



Delaware Weekly Influenza Report

MMWR Week 20 (May 13 - 19, 2018)

Delaware Division of Public Health

Note: This is the final Delaware Weekly Influenza Report for the 2017-2018 season.

The 1st report of the 2018-2019 season, MMWR Week 40 (September 30–October 6, 2018), will be October 12, 2018.

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 20 (May 13 - 19, 2018) influenza activity continued to decrease 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 Massachusetts. **Regional influenza activity** was reported by Guam, Puerto Rico and Utah. Local influenza activity was reported by seven states (Arizona, Connecticut, Maryland, New Jersey, New York, Ohio and Wisconsin). **Sporadic influenza activity** was reported by the District of Columbia, the U.S. Virgin Islands and 37 states (Alaska, Arkansas, California, Colorado, Delaware, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Michigan, Minnesota, Missouri, Montana, Nebraska, Nevada, New Mexico, North Carolina, North Dakota, Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Vermont, Virginia, Washington, West Virginia, and Wyoming). **No influenza activity** was reported by four states (Alabama, Mississippi, New Hampshire and Rhode Island). Both national and state data are provisional and subject to change as additional reports are received.

Delaware Influenza Surveillance 2017-2018:

During MMWR Week 20, there were three laboratory-confirmed cases of influenza reported among Delaware residents, bringing the total to 9,025 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 0.04% compared with Delaware's 2017-2018 baseline of 2.0%. Nationally, ILI is 1.2%, below the 2017-2018 national baseline of 2.2%.

Level of Influenza Activity in Delaware, MMWR Week 20:

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.
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.	
No Activity: No laboratory-confirmed cases of influenza and no reported increase in the number of cases of ILI.	
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.	
Local: Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in a single region of the state.	
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	
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.	

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	Wk 19	Wk 20	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	1	1	260	9,025	
	A / 2012 H3N2	60	24	26	26	42	39	38	53	33	14	9	6	8	3	1	3	1	1	1	0	0	389		
	A / no subtype	230	116	242	255	460	719	869	944	495	208	101	76	56	36	15	19	10	4	6	2	1	4,863		
	Co-infection	0	1	1	5	5	6	8	3	4	1	1	0	0	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	0	0	197		
	B / Victoria	1	1	0	2	5	1	11	12	13	17	9	6	3	5	2	3	3	2	0	1	0	97		
	B / no lineage	80	51	73	83	151	235	350	592	363	198	194	166	194	165	102	78	48	36	18	6	1	3,184		
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	1	1	104	3,163	35.1%
	A / 2012 H3N2	53	19	19	20	26	25	25	41	21	9	6	2	3	1	1	1	0	0	1	0	0	274		
	A / no subtype	44	39	109	97	136	182	279	269	144	54	27	17	19	5	8	1	3	2	3	1	1	1,439		
	Co-infection	0	1	0	3	2	0	2	1	2	0	0	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	0	0	144		
	B / Victoria	1	1	0	2	5	1	11	9	10	15	7	4	2	4	1	1	2	0	0	1	0	77		
	B / no lineage	36	16	28	42	55	72	133	208	148	81	70	51	54	46	35	19	6	9	2	3	0	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	0	0	109	2,130	23.6%
	A / 2012 H3N2	3	2	0	2	7	8	6	7	9	1	0	0	1	1	0	0	1	1	0	0	0	49		
	A / no subtype	64	26	48	65	154	213	247	258	116	38	20	13	9	7	0	5	3	0	2	1	0	1,289		
	Co-infection	0	0	0	0	1	0	1	2	1	0	0	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	0	0	21		
	B / Victoria	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	1	1	0	0	0	0	5		
	B / no lineage	6	10	12	21	20	54	64	140	76	36	33	24	43	42	26	22	16	1	5	1	0	652		
Sussex County	A / 2009 H1N1	3	0	3	4	7	10	3	6	6	2	1	1	0	0	0	0	1	0	0	0	0	47	3,732	41.4%
	A / 2012 H3N2	4	3	7	4	9	6	7	5	3	4	3	4	4	1	0	2	0	0	0	0	0	66		
	A / no subtype	122	51	85	93	170	324	343	417	235	116	54	46	28	24	7	13	4	2	1	0	0	2,135		
	Co-infection	0	0	1	2	2	6	5	0	1	1	1	0	0	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	0	0	32		
	B / Victoria	0	0	0	0	0	0	0	3	1	2	2	2	1	0	1	1	0	2	0	0	0	15		
	B / no lineage	38	25	33	20	76	109	153	244	139	81	91	91	97	77	41	37	26	26	11	2	1	1,418		

