



Delaware Weekly Influenza Report

MMWR Week 13 (March 25 - 31, 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 13 (March 25 - 31, 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 remains elevated. **Widespread influenza activity** was reported by 11 states (California, Connecticut, Delaware, Maryland, Massachusetts, New Hampshire, New York, Ohio, Rhode Island, Virginia and Wisconsin). **Regional influenza activity** was reported by Guam, Puerto Rico and 26 states (Alaska, Arizona, Colorado, Florida, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Maine, Michigan, Missouri, Montana, Nebraska, New Jersey, North Carolina, North Dakota, Oklahoma, Pennsylvania, South Carolina, South Dakota, Utah, Vermont, Washington and Wyoming). **Local influenza activity** was reported by the District of Columbia and 10 states (Arkansas, Georgia, Hawaii, Louisiana, Minnesota, Nevada, New Mexico, Oregon, Texas and West Virginia). **Sporadic influenza activity** was reported by the U.S. Virgin Islands and three states (Alabama, Tennessee 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 13, there were 216 laboratory-confirmed cases of influenza reported among Delaware residents, bringing the total to 8,182 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 1.0% compared with Delaware's 2017-2018 baseline of 2.0%. Nationally, ILI is 2.4% compared with the 2017-2018 national baseline of 2.2%.

Level of Influenza Activity in Delaware, MMWR Week 13:

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

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 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 positive¹ cases reported² statewide and county by subtype (A) or lineage (B)³, 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	YTD	YTD Total	YTD County %
STATEWIDE	A / 2009 H1N1	17	4	15	16	32	45	37	43	17	18	6	3	1	1	255	8,182	
	A / 2012 H3N2	60	23	26	26	42	39	37	53	34	12	9	6	7	0	374		
	A / no subtype	223	109	238	246	446	682	824	886	469	190	87	63	49	39	4,551		
	Co-infection	0	1	1	5	5	6	8	3	4	1	1	0	0	0	35		
	B / Yamagata	19	8	6	6	4	9	31	30	24	11	11	12	10	3	184		
	B / Victoria	1	1	0	2	5	1	11	12	12	17	8	6	3	3	82		
	B / no lineage	71	45	73	82	137	226	327	550	349	180	177	133	181	170	2,701		
New Castle County	A / 2009 H1N1	8	1	4	6	7	18	14	20	6	12	2	2	1	0	101	3,058	37.4%
	A / 2012 H3N2	53	19	19	20	26	25	25	41	22	8	6	2	3	0	269		
	A / no subtype	45	39	109	98	137	182	280	270	144	54	27	18	17	6	1,426		
	Co-infection	0	1	0	3	2	0	2	1	2	0	0	0	0	0	11		
	B / Yamagata	14	8	5	6	3	8	25	22	17	10	8	7	5	1	139		
	B / Victoria	1	1	0	2	5	1	11	9	9	15	6	4	2	2	68		
	B / no lineage	36	16	28	43	56	72	133	207	148	81	70	49	54	51	1,044		
Kent County	A / 2009 H1N1	6	3	8	6	18	17	20	17	5	4	3	0	0	1	108	2,034	24.9%
	A / 2012 H3N2	3	2	0	2	7	8	6	7	9	1	0	0	1	0	46		
	A / no subtype	64	26	48	65	154	212	247	257	116	38	20	13	9	8	1,277		
	Co-infection	0	0	0	0	1	0	1	2	1	0	0	0	0	0	5		
	B / Yamagata	0	0	0	0	0	0	3	5	3	0	1	2	3	1	18		
	B / Victoria	0	0	0	0	0	0	0	0	2	0	0	0	0	1	3		
	B / no lineage	6	10	12	21	19	54	63	140	76	35	32	24	43	42	577		
Sussex County	A / 2009 H1N1	3	0	3	4	7	10	3	6	6	2	1	1	0	0	46	3,090	37.8%
	A / 2012 H3N2	4	2	7	4	9	6	6	5	3	3	3	4	3	0	59		
	A / no subtype	114	44	81	83	155	288	297	359	209	98	40	32	23	25	1,848		
	Co-infection	0	0	1	2	2	6	5	0	1	1	1	0	0	0	19		
	B / Yamagata	5	0	1	0	1	1	3	3	4	1	2	3	2	1	27		
	B / Victoria	0	0	0	0	0	0	0	3	1	2	2	2	1	0	11		
	B / no lineage	29	19	33	18	62	100	131	203	125	64	75	60	84	77	1,080		

