



Delaware Weekly Influenza Report

MMWR Week 12 (March 19 - 25, 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 12 (March 19 - 25, 2017) influenza activity remained elevated in the United States. The most frequently identified influenza virus subtype reported by public health laboratories during week 12 was influenza A (H3). The percentage of respiratory specimens testing positive for influenza in clinical laboratories increased slightly. **Widespread influenza activity** was reported by 31 states (Alabama, Arkansas, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Nebraska, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, Vermont, Virginia and Wisconsin). **Regional influenza activity** was reported by Guam, Puerto Rico and 12 states (Alaska, Arizona, California, Idaho, Louisiana, Mississippi, Nevada, New Mexico, South Dakota, Tennessee, Texas and West Virginia). **Local influenza activity** was reported by the District of Columbia and five states (Colorado, Montana, Oregon, Washington and Wyoming). **Sporadic activity** was reported by Hawaii and Utah). **No 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 12 there were 344 laboratory-confirmed cases of influenza reported among Delaware residents with a total of 3,715 for the 2016-2017 season. Reports of influenza-like illness (ILI) received from participating providers, facilities and institutions in Delaware show ILI is 0.34% (Delaware's 2016-2017 baseline is 2.2%). Nationally, ILI is 3.2%, above the national baseline of 2.2%.

Level of Influenza Activity in Delaware, MMWR Week 12:

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.	
<p>No Activity: No laboratory-confirmed cases of influenza and no reported increase in the number of cases of ILI.</p> <p>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.</p> <p>Local: Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in a single region of the state.</p> <p>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</p> <p>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.</p>	

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.

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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 40-52	Wk 01	Wk 02	Wk 03	Wk 04	Wk 05	Wk 06	Wk 07	Wk 08	Wk 09	Wk 10	Wk 11	Wk 12	YTD	YTD Total	YTD County %
STATEWIDE	A / 2009 H1N1	1	1	0	1	0	0	2	1	0	0	0	0	0	6	3,715	
	A / 2012 H3N2	89	27	42	42	52	69	101	72	91	37	32	26	15	695		
	A / no subtype	104	45	57	71	84	159	250	285	400	251	204	159	167	2,236		
	A,B co-infection	0	0	0	0	0	0	0	0	0	1	0	0	0	1		
	B / Yamagata	1	1	3	5	3	5	4	7	10	9	10	9	13	80		
	B / Victoria	0	2	0	0	1	0	3	1	0	3	2	1	0	13		
B / no lineage	5	9	3	9	12	14	38	53	86	94	86	126	149	684			
New Castle County	A / 2009 H1N1	0	1	0	1	0	0	2	1	0	0	0	0	0	5	1,771	47.7%
	A / 2012 H3N2	69	21	34	37	39	52	85	54	71	23	18	17	5	525		
	A / no subtype	22	20	23	28	47	93	135	139	157	105	72	54	59	954		
	B / Yamagata	1	0	1	3	3	3	4	4	4	4	2	6	5	40		
	B / Victoria	0	2	0	0	1	0	3	0	0	0	0	0	0	6		
	B / no lineage	3	0	0	6	9	8	22	18	26	30	26	43	50	241		
Kent County	A / 2009 H1N1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,143	30.8%
	A / 2012 H3N2	11	0	1	2	4	6	4	4	3	2	6	0	3	46		
	A / no subtype	56	15	27	23	21	46	79	95	137	99	92	61	61	812		
	A,B co-infection	0	0	0	0	0	0	0	0	0	1	0	0	0	1		
	B / Yamagata	0	0	1	0	0	0	0	0	2	2	3	1	2	11		
	B / Victoria	0	0	0	0	0	0	0	0	0	0	0	1	0	1		
B / no lineage	2	8	3	2	1	1	11	19	39	29	36	57	64	272			
Sussex County	A / 2009 H1N1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	801	21.6%
	A / 2012 H3N2	9	6	7	3	9	11	12	14	17	12	8	9	7	124		
	A / no subtype	26	10	7	20	16	20	36	51	106	47	40	44	47	470		
	B / Yamagata	0	1	1	2	0	2	0	3	4	3	5	2	6	29		
	B / Victoria	0	0	0	0	0	0	0	1	0	3	2	0	0	6		
	B / no lineage	0	1	0	1	2	5	5	16	21	35	24	26	35	171		