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

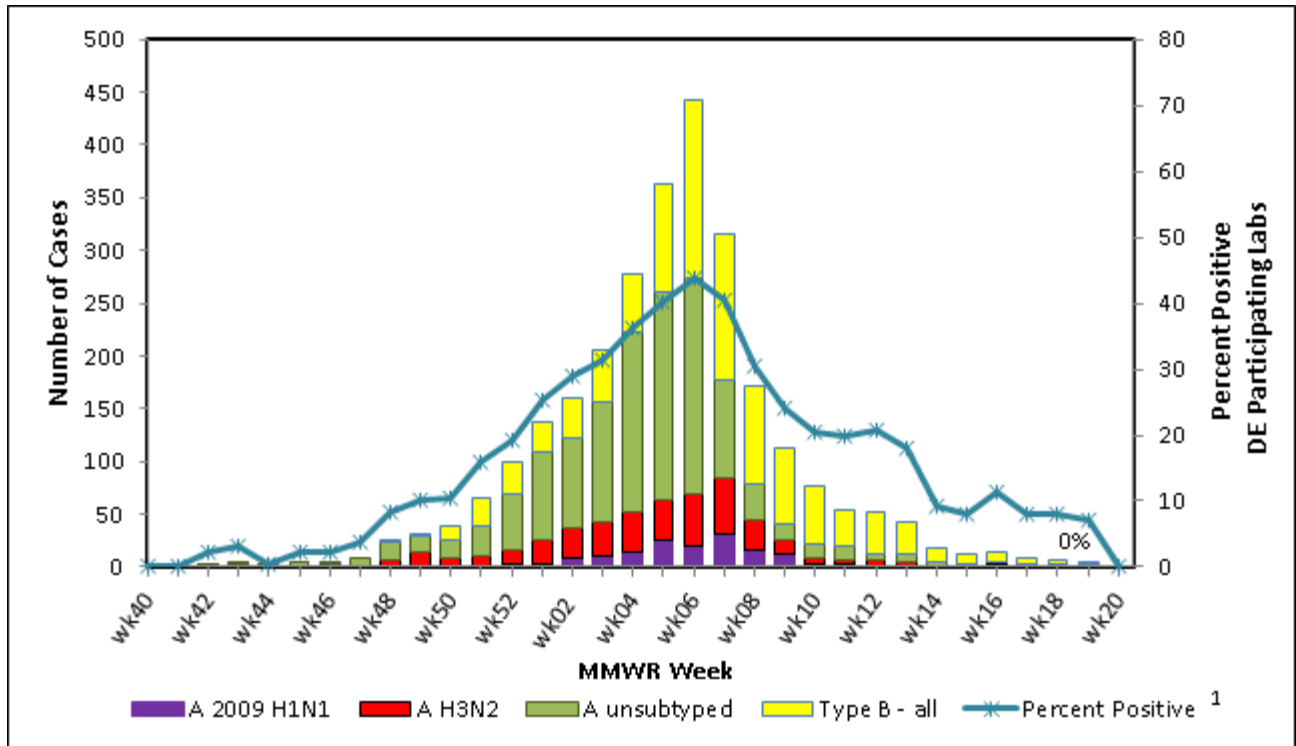
Confirmed Flu Cases by Age Group		Wk 40-52	Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10	Wk 11	Wk 12	Wk 13	Wk 14	Wk 15	Wk 16	Wk 17	Wk 18	Wk 19	Wk 20	YTD	YTD Total	YTD County %
STATEWIDE	0-4 years	41	21	48	62	127	194	272	324	195	95	67	50	56	46	27	23	11	10	5	2	0	1,676	9,025	
	5-24 years	81	36	82	105	221	408	517	663	349	159	150	107	86	58	29	21	19	18	7	0	1	3,117		
	25-49 years	75	37	69	85	144	173	232	262	136	74	38	31	35	34	11	13	14	4	5	4	2	1,478		
	50-64 years	83	43	57	61	98	123	136	174	108	48	34	28	31	36	25	21	8	3	5	4	0	1,126		
	65+ years	127	68	107	80	109	156	187	254	161	91	42	53	64	44	31	26	15	9	4	0	0	1,628		
New Castle County	0-4 years	17	8	13	25	36	49	117	120	95	44	27	17	29	20	12	9	3	3	2	1	0	647	3,163	35.1%
	5-24 years	32	15	37	48	68	98	162	204	114	59	46	29	22	12	11	3	5	5	0	0	1	971		
	25-49 years	35	12	33	37	51	52	89	95	38	22	9	12	8	10	4	2	3	0	0	3	1	516		
	50-64 years	30	18	33	26	35	53	59	56	39	18	15	8	9	9	9	6	0	1	3	2	0	429		
	65+ years	42	32	49	40	44	54	62	95	62	38	23	17	16	8	10	2	2	3	1	0	0	600		
Kent County	0-4 years	6	4	14	15	48	64	71	85	39	22	12	9	5	9	5	4	1	1	0	0	0	414	2,130	23.6%
	5-24 years	18	9	15	29	64	117	145	178	81	20	25	13	21	15	7	6	7	1	1	0	0	772		
	25-49 years	10	12	14	20	35	51	60	77	39	17	10	4	9	9	3	5	9	0	3	0	0	387		
	50-64 years	17	7	10	17	25	24	26	40	28	7	7	6	6	9	6	4	1	0	2	2	0	244		
	65+ years	28	9	15	13	28	36	39	49	25	13	3	7	15	13	6	10	3	0	1	0	0	313		
Sussex County	0-4 years	18	9	21	22	43	81	84	119	61	29	28	24	22	17	10	10	7	6	3	1	0	615	3,732	41.4%
	5-24 years	31	12	30	28	89	193	210	281	154	80	79	65	43	31	11	12	7	12	6	0	0	1,374		