Table 1b. Influenza positive¹ cases reported² statewide and county by age group, Delaware 2017-18

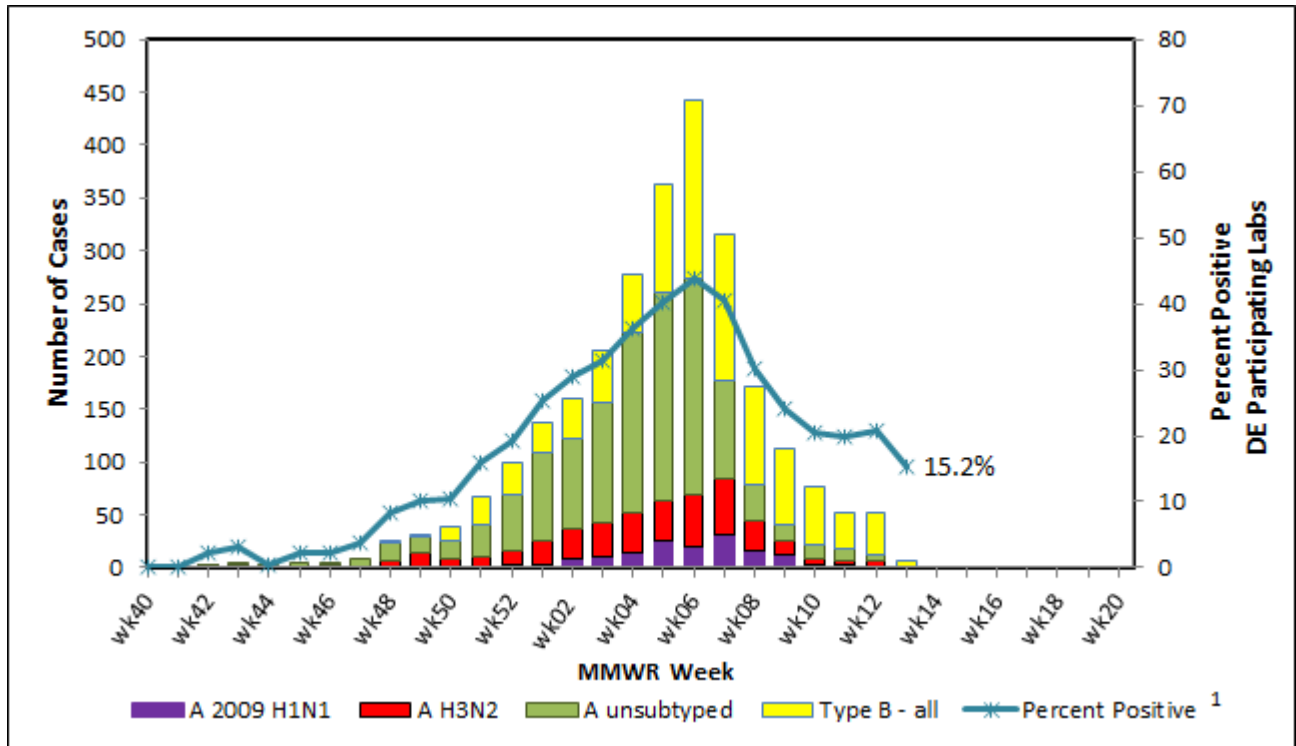
Confirmed Flu Cases by Age Group		Wk 40-52	Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10	Wk 11	Wk 12	Wk 13	YTD	YTD Total	YTD County %
STATEWIDE	0-4 years	39	19	47	58	122	181	258	300	191	87	61	40	54	45	1,502	8,182	
	5-24 years	76	32	81	103	212	390	492	619	334	147	136	84	77	58	2,841		
	25-49 years	75	38	68	83	135	167	222	251	127	67	30	26	32	33	1,354		
	50-64 years	79	36	56	62	96	116	127	164	105	45	32	27	29	35	1,009		
	65+ years	122	66	107	77	106	154	176	243	152	83	40	46	59	45	1,476		
New Castle County	0-4 years	17	8	13	25	36	49	117	120	96	44	27	17	29	21	619	3,058	37.4%
	5-24 years	32	15	37	48	70	99	162	204	114	59	45	29	21	12	947		
	25-49 years	36	12	33	37	51	52	90	95	38	21	9	12	8	9	503		
	50-64 years	30	18	33	27	35	52	59	56	37	18	15	8	9	9	406		
	65+ years	42	32	49	41	44	54	62	95	63	38	23	16	15	9	583		
Kent County	0-4 years	6	4	14	15	48	64	71	85	39	22	12	9	5	8	402	2,034	24.9%
	5-24 years	18	9	15	29	64	116	145	177	81	20	24	13	21	15	747		
	25-49 years	10	12	14	20	34	51	59	77	39	16	10	4	9	9	364		
	50-64 years	17	7	10	17	25	24	26	40	28	7	7	6	6	8	228		
	65+ years	28	9	15	13	28	36	39	49	25	13	3	7	15	13	293		
Sussex County	0-4 years	16	7	20	18	38	68	70	95	56	21	22	14	20	16	481	3,090	37.8%
	5-24 years	26	8	29	26	78	175	185	238	139	68	67	42	35	31	1,147		
	25-49 years	29	14	21	26	50	64	73	79	50	30	11	10	15	15	487		
	50-64 years	32	11	13	18	36	40	42	68	40	20	10	13	14	18	375		
	65+ years	52	25	43	23	34	64	75	99	64	32	14	23	29	23	600		

