



Delaware Weekly Influenza Report

MMWR Week 6 (February 5 - 11, 2017)

Delaware Division of Public Health

National Influenza Synopsis 2016-2017:

National data are updated Friday of each week. Please visit <http://www.cdc.gov/flu/weekly/> for the most current information. During MMWR Week 6 (February 5 - 11, 2017) influenza activity again increased in the United States. The most frequently identified influenza virus subtype reported by public health laboratories during week 6 was influenza A (H3). The percentage of respiratory specimens testing positive for influenza in clinical laboratories increased. **Widespread influenza activity** was reported by Puerto Rico and 46 states (Alabama, Alaska, Arizona, Arkansas, California, Connecticut, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Vermont, Virginia, Washington, West Virginia, Wisconsin and Wyoming). **Regional influenza activity** was reported by Guam and four states (Colorado, Hawaii, Oregon and Utah). **Local influenza activity** was reported by the District of Columbia. **Sporadic influenza activity** was reported by the U.S. Virgin Islands. Both national and state data are provisional and subject to change as additional reports are received.

Delaware Influenza Surveillance 2016-2017:

During MMWR Week 6 there were 385 laboratory-confirmed cases of influenza reported among Delaware residents with a total of 1,296 for the 2016-2017 season. Reports of influenza-like illness (ILI) received from participating providers, facilities and institutions in Delaware show ILI is 0.56% (Delaware's 2016-2017 baseline is 2.2%). Nationally, ILI increased to 5.2%, above the national baseline of 2.2%.

Level of Influenza Activity in Delaware, MMWR Week 6:

Widespread	Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in at least half the regions of the state with recent laboratory evidence of influenza in the state.
Influenza-like illness (ILI) is defined as patients presenting with fever of 100° F or greater, cough and/or sore throat in the absence of a known cause other than influenza.	
No Activity: No laboratory-confirmed cases of influenza and no reported increase in the number of cases of ILI.	
Sporadic: Small numbers of laboratory-confirmed influenza cases or a single laboratory-confirmed influenza outbreak has been reported, but there is no increase in cases of ILI.	
Local: Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in a single region of the state.	
Regional: <i>Outbreaks of influenza or increases in ILI and recent laboratory-confirmed influenza in at least two but less than half the regions of the state with recent laboratory evidence of influenza in those regions.</i> ³	
Widespread: Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in at least half the regions of the state with recent laboratory evidence of influenza in the state.	

¹ 2016-2017 Region 3 (DE, DC, MD, PA, VA and WV) baseline = 2.2%.

² Laboratory-confirmed case = case confirmed by viral culture or PCR.

³ Region = population under surveillance in a defined geographical subdivision of a state. Regions typically include several counties. Regional doesn't apply to Delaware and other states with ≤ four counties.

<u>In this report:</u>	<u>page</u>
Table 1a. Influenza positive cases reported statewide and county, by subtype / lineage and MMWR week, Delaware 2016-17	2
Table 1b. Influenza positive cases reported statewide and county, by age group and MMWR week, Delaware 2016-17	2
Figure 1. Confirmed cases of influenza by type and subtype / lineage, by MMWR week, Delaware 2016-17	3
Table 2. Influenza-related hospitalizations, statewide and county, by age group and MMWR week, Delaware 2016-17	3
Table 3. Influenza-related deaths by MMWR week, Delaware 2016-17	3
Table 4. Numbers of influenza cases reported by flu season, Delaware 2004-05 through 2016-17	4
Figure 2. Percentage of visits for influenza-like illness reported by sentinel providers participating in CDC's ILINet, Delaware 2016-17	4
Figure 3. Influenza-like illness reported by ILI reporting partners by MMWR week, Delaware 2016-17	5
Figure 4a. Percentage of emergency department (ED) visits due to ILI/Flu by MMWR week, Delaware 2016-17	5
Figure 4b. County-specific percentages of ED visits due to ILI/Flu by MMWR week, Delaware 2016-17	5
Summary of International Influenza Activity	6

Table 1a. Influenza positive¹ cases reported² statewide and county, by subtype (A) / lineage (B)³ and MMWR Week, Delaware 2016-17

