



# Delaware Weekly Influenza Report

## MMWR Week 15 (April 8 - 14, 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 15 (April 8 – 14, 2018) influenza activity decreased in the United States. Overall, influenza A(H3) viruses have predominated this season. Since early March, influenza B viruses have been more frequently reported than influenza A viruses. The percentage of respiratory specimens testing positive for influenza in clinical laboratories decreased. **Widespread influenza activity** was reported by five states (Connecticut, Delaware, Massachusetts, New York and Rhode Island). **Regional influenza activity** was reported by Guam, Puerto Rico and 16 states (Alaska, Arizona, California, Kentucky, Maine, Montana, Nebraska, New Hampshire, New Jersey, North Dakota, Ohio, Pennsylvania, Vermont, Virginia, Washington and Wisconsin). **Local influenza activity** was reported by 21 states (Arkansas, Colorado, Florida, Georgia, Idaho, Illinois, Iowa, Kansas, Louisiana, Maryland, Michigan, Minnesota, Missouri and New Mexico, North Carolina, Oklahoma, South Carolina, South Dakota, Utah, West Virginia and Wyoming). **Sporadic influenza activity** was reported by the District of Columbia and six states (Hawaii, Indiana, Nevada, Oregon, Tennessee and Texas). **No influenza activity** was reported by the U.S. Virgin Islands and two states (Alabama and Mississippi). Both national and state data are provisional and subject to change as additional reports are received.

#### Delaware Influenza Surveillance 2017-2018:

During MMWR Week 15, there were 104 laboratory-confirmed cases of influenza reported among Delaware residents, bringing the total to 8,443 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 0.3% compared with Delaware's 2017-2018 baseline of 2.0%. Nationally, ILI is 1.8%, below the 2017-2018 national baseline of 2.2%.

#### Level of Influenza Activity in Delaware, MMWR Week 15:

<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.

<u>In this report:</u>	<u>page</u>
Table 1a. Influenza positive cases reported statewide and county, by subtype / lineage and MMWR week, Delaware 2017-18	2
Table 1b. Influenza positive cases reported statewide and county, by age group and MMWR week, Delaware 2017-18	2
Figure 1. Confirmed cases of influenza by type and subtype / lineage, by MMWR week, Delaware 2017-18	3
Table 2. Influenza-related hospitalizations, statewide and county, by age group and MMWR week, Delaware 2017-18	3
Table 3. Influenza-related deaths by MMWR week, Delaware 2017-18	3
Table 4. Numbers of influenza cases reported by flu season, Delaware 2004-05 through 2017-18	4
Figure 2. Percentage of visits for influenza-like illness reported by sentinel providers participating in CDC's ILINet, Delaware 2017-18	4
Figure 3. Influenza-like illness reported by ILI reporting partners by MMWR week, Delaware 2017-18	5
Figure 4a. Percentage of emergency department (ED) visits due to ILI/Flu by MMWR week, Delaware 2017-18	5
Figure 4b. County-specific percentages of ED visits due to ILI/Flu by MMWR week, Delaware 2017-18	5
Summary of International Influenza Activity	6

