



Delaware Weekly Influenza Report

MMWR Week 12 (March 18 – 24, 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 12 (March 18 – 24, 2018) influenza activity decreased in the United States. Overall, influenza A(H3) viruses have predominated this season. However, in recent weeks the proportion of influenza A viruses has declined, and during week 12, influenza B viruses were 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 Puerto Rico and 16 states (Alaska, California, Connecticut, Delaware, Indiana, Maine, Maryland, Massachusetts, Nebraska, New Hampshire, New York, Ohio, Oklahoma, Rhode Island, Virginia and Wisconsin). **Regional influenza activity** was reported by 22 states (Arizona, Colorado, Florida, Georgia, Idaho, Illinois, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Montana, New Jersey, New Mexico, North Dakota, Pennsylvania, South Carolina, South Dakota, Utah, Washington and Wyoming). **Local influenza activity** was reported by the District of Columbia, Guam and eight states (Arkansas, Louisiana, Nevada, North Carolina, Oregon, Tennessee, Texas and West Virginia). **Sporadic influenza activity** was reported by four states (Alabama, Hawaii, Mississippi and Vermont). **No influenza activity** was reported by the U.S. Virgin Islands. Both national and state data are provisional and subject to change as additional reports are received.

Delaware Influenza Surveillance 2017-2018:

During MMWR Week 12, there were 251 laboratory-confirmed cases of influenza reported among Delaware residents, bringing the total to 7,902 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 1.3% compared with Delaware's 2017-2018 baseline of 2.0%. Nationally, ILI is 2.5% compared with the 2017-2018 national baseline of 2.2%.

Level of Influenza Activity in Delaware, MMWR Week 12:

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.

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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 40-49	Wk 50	Wk 51	Wk 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	YTD	YTD Total	YTD County %
STATEWIDE	A / 2009 H1N1	4	2	3	8	4	15	16	32	45	37	43	16	18	5	2	1	251	7,902	
	A / 2012 H3N2	26	9	11	14	23	27	25	42	39	37	53	34	12	8	3	7	370		
	A / no subtype	44	31	59	81	110	238	247	447	685	825	876	465	191	86	65	48	4,498		
	Co-infection	0	0	0	0	1	1	5	4	5	8	3	4	1	1	0	0	33		
	B / Yamagata	1	3	7	8	8	6	6	4	9	31	29	24	11	11	9	10	177		
	B / Victoria	0	0	0	1	1	0	2	5	1	11	13	13	17	8	5	3	80		
	B / no lineage	6	4	18	32	44	72	82	137	224	327	543	345	174	171	132	182	2,493		
New Castle County	A / 2009 H1N1	3	1	0	4	1	4	6	7	18	14	20	6	12	2	1	1	100	2,986	37.8%
	A / 2012 H3N2	22	9	9	13	19	20	20	26	25	25	41	22	8	6	1	3	269		
	A / no subtype	17	2	10	16	39	108	98	138	182	280	272	141	54	26	19	17	1,419		
	Co-infection	0	0	0	0	1	0	3	2	0	2	1	2	0	0	0	0	11		
	B / Yamagata	1	2	6	5	8	5	6	3	8	25	21	17	10	8	5	5	135		
	B / Victoria	0	0	0	1	1	0	2	5	1	11	10	10	15	6	3	2	67		
	B / no lineage	3	1	10	22	16	28	43	55	72	133	206	147	77	68	50	54	985		
Kent County	A / 2009 H1N1	1	0	2	3	3	8	6	18	17	20	17	4	4	2	0	0	105	1,970	24.9%
	A / 2012 H3N2	2	0	0	1	2	0	2	7	8	6	7	9	1	0	0	1	46		
	A / no subtype	13	8	16	27	26	48	65	153	212	247	258	115	38	20	13	9	1,268		
	Co-infection	0	0	0	0	0	0	0	1	0	1	2	1	0	0	0	0	5		
	B / Yamagata	0	0	0	0	0	0	0	0	0	3	5	3	0	1	2	3	17		
	B / Victoria	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2		
	B / no lineage	0	2	1	3	10	12	21	20	54	63	140	73	35	28	22	43	527		
Sussex County	A / 2009 H1N1	0	1	1	1	0	3	4	7	10	3	6	6	2	1	1	0	46	2,946	37.3%
	A / 2012 H3N2	2	0	2	0	2	7	3	9	6	6	5	3	3	2	2	3	55		
	A / no subtype	14	21	33	38	45	82	84	156	291	298	346	209	99	40	33	22	1,811		
	Co-infection	0	0	0	0	0	1	2	1	5	5	0	1	1	1	0	0	17		
	B / Yamagata	0	1	1	3	0	1	0	1	1	3	3	4	1	2	2	2	25		
	B / Victoria	0	0	0	0	0	0	0	0	0	0	3	1	2	2	2	1	11		
	B / no lineage	3	1	7	7	18	32	18	62	98	131	197	125	62	75	60	85	981		