Confirmed Flu Cases by Subtype / Lineage		Wk 40	Wk 41	Wk 42	Wk 43	Wk 44	Wk 45	Wk 46	Wk 47	Wk 48	Wk 49	Wk 50	Wk 51	Wk 52	Wk 01	Wk 02	Wk 03	Wk 04	Wk 05	Wk 06	YTD	YTD Total	YTD County %
STATEWIDE	A / 2009 H1N1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1	0	0	1	4	1,296	
	A / 2012 H3N2	0	0	0	2	0	2	3	6	17	12	13	13	21	27	42	42	51	67	97	415		
	A / no subtype	0	0	1	1	0	0	3	2	4	7	15	26	44	45	57	71	83	158	244	761		
	B / Yamagata	0	0	0	0	0	0	0	0	1	0	0	0	0	1	3	5	3	5	2	20		
	B / Victoria	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	2	5		
B / no lineage	0	0	0	0	0	0	0	0	0	0	0	1	4	9	3	9	12	14	39	91			
New Castle County	A / 2009 H1N1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	3	772	59.6%
	A / 2012 H3N2	0	0	0	2	0	2	2	6	15	11	11	6	14	21	34	37	38	51	83	333		
	A / no subtype	0	0	0	0	0	0	1	1	1	1	6	6	5	20	23	28	47	94	136	369		
	B / Yamagata	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	3	3	3	2	13		
	B / Victoria	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	2	5		
B / no lineage	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	6	9	8	23	49			
Kent County	A / 2009 H1N1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	321	24.8%
	A / 2012 H3N2	0	0	0	0	0	0	1	0	2	0	1	4	3	0	1	2	4	5	4	27		
	A / no subtype	0	0	1	1	0	0	1	1	3	6	8	12	23	15	27	23	21	44	79	265		
	B / Yamagata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1		
	B / Victoria	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
B / no lineage	0	0	0	0	0	0	0	0	0	0	0	0	2	8	3	2	1	1	11	28			
Sussex County	A / 2009 H1N1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	203	15.7%
	A / 2012 H3N2	0	0	0	0	0	0	0	0	0	1	1	3	4	6	7	3	9	11	10	55		
	A / no subtype	0	0	0	0	0	0	1	0	0	0	1	8	16	10	7	20	15	20	29	127		
	B / Yamagata	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	2	0	6		
	B / Victoria	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
B / no lineage	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2	5	5	14			

Table 1b. Influenza positive¹ cases reported² statewide and county, by age group and MMWR Week, Delaware 2016-17

Confirmed Flu Cases by Age Group		Wk 40	Wk 41	Wk 42	Wk 43	Wk 44	Wk 45	Wk 46	Wk 47	Wk 48	Wk 49	Wk 50	Wk 51	Wk 52	Wk 01	Wk 02	Wk 03	Wk 04	Wk 05	Wk 06	YTD	YTD Total	YTD County %
STATEWIDE	0-4 years	0	0	0	0	1	0	0	0	0	3	5	6	12	15	24	24	26	38	66	220	1,296	
	5-24 years	0	0	0	0	0	1	2	2	3	6	4	10	13	23	35	42	57	87	199	484		
	25-49 years	0	0	1	1	0	0	2	0	8	5	8	13	14	13	13	25	18	43	53	217		
	50-64 years	0	0	0	1	0	0	2	2	2	2	7	5	13	14	12	16	21	27	27	151		
	65+ years	0	0	0	1	0	1	0	4	9	3	4	6	17	20	21	21	28	49	40	224		
New Castle County	0-4 years	0	0	0	0	0	0	0	0	0	1	2	1	3	9	12	10	20	27	52	137	772	59.6%
	5-24 years	0	0	0	0	0	1	1	2	2	2	2	6	4	10	19	26	35	61	123	294		
	25-49 years	0	0	0	0	0	0	1	0	6	4	4	3	8	8	8	16	10	20	35	123		
	50-64 years	0	0	0	1	0	0	1	1	1	2	5	2	2	5	7	10	14	23	18	92		
	65+ years	0	0	0	1	0	1	0	4	8	3	4	1	4	12	12	13	19	25	19	126		
Kent County	0-4 years	0	0	0	0	0	0	0	0	0	2	3	4	9	6	9	8	4	8	7	60	321	24.8%
	5-24 years	0	0	0	0	0	0	1	0	1	3	1	4	7	8	12	6	12	18	53	126		
	25-49 years	0	0	1	1	0	0	0	0	2	1	3	5	3	2	3	4	5	10	14	54		
	50-64 years	0	0	0	0	0	0	1	1	1	0	2	0	4	3	4	4	3	3	4	30		
	65+ years	0	0	0	0	0	0	0	0	1	0	0	3	5	4	4	5	2	11	16	51		
Sussex County	0-4 years	0	0	0	0	1	0	0	0	0	0	0	1	0	0	3	6	2	3	7	23	203	15.7%
	5-24 years	0	0	0	0	0	0	0	0	0	1	1	0	2	5	4	10	10	8	23	64		
	25-49 years	0	0	0	0	0	0	1	0	0	0	1	5	3	3	2	5	3	13	4	40		
	50-64 years	0	0	0	0	0	0	0	0	0	0	0	3	7	6	1	2	4	1	5	29		
	65+ years	0	0	0	0	0	0	0	0	0	0	0	2	8	4	5	3	7	13	5	47		