**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		Wk 40-52	Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10	Wk 11	Wk 12	Wk 13	Wk 14	Wk 15	YTD	YTD Total	YTD County %
STATEWIDE	A / 2009 H1N1	17	4	15	16	32	45	37	43	17	18	6	3	1	2	0	0	256	8,443	
	A / 2012 H3N2	60	24	26	26	42	39	37	53	34	13	9	6	8	3	1	3	384		
	A / no subtype	223	109	238	246	446	682	823	885	469	190	87	68	51	36	16	19	4,588		
	Co-infection	0	1	1	5	5	6	8	3	4	1	1	0	0	0	0	0	35		
	B / Yamagata	19	8	6	6	4	9	31	30	24	11	11	12	10	7	3	0	191		
	B / Victoria	1	1	0	2	5	1	11	12	12	17	9	6	3	5	2	3	90		
	B / no lineage	72	45	73	82	137	226	329	551	349	180	176	151	182	165	102	79	2,899		
New Castle County	A / 2009 H1N1	8	1	4	6	7	18	14	20	6	12	2	2	1	0	0	0	101	3,129	37.1%
	A / 2012 H3N2	53	19	19	20	26	25	25	41	22	9	6	2	3	1	1	1	273		
	A / no subtype	45	39	109	98	137	182	279	270	144	54	27	17	19	5	8	1	1,434		
	Co-infection	0	1	0	3	2	0	2	1	2	0	0	0	0	0	0	0	11		
	B / Yamagata	14	8	5	6	3	8	25	22	17	10	8	7	5	3	1	0	142		
	B / Victoria	1	1	0	2	5	1	11	9	9	15	7	4	2	4	1	1	73		
	B / no lineage	36	16	28	43	56	72	134	207	148	81	69	51	54	46	35	19	1,095		
Kent County	A / 2009 H1N1	6	3	8	6	18	17	20	17	5	4	3	0	0	2	0	0	109	2,093	24.8%
	A / 2012 H3N2	3	2	0	2	7	8	6	7	9	1	0	0	1	1	0	0	47		
	A / no subtype	64	26	48	65	154	212	247	257	116	38	20	13	9	7	0	5	1,281		
	Co-infection	0	0	0	0	1	0	1	2	1	0	0	0	0	0	0	0	5		
	B / Yamagata	0	0	0	0	0	0	3	5	3	0	1	2	3	2	1	0	20		
	B / Victoria	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	1	4		
	B / no lineage	6	10	12	21	19	54	64	140	76	35	32	24	43	42	26	23	627		
Sussex County	A / 2009 H1N1	3	0	3	4	7	10	3	6	6	2	1	1	0	0	0	0	46	3,221	38.2%
	A / 2012 H3N2	4	3	7	4	9	6	6	5	3	3	3	4	4	1	0	2	64		
	A / no subtype	114	44	81	83	155	288	297	358	209	98	40	38	23	24	8	13	1,873		
	Co-infection	0	0	1	2	2	6	5	0	1	1	1	0	0	0	0	0	19		
	B / Yamagata	5	0	1	0	1	1	3	3	4	1	2	3	2	2	1	0	29		
	B / Victoria	0	0	0	0	0	0	0	3	1	2	2	2	1	0	1	1	13		
	B / no lineage	30	19	33	18	62	100	131	204	125	64	75	76	85	77	41	37	1,177		