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 40-52	Wk 01	Wk 02	Wk 03	Wk 04	Wk 05	Wk 06	Wk 07	Wk 08	Wk 09	Wk 10	Wk 11	Wk 12	YTD	YTD Total	YTD County %
STATEWIDE	0-4 years	27	15	24	24	26	39	68	65	119	74	67	59	61	668	3,715	
	5-24 years	41	23	35	42	59	88	202	202	204	138	132	112	128	1,406		
	25-49 years	52	13	13	25	18	44	56	61	94	60	49	58	66	609		
	50-64 years	34	14	12	16	21	27	29	42	67	54	36	43	35	430		
	65+ years	46	20	21	21	28	49	43	49	103	69	50	49	54	602		
New Castle County	0-4 years	7	9	12	10	20	27	54	41	67	37	30	30	21	365	1,771	47.7%
	5-24 years	20	10	19	26	36	61	123	103	88	62	33	40	46	667		
	25-49 years	26	8	8	16	10	20	35	30	34	19	19	22	17	264		
	50-64 years	15	5	7	10	14	23	19	17	26	18	19	10	10	193		
	65+ years	27	12	12	13	19	25	20	25	43	26	17	18	25	282		
Kent County	0-4 years	18	6	9	8	4	9	7	14	30	29	24	22	26	206	1,143	30.8%
	5-24 years	17	8	12	6	12	19	53	63	62	42	66	46	46	452		
	25-49 years	16	2	3	4	5	11	14	17	33	25	19	21	29	199		
	50-64 years	9	3	4	4	3	3	4	10	24	15	10	20	12	121		
	65+ years	9	4	4	5	2	11	16	14	32	22	18	11	17	165		
Sussex County	0-4 years	2	0	3	6	2	3	7	10	22	8	13	7	14	97	801	21.6%
	5-24 years	4	5	4	10	11	8	26	36	54	34	33	26	36	287		
	25-49 years	10	3	2	5	3	13	7	14	27	16	11	15	20	146		
	50-64 years	10	6	1	2	4	1	6	15	17	21	7	13	13	116		
	65+ years	10	4	5	3	7	13	7	10	28	21	15	20	12	155		

