



Delaware Weekly Influenza Report

MMWR Week 18 (April 29 – May 5, 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 18 (April 29 – May 5, 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 three states (Connecticut, Massachusetts and New York). **Regional influenza activity** was reported by Guam, Puerto Rico and four states (Kentucky, Maine, New Jersey and Utah). **Local influenza activity** was reported by 16 states (Alaska, Arizona, Delaware, Maryland, Michigan, Minnesota, New Hampshire, Ohio, Oklahoma, Pennsylvania, South Carolina, Vermont, Virginia, Washington, West Virginia, and Wisconsin). **Sporadic influenza activity** was reported by the District of Columbia and 25 states (Arkansas, California, Colorado, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Louisiana, Missouri, Montana, Nebraska, Nevada, New Mexico, North Carolina, North Dakota, Oregon, Rhode Island, South Dakota, Tennessee, Texas, and Wyoming). **No influenza activity** was reported by the U.S. Virgin Islands, 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 18, there were 24 laboratory-confirmed cases of influenza reported among Delaware residents, bringing the total to 9,024 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 0.25% compared with Delaware's 2017-2018 baseline of 2.0%. Nationally, ILI is 1.5%, below the 2017-2018 national baseline of 2.2%.

Level of Influenza Activity in Delaware, MMWR Week 18:

Local	Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in a single region of 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.

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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	Wk 14	Wk 15	Wk 16	Wk 17	Wk 18	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	2	0	0	258	9,024	
	A / 2012 H3N2	60	24	26	26	42	39	38	53	34	14	9	6	8	3	1	3	0	1	1	388		
	A / no subtype	231	117	242	256	461	720	869	945	495	208	101	77	56	36	16	19	10	4	6	4,869		
	Co-infection	0	1	1	5	5	6	8	3	4	1	1	0	0	0	0	0	0	0	0	35		
	B / Yamagata	19	8	6	6	4	9	31	30	24	11	11	12	10	7	3	1	3	1	1	197		
	B / Victoria	1	1	0	2	5	1	11	12	13	17	9	6	3	5	2	3	3	2	0	96		
	B / no lineage	81	51	74	84	152	235	352	592	363	197	194	166	196	166	102	78	47	35	16	3,181		
New Castle County	A / 2009 H1N1	8	1	4	6	7	18	14	20	6	12	2	2	1	0	0	0	1	0	0	102	3,164	35.1%
	A / 2012 H3N2	53	19	19	20	26	25	25	41	22	9	6	2	3	1	1	1	0	0	1	274		
	A / no subtype	45	39	109	98	137	183	279	270	144	54	27	17	19	5	8	1	3	2	3	1,443		
	Co-infection	0	1	0	3	2	0	2	1	2	0	0	0	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	1	1	0	144		
	B / Victoria	1	1	0	2	5	1	11	9	10	15	7	4	2	4	1	1	2	0	0	76		
	B / no lineage	36	16	28	43	56	72	134	208	148	81	70	51	54	47	35	19	6	8	2	1,114		
Kent County	A / 2009 H1N1	6	3	8	6	18	17	20	17	5	4	3	0	0	2	0	0	0	0	0	109	2,123	23.5%
	A / 2012 H3N2	3	2	0	2	7	8	6	7	9	1	0	0	1	1	0	0	0	1	0	48		
	A / no subtype	64	26	48	65	154	213	247	258	116	38	20	13	9	7	0	5	3	0	2	1,288		
	Co-infection	0	0	0	0	1	0	1	2	1	0	0	0	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	1	0	0	0	21		
	B / Victoria	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	1	1	0	0	5		
	B / no lineage	6	10	12	21	20	54	64	140	76	35	32	24	43	42	26	22	15	1	4	647		
Sussex County	A / 2009 H1N1	3	0	3	4	7	10	3	6	6	2	1	1	0	0	0	0	1	0	0	47	3,737	41.4%
	A / 2012 H3N2	4	3	7	4	9	6	7	5	3	4	3	4	4	1	0	2	0	0	0	66		
	A / no subtype	122	52	85	93	170	324	343	417	235	116	54	47	28	24	8	13	4	2	1	2,138		
	Co-infection	0	0	1	2	2	6	5	0	1	1	1	0	0	0	0	0	0	0	0	19		
	B / Yamagata	5	0	1	0	1	1	3	3	4	1	2	3	2	2	1	0	2	0	1	32		
	B / Victoria	0	0	0	0	0	0	0	3	1	2	2	2	1	0	1	1	0	2	0	15		
	B / no lineage	39	25	34	20	76	109	154	244	139	81	92	91	99	77	41	37	26	26	10	1,420		