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

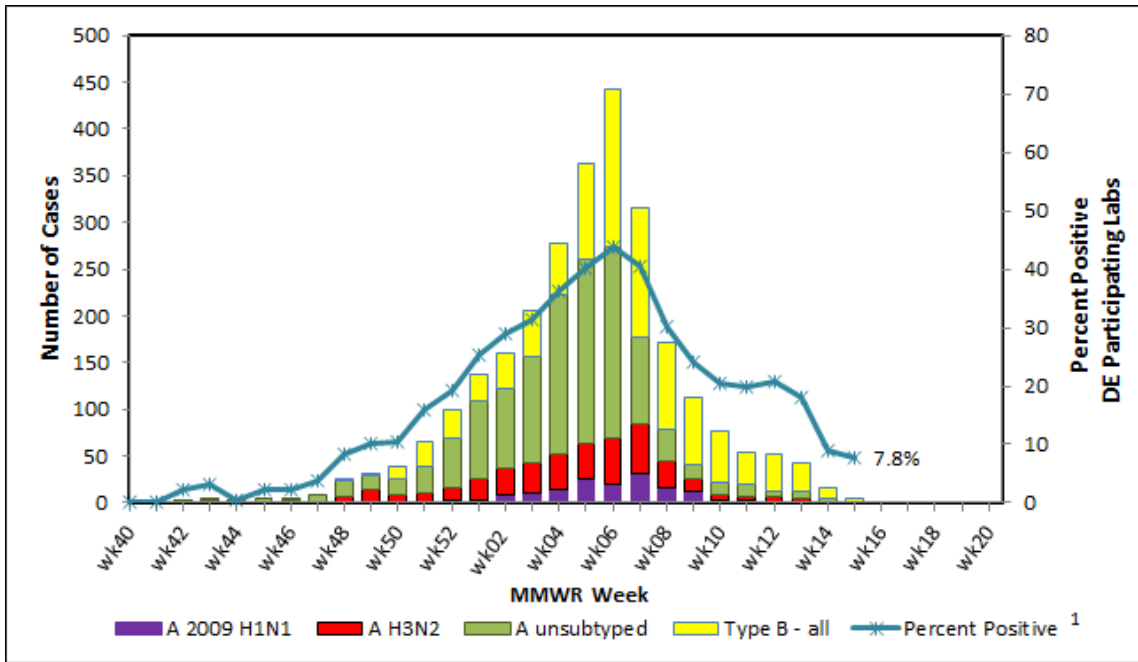
Confirmed Flu Cases by Age Group		Wk 40-52	Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10	Wk 11	Wk 12	Wk 13	Wk 14	Wk 15	YTD	YTD Total	YTD County %
STATEWIDE	0-4 years	39	19	47	58	122	181	258	300	191	87	61	44	54	46	28	23	1,558	8,443	
	5-24 years	77	32	81	103	212	390	492	619	334	147	136	96	79	59	29	21	2,907		
	25-49 years	75	38	68	83	135	167	223	251	127	68	30	28	32	33	11	13	1,382		
	50-64 years	79	37	56	62	96	116	127	164	105	45	32	28	29	36	25	21	1,058		
	65+ years	122	66	107	77	106	154	176	243	152	83	40	50	61	44	31	26	1,538		
New Castle County	0-4 years	17	8	13	25	36	49	117	120	96	44	27	17	29	20	12	9	639	3,129	37.1%
	5-24 years	32	15	37	48	70	99	162	204	114	59	45	29	22	13	11	3	963		
	25-49 years	36	12	33	37	51	52	90	95	38	22	9	12	8	9	4	2	510		
	50-64 years	30	18	33	27	35	52	59	56	37	18	15	8	9	9	9	6	421		
	65+ years	42	32	49	41	44	54	62	95	63	38	23	17	16	8	10	2	596		
Kent County	0-4 years	6	4	14	15	48	64	71	85	39	22	12	9	5	9	5	4	412	2,093	24.8%
	5-24 years	18	9	15	29	64	116	145	177	81	20	24	13	21	15	7	6	760		
	25-49 years	10	12	14	20	34	51	60	77	39	16	10	4	9	9	3	5	373		
	50-64 years	17	7	10	17	25	24	26	40	28	7	7	6	6	9	6	4	239		
	65+ years	28	9	15	13	28	36	39	49	25	13	3	7	15	13	6	10	309		
Sussex County	0-4 years	16	7	20	18	38	68	70	95	56	21	22	18	20	17	11	10	507	3,221	38.2%
	5-24 years	27	8	29	26	78	175	185	238	139	68	67	54	36	31	11	12	1,184		
	25-49 years	29	14	21	26	50	64	73	79	50	30	11	12	15	15	4	6	499		
	50-64 years	32	12	13	18	36	40	42	68	40	20	10	14	14	18	10	11	398		
	65+ years	52	25	43	23	34	64	75	99	64	32	14	26	30	23	15	14	633		

<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		Wk 40-52	Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10	Wk 11	Wk 12	Wk 13	Wk 14	Wk 15	YTD	YTD Total	YTD County %
STATEWIDE	0-4 years	3	1	0	1	8	8	17	5	7	4	3	2	2	3	2	2	68	1,191	
	5-24 years	4	1	1	2	4	6	7	7	7	3	6	3	2	0	1	1	55		
	25-49 years	6	2	10	4	6	8	20	11	9	7	6	3	1	0	1	0	94		
	50-64 years	24	11	16	10	21	19	27	35	24	14	11	4	7	3	8	5	239		
	65+ years	57	37	59	40	56	74	85	100	66	45	19	27	25	21	16	8	735		
New Castle County	0-4 years	2	1	0	1	7	4	15	4	6	2	3	2	1	1	2	2	53	660	55.4%
	5-24 years	3	1	1	2	2	6	5	5	4	2	6	3	1	0	1	1	43		
	25-49 years	6	0	6	3	5	3	13	7	2	1	2	3	1	0	1	0	53		
	50-64 years	14	8	13	8	8	13	17	16	11	11	7	3	3	2	3	2	139		
	65+ years	29	23	32	23	23	35	44	48	35	28	15	13	11	4	7	2	372		
Kent County	0-4 years	0	0	0	0	1	4	0	1	0	2	0	0	0	0	0	0	8	252	21.2%
	5-24 years	0	0	0	0	1	0	1	2	2	1	0	0	0	0	0	0	7		
	25-49 years	0	2	1	0	0	4	5	2	6	4	3	0	0	0	0	0	27		
	50-64 years	4	2	3	1	8	3	3	10	5	1	2	0	3	0	2	1	48		
	65+ years	14	5	10	4	18	22	21	23	11	9	0	4	6	7	5	3	162		
Sussex County	0-4 years	1	0	0	0	0	0	2	0	1	0	0	0	1	2	0	0	7	279	23.4%
	5-24 years	1	0	0	0	1	0	1	0	1	0	0	0	1	0	0	0	5		
	25-49 years	0	0	3	1	1	1	1	2	2	1	0	2	1	0	0	0	14		
	50-64 years	6	1	0	1	5	3	7	9	8	2	2	1	1	1	3	2	52		
	65+ years	14	9	17	13	15	17	20	29	20	8	4	10	8	10	4	3	201		