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*

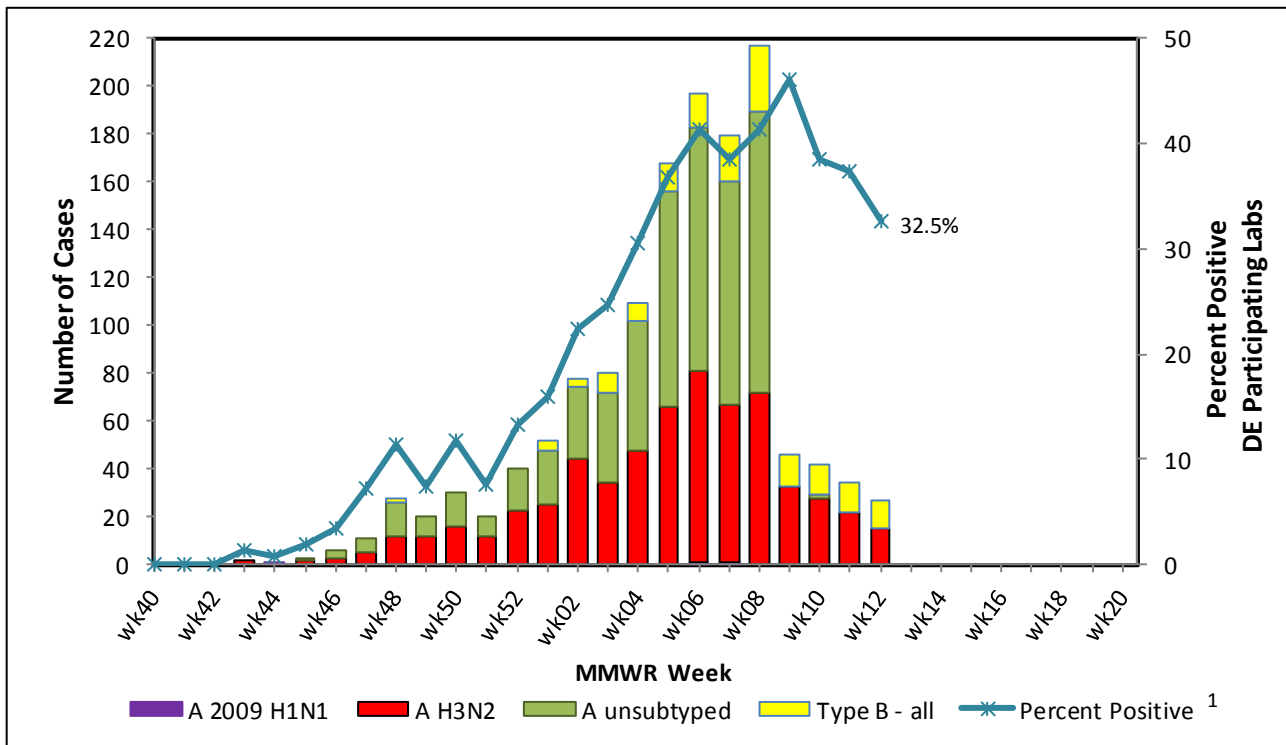


Table 2. Influenza-related hospitalizations statewide and county, by age group and MMWR Week, Delaware 2016-17

Hospitalized Flu Cases by Age Group	Wk 40-52	Wk 01	Wk 02	Wk 03	Wk 04	Wk 05	Wk 06	Wk 07	Wk 08	Wk 09	Wk 10	Wk 11	Wk 12	YTD	YTD Total	YTD County %
STATEWIDE	2	2	2	2	1	1	6	6	7	0	1	0	1	31	615	
0-4 years	3	1	2	4	3	6	11	12	7	6	1	3	2	61		
5-24 years	8	2	2	4	3	6	7	4	6	4	1	6	7	60		
25-49 years	9	5	3	4	5	10	7	8	17	19	6	13	8	114		
50-64 years	33	13	17	11	20	23	27	25	57	35	32	27	29	349		
65+ years	2	2	1	1	0	1	6	5	4	0	0	0	0	22	366	59.5%
New Castle County	1	1	2	3	3	5	11	9	6	2	0	3	2	48		
0-4 years	6	1	2	3	2	4	5	2	4	0	0	5	4	38		
5-24 years	3	4	2	3	4	9	6	3	11	9	4	7	5	70		
25-49 years	21	6	10	8	16	13	11	13	31	16	11	17	15	188		
50-64 years	0	0	1	1	1	0	0	1	3	0	1	0	0	8	154	25.0%
Kent County	1	0	0	0	0	1	0	2	1	3	0	0	0	8		
0-4 years	1	0	0	1	1	1	2	2	1	2	1	1	2	15		
5-24 years	4	1	1	1	1	1	0	2	1	4	2	3	3	24		
25-49 years	8	4	4	3	1	6	12	9	16	9	12	7	8	99		
50-64 years	0	0	0	0	0	0	0	0	0	0	0	0	1	1	95	15.4%
Sussex County	1	0	0	1	0	0	0	1	0	1	1	0	0	5		
0-4 years	1	1	0	0	0	1	0	0	1	2	0	0	1	7		
5-24 years	2	0	0	0	0	0	1	3	5	6	0	3	0	20		
25-49 years	4	3	3	0	3	4	4	3	10	10	9	3	6	62		
50-64 years	4	3	3	0	3	4	4	3	10	10	9	3	6	62		
65+ years																

