



Delaware Weekly Influenza Report

MMWR Week 10 (March 4 – 10, 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 10 (March 4 - 10, 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 10, the numbers of influenza A and influenza B viruses reported were similar. The percentage of respiratory specimens testing positive for influenza in clinical laboratories decreased. **Widespread influenza activity** was reported by Puerto Rico and 26 states (Alaska, Arizona, California, Colorado, Connecticut, Delaware, Florida, Indiana, Kansas, Maine, Maryland, Massachusetts, Michigan, Montana, Nebraska, New Hampshire, New Jersey, New York, Ohio, Oklahoma, Rhode Island, South Carolina, Virginia, Washington, Wisconsin and Wyoming). **Regional influenza activity** was reported by Guam and 18 states (Alabama, Arkansas, Georgia, Idaho, Illinois, Iowa, Kentucky, Louisiana, Minnesota, Mississippi, Missouri, New Mexico, North Carolina, North Dakota, Pennsylvania, South Dakota, Tennessee and Utah). **Local influenza activity** was reported by the District of Columbia and five states (Hawaii, Nevada, Oregon, Texas and West Virginia). **Sporadic influenza activity** was reported by 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 10, there were 290 laboratory-confirmed cases of influenza reported among Delaware residents, bringing the total to 7,433 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 3.3% compared with the 2017-2018 national baseline of 2.2%.

Level of Influenza Activity in Delaware, MMWR Week 10:

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.	
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 40-49	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	YTD	YTD Total	YTD County %
STATEWIDE	A / 2009 H1N1	4	2	3	8	4	15	16	32	45	37	44	16	18	5	249	7,433	
	A / 2012 H3N2	26	9	11	14	23	27	25	42	39	37	53	34	12	6	358		
	A / no subtype	44	31	59	81	110	238	247	447	685	825	876	465	191	88	4,387		
	Co-infection	0	0	0	0	1	1	5	4	5	6	2	4	1	0	29		
	B / Yamagata	1	3	7	8	8	6	6	4	9	31	29	24	11	11	158		
	B / Victoria	0	0	0	1	1	0	2	5	1	11	13	13	17	8	72		
	B / no lineage	6	4	18	32	44	72	82	137	224	327	543	345	174	172	2,180		
New Castle County	A / 2009 H1N1	3	1	0	4	1	4	6	7	18	14	20	6	12	2	98	2,823	38.0%
	A / 2012 H3N2	22	9	9	13	19	20	20	26	25	25	41	22	8	5	264		
	A / no subtype	17	2	10	16	39	108	98	138	182	278	272	141	54	27	1,382		
	Co-infection	0	0	0	0	1	0	3	2	0	2	1	2	0	0	11		
	B / Yamagata	1	2	6	5	8	5	6	3	8	25	21	17	10	8	125		
	B / Victoria	0	0	0	1	1	0	2	5	1	11	10	10	15	6	62		
	B / no lineage	3	1	10	22	16	28	43	55	72	133	206	147	77	68	881		
Kent County	A / 2009 H1N1	1	0	2	3	3	8	6	18	17	20	18	4	4	2	106	1,877	25.3%
	A / 2012 H3N2	2	0	0	1	2	0	2	7	8	6	7	9	1	0	45		
	A / no subtype	13	8	16	27	26	48	65	153	212	247	258	115	38	20	1,246		
	Co-infection	0	0	0	0	0	0	0	1	0	1	1	1	0	0	4		
	B / Yamagata	0	0	0	0	0	0	0	0	0	3	5	3	0	1	12		
	B / Victoria	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2		
	B / no lineage	0	2	1	3	10	12	21	20	54	63	140	73	35	28	462		
Sussex County	A / 2009 H1N1	0	1	1	1	0	3	4	7	10	3	6	6	2	1	45	2,733	36.8%
	A / 2012 H3N2	2	0	2	0	2	7	3	9	6	6	5	3	3	1	49		
	A / no subtype	14	21	33	38	45	82	84	156	291	300	346	209	99	41	1,759		
	Co-infection	0	0	0	0	0	1	2	1	5	3	0	1	1	0	14		
	B / Yamagata	0	1	1	3	0	1	0	1	1	3	3	4	1	2	21		
	B / Victoria	0	0	0	0	0	0	0	0	0	0	3	1	2	2	8		
	B / no lineage	3	1	7	7	18	32	18	62	98	131	197	125	62	76	837		