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

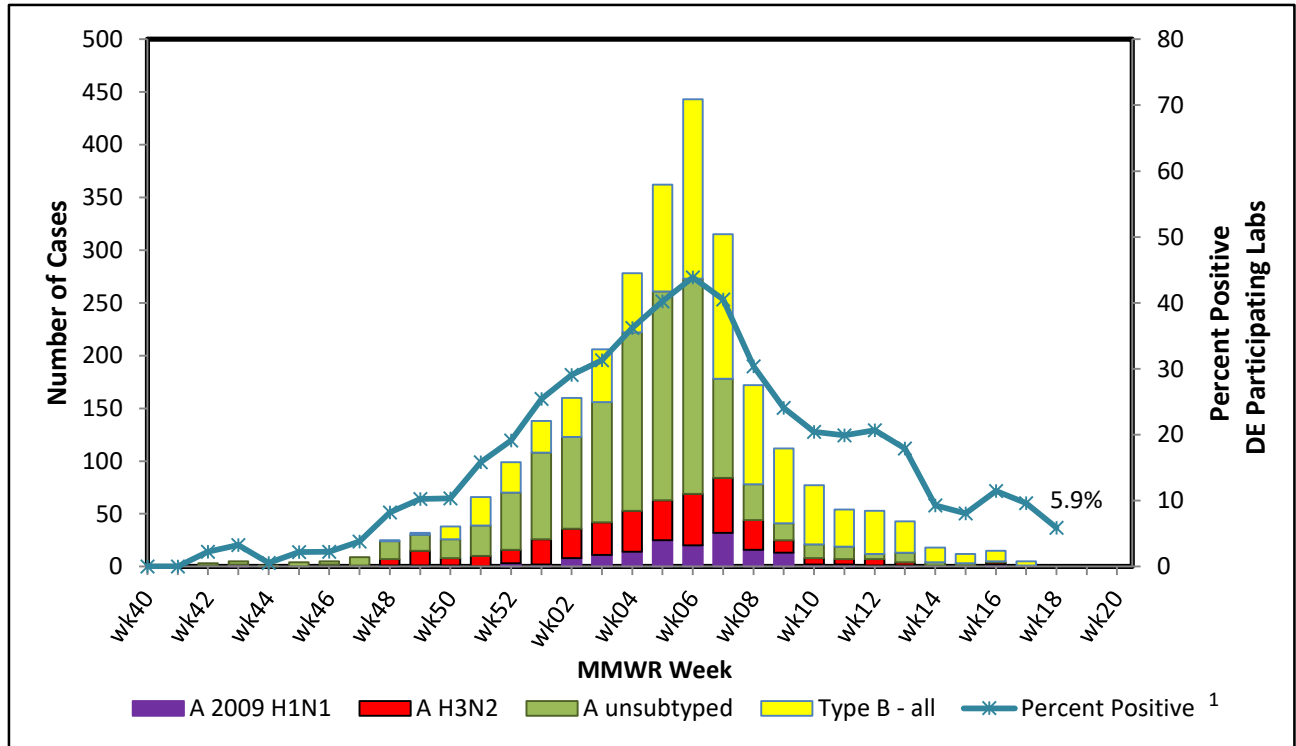
Confirmed Flu Cases by Age Group		Wk 40-52	Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10	Wk 11	Wk 12	Wk 13	Wk 14	Wk 15	Wk 16	Wk 17	Wk 18	YTD	YTD Total	YTD County %
STATEWIDE	0-4 years	41	21	48	62	127	194	272	324	196	95	68	50	56	46	28	23	11	10	5	1,677	9,024	
	5-24 years	81	36	83	105	223	409	518	663	349	159	149	108	88	59	29	21	18	18	7	3,123		
	25-49 years	77	38	69	85	144	173	233	263	136	73	38	31	35	34	11	13	14	4	3	1,474		
	50-64 years	83	43	57	62	98	123	136	174	107	48	34	28	31	36	25	21	8	3	5	1,122		
	65+ years	127	68	107	81	109	156	187	254	162	91	42	53	64	44	31	26	14	8	4	1,628		
New Castle County	0-4 years	17	8	13	25	36	49	117	120	96	44	27	17	29	20	12	9	3	3	2	647	3,164	35.1%
	5-24 years	32	15	37	48	70	99	162	204	114	59	46	29	22	13	11	3	5	5	0	974		
	25-49 years	36	12	33	37	51	52	90	96	38	22	9	12	8	10	4	2	3	0	0	515		
	50-64 years	30	18	33	27	35	53	59	56	38	18	15	8	9	9	9	6	0	1	3	427		
	65+ years	42	32	49	41	44	54	62	95	63	38	23	17	16	8	10	2	2	2	1	601		
Kent County	0-4 years	6	4	14	15	48	64	71	85	39	22	12	9	5	9	5	4	1	1	0	414	2,123	23.5%
	5-24 years	18	9	15	29	64	117	145	178	81	20	24	13	21	15	7	6	6	1	1	770		
	25-49 years	10	12	14	20	35	51	60	77	39	16	10	4	9	9	3	5	9	0	2	385		
	50-64 years	17	7	10	17	25	24	26	40	28	7	7	6	6	9	6	4	1	0	2	242		
	65+ years	28	9	15	13	28	36	39	49	25	13	3	7	15	13	6	10	2	0	1	312		
Sussex County	0-4 years	18	9	21	22	43	81	84	119	61	29	29	24	22	17	11	10	7	6	3	616	3,737	41.4%
	5-24 years	31	12	31	28	89	193	211	281	154	80	79	66	45	31	11	12	7	12	6	1,379		
	25-49 years	31	14	22	28	58	70	83	90	59	35	19	15	18	15	4	6	2	4	1	574		
	50-64 years	36	18	14	18	38	46	51	78	41	23	12	14	16	18	10	11	7	2	0	453		
	65+ years	57	27	43	27	37	66	86	110	74	40	16	29	33	23	15	14	10	6	2	715		