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

Influenza-Related Deaths	Wk 40-52	Wk 01	Wk 02	Wk 03	Wk 04	Wk 05	Wk 06	Wk 07	Wk 08	Wk 09	Wk 10	Wk 11	Wk 11	Wk 12	YTD
	1	0	1	0	1	0	1	2	0	2	2	1	1	1	12

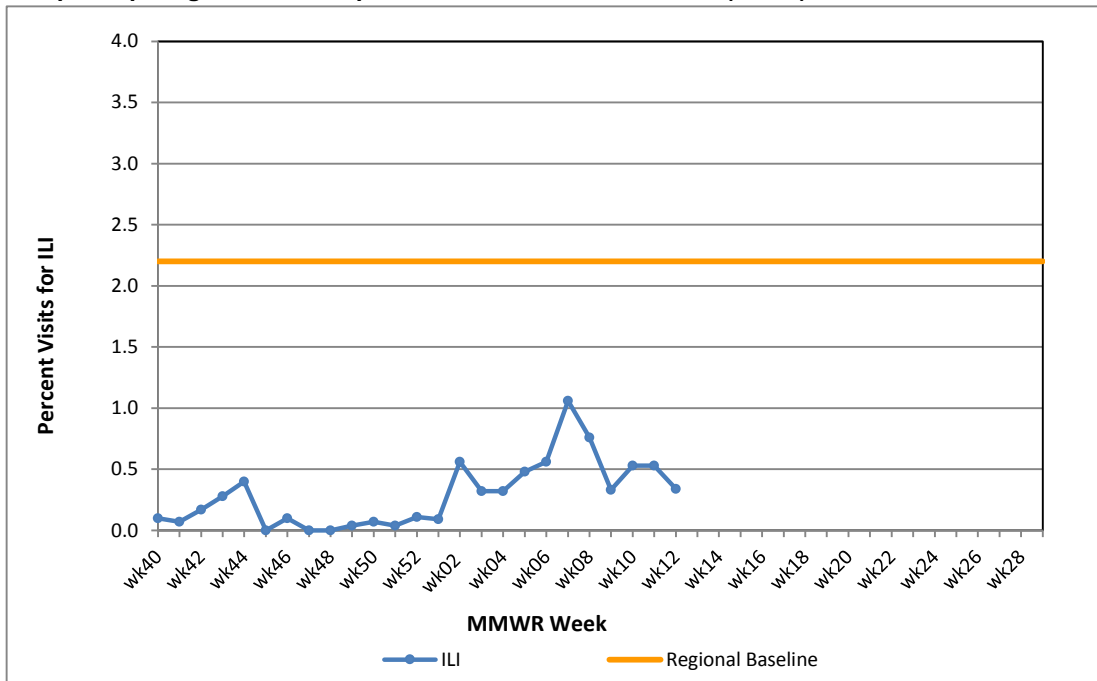
Table 4. Numbers of influenza cases reported by flu season, Delaware 2004-05 through 2016-17

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)	3,715

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.

