



# Delaware Weekly Influenza Report

## MMWR Week 14 (April 1 - 7, 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 14 (April 1 - 7, 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 seven states (California, Connecticut, Delaware, Massachusetts, New York, Ohio and Rhode Island). **Regional influenza activity** was reported by Guam, Puerto Rico and 22 states (Alaska, Arizona, Colorado, Florida, Idaho, Kentucky, Maine, Michigan, Montana, Nebraska, New Hampshire, New Jersey, North Carolina, North Dakota, Oklahoma, Pennsylvania, South Carolina, Utah, Vermont, Virginia, Washington and Wisconsin). **Local influenza activity** was reported by the District of Columbia and 16 states (Alabama, Arkansas, Georgia, Illinois, Indiana, Iowa, Kansas, Louisiana, Maryland, Minnesota, Missouri, New Mexico, South Dakota, Tennessee, West Virginia and Wyoming). **Sporadic influenza activity** was reported by the U.S. Virgin Islands and five states (Hawaii, Mississippi, Nevada, Oregon and Texas). Both national and state data are provisional and subject to change as additional reports are received.

#### Delaware Influenza Surveillance 2017-2018:

During MMWR Week 14, there were 119 laboratory-confirmed cases of influenza reported among Delaware residents, bringing the total to 8,329 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 0.2% compared with Delaware's 2017-2018 baseline of 2.0%. Nationally, ILI is 2.1% below the 2017-2018 national baseline of 2.2%.

#### Level of Influenza Activity in Delaware, MMWR Week 14:

<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		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	YTD	YTD Total	YTD County %
STATEWIDE	A / 2009 H1N1	17	4	15	16	32	45	37	43	17	18	6	3	1	2	0	256	8,329	
	A / 2012 H3N2	60	24	26	26	42	39	37	53	34	13	9	6	8	3	0	380		
	A / no subtype	223	109	238	246	446	682	824	886	469	190	87	68	51	36	20	4,575		
	Co-infection	0	1	1	5	5	6	8	3	4	1	1	0	0	0	0	35		
	B / Yamagata	19	8	6	6	4	9	31	30	24	11	11	12	10	7	1	189		
	B / Victoria	1	1	0	2	5	1	11	12	12	17	9	7	3	6	0	87		
	B / no lineage	71	45	73	82	137	226	328	550	349	180	176	146	182	164	98	2,807		
New Castle County	A / 2009 H1N1	8	1	4	6	7	18	14	20	6	12	2	2	1	0	0	101	3,105	37.3%
	A / 2012 H3N2	53	19	19	20	26	25	25	41	22	9	6	2	3	1	0	271		
	A / no subtype	45	39	109	98	137	182	280	270	144	54	27	18	19	5	9	1,436		
	Co-infection	0	1	0	3	2	0	2	1	2	0	0	0	0	0	0	11		
	B / Yamagata	14	8	5	6	3	8	25	22	17	10	8	7	5	3	0	141		
	B / Victoria	1	1	0	2	5	1	11	9	9	15	7	4	2	4	0	71		
	B / no lineage	36	16	28	43	56	72	133	207	148	81	69	50	54	46	35	1,074		
Kent County	A / 2009 H1N1	6	3	8	6	18	17	20	17	5	4	3	0	0	2	0	109	2,064	24.8%
	A / 2012 H3N2	3	2	0	2	7	8	6	7	9	1	0	0	1	1	0	47		
	A / no subtype	64	26	48	65	154	212	247	257	116	38	20	13	9	7	2	1,278		
	Co-infection	0	0	0	0	1	0	1	2	1	0	0	0	0	0	0	5		
	B / Yamagata	0	0	0	0	0	0	3	5	3	0	1	2	3	2	0	19		
	B / Victoria	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	3		
	B / no lineage	6	10	12	21	19	54	64	140	76	35	32	24	43	42	25	603		
Sussex County	A / 2009 H1N1	3	0	3	4	7	10	3	6	6	2	1	1	0	0	0	46	3,090	37.8%
	A / 2012 H3N2	4	3	7	4	9	6	6	5	3	3	3	4	4	1	0	62		
	A / no subtype	114	44	81	83	155	288	297	359	209	98	40	37	23	24	9	1,861		
	Co-infection	0	0	1	2	2	6	5	0	1	1	1	0	0	0	0	19		
	B / Yamagata	5	0	1	0	1	1	3	3	4	1	2	3	2	2	1	29		
	B / Victoria	0	0	0	0	0	0	0	3	1	2	2	3	1	1	0	13		
	B / no lineage	29	19	33	18	62	100	131	203	125	64	75	72	85	76	38	1,130		

