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Seminole County's School-Based Influenza Vaccination Initiative

Throughout the flu season the Centers for Disease Control and Prevention (CDC) studies samples of flu viruses to assess how close a match there is between viruses used to create the vaccine and circulating viruses[1]. Flu viruses are constantly changing (called "antigenic drift") – they can change from one flu season to the next or they can even change within the course of the flu season[1]. Experts pick which viruses to include in the vaccine many months in advance in order the for vaccine to be produced and distributed on time[1]. Antibodies made in response to vaccination from one flu virus can sometimes provide protection against different but related viruses[1]. A less than optimal match may result in reduced vaccine effectiveness against the virus that is different from what is in the vaccine, but it can still provide some protection against influenza illness[1]. It is important to remember that the flu vaccine is designed to protect against three or four flu viruses, depending on the vaccine[1]. Even though it is not possible to predict with certainty which flu viruses will predominate during a given season, the CDC continues to recommend flu vaccination[1].

Seminole County Public Schools began an Influenza vaccination initiative in 2014[2]. The Flu Clinics are supported by Healthy Schools LLC. (a Florida based Vaccine for Children Provider), Seminole County Public Schools and the Florida Department of Health in Seminole County[2]. The flu vaccine to be administered is the intranasal FluMist® Quadrivalent vaccine. No out-of-pocket expenses or deductibles will be collected[2]. Students with Medicaid, Florida Kidcare, Aetna, or BCBS will be billed, but students with no insurance will be provided the flu vaccine at no cost, while supplies last[2].

The importance of this yearly initiative is demonstrated in the achievements of Alachua County's School-Located Influenza Vaccination (SLIV) program. A study conducted by the University of Florida during the 2011-12 and 2012-13 flu seasons highlighted the reduction in community risk of influenza or influenza-like illness (ILI) emergency care visits due to the SLIV program[3]. The program hoped to increase sub-optimal influenza vaccination

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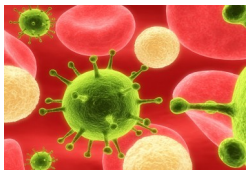


coverage under current delivery systems, and was able to achieve approximately 50% vaccination coverage among 5-17 year olds[3]. Results of the study indicated with the vaccination coverage of approximately half of the 5-17 year olds in Alachua County, their age group risk of ILI-associated visits decreased the risk by 79% in 2011-12 and by 71% in 2012-13, compared to the rest of Florida (Table 1) [3]. The greatest indirect effectiveness was observed in the 0-4 age group, with a decreased influenza attack rate of 89% in 2011-12 and 84% in 2012-13[3]. The estimated indirect effectiveness for non-school age residents of Alachua County was 60% in 2011-12 and 36% in 2012-13[3]. The overall indirect effectiveness of the vaccine on all age groups was 65% in 2011-12 and 46% in 2012-13[3].

	Influenza Attack Rates	
Age-Groups	2011/12 Flu Season	2012/13 Flu Season
All age-groups	↓ by 65%	↓ by 49%
0 – 4 year olds	↓ by 89%	↓ by 84%
5 – 17 year olds	↓ by 79%	↓ by 71%
Non-school age residents	↓ by 60%	↓ by 36%

The study had several important conclusions, which included public health implications. Immunization of school-age children for influenza protects them from ILI-associated outpatient emergency department visits[3]. The very young, one of the most vulnerable age-groups, also benefit from the school-located influenza vaccination program by protecting against adverse morbidity and mortality outcome[3]. The study illustrated the value of SLIV programs for increasing flu vaccination rates by complementing the traditional delivery strategy which depends upon medical offices and pharmacies[3]. Through the SLIV program, they observed increased vaccination uptake among minorities and lower socioeconomic groups that may not normally receive flu vaccinations[3]. The study also hoped to promote dialogue among the members of the research community and the general public regarding the effectiveness of the SLIV approach for reducing the public health burden attributable to influenza, particularly as SLIV programs are being considered on a wider scale, with possible implementation in the USA and overseas[3]. The study provided a compelling argument for further community-based research into the nature and extent of the impact of SLIV programs.[3]

Seminole County's school-based vaccination program began in 2014, and will continue through 2015[2]. The Flu Clinics will be offered at all public schools in Seminole County beginning in November[2]. Although last year's vaccination rates were not as high as Alachua County's (~5.43% vaccination rate[2]), the goal is to continue to expand vaccination coverage in order to ease the influenza burden on the county.