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

Influenza-Related Deaths	Wk 40-52	Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10	Wk 11	Wk 12	Wk 13	Wk 14	Wk 15	YTD
	1	0	1	1	0	3	7	6	6	4	0	1	1	2	0	0	34

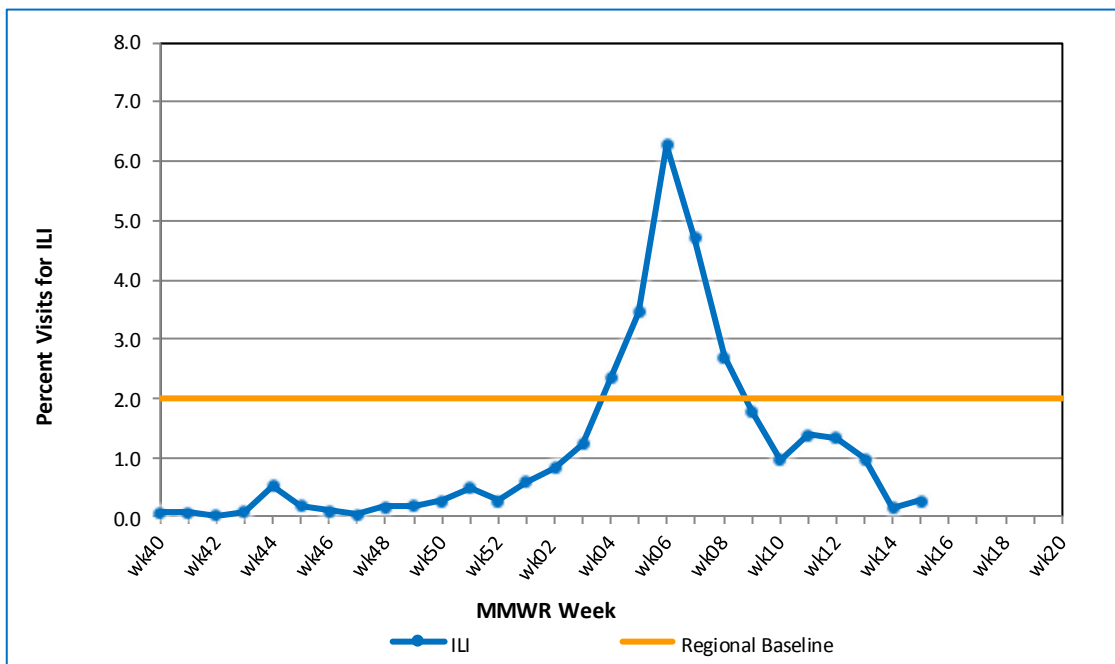
**Table 4. Annual number of influenza cases reported by flu season, Delaware 2004-05 through 2017-18**

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>8,443</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.

