



# Delaware Weekly Influenza Report

## MMWR Week 4 (January 21 - 27, 2018)

### Delaware Division of Public Health

#### National Influenza Synopsis 2017-2018:

National data are updated Friday of each week. Please visit <http://www.cdc.gov/flu/weekly/> for the most current information. During MMWR Week 4 (January 21 - 27, 2018) influenza activity increased in the United States. The most frequently identified influenza virus subtype reported by public health laboratories during week 4 was influenza A(H3). The percentage of respiratory specimens testing positive for influenza in clinical laboratories remained elevated. **Widespread influenza activity** was reported by 48 states and Puerto Rico. **Regional influenza activity** was reported by Oregon and Guam. **Local influenza activity** was reported by Hawaii and 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 2017-2018:

During MMWR Week4, there were 650 laboratory-confirmed cases of influenza reported among Delaware residents, bringing the total to 1,950 confirmed cases for the 2017-2018 season. Reports of influenza-like illness (ILI) received from participating providers, facilities and institutions in Delaware show ILI is 2.4% compared with Delaware's 2017-2018 baseline of 2.0%. Nationally, ILI is 7.1% compared with the 2017-2018 national baseline of 2.2%.

#### Level of Influenza Activity in Delaware, MMWR Week 4:

<b>Widespread</b>	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><b>No Activity:</b> No laboratory-confirmed cases of influenza and no reported increase in the number of cases of ILI.</p> <p><b>Sporadic:</b> 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><b>Local:</b> Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in a single region of the state.</p> <p><b>Regional:</b> <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><sup>3</sup></p> <p><b>Widespread:</b> 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>	

<sup>1</sup> 2017-2018 Region 3 (DE, DC, MD, PA, VA and WV) baseline = 2.0%.

<sup>2</sup> Laboratory-confirmed case = case confirmed by viral culture or PCR.

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

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**Table 1a. Influenza positive<sup>1</sup> cases reported<sup>2</sup> statewide and county by subtype (A) or lineage (B)<sup>3</sup>, Delaware 2017-18**

Confirmed Flu Cases by Subtype / Lineage		Week 40	Week 41	Week 42	Week 43	Week 44	Week 45	Week 46	Week 47	Week 48	Week 49	Week 50	Week 51	Week 52	Week 1	Week 2	Week 3	Week 4	YTD	YTD Total	YTD County %
STATEWIDE	A / 2009 H1N1	0	0	0	1	0	0	0	1	1	1	2	3	8	5	15	16	30	83	1,950	
	A / 2012 H3N2	0	0	1	0	1	0	2	1	6	15	9	11	14	23	26	25	38	172		
	A / no subtype	0	0	0	4	2	4	7	4	6	17	31	59	81	110	239	245	442	1251		
	B / Yamagata	0	0	0	0	0	0	0	0	1	0	3	7	8	8	6	6	4	43		
	B / Victoria	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	5	9		
	B / no lineage	0	0	0	0	1	0	1	0	2	2	4	18	32	44	71	86	131	392		
New Castle County	A / 2009 H1N1	0	0	0	1	0	0	0	0	1	1	1	0	4	2	4	6	7	27	816	41.9%
	A / 2012 H3N2	0	0	1	0	0	0	2	1	5	13	9	9	13	19	19	20	26	137		
	A / no subtype	0	0	0	1	0	1	3	3	2	7	2	10	16	39	108	97	137	426		
	B / Yamagata	0	0	0	0	0	0	0	0	1	0	2	6	5	8	5	6	3	36		
	B / Victoria	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	5	9		
	B / no lineage	0	0	0	0	1	0	1	0	0	1	1	10	22	16	27	46	56	181		
Kent County	A / 2009 H1N1	0	0	0	0	0	0	0	1	0	0	0	2	3	3	8	6	16	39	470	24.1%
	A / 2012 H3N2	0	0	0	0	0	0	0	0	0	2	0	0	1	2	0	2	3	10		
	A / no subtype	0	0	0	3	1	2	2	1	2	2	8	16	27	26	48	63	152	353		
	B / Yamagata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	B / Victoria	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	2	1	3	10	12	21	19	68		
Sussex County	A / 2009 H1N1	0	0	0	0	0	0	0	0	0	0	1	1	1	0	3	4	7	17	664	34.1%
	A / 2012 H3N2	0	0	0	0	1	0	0	0	1	0	0	2	0	2	7	3	9	25		
	A / no subtype	0	0	0	0	1	1	2	0	2	8	21	33	38	45	83	85	153	472		
	B / Yamagata	0	0	0	0	0	0	0	0	0	0	1	1	3	0	1	0	1	7		
	B / Victoria	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	2	1	1	7	7	18	32	19	56	143		