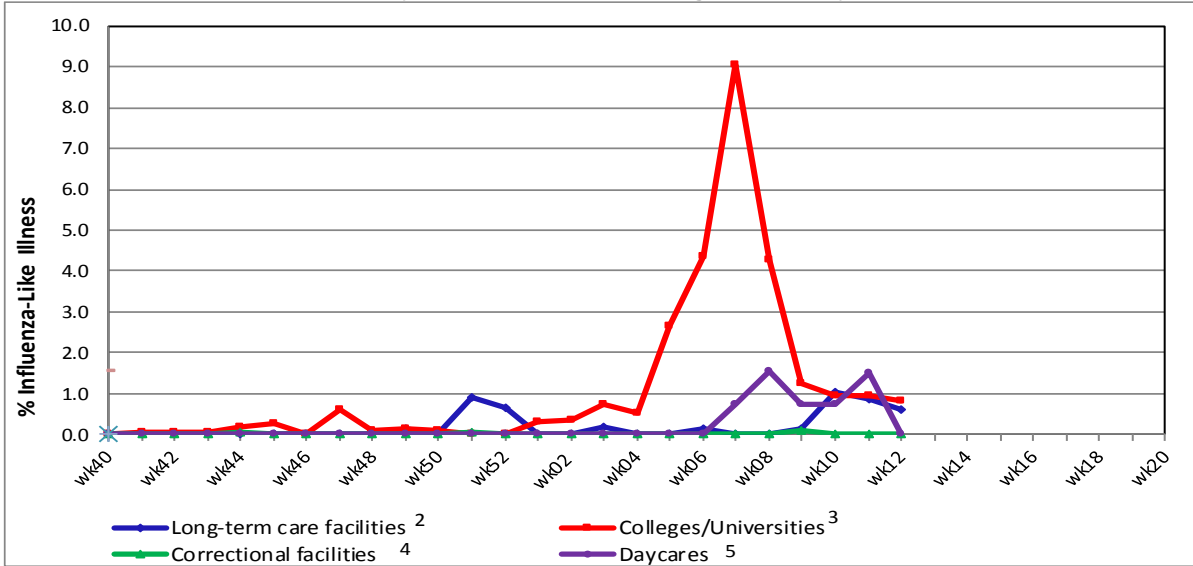
Figure 2. Percentage of visits for influenza-like illness reported by sentinel providers¹ participating in CDC’s Outpatient ILI Surveillance Network (ILINet), Delaware 2016-17



¹ Twelve 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 Six 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

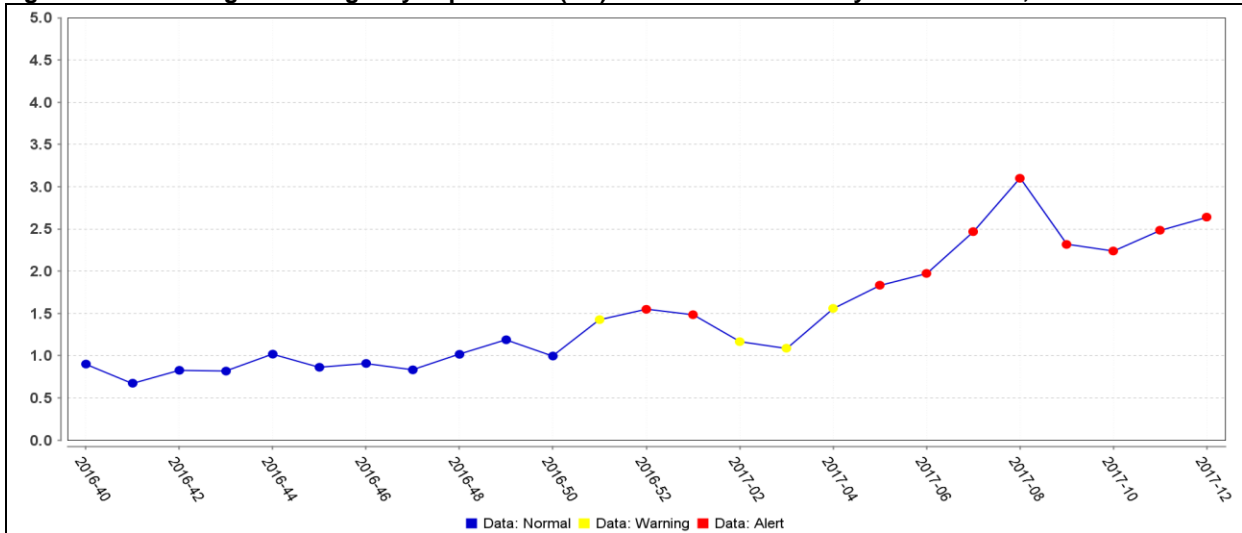
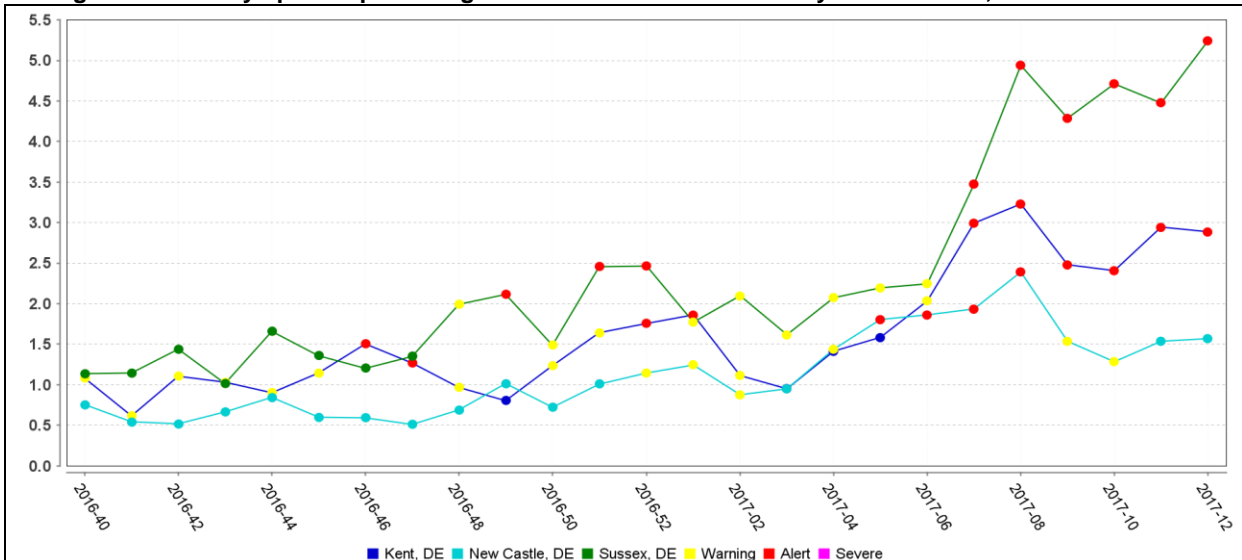