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

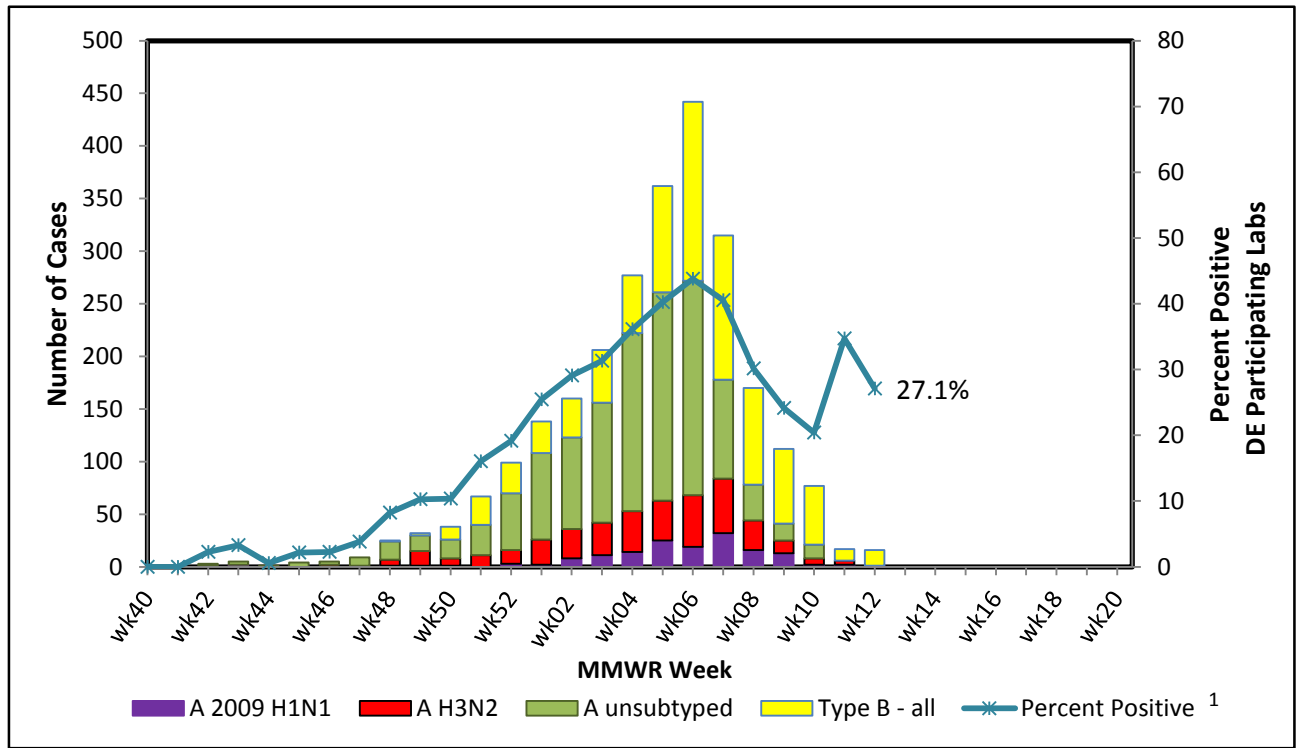
Confirmed Flu Cases by Age Group		Wk 40-49	Wk 50	Wk 51	Wk 52	Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10	Wk 11	Wk 12	YTD	YTD Total	YTD County %
STATEWIDE	0-4 years	7	3	10	15	19	47	58	122	181	258	298	191	87	61	40	45	1,442	7,902	
	5-24 years	13	9	19	26	32	81	103	212	390	493	611	330	147	133	81	86	2,766		
	25-49 years	13	5	20	34	38	68	83	135	167	222	248	126	67	28	26	33	1,313		
	50-64 years	15	15	13	34	36	56	62	96	116	127	161	103	44	29	24	29	960		
	65+ years	33	17	36	35	66	107	77	106	154	176	242	151	79	39	45	58	1,421		
New Castle County	0-4 years	3	2	5	7	8	13	25	36	49	117	120	96	44	27	17	24	593	2,986	37.8%
	5-24 years	8	3	8	13	15	37	48	70	99	162	204	114	59	45	28	26	939		
	25-49 years	8	0	8	20	12	33	37	51	52	90	96	38	21	9	12	8	495		
	50-64 years	6	6	6	12	18	33	27	35	52	59	56	35	17	13	7	9	391		
	65+ years	21	4	8	9	32	49	41	44	54	62	95	62	35	22	15	15	568		
Kent County	0-4 years	0	0	2	4	4	14	15	48	64	71	85	39	22	12	9	4	393	1,970	24.9%
	5-24 years	2	1	6	9	9	15	29	64	116	145	177	77	20	21	11	22	724		
	25-49 years	3	2	2	3	12	14	20	34	51	59	77	38	16	9	4	9	353		
	50-64 years	6	3	2	6	7	10	17	25	24	26	40	28	7	6	6	6	219		
	65+ years	5	4	7	12	9	15	13	28	36	39	50	25	13	3	7	15	281		
Sussex County	0-4 years	4	1	3	4	7	20	18	38	68	70	93	56	21	22	14	17	456	2,946	37.3%
	5-24 years	3	5	5	4	8	29	26	78	175	186	230	139	68	67	42	38	1,103		
	25-49 years	2	3	10	11	14	21	26	50	64	73	75	50	30	10	10	16	465		
	50-64 years	3	6	5	16	11	13	18	36	40	42	65	40	20	10	11	14	350		
	65+ years	7	9	21	14	25	43	23	34	64	75	97	64	31	14	23	28	572		