**Table 1b. Influenza positive<sup>1</sup> cases reported<sup>2</sup> statewide and county by age group, Delaware 2017-18**

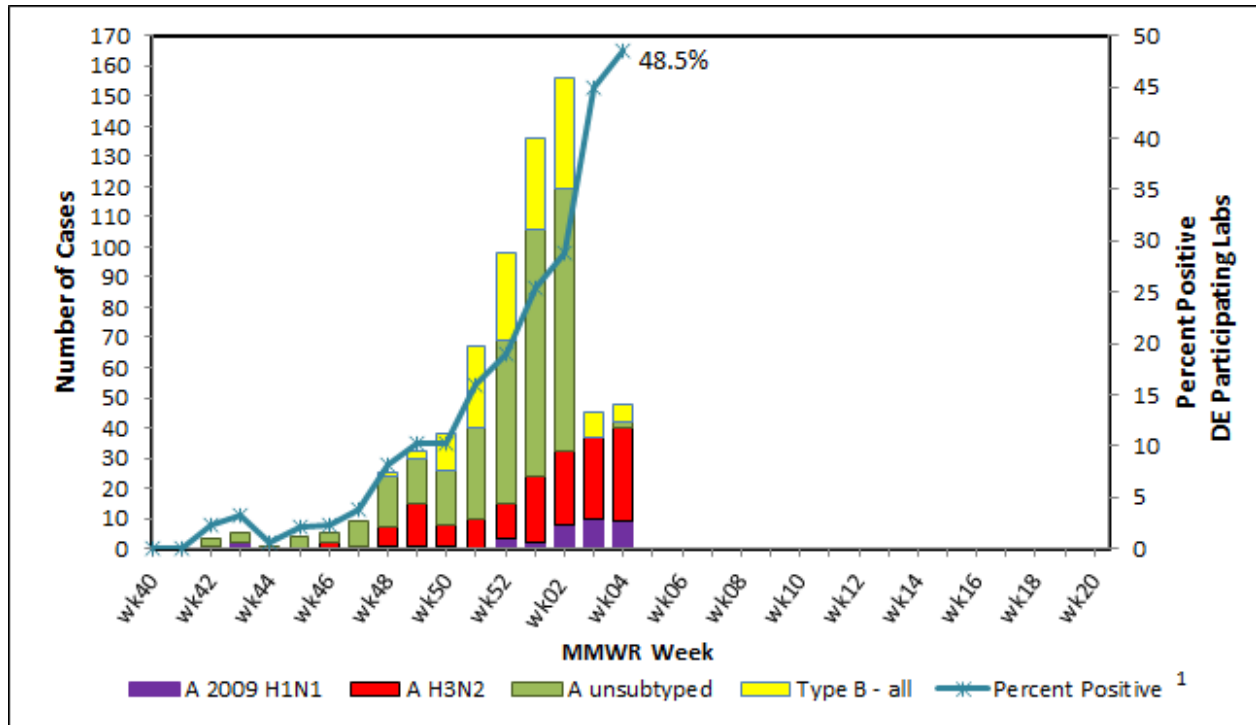
Confirmed Flu Cases by Age Group		Week 40	Week 41	Week 42	Week 43	Week 44	Week 45	Week 46	Week 47	Week 48	Week 49	Week 50	Week 51	Week 52	Week 1	Week 2	Week 3	Week 4	YTD	YTD Total	YTD County %
STATEWIDE	0-4 years	0	0	0	0	1	1	0	0	1	4	3	10	15	19	47	58	118	277	1,950	
	5-24 years	0	0	0	0	1	0	1	2	2	7	9	19	26	32	79	102	202	482		
	25-49 years	0	0	0	3	0	0	2	0	3	5	5	20	34	38	68	81	132	391		
	50-64 years	0	0	0	0	0	1	3	2	5	4	15	13	34	36	56	62	94	325		
	65+ years	0	0	1	2	2	2	4	2	5	15	17	36	35	66	107	77	104	475		
New Castle County	0-4 years	0	0	0	0	0	1	0	0	0	2	2	5	7	8	13	25	36	99	816	41.9%
	5-24 years	0	0	0	0	0	0	1	1	2	4	3	8	13	15	35	47	69	198		
	25-49 years	0	0	0	1	0	0	2	0	1	4	0	8	20	12	33	37	51	169		
	50-64 years	0	0	0	0	0	0	1	2	2	1	6	6	12	18	33	27	35	143		
	65+ years	0	0	1	1	1	0	2	1	4	11	4	8	9	32	49	41	43	207		
Kent County	0-4 years	0	0	0	0	0	0	0	0	0	0	0	2	4	4	14	15	46	85	470	24.1%
	5-24 years	0	0	0	1	1	0	0	1	0	0	1	6	9	9	15	29	60	131		
	25-49 years	0	0	0	1	0	0	0	0	0	1	2	2	3	12	14	18	31	85		
	50-64 years	0	0	0	0	0	1	1	0	2	2	3	2	6	7	10	17	25	76		
	65+ years	0	0	0	1	0	1	1	1	0	1	4	7	12	9	15	13	28	93		
Sussex County	0-4 years	0	0	0	0	1	0	0	0	1	2	1	3	4	7	20	18	36	93	664	34.1%
	5-24 years	0	0	0	0	0	0	0	0	0	3	5	5	4	8	29	26	73	153		
	25-49 years	0	0	0	0	0	0	0	0	2	0	3	10	11	14	21	26	50	137		
	50-64 years	0	0	0	0	0	0	1	0	1	1	6	5	16	11	13	18	34	106		
	65+ years	0	0	0	0	1	1	1	0	1	3	9	21	14	25	43	23	33	175		