¹ Based on patients with positive nucleic acid or viral culture test results reported to the Division of Public Health.

² Reports are by the date the laboratory results are obtained. As a result, prior weeks' counts may be adjusted to reflect additional cases received.

³ The Division of Public Health Laboratory now has the capability to identify lineage for Influenza B. Since some laboratories in the state do not have this capability, those influenza cases will be categorized as Influenza B, no lineage identified.

Figure 1. Confirmed cases¹ of influenza by type and subtype / lineage, by MMWR Week, Delaware 2016-17*

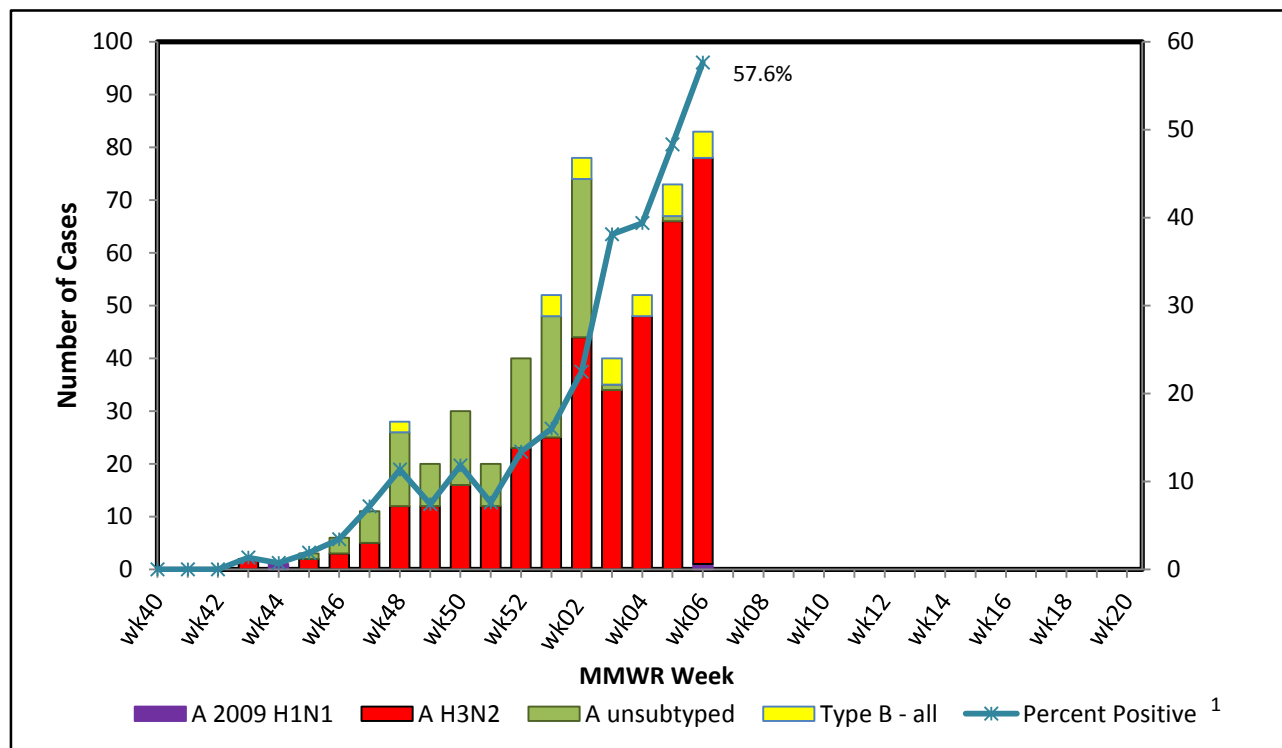


Table 2. Influenza-related hospitalizations statewide and county, by age group and MMWR Week, Delaware 2016-17