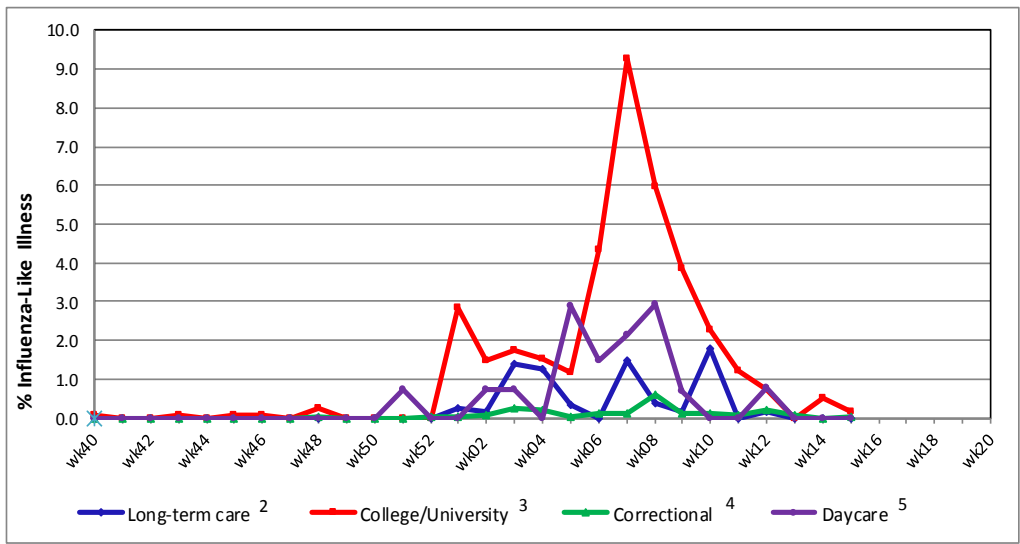
**Figure 2. Percentage of visits for influenza-like illness reported by sentinel providers<sup>1</sup> participating in the U.S. Outpatient ILI Surveillance Network (ILINet), Delaware 2017-18**



<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.

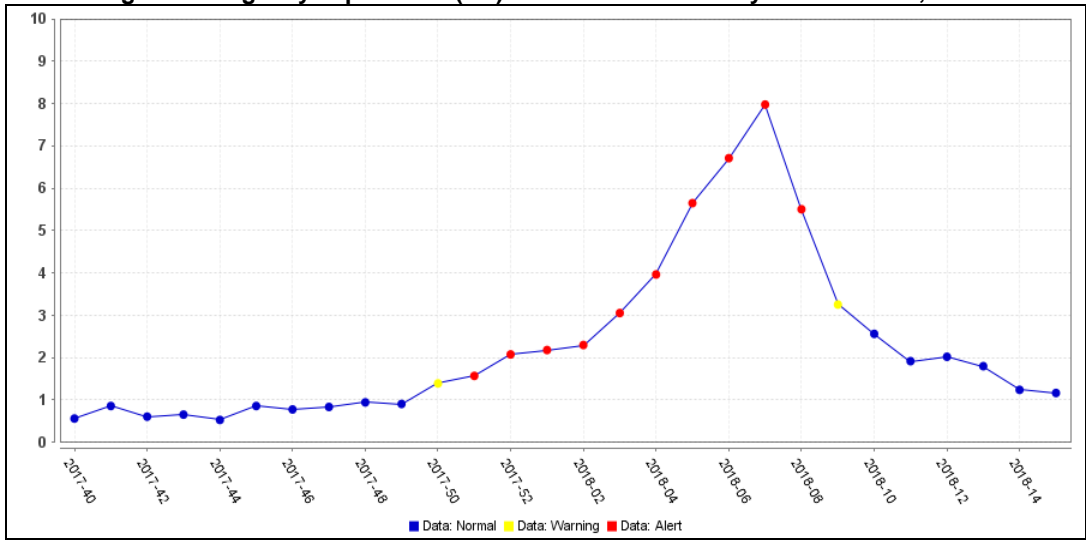
<sup>2</sup> % ILI= percentage of residents with ILI symptoms: Seven long-term care facilities reported.

<sup>3</sup> % ILI= percentage of student visits for ILI; Two universities reported.