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

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

<sup>3</sup> 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 cases<sup>1</sup> of influenza by type and subtype/lineage, Delaware 2017-18\*



<sup>1</sup> Based on patients with positive nucleic acid or viral culture test results reported to the Delaware Division of Public Health. Data Source: Season 2017 - 2018 Influenza Positive Specimens from Delaware, Reported by WHO/NREVSS Collaborating Laboratories

Table 2. Influenza-related hospitalizations statewide and county, by age group, Delaware 2017-18

Hospitalized Flu Cases by Age Group		Week 40	Week 41	Week 42	Week 43	Week 44	Week 45	Week 46	Week 47	Week 48	Week 49	Week 50	Week 51	Week 52	Week 1	Week 2	Week 3	Week 4	YTD	YTD Total	YTD County %
STATEWIDE	0-4 years	0	0	0	0	0	0	0	0	0	0	1	1	1	1	3	2	8	17	398	
	5-24 years	0	0	0	0	0	0	0	0	0	1	1	0	2	1	2	6	6	19		
	25-49 years	0	0	0	0	0	0	0	0	0	2	0	1	3	2	10	6	6	30		
	50-64 years	0	0	0	0	0	0	0	1	3	1	8	2	9	11	16	11	21	83		
	65+ years	0	0	1	2	1	1	1	2	3	11	9	10	16	36	59	40	57	249		
New Castle County	0-4 years	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	2	7	13	229	57.8%
	5-24 years	0	0	0	0	0	0	0	0	0	1	0	0	2	1	1	5	3	13		
	25-49 years	0	0	0	0	0	0	0	0	0	2	0	1	3	0	6	4	5	21		
	50-64 years	0	0	0	0	0	0	0	1	2	0	3	2	6	8	13	9	8	52		
	65+ years	0	0	1	1	1	0	1	1	3	10	3	4	4	23	32	22	24	130		
Kent County	0-4 years	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	3	80	20.1%
	5-24 years	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	4		
	25-49 years	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	1	0	4		
	50-64 years	0	0	0	0	0	0	0	0	1	1	2	0	0	2	3	1	8	18		
	65+ years	0	0	0	1	0	1	0	1	0	0	2	2	7	4	10	5	18	51		
Sussex County	0-4 years	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	89	22.4%
	5-24 years	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	2		
	25-49 years	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	1	5		
	50-64 years	0	0	0	0	0	0	0	0	0	0	3	0	3	1	0	1	5	13		
	65+ years	0	0	0	0	0	0	0	0	0	1	4	4	5	9	17	13	15	68		