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 40-49	Wk 50	Wk 51	Wk 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	YTD	YTD Total	YTD County %
STATEWIDE	0-4 years	0	1	1	1	1	0	1	8	8	17	5	7	4	3	2	2	61	1,112	
	5-24 years	1	1	0	2	1	1	3	4	6	7	7	7	3	7	2	2	54		
	25-49 years	2	0	1	3	2	10	4	6	8	20	11	9	7	5	2	1	91		
	50-64 years	5	8	2	9	11	16	10	21	19	27	35	26	14	10	3	7	223		
	65+ years	22	9	10	16	37	59	40	56	74	85	100	66	46	16	24	23	683		
New Castle County	0-4 years	0	0	1	1	1	0	1	7	4	15	4	6	2	3	2	1	48	623	56.0%
	5-24 years	1	0	0	2	1	1	2	2	6	5	5	4	2	7	2	1	41		
	25-49 years	2	0	1	3	0	6	3	5	3	13	7	2	1	1	2	1	50		
	50-64 years	3	3	2	6	8	13	8	8	13	17	16	11	11	6	2	3	130		
	65+ years	18	3	4	4	23	32	23	23	35	44	48	35	29	12	10	11	354		
Kent County	0-4 years	0	0	0	0	0	0	0	1	4	0	1	0	2	0	0	0	8	233	21.0%
	5-24 years	0	0	0	0	0	0	1	1	0	1	2	2	1	0	0	0	8		
	25-49 years	0	0	0	0	2	1	0	0	4	5	2	6	4	3	0	0	27		
	50-64 years	2	2	0	0	2	3	1	8	3	3	10	5	1	2	0	3	45		
	65+ years	3	2	2	7	5	10	4	18	22	21	23	11	9	0	4	4	145		
Sussex County	0-4 years	0	1	0	0	0	0	0	0	0	2	0	1	0	0	0	1	5	256	23.0%
	5-24 years	0	1	0	0	0	0	0	1	0	1	0	1	0	0	0	1	5		
	25-49 years	0	0	0	0	0	3	1	1	1	2	2	1	2	1	0	0	14		
	50-64 years	0	3	0	3	1	0	1	5	3	7	9	10	2	2	1	1	48		
	65+ years	1	4	4	5	9	17	13	15	17	20	29	20	8	4	10	8	184		