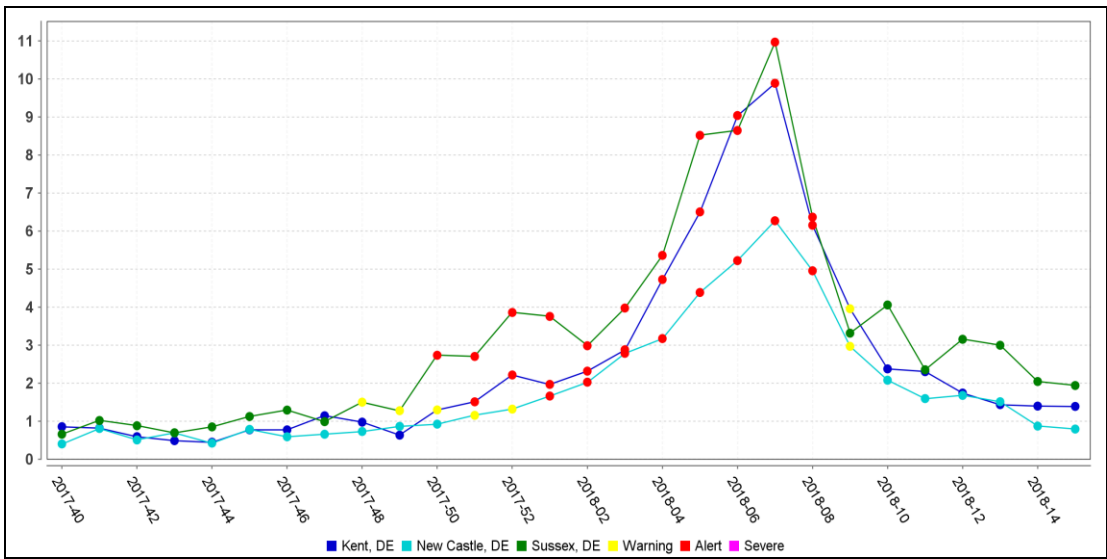
<sup>4</sup> % ILI= percentage of visits for ILI at the correctional facility; Nine correctional facilities reported.

<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**

Influenza activity decreased in most of the countries in the temperate zone of the northern hemisphere, with exception of Eastern Europe where activity continued to increase. In the temperate zone of the southern hemisphere, influenza activity remained at inter-seasonal levels. Worldwide, influenza A and influenza B accounted for a similar proportion of influenza detections.

In North America, influenza activity continued to decrease. Influenza indicators continued to decrease in Canada and the United States, with influenza B virus most frequently detected in the former and influenza A(H3N2) and influenza B viruses co-circulating in the latter. In Mexico, influenza activity was reported as decreased, with detection of all seasonal influenza subtypes.

In the Caribbean, influenza activity increased in general. In the Dominican Republic, influenza activity appeared to increase with influenza A(H1N1)pdm09 predominating. In Central American countries, influenza activity remained low in general. Influenza detections increased slightly in Guatemala and Honduras.

In the European region, influenza viruses continued to circulate widely, but most of the countries reported low to medium intensity. In Eastern Europe, influenza activity continued to increase with detections of influenza A and B viruses. In particular, influenza activity remained high in Latvia and the Russian Federation. In Northern and South West Europe, influenza A and B virus detections continued to decrease.

In Northern Africa, influenza activity decreased across most of the region, with the exception of Egypt where detections remained high. In Western Africa, influenza activity remained low across the region. In Middle Africa, sporadic cases were reported in the Central African Republic. In Eastern Africa, influenza activity decreased in Madagascar and in the United Republic of Tanzania and detections of A(H1N1)pdm09 virus were reported in Mozambique.

In Western Asia, influenza activity appeared to decrease across the region, with all seasonal influenza subtypes present in the region. In Central Asia, influenza activity decreased across the region, although Kazakhstan reported high number of influenza detections in recent weeks. In East Asia, influenza activity decreased across the region. In Northern and Southern China influenza detections continued to decrease, with influenza A(H1N1)pdm09 and influenza B viruses predominating. Low influenza activity was reported in Japan and the Republic of Korea. In Southern Asia, influenza activity remained low in general, based on the countries reporting in this period. In Southeast Asia, influenza activity appeared to be low across the region.

Overall in the temperate zone of the Southern Hemisphere, influenza activity remained at inter-seasonal levels in most countries.

**Reference:** World Health Organization (WHO), 2017. Influenza Update number 313 (4/16/18). Retrieved April 20, 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.