Table 3. Influenza-related deaths, Delaware 2017-18

Influenza-Related Deaths	Week 40	Week 41	Week 42	Week 43	Week 44	Week 45	Week 46	Week 47	Week 48	Week 49	Week 50	Week 51	Week 52	Week 1	Week 2	Week 3	Week 4	YTD
	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	3

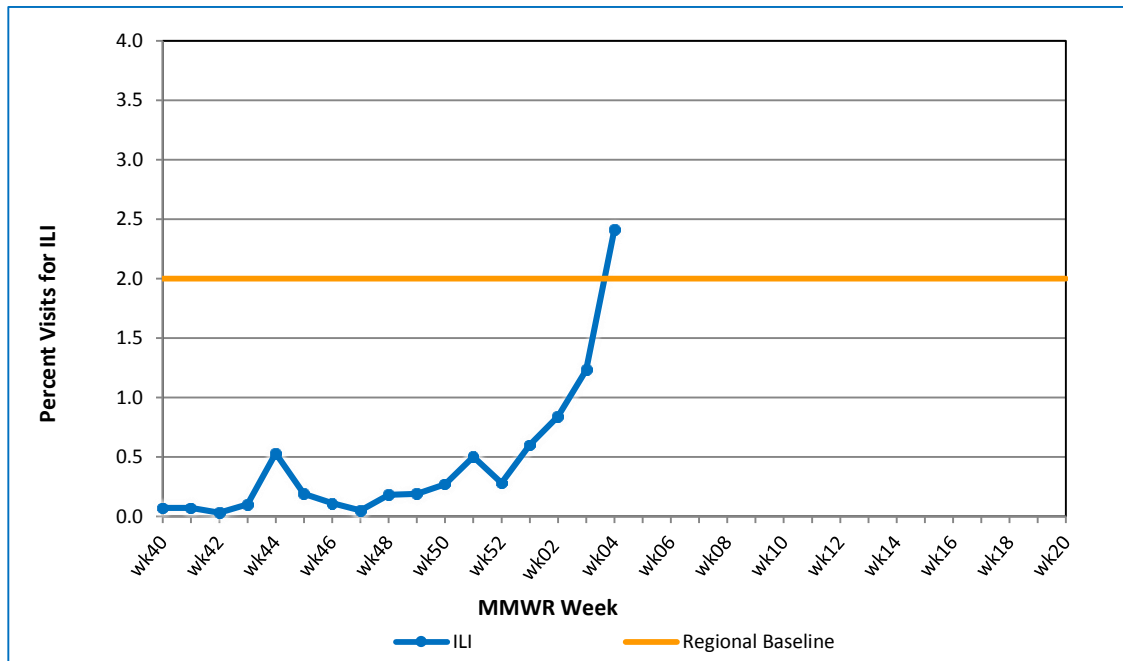
**Table 4. Annual number of influenza cases reported by flu season, Delaware 2004-05 through 2017-18**

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	1,842
2016 – 2017	4,590
<b>2017 – 2018 (YTD)</b>	<b>1,950</b>