Hospitalized Flu Cases by Age Group		Wk 40	Wk 41	Wk 42	Wk 43	Wk 44	Wk 45	Wk 46	Wk 47	Wk 48	Wk 49	Wk 50	Wk 51	Wk 52	Wk 01	Wk 02	Wk 03	Wk 04	Wk 05	Wk 06	YTD	YTD Total	YTD County %
STATEWIDE	0-4 years	0	0	0	0	0	0	0	0	0	0	1	1	0	2	2	2	1	1	6	16	263	
	5-24 years	0	0	0	0	0	0	0	0	0	2	0	1	0	1	2	4	3	6	11	30		
	25-49 years	0	0	0	0	0	0	1	0	2	1	0	0	4	2	2	4	3	6	7	32		
	50-64 years	0	0	0	0	0	0	0	0	0	0	2	1	6	5	3	4	5	10	7	43		
	65+ years	0	0	0	1	0	1	0	3	8	1	3	3	12	13	17	11	20	23	26	142		
New Castle County	0-4 years	0	0	0	0	0	0	0	0	0	0	1	1	0	2	1	1	0	1	6	13	177	67.3%
	5-24 years	0	0	0	0	0	0	0	0	0	0	1	0	1	1	2	3	3	5	11	26		
	25-49 years	0	0	0	0	0	0	0	0	2	1	0	0	3	1	2	3	2	4	5	23		
	50-64 years	0	0	0	0	0	0	0	0	0	0	1	1	1	4	2	3	4	9	6	31		
	65+ years	0	0	0	1	0	1	0	3	7	1	3	0	4	6	10	8	16	13	11	84		
Kent County	0-4 years	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	3	58	22.1%
	5-24 years	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2		
	25-49 years	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	2	6		
	50-64 years	0	0	0	0	0	0	0	0	0	0	1	0	3	1	1	1	1	1	0	9		
	65+ years	0	0	0	0	0	0	0	0	1	0	0	2	5	4	4	3	1	6	12	38		
Sussex County	0-4 years	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28	10.6%
	5-24 years	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	2		
	25-49 years	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	1	0	3		
	50-64 years	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	3		
	65+ years	0	0	0	0	0	0	0	0	0	0	0	1	3	3	3	0	3	4	3	20		

Table 3. Influenza-related deaths by MMWR Week, Delaware 2016-17

Influenza-Related Deaths	Wk 40	Wk 41	Wk 42	Wk 43	Wk 44	Wk 45	Wk 46	Wk 47	Wk 48	Wk 49	Wk 50	Wk 51	Wk 52	Wk 01	Wk 02	Wk 03	Wk 04	Wk 05	Wk 06	YTD	
	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1	0	1	0	4