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, Delaware 2017-18*



¹ 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	YTD	YTD Total	YTD County %
STATEWIDE	0-4 years	3	1	0	1	8	8	17	5	7	4	3	2	2	3	64	1,148	
	5-24 years	4	1	1	2	4	6	7	7	7	3	6	3	2	0	53		
	25-49 years	6	2	10	4	6	8	20	11	9	7	6	3	1	0	93		
	50-64 years	24	11	16	10	21	19	27	35	24	14	11	4	7	3	226		
	65+ years	57	37	59	40	56	74	85	100	66	45	19	27	25	22	712		
New Castle County	0-4 years	2	1	0	1	7	4	15	4	6	2	3	2	1	1	49	640	55.7%
	5-24 years	3	1	1	2	2	6	5	5	4	2	6	3	1	0	41		
	25-49 years	6	0	6	3	5	3	13	7	2	1	2	3	1	0	52		
	50-64 years	14	8	13	8	8	13	17	16	11	11	7	3	3	2	134		
	65+ years	29	23	32	23	23	35	44	48	35	28	15	13	11	5	364		
Kent County	0-4 years	0	0	0	0	1	4	0	1	0	2	0	0	0	0	8	241	21.0%
	5-24 years	0	0	0	0	1	0	1	2	2	1	0	0	0	0	7		
	25-49 years	0	2	1	0	0	4	5	2	6	4	3	0	0	0	27		
	50-64 years	4	2	3	1	8	3	3	10	5	1	2	0	3	0	45		
	65+ years	14	5	10	4	18	22	21	23	11	9	0	4	6	7	154		
Sussex County	0-4 years	1	0	0	0	0	0	2	0	1	0	0	0	1	2	7	267	23.3%
	5-24 years	1	0	0	0	1	0	1	0	1	0	0	0	1	0	5		
	25-49 years	0	0	3	1	1	1	2	2	1	2	1	0	0	0	14		
	50-64 years	6	1	0	1	5	3	7	9	8	2	2	1	1	1	47		
	65+ years	14	9	17	13	15	17	20	29	20	8	4	10	8	10	194		