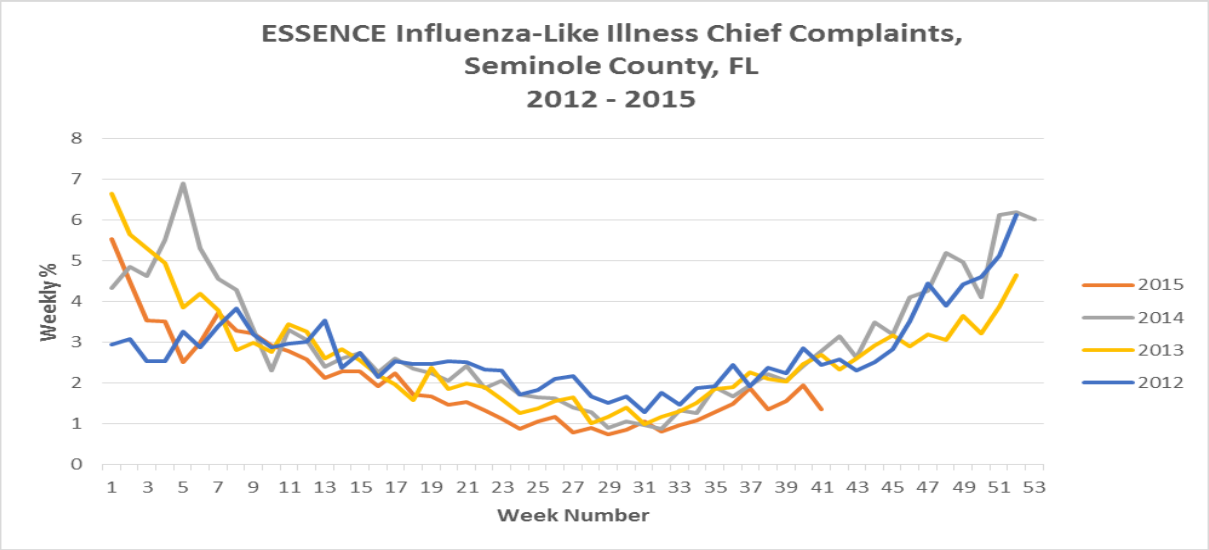
1. Center for Disease Control and Prevention. (2015, August 12). Preventing Seasonal Flu With Vaccination. Retrieved 10 20, 2015, from Center for Disease Control and Prevention: http://www.cdc.gov/flu/protect/vaccine/index.htm
2. Florida Department of Health in Seminole County, School Health Program
3. TranCH, SugimotoJD, PulliamJR, RyanKA, MyersPD, CastlemanJB, et al. School-located influenza vaccination reduces community risk for influenza and influenza-like illness emergency care visits. PLoS ONE. 2014;9 (12):e114479. DOI: 10.1371/journal.pone.0114479 PMID: 25489850

Influenza Surveillance

Local: Seminole County is reporting **MILD** flu activity for the month of October. No **influenza outbreaks** have been reported in Seminole for the 2015-2016. The ESSENCE Syndromic Surveillance system is showing increasing influenza-like illness (ILI) chief complaints.

State: Florida is currently reporting **SPORADIC** flu activity. Influenza activity has slightly **INCREASED** in recent weeks. **One (1) influenza or ILI outbreaks** have been reported this flu season. The preliminary estimated number of deaths due to pneumonia and influenza in Florida is similar to levels seen in previous years at this time. In weeks 37 and 38, 7 specimens submitted to Bureau of Public Health Labs (BPHL) were positive for influenza A (H3) and 1 was positive for influenza B not yet subtyped.