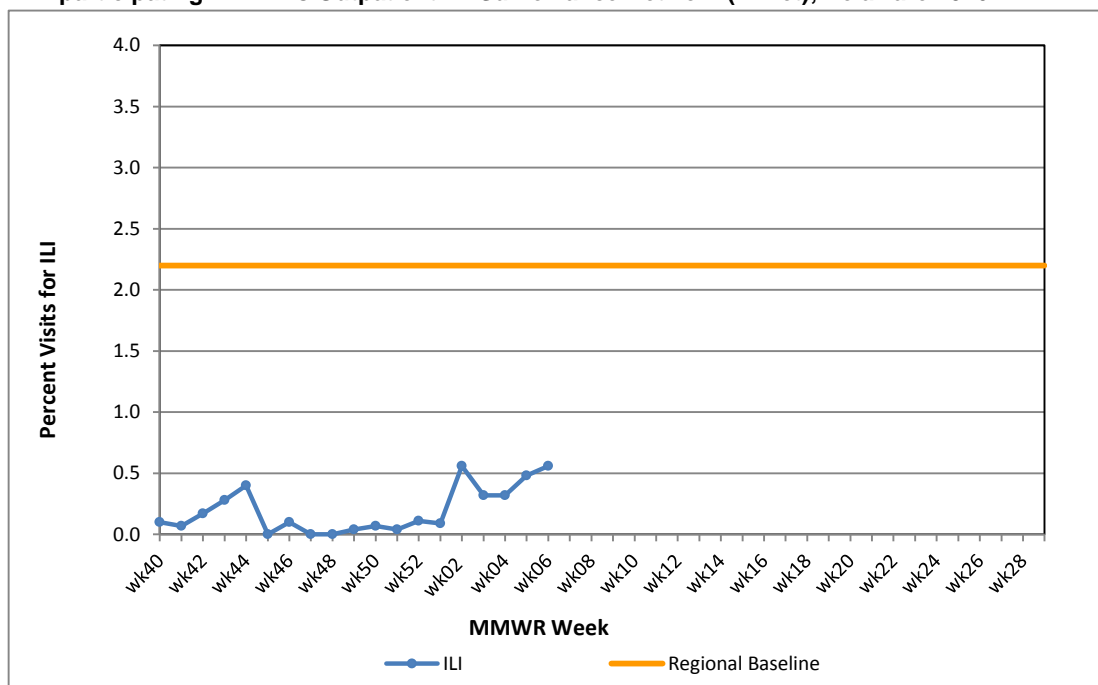
Table 4. Numbers of influenza cases reported by flu season, Delaware 2004-05 through 2016-17

Influenza Season	Total Annual Influenza Cases
2004 – 2005	995
2005 – 2006	541
2006 – 2007	508
2007 – 2008	1,401
2008 – 2009	738
2009 – 2010	2,247
2010 – 2011	1,479
2011 – 2012	267
2012 – 2013	1,781
2013 – 2014	1,842
2014 – 2015	2,390
2015 – 2016	2,251
2016 – 2017 (YTD)	1,296

U.S. Outpatient Influenza-Like Illness Surveillance Network (ILINet) Sentinel Providers

An ILINet (sentinel) provider conducts surveillance for influenza-like illness (ILI) in collaboration with the Division of Public Health and the Centers for Disease Control and Prevention (CDC). Data reported by ILINet providers, in combination with other influenza surveillance data, provide a national and statewide picture of influenza activity in the U.S.

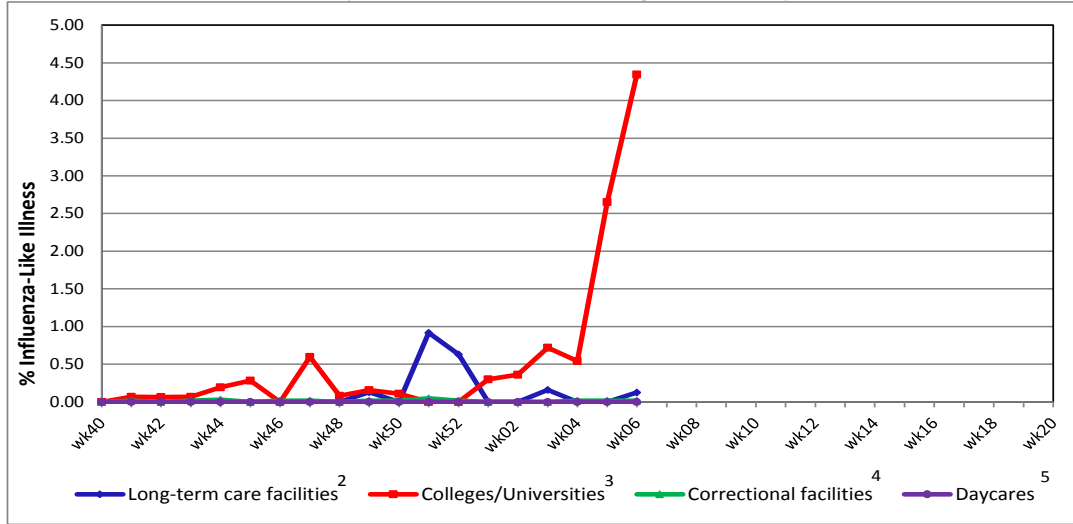
Figure 2. Percentage of visits for influenza-like illness reported by sentinel providers¹ participating in CDC’s Outpatient ILI Surveillance Network (ILINet), Delaware 2016-17



¹ Thirteen of 18 sentinel providers reported.