**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.

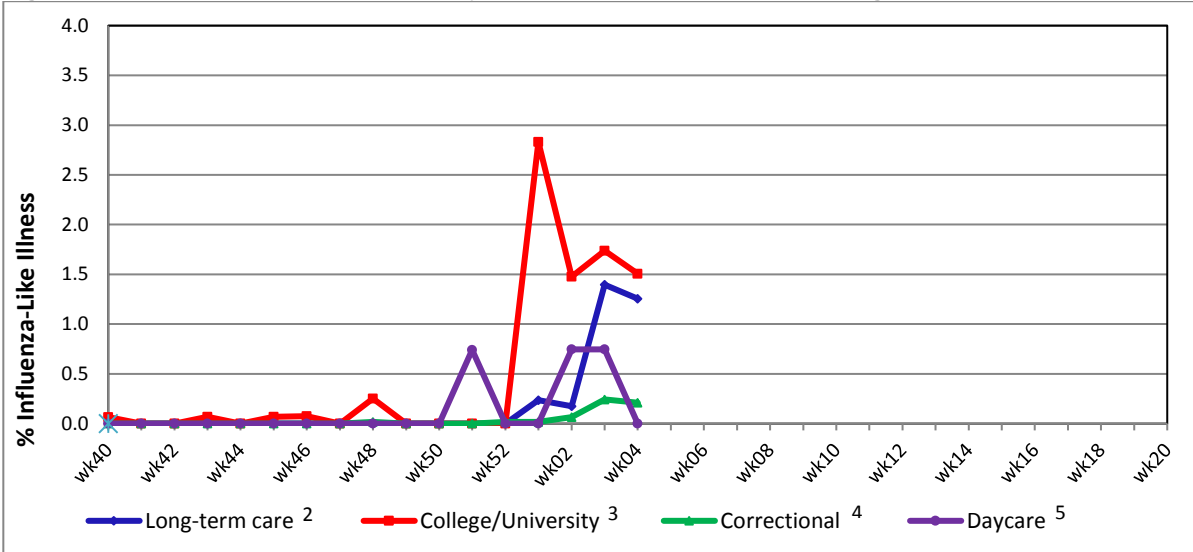
**Figure 2. Percentage of visits for influenza-like illness reported by sentinel providers<sup>1</sup> participating in the U.S. Outpatient ILI Surveillance Network (ILINet), Delaware 2017-18**



<sup>1</sup> Eleven of 13 sentinel providers reported.

<sup>2</sup> 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 influenza surveillance ILI reporting partners<sup>1</sup>, Delaware 2017-18



- <sup>1</sup> ILINet reporting partners include long-term care facilities, colleges / universities, correctional facilities and daycare facilities.
- <sup>2</sup> % ILI= percentage of residents with ILI symptoms. Six long-term care facilities reported.
- <sup>3</sup> % ILI= percentage of student visits for ILI; Two universities reported.
- <sup>4</sup> % ILI= percentage of visits for ILI at the correctional facility; Nine correctional facilities reported.
- <sup>5</sup> % 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 2017-18

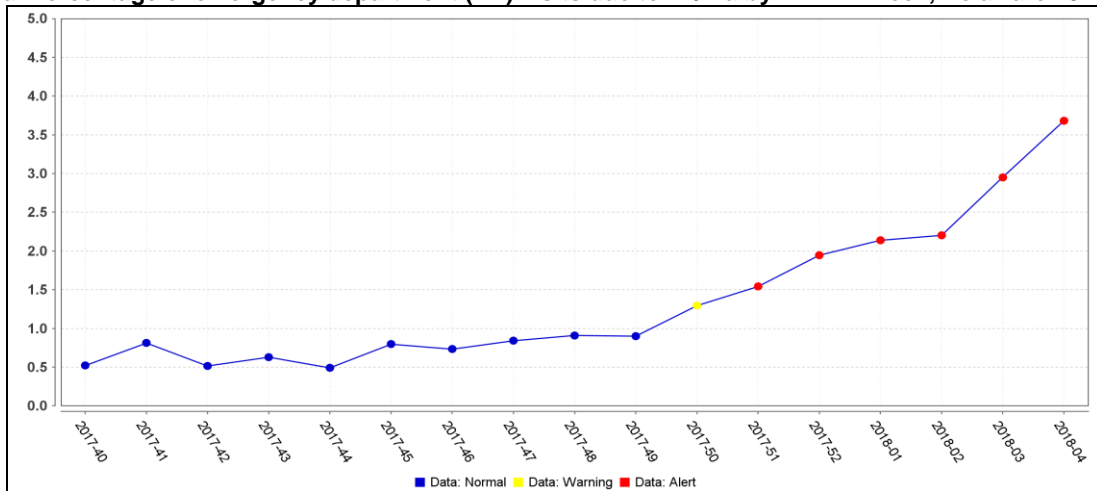
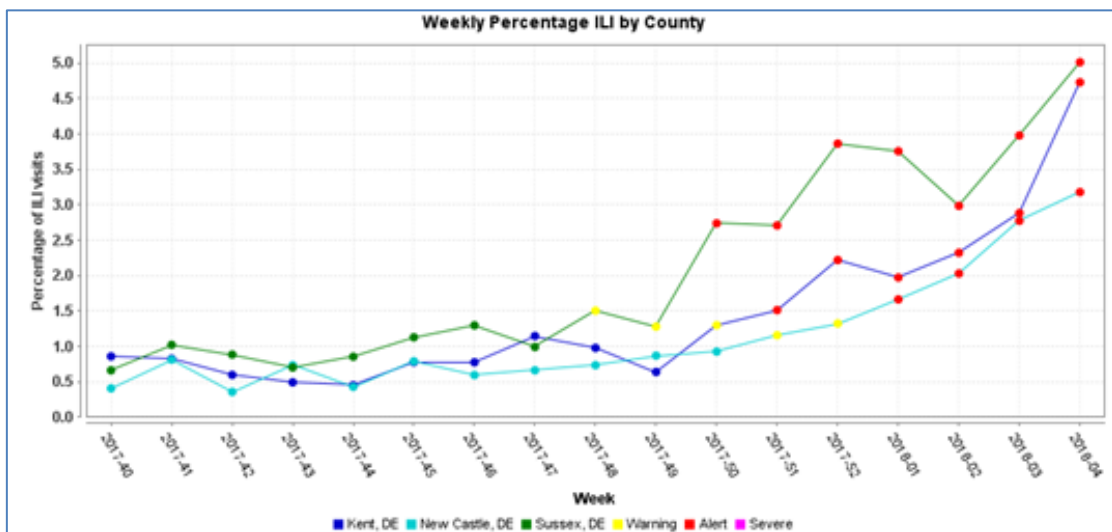