National: MILD levels of flu activity are being reported nationwide. The predominantly circulating strain in recent weeks has shifted from influenza B to influenza A (H3), which is typical for this time of year. Additional information can be found at the following link: http://emergency.cdc.gov/han/han00374.asp



Arbovirus Surveillance

Seminole County Mosquito-borne Illness Statistics 2015 Year to Date:

West Nile Virus: 6 Sentinel Chicken

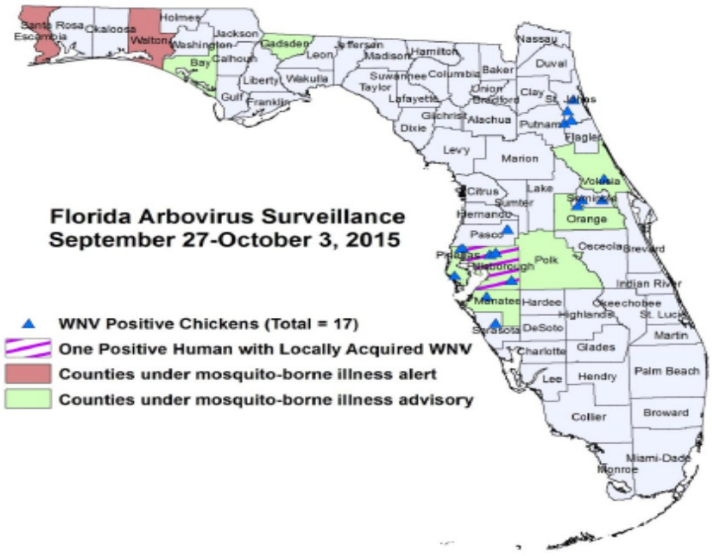
Eastern Equine Encephalitis: 4 Sentinel Chickens

St. Louis Encephalitis: 1 Sentinel Chicken

Dengue: 1 imported case

Chikungunya: 3 imported cases

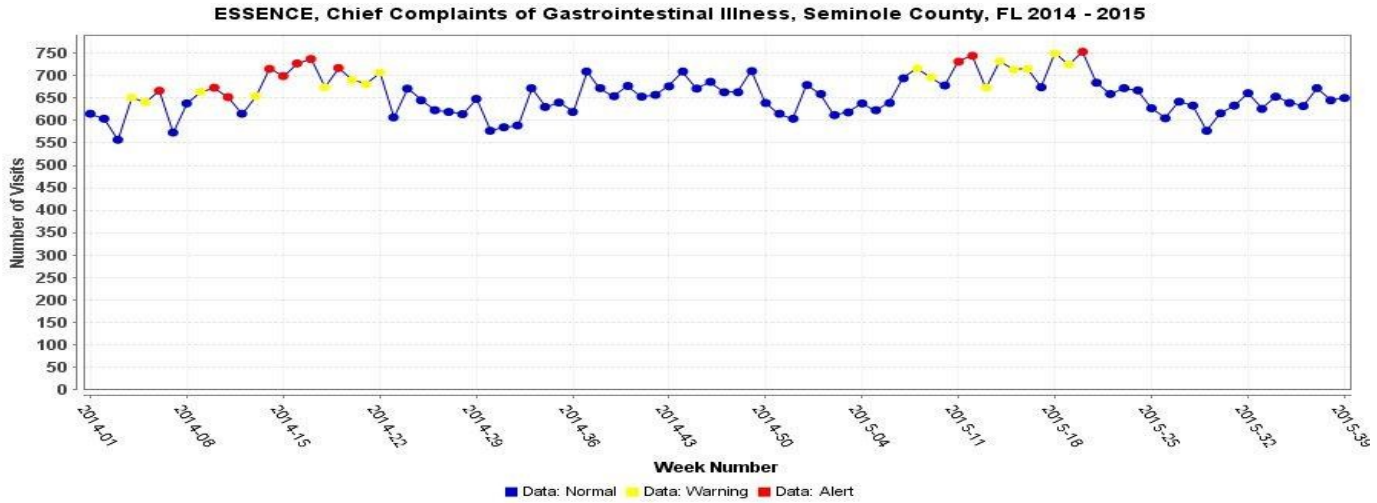
Malaria: N/A



Gastrointestinal Illness Surveillance

Gastrointestinal illness typically follows a trend similar to influenza season, peaking in the winter months. No gastrointestinal illness outbreak was investigated by DOH-Seminole in October.