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

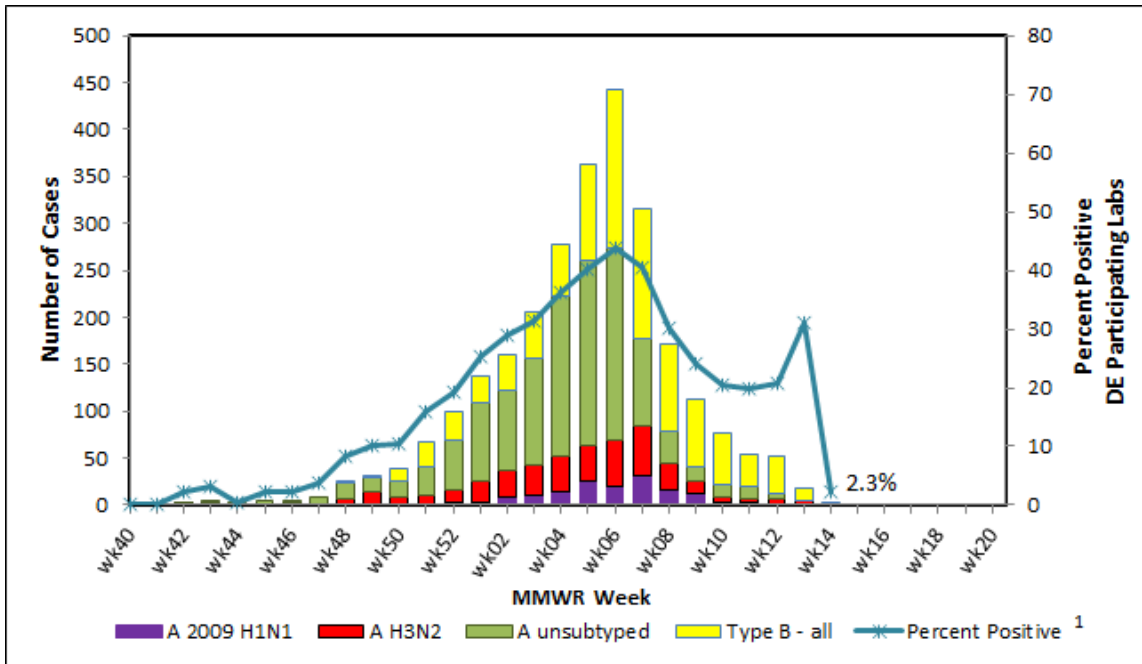
Confirmed Flu Cases by Age Group		Wk 40-52	Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10	Wk 11	Wk 12	Wk 13	Wk 14	YTD	YTD Total	YTD County %
STATEWIDE	0-4 years	39	19	47	58	122	181	258	300	191	87	61	42	54	46	27	1,532	8,329	
	5-24 years	76	32	81	103	212	390	492	619	334	147	136	94	79	59	29	2,883		
	25-49 years	75	38	68	83	135	167	223	251	127	68	30	28	32	33	10	1,368		
	50-64 years	79	37	56	62	96	116	127	164	105	45	32	28	29	36	24	1,036		
	65+ years	122	66	107	77	106	154	176	243	152	83	40	50	61	44	29	1,510		
New Castle County	0-4 years	17	8	13	25	36	49	117	120	96	44	27	17	29	20	12	630	3,105	37.3%
	5-24 years	32	15	37	48	70	99	162	204	114	59	45	29	22	13	11	960		
	25-49 years	36	12	33	37	51	52	90	95	38	22	9	12	8	9	3	507		
	50-64 years	30	18	33	27	35	52	59	56	37	18	15	8	9	9	9	415		
	65+ years	42	32	49	41	44	54	62	95	63	38	23	17	16	8	9	593		
Kent County	0-4 years	6	4	14	15	48	64	71	85	39	22	12	9	5	9	5	408	2,064	24.8%
	5-24 years	18	9	15	29	64	116	145	177	81	20	24	13	21	15	7	754		
	25-49 years	10	12	14	20	34	51	60	77	39	16	10	4	9	9	3	368		
	50-64 years	17	7	10	17	25	24	26	40	28	7	7	6	6	9	6	235		
	65+ years	28	9	15	13	28	36	39	49	25	13	3	7	15	13	6	299		
Sussex County	0-4 years	16	7	20	18	38	68	70	95	56	21	22	16	20	17	10	494	3,090	37.8%
	5-24 years	26	8	29	26	78	175	185	238	139	68	67	52	36	31	11	1,169		
	25-49 years	29	14	21	26	50	64	73	79	50	30	11	12	15	15	4	493		
	50-64 years	32	12	13	18	36	40	42	68	40	20	10	14	14	18	9	386		
	65+ years	52	25	43	23	34	64	75	99	64	32	14	26	30	23	14	618		