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

Influenza-Related Deaths	Wk 40-49	Wk 50	Wk 51	Wk 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	YTD
	1	0	1	0	0	1	1	0	3	7	6	6	4	0	1	1	32

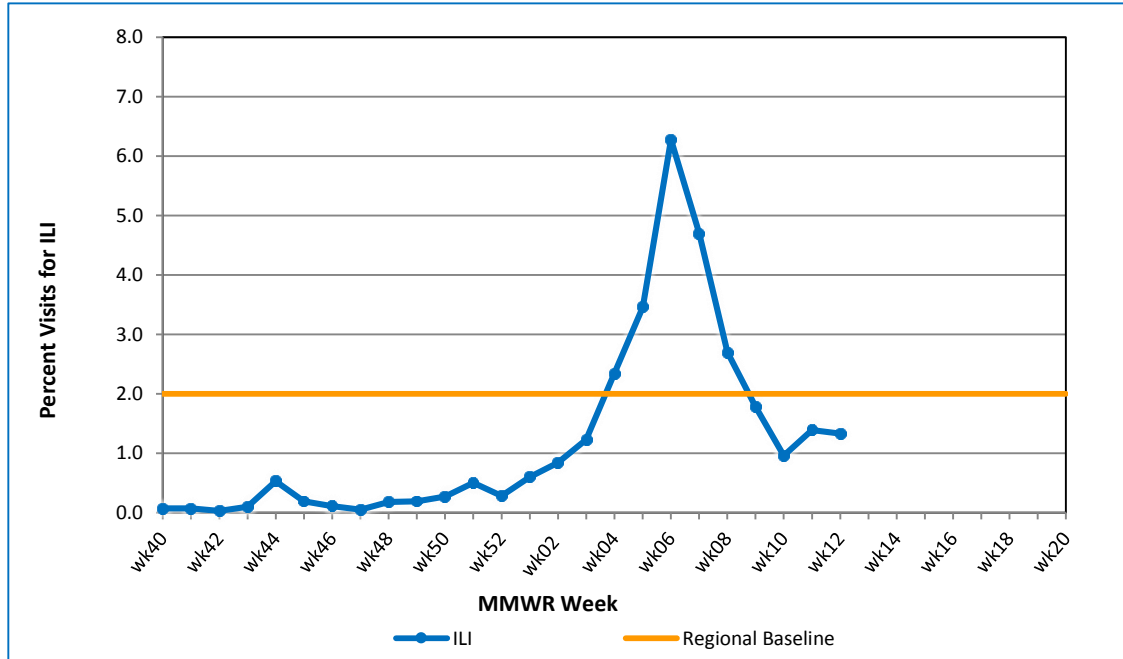
Table 4. Annual number of influenza cases reported by flu season, Delaware 2004-05 through 2017-18

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)	7,902

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.