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

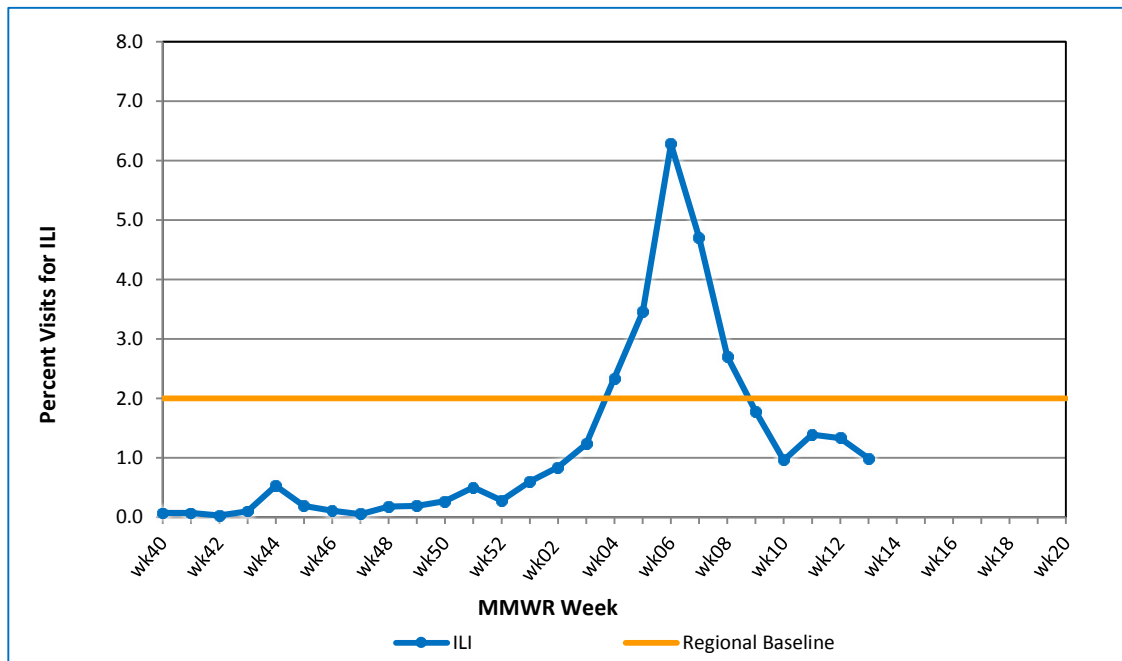
Table 4. Annual number of influenza cases reported by flu season, Delaware 2004-05 through 2017-18

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
2017 – 2018 (YTD)	8,182

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.

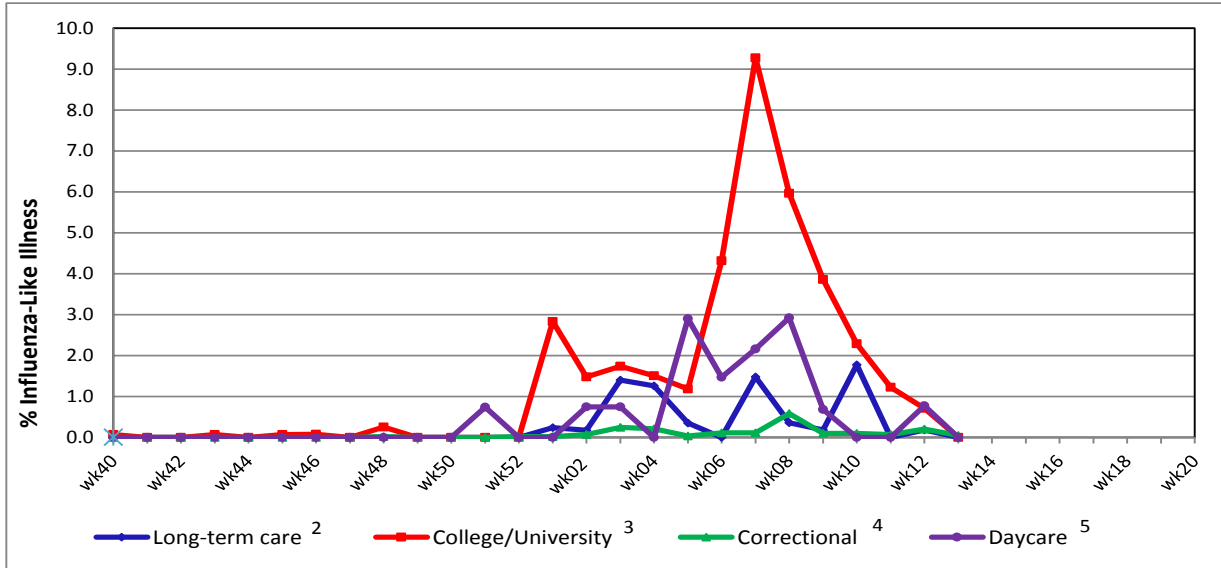
Figure 2. Percentage of visits for influenza-like illness reported by sentinel providers¹ participating in the U.S. Outpatient ILI Surveillance Network (ILINet), Delaware 2017-18



¹ Eleven of 13 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 influenza surveillance ILI reporting partners¹, Delaware 2017-18



¹ ILINet reporting partners include long-term care facilities, colleges / universities, correctional facilities and daycare facilities.
² % ILI= percentage of residents with ILI symptoms: Seven long-term care facilities reported.
³ % ILI= percentage of student visits for ILI; One university 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 2017-18