<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	YTD	YTD Total	YTD County %
STATEWIDE	0-4 years	3	1	0	1	8	8	17	5	7	4	3	2	2	3	2	64	1,174	
	5-24 years	4	1	1	2	4	6	7	7	7	3	6	3	2	0	1	53		
	25-49 years	6	2	10	4	6	8	20	11	9	7	6	3	1	0	1	93		
	50-64 years	24	11	16	10	21	19	27	35	24	14	11	4	7	3	9	226		
	65+ years	57	37	59	40	56	74	85	100	66	45	19	27	25	21	14	712		
New Castle County	0-4 years	2	1	0	1	7	4	15	4	6	2	3	2	1	1	2	51	653	55.6%
	5-24 years	3	1	1	2	2	6	5	5	4	2	6	3	1	0	1	42		
	25-49 years	6	0	6	3	5	3	13	7	2	1	2	3	1	0	1	53		
	50-64 years	14	8	13	8	8	13	17	16	11	11	7	3	3	2	4	138		
	65+ years	29	23	32	23	23	35	44	48	35	28	15	13	11	4	6	369		
Kent County	0-4 years	0	0	0	0	1	4	0	1	0	2	0	0	0	0	0	8	248	21.1%
	5-24 years	0	0	0	0	1	0	1	2	2	1	0	0	0	0	0	7		
	25-49 years	0	2	1	0	0	4	5	2	6	4	3	0	0	0	0	27		
	50-64 years	4	2	3	1	8	3	3	10	5	1	2	0	3	0	2	47		
	65+ years	14	5	10	4	18	22	21	23	11	9	0	4	6	7	5	159		
Sussex County	0-4 years	1	0	0	0	0	0	2	0	1	0	0	0	1	2	0	7	273	23.3%
	5-24 years	1	0	0	0	1	0	1	0	1	0	0	0	1	0	0	5		
	25-49 years	0	0	3	1	1	1	2	2	1	2	1	0	0	0	0	14		
	50-64 years	6	1	0	1	5	3	7	9	8	2	2	1	1	1	3	50		
	65+ years	14	9	17	13	15	17	20	29	20	8	4	10	8	10	3	197		

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	YTD
	1	0	1	1	0	3	7	6	6	4	0	1	1	2	0	34

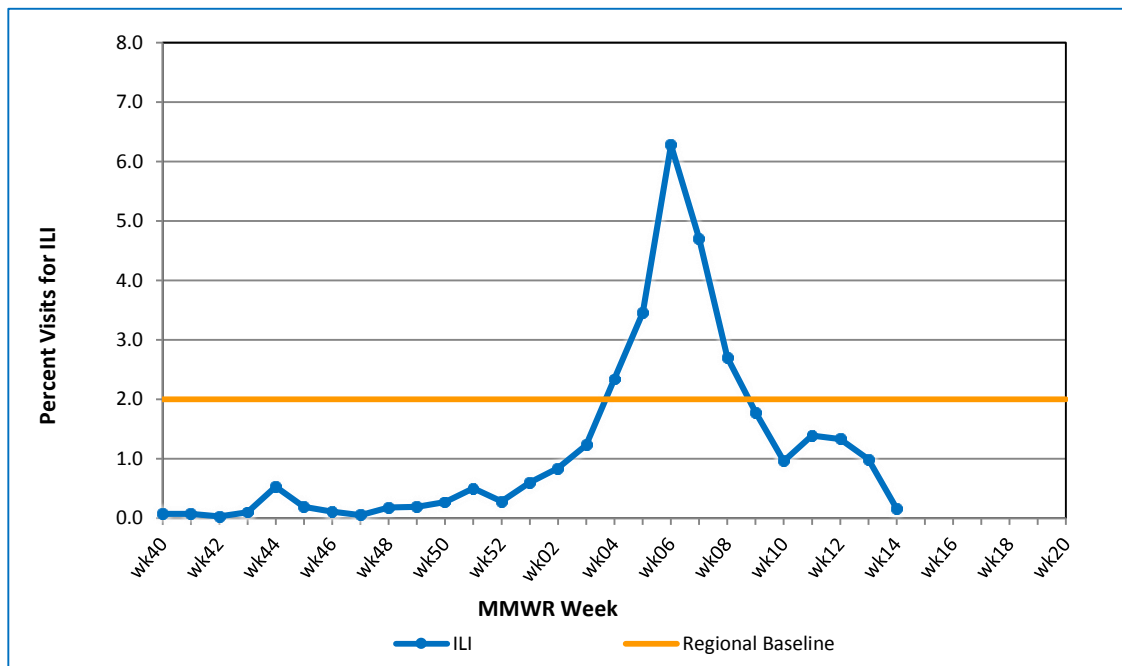
**Table 4. Annual number of influenza cases reported by flu season, Delaware 2004-05 through 2017-18**