Figure 4b. County-specific percentages of ED visits due to ILI/Flu by MMWR Week, Delaware 2016-17



Summary of International Influenza Activity

Influenza activity in the temperate zone of the northern hemisphere appeared to decrease. Influenza activity in many countries especially in East Asia and Europe already peaked. Worldwide, influenza A(H3N2) virus was predominant. In South Asia influenza activity with mainly H1N1 has been increasing. 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, overall influenza and other respiratory virus activity decreased in Canada and the U.S. Influenza activity slightly increased in Mexico with influenza A(H1N1)pdm09 virus predominating.

In Europe, influenza activity appeared to decrease with influenza A (H3N2) and influenza B viruses predominant in the region. Detections of influenza B virus increased in the recent weeks. Persons aged over 65 years continued to be reported as most frequently associated with severe disease from influenza infection.

In Western Asia, influenza activity continued to decrease with influenza A(H3N2) and B viruses co-circulating in the region. In East Asia, influenza activity continued to decrease with influenza A(H3N2) virus predominant. In Southern Asia, influenza activity continued to increase in India, the Maldives and Sri Lanka, with mainly influenza A(H1N1)pdm09 virus reported followed by influenza B virus. In South East Asia, influenza activity remained low.

In Northern Africa, low influenza activity was reported in Tunisia, with influenza A(H3N2) and influenza B virus co-circulating. In West Africa, influenza activity continued to be reported in Ghana and Mali, with influenza B being the main virus detected. In Eastern Africa, influenza activity was reported in Ethiopia and Mauritius with influenza A(H3N2) virus predominant.

In the Caribbean countries and Central America, influenza and other respiratory virus activity remained low in general.

In tropical South America, influenza and other respiratory virus activity remained low, although RSV activity remained elevated in Colombia.

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

Reference: World Health Organization (WHO), 2017. Influenza update number 285 (3/20/17). Retrieved March 27, 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.