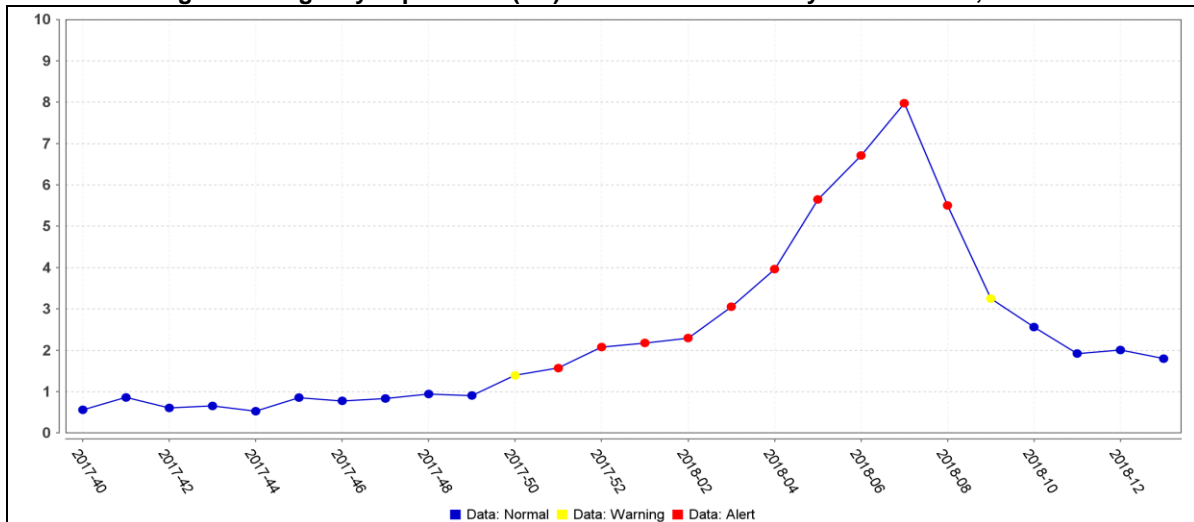
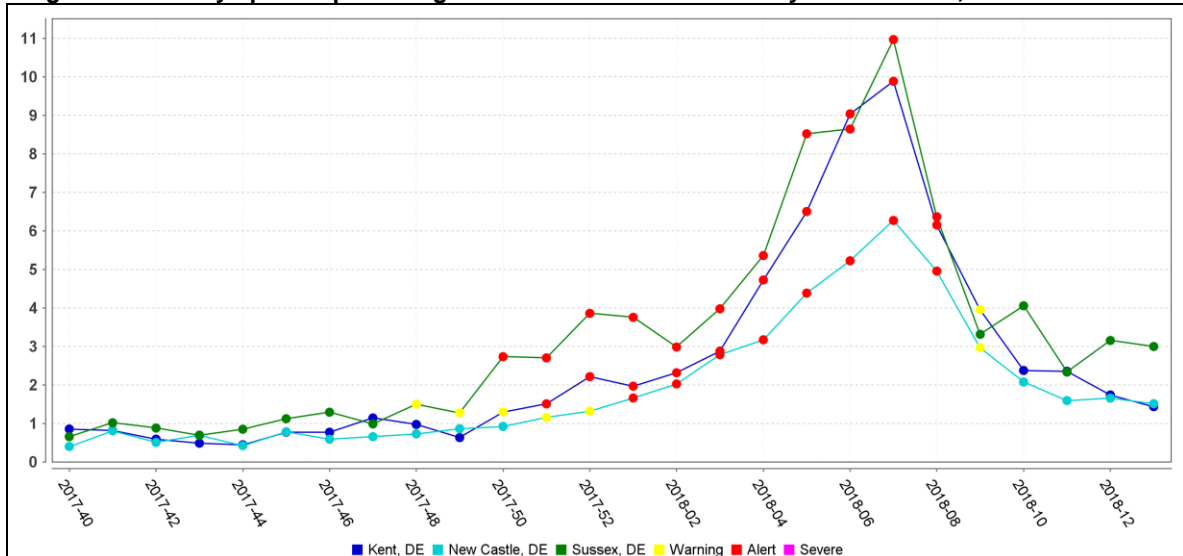


Figure 4b. County-specific percentages of ED visits due to ILI/Flu by MMWR Week, Delaware 2017-18



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/. Reports are updated biweekly.

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 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.