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	Wk 14	Wk 15	Wk 16	Wk 17	Wk 18	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	0	0	1	69	1,233	
	5-24 years	4	1	1	2	4	6	7	7	9	3	6	3	2	0	1	1	0	0	0	57		
	25-49 years	6	2	10	4	7	8	20	11	10	7	6	3	1	0	2	0	2	0	0	99		
	50-64 years	24	11	16	10	21	19	28	36	24	14	12	4	7	4	8	5	1	0	1	245		
	65+ years	57	38	59	41	56	75	89	102	68	46	20	27	27	21	16	8	8	5	0	763		
New Castle County	0-4 years	2	1	0	1	7	4	15	4	6	2	3	2	1	1	2	2	0	0	1	54	668	54.2%
	5-24 years	3	1	1	2	2	6	5	5	4	2	6	3	1	0	1	1	0	0	0	43		
	25-49 years	6	0	6	3	5	3	13	7	2	1	2	3	1	0	1	0	2	0	0	55		
	50-64 years	14	8	13	8	8	13	17	16	11	11	7	3	3	3	3	2	0	0	1	141		
	65+ years	29	23	32	23	23	35	44	48	35	28	15	13	11	4	7	2	2	1	0	375		
Kent County	0-4 years	0	0	0	0	1	4	0	1	0	2	0	0	0	0	0	0	0	0	0	8	254	20.6%
	5-24 years	0	0	0	0	1	0	1	2	2	1	0	0	0	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	0	0	0	27		
	50-64 years	4	2	3	1	8	3	3	10	5	1	2	0	3	0	2	1	0	0	0	48		
	65+ years	14	5	10	4	18	22	21	23	11	9	0	4	6	7	5	3	2	0	0	164		
Sussex County	0-4 years	1	0	0	0	0	0	2	0	1	0	0	0	1	2	0	0	0	0	0	7	311	25.2%
	5-24 years	1	0	0	0	1	0	1	0	3	0	0	0	1	0	0	0	0	0	0	7		
	25-49 years	0	0	3	1	2	1	2	2	2	2	1	0	0	0	1	0	0	0	0	17		
	50-64 years	6	1	0	1	5	3	8	10	8	2	3	1	1	1	3	2	1	0	0	56		
	65+ years	14	10	17	14	15	18	24	31	22	9	5	10	10	10	4	3	4	4	0	224		