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>8,329</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.

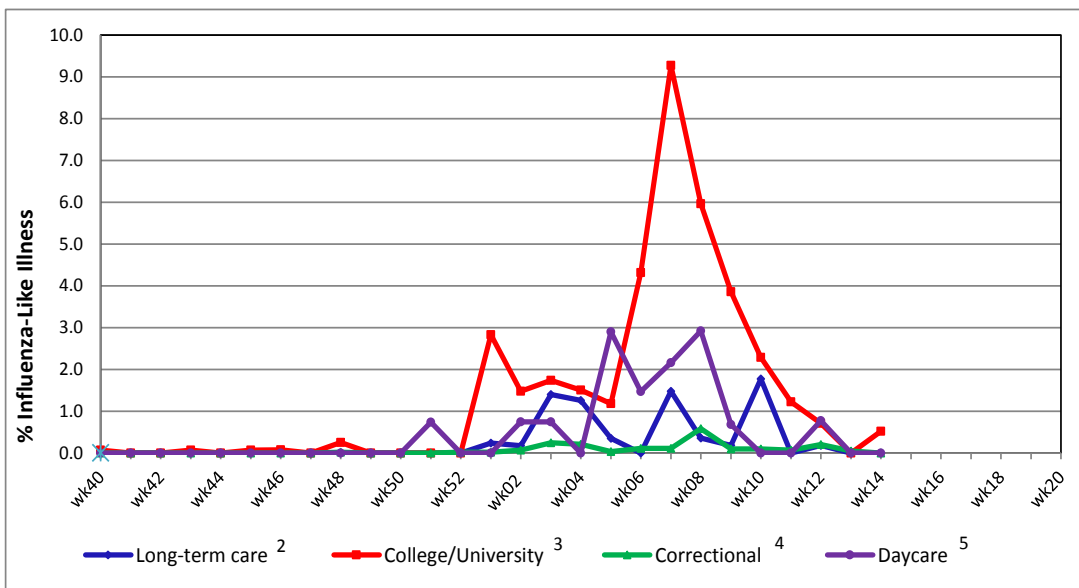
**Figure 2. Percentage of visits for influenza-like illness reported by sentinel providers<sup>1</sup> participating in the U.S. Outpatient ILI Surveillance Network (ILINet), Delaware 2017-18**



<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; One university 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