	25-49 years	30	13	22	28	58	70	83	90	59	35	19	15	18	15	4	6	2	4	2	1	1	575		
	50-64 years	36	18	14	18	38	46	51	78	41	23	12	14	16	18	10	11	7	2	0	0	0	453		
	65+ years	57	27	43	27	37	66	86	110	74	40	16	29	33	23	15	14	10	6	2	0	0	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	Wk 19	Wk 20	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	1	0	70	1,235	
	5-24 years	4	1	1	2	4	6	7	7	9	3	6	3	2	0	1	1	0	0	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	1	0	100		
	50-64 years	24	11	16	10	21	19	28	36	24	14	12	4	7	4	8	5	1	0	1	1	0	246		
	65+ years	57	38	59	41	56	75	89	102	67	46	20	27	27	21	16	8	8	5	0	0	0	762		
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	1	0	55	669	54.2%
	5-24 years	3	1	1	2	2	6	5	5	4	2	6	3	1	0	1	1	0	0	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	1	0	56		
	50-64 years	14	8	13	8	8	13	17	16	11	11	7	3	3	3	3	2	0	0	1	0	0	141		
	65+ years	29	23	32	23	23	35	44	48	34	28	15	13	11	4	7	2	2	1	0	0	0	374		
Kent County	0-4 years	0	0	0	0	1	4	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	8	255	20.6%
	5-24 years	0	0	0	0	1	0	1	2	2	1	0	0	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	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	1	0	49		
	65+ years	14	5	10	4	18	22	21	23	11	9	0	4	6	7	5	3	2	0	0	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	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	0	0	7		
	25-49 years	0	0	3	1	2	1	2	2	2	1	0	0	0	0	1	0	0	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	0	0	56		
	65+ years	14	10	17	14	15	18	24	31	22	9	5	10	10	10	4	3	4	4	0	0	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	Wk 19	Wk 20	YTD	
	1	0	1	1	0	3	7	6	6	4	0	1	1	2	0	0	1	0	0	0	0	0	35