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	Wk 16	Wk 17	Wk 18	YTD
	1	0	1	1	0	3	7	6	6	4	0	1	1	2	0	0	1	0	0	35

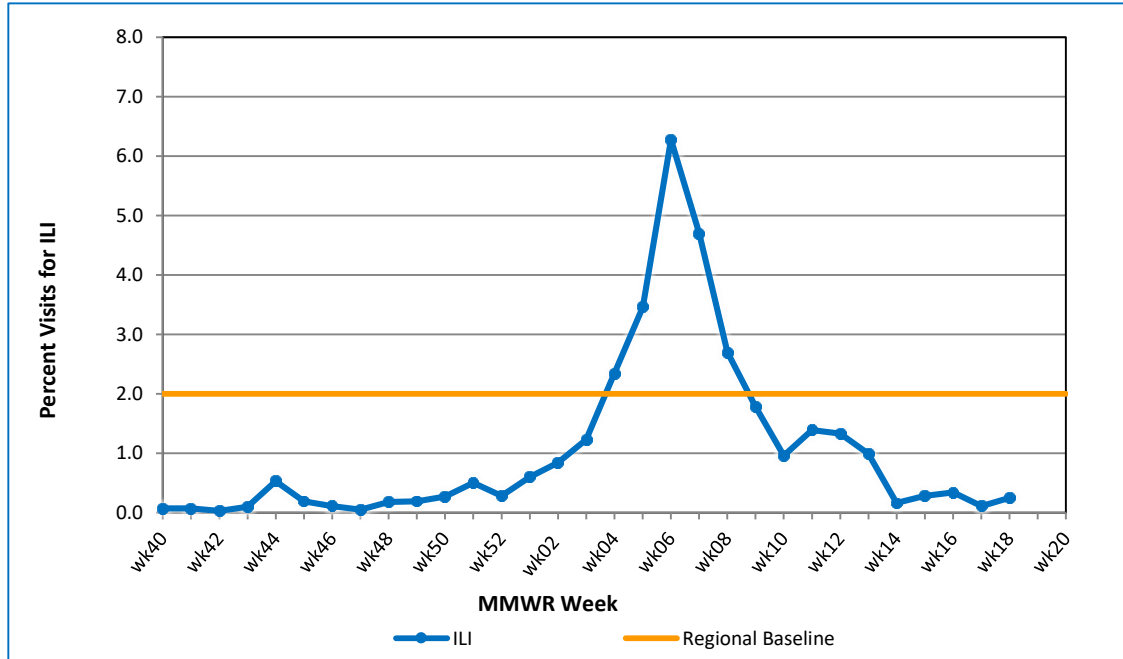
Table 4. Annual number of influenza cases reported by flu season, Delaware 2004-05 through 2017-18

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	2,250
2016 – 2017	4,590
2017 – 2018 (YTD)	9,024

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.