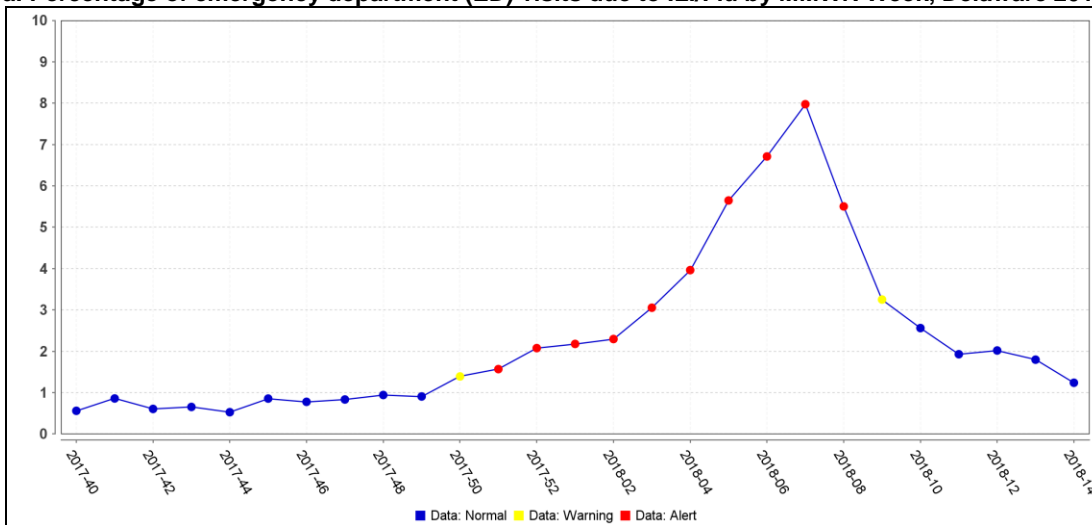
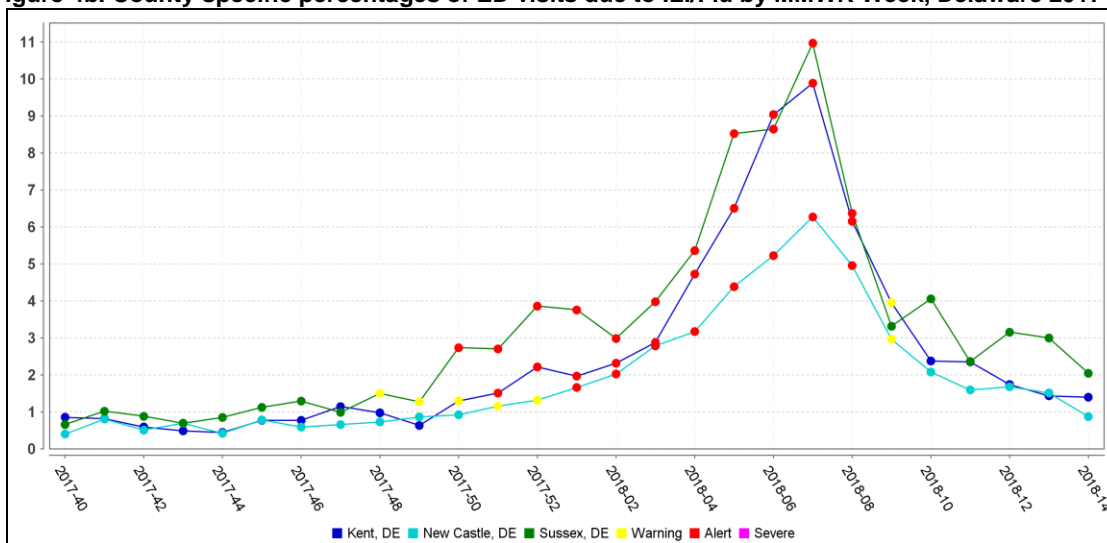


Figure 4b. County-specific percentages of ED visits due to ILI/Flu by MMWR Week, Delaware 2017-18



## **Summary of International Influenza Activity**

Influenza activity appeared to decrease 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

Decreased influenza virus activity was reported in North America overall. In Canada, influenza indicators decreased or remained similar to previous week. Influenza B continued to be the most frequently detected virus. In the United States, influenza activity and illness indicators continued to decrease. However, hospitalization rates due to influenza remained high, especially in adults aged 65 years and older, and was reported to be higher than the previous eight influenza seasons. All seasonal influenza subtypes were detected. In Mexico, influenza activity was reported as decreased, with detection of all seasonal influenza subtypes.

In the Caribbean, influenza activity decreased slightly, with all seasonal influenza subtypes continuing to be detected in the region. In Central American countries, influenza activity remained low in general. A slight increase in influenza detections was reported in Guatemala and Honduras. In the tropical countries of South America, influenza activities varied by countries. Influenza activity decreased in Colombia, Ecuador and Peru, and increased detections of influenza A(H1N1)pdm09 were reported in Venezuela.

In the European region, influenza viruses continued to circulate widely. All seasonal influenza subtypes were present, with influenza B as the predominant virus. In Eastern Europe, influenza activity continued to increase with influenza A virus most frequently detected followed by influenza B virus. In particular, influenza activity was still increasing in the Russian Federation, with all seasonal influenza subtypes co-circulating. In Northern and South West Europe, influenza A and B virus detections continued to decrease in general with the exceptions of Denmark and Germany where influenza activity remained high.

In Northern Africa, influenza activity decreased in most of the countries, with the exception of Egypt where detections of influenza A(H1N1)pdm09 and B viruses remained high. In Western Africa, influenza activity remained low across the region. In Middle Africa, there were no updates available for this reporting period. In Eastern Africa, influenza activity decreased in Madagascar 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. In Eastern 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. 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.

**Reference:** World Health Organization (WHO), 2017. Influenza Update number 312 (4/2/18). Retrieved April 6, 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.