² Regional baseline is calculated by CDC using non-influenza weeks from the previous three influenza seasons. Delaware is in Region 3 that also includes DC, MD, PA, VA and WV.

Figure 3. Influenza-like illness reported by ILI surveillance reporting partners¹ by MMWR Week, Delaware 2016-17



¹ ILINet reporting partners include long-term care facilities, colleges / universities, correctional facilities and daycare facilities.

² % ILI= percentage of residents with ILI symptoms Eight long-term care facilities reported.

³ % ILI= percentage of student visits for ILI; Three universities reported.

⁴ % ILI= percentage of visits for ILI at the correctional facility; Nine correctional facilities reported.

⁵ % ILI= percentage of children absent with ILI; One daycare provider reported.

Figure 4a. Percentage of emergency department (ED) visits due to ILI/Flu by MMWR Week, Delaware 2016-17

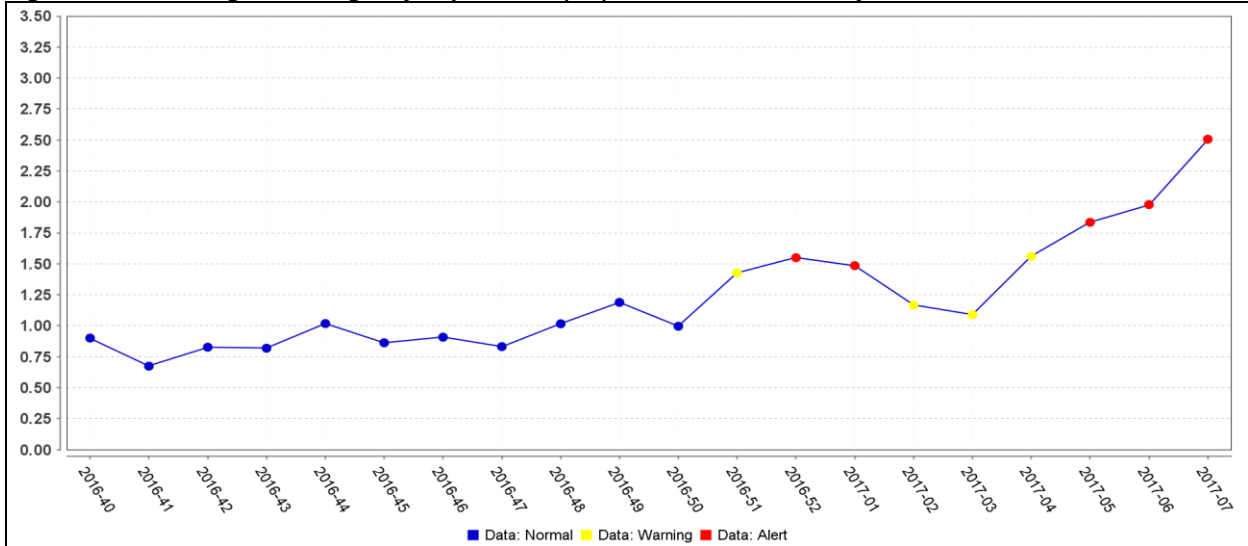
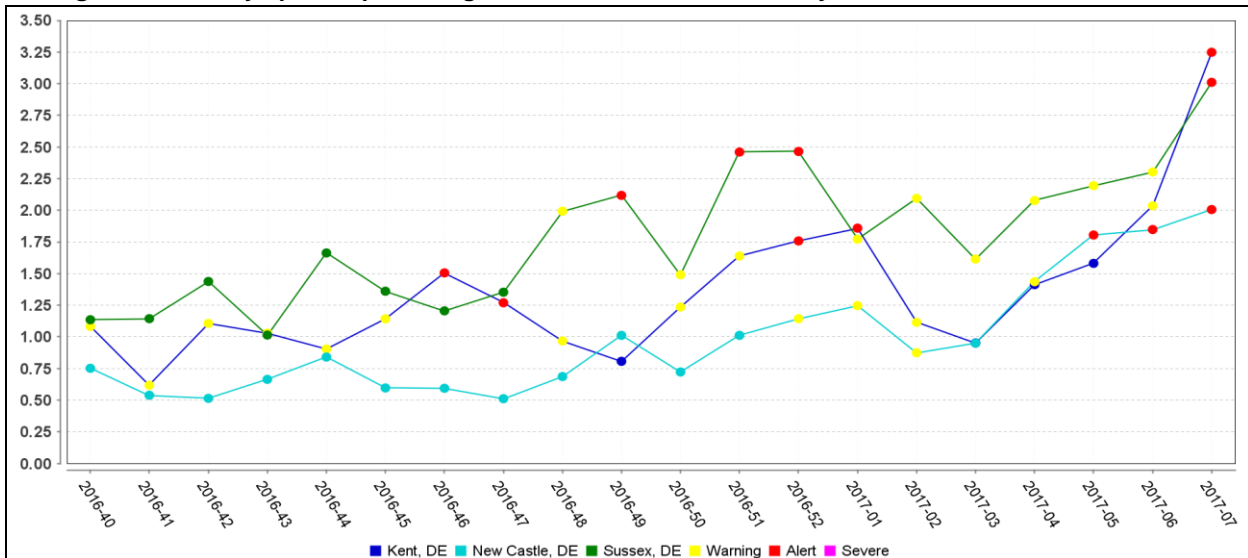