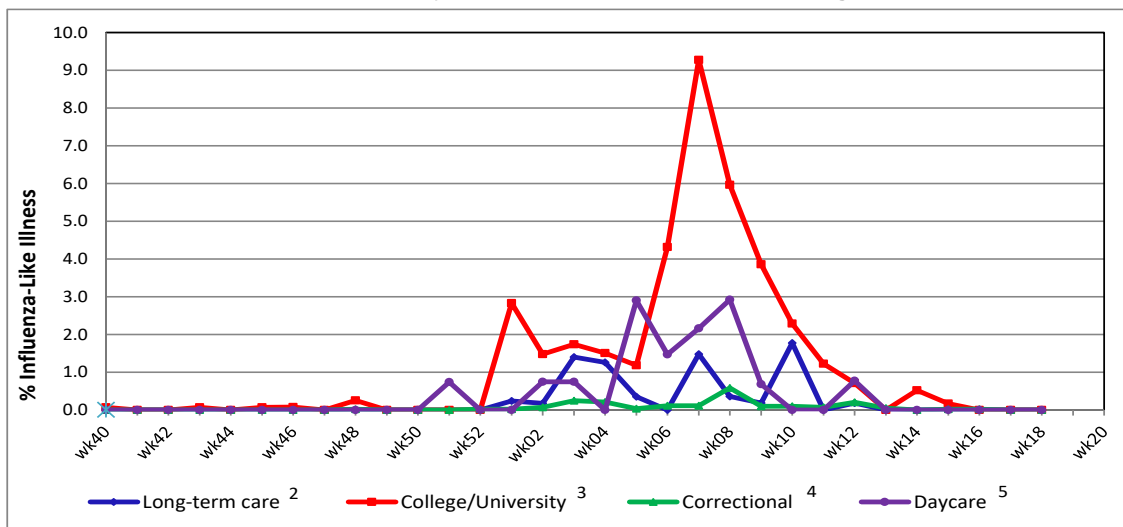
Figure 2. Percentage of visits for influenza-like illness reported by sentinel providers¹ participating in the U.S. Outpatient ILI Surveillance Network (ILINet), Delaware 2017-18



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: Five long-term care facilities reported.

³ % ILI= percentage of student visits for ILI; Two 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 2017-18

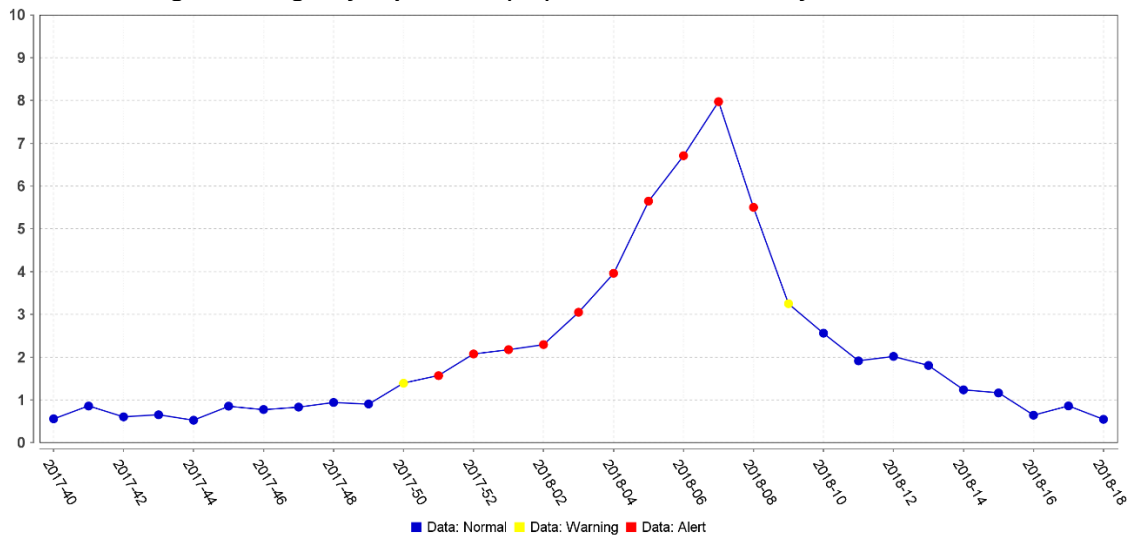
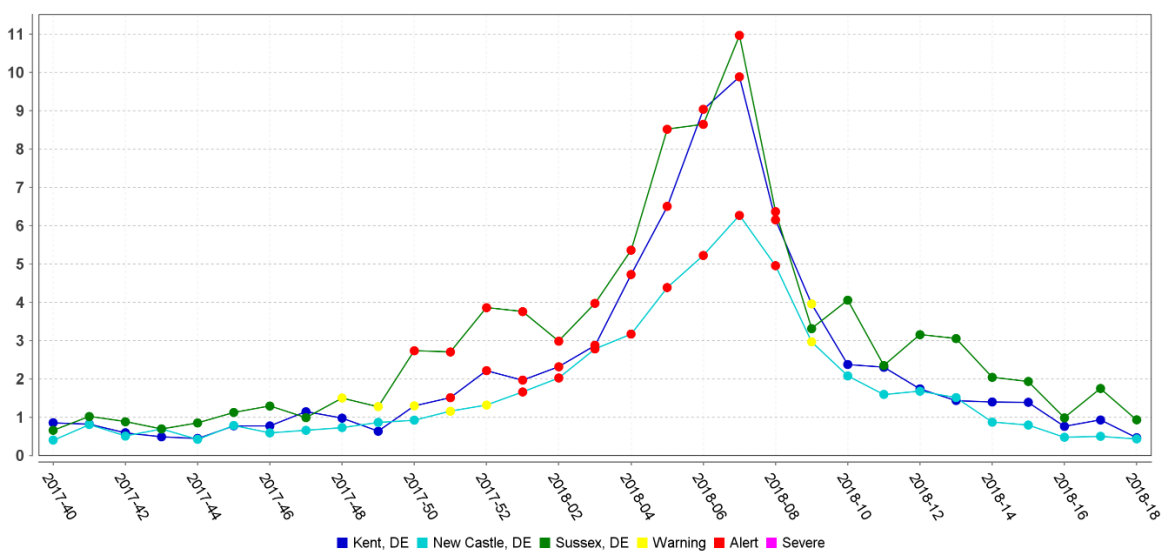