Food and Waterborne Illness Complaints can be submitted at the following link, a health department employee will follow-up with the complainant by phone: http://www.floridahealth.gov/diseases-and-conditions/food-and-waterborne-disease/online-food-complaint-form.html



Ebola Virus Disease Update

Current Statistics:

	Cases	Deaths
Guinea	3,806	2,535
Liberia*	10,672	4,808
Sierra Leone	13,999	3,955
Total	28,477	11,298

Case count as of October 19, 2015

The U.S., Nigeria, Senegal, Spain, Mali, and U.K. have all previously reported cases but have since been declared Ebola-free. * **Liberia was declared Ebola-free on May 9, 2015.**

On June 29, 2015, a confirmed case of Ebola was reported in a person who had died in Liberia. Five people who had contact with the person who died of Ebola were confirmed to have Ebola; one died. **On September 3, 2015, WHO again declared Liberia free of Ebola virus transmission.**

The Florida Department of Health continues to encourage healthcare providers and hospitals to prepare for an Ebola case in Florida.

The latest FDOH guidance on Ebola Virus Disease can be found at the following link:

http://www.floridahealth.gov/diseases-and-conditions/ebola/index.html

Disease Incidence Table-Seminole County

Selected Diseases/Conditions Reported to DOH-Seminole	2015 through Week 38	2014 through Week 38	2013 through Week 38	2012–2014 Average through Week 35
AIDS*	0	0	0	0.0
Animal Bite to Humans**	13	29	30	21.0
Animal Rabies	5	3	10	5.5
Campylobacteriosis	40	22	27	31.3
Chlamydia	1235	1044	1068	1116.5
Cryptosporidiosis	7	8	3	5.5
Cyclosporiasis	1	3	1	1.5
Dengue	1	1	2	1.5
E. coli Shiga toxin-producing	6	8	7	7.5
Giardiasis	12	12	7	11.3
Gonorrhea	281	232	230	250.3
Haemophilus influenzae (invasive)	0	2	7	2.5
Hepatitis A	0	2	0	1.3
Hepatitis B (acute and chronic)	65	47	34	48.5
Hepatitis C (acute and chronic)	354	269	216	271.5
Hepatitis B in Pregnant Women	4	1	3	3.3
HIV*	40	25	39	31.8
Lead poisoning	2	5	2	4.5
Legionellosis	9	5	7	5.5
Lyme Disease	0	4	4	2.5
Meningococcal Disease	1	1	1	1.0
Pertussis	11	18	8	12.0
Salmonellosis	64	62	51	59.3
Shigellosis	14	18	4	19.0
S. pneumoniae – drug resistant	3	5	11	6.3
Syphilis	84	60	40	54.8
Tuberculosis	2	5	4	4.3
Varicella	7	10	13	11.3

- ** HIV data includes those cases that have converted to AIDS. These HIV cases cannot be added with AIDS cases to get combined totals since the categories are not mutually exclusive. AIDS data is current through March 2015.*
- *** Animal bite to humans by a potentially rabid animal resulting in a county health department or state health office recommendation for post-exposure prophylaxis (PEP), or a bite by a non-human primate.*

*Reported cases of diseases/conditions in **Bold** are >10% higher than the previous three year average for the same time period.*

All Data is Provisional

MISSION

To protect, promote and improve the health of all people in Florida through integrated state, county and community efforts

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To be the Healthiest State in the Nation

VALUES

Innovation

Collaboration

Accountability

Responsiveness

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ADDRESS

400 West Airport Boulevard

Sanford, FL 32773

Disease Reporting

The Epidemiology Program conducts disease surveillance and investigates suspected occurrences of infectious diseases and conditions reported from physician's offices, hospitals and laboratories.

Surveillance is primarily conducted through passive reporting from the medical community as required by Chapter 381, Florida Statutes.

To report a reportable disease or outbreak during business hours please use the Report of Communicable Disease Form. Contact the Division of Epidemiology at 407-665-3266 for diseases other than HIV/AIDS and STDs.

To report an urgent reportable disease or outbreak after hours, call 407-665-3266 and follow the instructions to reach the on-call Epidemiologist.

Reportable Diseases/Conditions in Florida - Practitioner List

Reportable Diseases/Conditions in Florida - Laboratory List

Disease Reporting Information for Health Care Providers and Laboratories

Foodborne Illnesses Reporting Links:

Report illnesses due to food online 24/7

Report unsafe or unsanitary conditions

Disaster Preparedness Link: http://www.floridadisaster.org/index.asp

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