Figure 4b. County-specific percentages of ED visits due to ILI/Flu by MMWR Week, Delaware 2016-17



Summary of International Influenza Activity

Influenza activity in the temperate zone of the northern hemisphere continued to increase, with many countries especially in East Asia and Europe having passed their seasonal threshold early in comparison with previous years. Worldwide, influenza A(H3N2) virus was predominant. The majority of influenza viruses characterized so far were similar antigenically to the reference viruses contained in vaccines for use in the 2016-2017 northern hemisphere influenza season.

In North America, influenza activity with A(H3N2) virus predominating continued to increase in the United States of America, whereas in Canada and Mexico, influenza activity decreased.

In the Caribbean countries and Central America, influenza and other respiratory virus activity remained low in general. Puerto Rico and Costa Rica however reported an increase of ILI and influenza activity, respectively.

In temperate South America, influenza and RSV activity remained low in most of the countries. In Paraguay, ILI activity increased above expected levels but no influenza activity was reported.

In Europe, influenza activity remained high, and has peaked already in some countries, with influenza A (H3N2) virus being the most prominent subtype. Persons aged over 65 years were most frequently associated with severe disease from influenza infection.

In Western Asia, influenza and ILI activity appeared to be decreasing in Armenia, Georgia, Israel and Iraq. Influenza A(H3N2) was the most frequently detected virus, followed by influenza B virus. In East Asia, high influenza activity continued to be reported with influenza A(H3N2) viruses predominant. In Southern Asia influenza activity remained low in most of the countries, with influenza A (H3N2) virus predominant, and low levels of influenza A(H1N1) and influenza B viruses present. In South East Asia, influenza activity remained low, with influenza A(H3N2) virus and influenza B predominating in the region.

In Northern Africa, influenza activity was reported in Algeria and Morocco with influenza A(H3N2) and influenza B virus detections. In West Africa, influenza B continued to be detected in Ghana.

In the temperate zone of the Southern Hemisphere, influenza activity remained at inter-seasonal levels.

Reference: World Health Organization (WHO), 2017. Influenza update number 282 (2/6/17). Retrieved February 10, 2017, from http://www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/. Reports are updated biweekly.

NOTE: The data provided do not reflect the total number of individuals who have been infected with the influenza virus in Delaware during the reporting period due to the following factors:

- Many people ill with influenza-like symptoms do not seek medical care.
- Many who do seek medical care are not tested for influenza.
- The Delaware Public Health Laboratory is limited by capacity to processing a maximum of three specimens per day from each reporting entity.

The Delaware Division of Public Health (DPH) is committed to serving you better by providing the most accurate, up-to-date influenza data available.

- For general information on influenza, visit flu.delaware.gov or <http://dhss.delaware.gov/dhss/dph/dpc/immunize-flu.html>.
- For specific information on DPH flu clinics, visit <http://dhss.delaware.gov/dhss/dph/fluclinics.html>.
- For questions on Delaware's Weekly flu report, call the DPH Office of Infectious Disease Epidemiology: 302-744-4990.
- For questions regarding influenza vaccination, please call 302-744-1060.