Figure 4b. County-specific percentages of ED visits due to ILI/Flu by MMWR Week, Delaware 2017-18



Summary of International Influenza Activity

Influenza activity returned to inter-seasonal levels in most of the countries in the temperate zone of the northern hemisphere except for Eastern Europe. In the temperate zone of the southern hemisphere, influenza activity remained below the seasonal thresholds. Worldwide, seasonal influenza subtypes A and B accounted for approximately the same proportion of influenza detections.

In North America, influenza activity began a downward slope after peaked in recent weeks as expected in Canada, Mexico and the United States. Influenza A(H3N2) and influenza B co-circulated in the sub-region. In the U.S. and Canada, ILI activity decreased, while in Mexico SARI/ILI activity slightly decreased as expected.

In the Caribbean Influenza virus activity increased and low RSV activity was reported throughout most of the sub-region. Influenza activity continued elevated in French Territories, Jamaica and Puerto Rico in recent weeks with influenza A(H1N1), A(H3N2) and B co-circulating. In Central America, epidemiological indicators remained at moderate levels and influenza and RSV circulation were reported to decrease throughout the subregion. In Guatemala and Honduras, influenza activity increased with co-circulation of influenza A(H1N1)pdm09, A(H3N2) and B.

In the European region, influenza viruses continued to circulate widely, but most of the countries reported activities from low to medium intensity. Across the region both influenza A and B viruses circulated. Influenza A viruses predominated during this reporting period however over the course of the influenza season influenza B virus was most frequently detected, including among severe cases. In Eastern Europe, influenza activity decreased overall, but remained at high level in the Russian Federation with detections of influenza A and B viruses.

In Northern Africa, influenza activity decreased across most of the region, except for Egypt where detections remained high. Across reporting countries in Middle and Western Africa, influenza activity remained low. In Eastern Africa, influenza activity also remained low across most reporting countries, however moderate activity was detected in the United Republic of Tanzania.

In Western Asia, influenza activity appeared to decrease across the region, with influenza A (H1N1)pdm09 predominating. In Central Asia, influenza activity decreased across the region. In Eastern Asia, influenza activity decreased across the region, with most countries reaching inter-seasonal levels. In Mongolia, influenza activity remained slightly elevated, with influenza A(H1N1)pdm09 predominantly detected. In Southern Asia, countries reporting in this period documented influenza activity as low in general. In Bhutan, increased influenza activity was reported in recent weeks. In Southeast Asia, influenza activity remained low across reporting countries.

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 314 (4/30/18). Retrieved May 1, 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.