. No sentinel chickens tested positive for antibodies to SLEV this week. In 2015, positive samples from nine sentinel chickens have been received from seven counties.

EEEV activity: No human cases of EEEV infection were reported this week. No horses with EEEV infection were reported this week. Three sentinel chickens tested positive for antibodies to EEEV this week in Citrus and Walton Counties. In 2015, positive samples from 79 sentinel chickens, 21 horses, and one goat have been received from 25 counties.

International Travel-Associated Dengue Fever Cases: Four cases of dengue fever were reported this week in persons that had international travel. In 2015, 71 travel-associated cases have been reported.

Dengue Fever Cases Acquired in Florida: No cases of locally acquired dengue fever were reported this week. In 2015, no cases of locally acquired dengue fever have been reported.

International Travel-Associated Chikungunya Fever Cases: One case of chikungunya fever was reported this week in a person that had international travel. In 2015, 70 travel-associated cases have been reported.

Chikungunya Fever Cases Acquired in Florida: No cases of locally acquired chikungunya fever were reported this week. In 2015, no cases of locally acquired chikungunya fever have been reported.

Advisories/Alerts: Bay, Gadsden, Manatee, Pinellas, Polk, and Volusia Counties are currently under mosquito-borne illness advisory. Escambia, Hillsborough, and Walton Counties are currently under mosquito-borne illness alert. No other counties are currently under mosquito-borne illness advisory or alert. A CDC Health Alert Network (HAN) health advisory was issued in December 2013 for the Caribbean region announcing the first locally acquired cases of chikungunya fever in the Americas. There is a Level 1 (Watch) Travel Health Notice from the CDC for multiple countries in the Caribbean, Mexico, Central and South America, the Pacific Islands, and Senegal, related to the transmission of chikungunya. There is a similar CDC Travel Health Notice for dengue transmission in Malaysia. Additional information on travel health notices can be found at the following link: http://wwwnc.cdc.gov/travel/notices.

Nassau	EEEV: 7 sentinels (5/29, 7/3, 7/10, 7/13, 9/28, 10/2, 10/16) WNV: 1 sentinel (11/23)

FDOH-Nassau Health Bulletins, Advisories and Alerts Issued

- *No health bulletins, advisories, or alerts issued*

For additional information regarding bulletins, advisories and alerts visit our website or the Department of Health's Online Newsroom at: http://www.nassau.floridahealth.gov *and* http://newsroom.doh.state.fl.us.

November 2015: Reported Cases in Nassau County

Confirmed, Probable, Suspect, Unkown Cases of Multiple Diseases with Report Date 11/01/2015 to 11/30/2015 with Three-Year Period Comparison for Nassau County

	Selection Date 11/01/15 - 11/30/15		Comparison Date 1 11/01/14 - 11/30/14		Comparison Date 2 11/01/13- 11/30/13		Comparison Date 3 11/01/12 - 11/30/12	
Disease Name	Cases	Percent	Cases	Percent	Cases	Percent	Cases	Percent
County: NASSAU								
Campylobacteriosis	1	6.25	0	0.00	0	0.00	1	7.69
Cryptosporidiosis	0	0.00	2	15.38	0	0.00	0	0.00
Escheria coli, Shiga Toxin-Producing (STEC) Infection	1	6.25	0	0.00	0	0.00	0	0.00
Giardiasis, Acute	2	12.50	0	0.00	1	6.25	0	0.00
Hepatitis B, Acute	0	0.00	0	0.00	0	0.00	1	7.69
Hepatitis B, Chronic	1	6.25	1	7.69	2	12.50	0	0.00
Hepatitis C, Chronic	8	50.00	4	30.77	7	43.75	5	38.46
Legionellosis	0	0.00	1	7.69	0	0.00	0	0.00
Meningitis, Bacterial or Mycotic	0	0.00	0	0.00	0	0.00	1	7.69
Meningoccocal Disease	0	0.00	1	7.69	0	0.00	0	0.00
Rabies, Possible Exposure	0	0.00	0	0.00	1	6.25	0	0.00
Salmonellosis	2	12.50	3	23.08	4	25.00	4	30.77
Strep pneumoniae Invasive Disease, Drug-Resistant	1	6.25	0	0.00	1	6.25	0	0.00
Strep pneumoniae Invasive Disease, Drug-Susceptible	0	0.00	1	7.69	0	0.00	0	0.00
West Nile Virus Neuroinvasive Disease	0	0.00	0	0.00	0	0.00	1	7.69
TOTAL:	**16**	100.00	**13**	100.00	**16**	100.00	**13**	100.00
STATEWIDE TOTAL								
Campylobacteriosis	254	6.93	205	5.82	182	5.10	172	4.60
Cryptosporidiosis	53	1.45	105	2.98	34	0.95	25	0.67
Escheria coli, Shiga Toxin-Producing (STEC) Infection	31	0.85	33	0.94	48	1.34	32	0.86
Giardiasis, Acute	87	2.38	71	2.02	86	2.41	88	2.35
Hepatitis B, Acute	41	1.12	36	1.02	43	1.20	20	0.53
Hepatitis B, Chronic	337	9.20	407	11.56	325	9.10	364	9.73
Hepatitis C, Chronic	1937	52.88	1787	50.75	1878	52.61	2000	53.46
Legionellosis	22	0.60	17	0.48	20	0.56	31	0.83
Meningitis, Bacterial or Mycotic	4	0.11	16	0.45	14	0.39	27	0.72
Meningoccocal Disease	0	0.00	5	0.14	4	0.11	5	0.13
Rabies, Possible Exposure	259	7.07	251	7.13	229	6.41	182	4.87
Salmonellosis	610	16.65	561	15.93	639	17.90	688	18.39
Strep pneumoniae Invasive Disease, Drug-Resistant	11	0.30	15	0.43	35	0.98	40	1.07
Strep pneumoniae Invasive Disease, Drug-Susceptible	16	0.44	11	0.31	33	0.92	57	1.52
West Nile Virus Neuroinvasive Disease	1	0.03	1	0.03	0	0.00	10	0.27
TOTAL:	**3663**	100.00	**3521**	100.00	**3570**	100.00	**3741**	100.00

A list of Florida's reportable diseases and conditions can be accessed electronically at: http://www.floridahealth.gov/diseases-and-conditions/disease-reporting-and-management/_documents/reportable-diseases/_documents/Reportable_Diseases_List_Practitioners.pdf