Figure 4b. County-specific percentages of ED visits due to ILI/Flu by MMWR Week, Delaware 2017-18



## **Summary of International Influenza Activity**

Worldwide, influenza A accounted still for the majority of influenza detections (62%) but influenza B (mostly from the Yamagata lineage) has increased proportionally. Up to now, the majority of countries which started the season, reported influenza like illness reaching moderate levels in comparison with previous years, with few reaching already high levels. Some countries have reported levels of hospitalization and ICU admissions at levels reaching or exceeding peak levels of previous influenza seasons.

Influenza activity continued to increase in the temperate zone of the northern hemisphere while in the temperate zone of the southern hemisphere activity was at inter-seasonal levels.

In North America, overall influenza activity remained high, with detections of predominantly influenza A(H3N2) viruses.

In the Caribbean and Central American countries, respiratory illness indicators and influenza activity remained low in general.

In Europe, influenza activity increased above baseline levels in most countries in Northern, Western and Southwestern Europe with sharp increases in some countries. Activity remained low in countries in Eastern Europe. Influenza B remained the virus most frequently detected and the subtype of the influenza A viruses detected varied depending on the country and the surveillance system (outpatient or inpatient systems).

In Western Asia, increasing influenza activity was reported in some countries, with influenza A(H1N1)pdm09 and B viruses present in the region. In Central Asia, influenza activity remained low. In Southern Asia, increased influenza activity continued to increase in Iran, with detection of all seasonal subtypes. In South East Asia, low levels of influenza activity were reported. In East Asia, high levels of illness indicators and influenza activity were reported in most of the countries. Influenza B-Yamagata lineage virus was predominantly detected followed by influenza A(H3N2) viruses.

In Northern Africa, detections of influenza A(H1N1)pdm09 virus sharply increased in Algeria and Tunisia. Detections of influenza B virus remained high in Egypt (together with influenza A(H1N1)pdm09) and Morocco. In Western Africa, influenza activity continued to decrease across the region. In Middle Africa, there were no updates available for this reporting period. In Eastern Africa, influenza activity remained low across the region.

In the tropical countries of South America, low to no influenza activity was reported.

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

**Reference:** World Health Organization (WHO), 2017. Influenza Update number 307 (1/22/18). Retrieved January 26, 2018, from [http://www.who.int/influenza/surveillance\\_monitoring/updates/latest\\_update\\_GIP\\_surveillance/en/](http://www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/). Reports are updated biweekly.

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**NOTE:** 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](http://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.