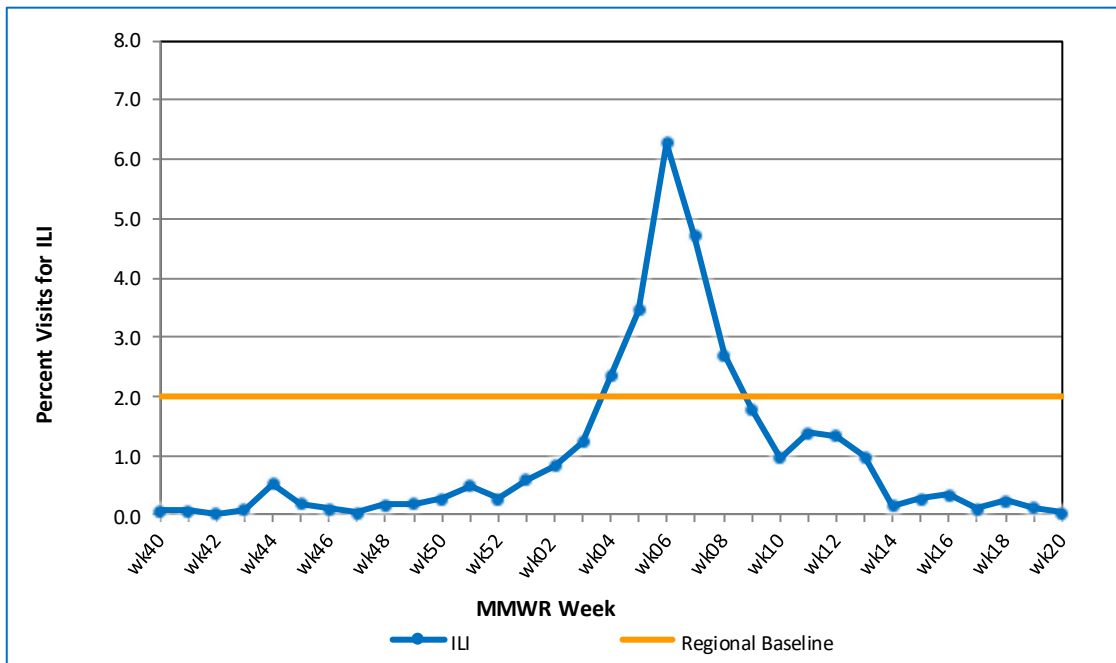
Table 4. Annual number of influenza cases reported by flu season, Delaware 2004-05 through 2017-18

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)	9,025

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.