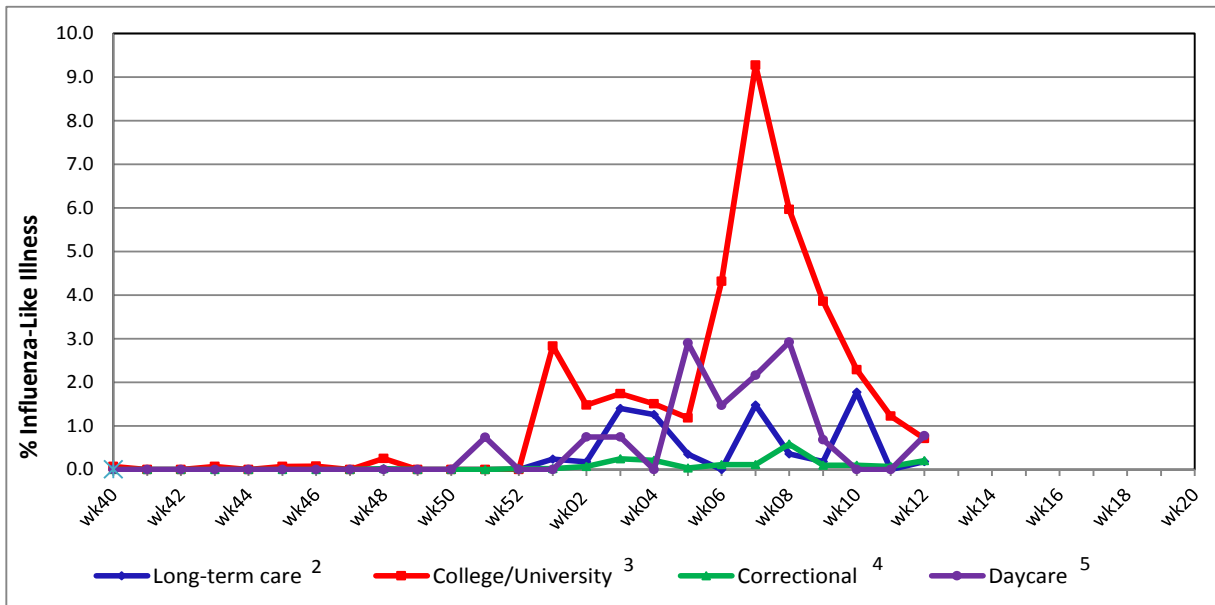
Figure 2. Percentage of visits for influenza-like illness reported by sentinel providers¹ participating in the U.S. Outpatient ILI Surveillance Network (ILINet), Delaware 2017-18



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; 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