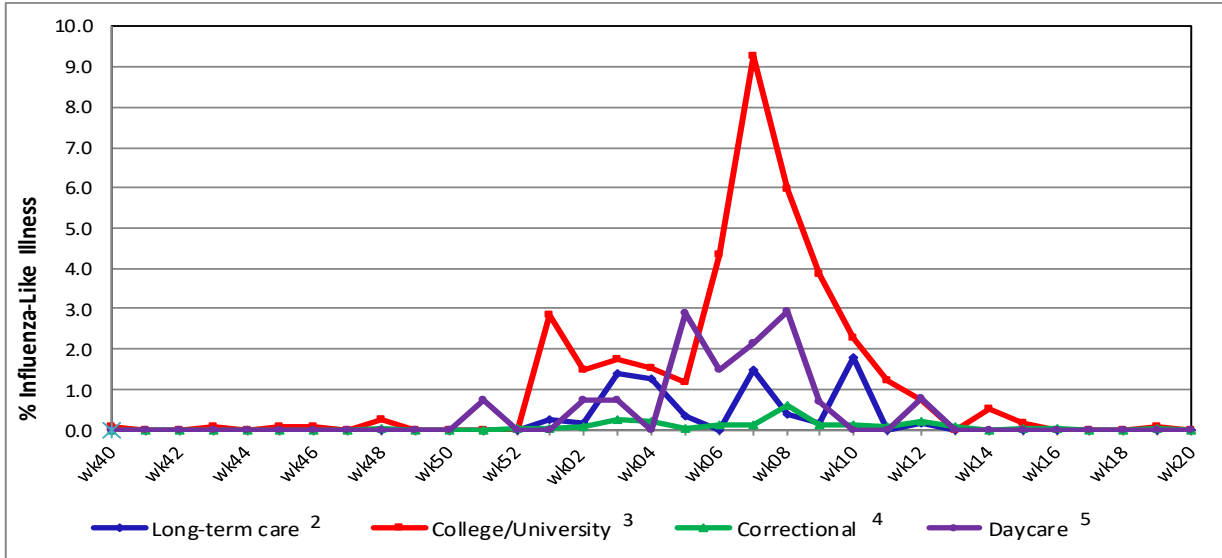
Figure 2. Percentage of visits for influenza-like illness reported by sentinel providers¹ participating in the U.S. Outpatient ILI Surveillance Network (ILINet), Delaware 2017-18



¹ Ten 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: Six 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

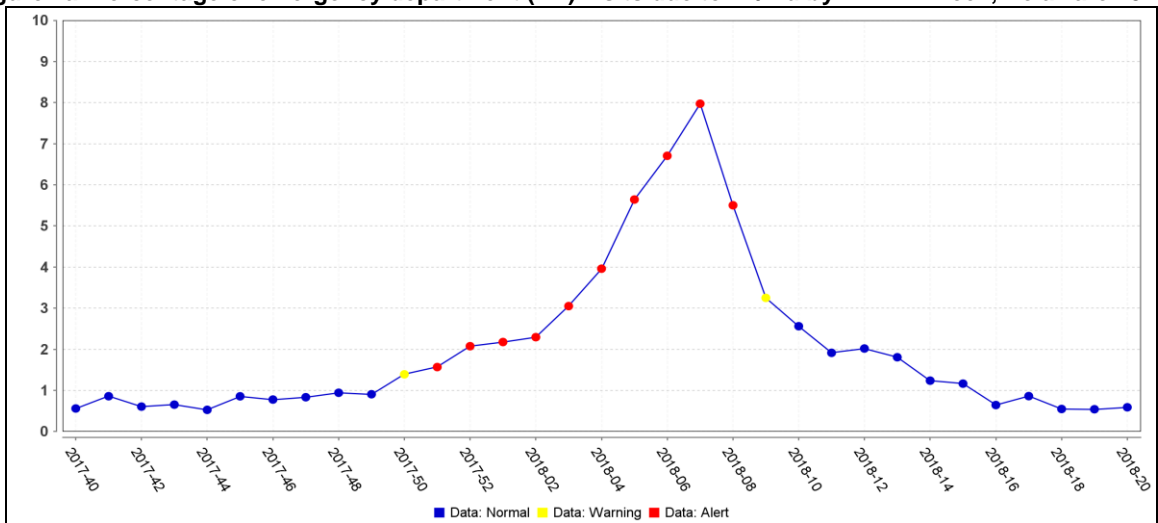
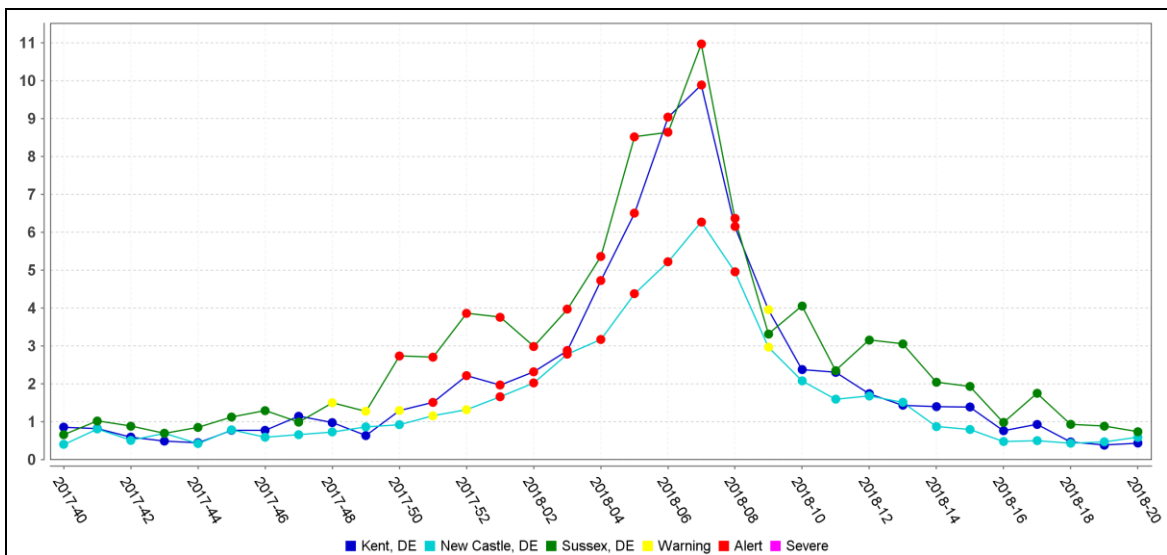


Figure 4b. County-specific percentages of ED visits due to ILI/Flu by MMWR Week, Delaware 2017-18



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 some countries in Eastern Europe. Activity increased in some countries in tropical America. In the temperate zone of the southern hemisphere, influenza activity increased but 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 decreased overall. Influenza indicators continued to decrease in Canada and the United States, with influenza A and B viruses predominating, respectively. Influenza like illness (ILI) rate and the proportion of other respiratory viruses increased slightly in Canada. In Mexico, influenza activity was reported as decreased, and respiratory illness indicators returned to inter-seasonal levels.

In the Caribbean, influenza activity (all seasonal subtypes) continued in several countries while respiratory syncytial virus (RSV) activity was low in the region. In the Dominican Republic, influenza virus A(H1N1)pdm09 predominated. In Suriname, influenza A(H3N2) and B viruses predominated. Severe acute respiratory infection (SARI) hospitalizations increased in Haiti in recent weeks. In Central American countries, influenza activity remained low in general but influenza detections remained high in Guatemala and Honduras, with influenza A predominating in the former and influenza A(H1N1)pdm09 and B viruses in the latter.

In Europe, influenza activity generally decreased to inter-seasonal levels in reporting countries, except for some countries in Eastern Europe, including western regions in the Russian Federation, where activity remained above threshold levels.

In Northern Africa, influenza activity decreased across the region. Across reporting countries in Middle and Western Africa, influenza activity remained low except for Côte d'Ivoire where detections of influenza B virus were reported. 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, low influenza activity was reported in most countries across the region. In Central Asia, influenza activity continued to decrease across the region. In East Asia, influenza activity returned to inter-seasonal levels in most countries. Influenza A(H1N1)pdm09 detections continued to be reported in Mongolia. In Southern Asia, countries reporting in this period documented influenza activity as low in general. In Bhutan, influenza activity appeared to decrease. In Southeast Asia, influenza activity remained low across reporting countries.

In the temperate zone of the Southern Hemisphere, influenza activity increased slightly in most countries but stayed below alert thresholds in general.

Reference: World Health Organization (WHO), 2017. Influenza Update number 315 (5/14/18). Retrieved May 15, 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.