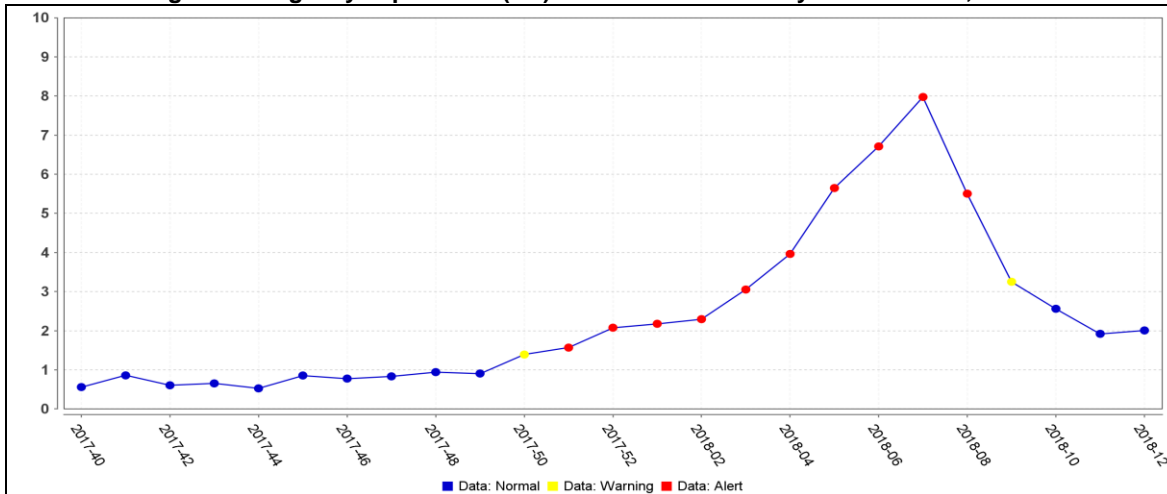
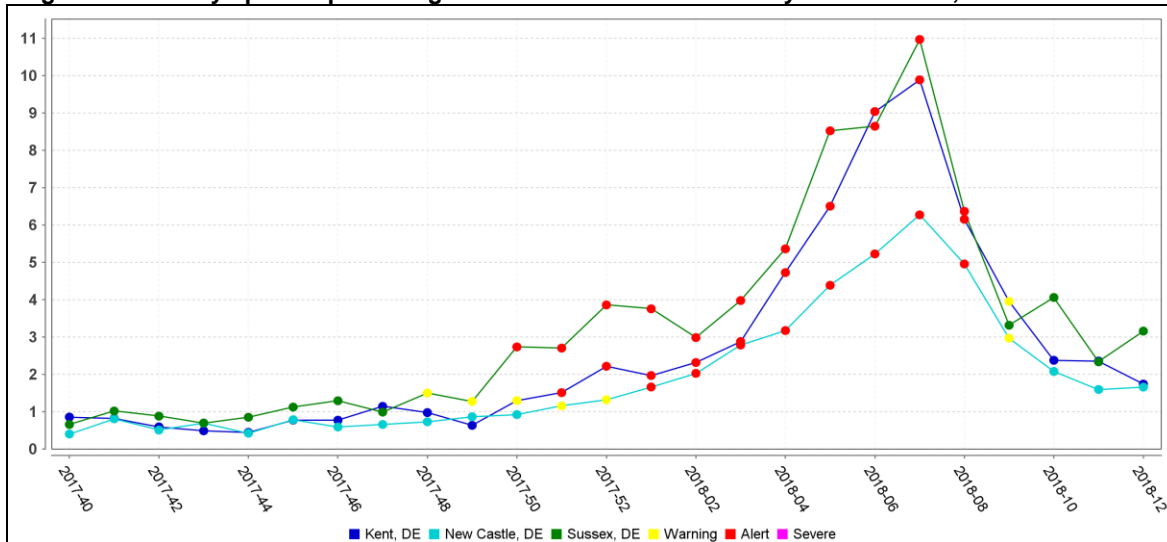


Figure 4b. County-specific percentages of ED visits due to ILI/Flu by MMWR Week, Delaware 2017-18



Summary of International Influenza Activity

Influenza activity remained high but appeared to have peaked in some countries in the temperate zone of the northern hemisphere. In the temperate zone of the southern hemisphere activity remained at inter-seasonal levels. Worldwide, influenza A and influenza B accounted for a similar proportion of influenza detections.

In North America overall, 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 United States and Canada, ILI activity decreased, while in Mexico SARI/ILI activity slightly decreased as expected.

In Central America epidemiological indicators remained at moderate levels and influenza and RSV circulation were reported to decrease throughout the sub region.

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 Dominican Republic, influenza A(H1N1)pdm09 activity increased.

In Europe, Influenza viruses continue to circulate widely in the Region with some eastern European countries that have only recently reported increased activity, experiencing a late start to the season with increased circulation of influenza type A viruses. Both influenza virus types A and B were co-circulating with the majority being type B viruses and B/Yamagata continuing to be the dominant lineage.

In the temperate zone of the Western Pacific Region (Northern Hemisphere), ILI and influenza activity is higher than the corresponding period from previous years.

Reference: World Health Organization (WHO), 2017. Influenza Update number 311 (3/19/18). Retrieved March 23, 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.