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

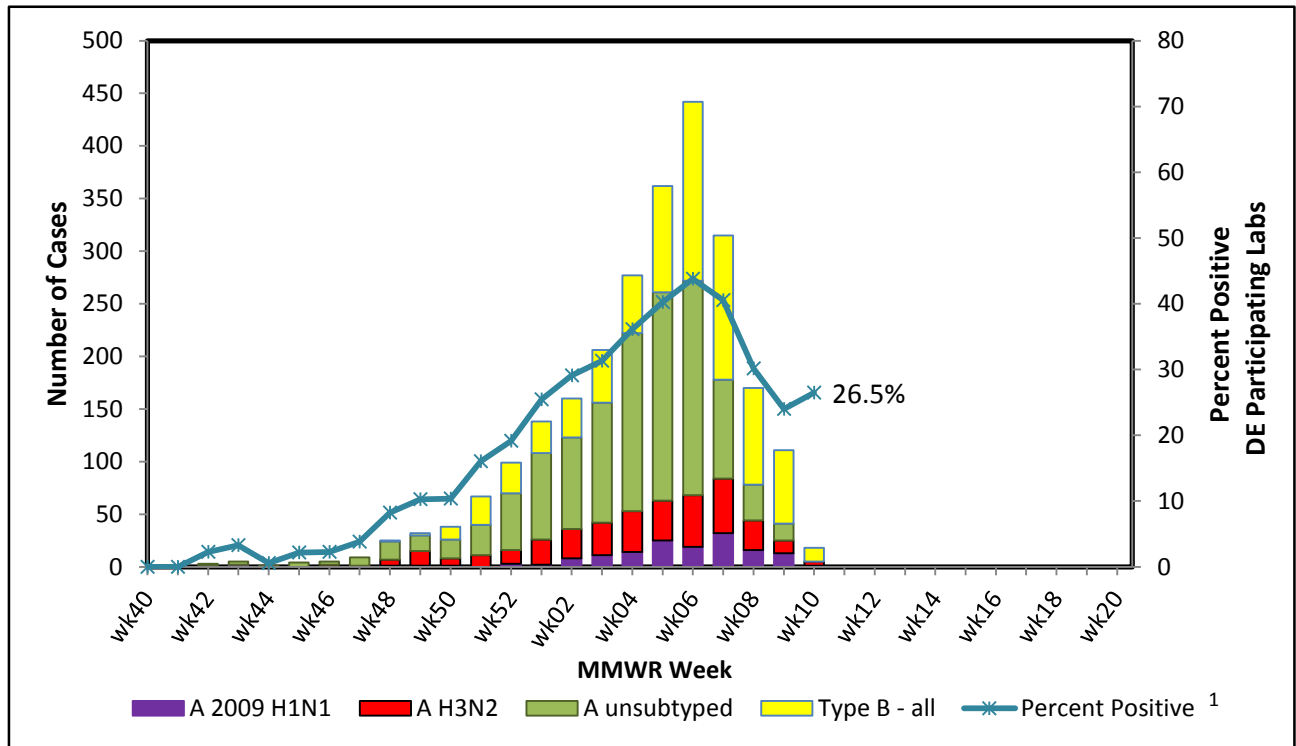
Confirmed Flu Cases by Age Group		Wk 40-49	Wk 50	Wk 51	Wk 52	Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10	YTD	YTD Total	YTD County %
STATEWIDE	0-4 years	7	3	10	15	19	47	58	122	181	257	298	191	87	61	1,356	7,433	
	5-24 years	13	9	19	26	32	81	103	212	390	492	611	330	147	133	2,598		
	25-49 years	13	5	20	34	38	68	83	135	167	222	248	126	67	28	1,254		
	50-64 years	15	15	13	34	36	56	62	96	116	127	161	103	44	29	907		
	65+ years	33	17	36	35	66	107	77	106	154	176	242	151	79	39	1,318		
New Castle County	0-4 years	3	2	5	7	8	13	25	36	49	116	120	96	44	27	551	2,823	38.0%
	5-24 years	8	3	8	13	15	37	48	70	99	161	204	114	59	45	884		
	25-49 years	8	0	8	20	12	33	37	51	52	90	96	38	21	9	475		
	50-64 years	6	6	6	12	18	33	27	35	52	59	56	35	17	13	375		
	65+ years	21	4	8	9	32	49	41	44	54	62	95	62	35	22	538		
Kent County	0-4 years	0	0	2	4	4	14	15	48	64	71	85	39	22	12	380	1,877	25.3%
	5-24 years	2	1	6	9	9	15	29	64	116	145	177	77	20	21	691		
	25-49 years	3	2	2	3	12	14	20	34	51	59	77	38	16	9	340		
	50-64 years	6	3	2	6	7	10	17	25	24	26	40	28	7	6	207		
	65+ years	5	4	7	12	9	15	13	28	36	39	50	25	13	3	259		
Sussex County	0-4 years	4	1	3	4	7	20	18	38	68	70	93	56	21	22	425	2,733	36.8%
	5-24 years	3	5	5	4	8	29	26	78	175	186	230	139	68	67	1,023		
	25-49 years	2	3	10	11	14	21	26	50	64	73	75	50	30	10	439		
	50-64 years	3	6	5	16	11	13	18	36	40	42	65	40	20	10	325		
	65+ years	7	9	21	14	25	43	23	34	64	75	97	64	31	14	521		

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	YTD	YTD Total	YTD County %
STATEWIDE	0-4 years	0	1	1	1	1	0	1	8	8	17	5	7	4	3	57	1,044	
	5-24 years	1	1	0	2	1	1	3	4	6	7	7	7	3	7	50		
	25-49 years	2	0	1	3	2	10	4	6	8	20	11	9	7	5	88		
	50-64 years	5	8	2	9	11	16	10	21	19	27	35	26	14	10	213		
	65+ years	22	9	10	16	37	59	40	56	74	85	100	66	46	16	636		
New Castle County	0-4 years	0	0	1	1	1	0	1	7	4	15	4	6	2	3	45	588	55.7%
	5-24 years	1	0	0	2	1	1	2	2	6	5	5	4	2	7	38		
	25-49 years	2	0	1	3	0	6	3	5	3	13	7	2	1	1	47		
	50-64 years	3	3	2	6	8	13	8	8	13	17	16	11	11	6	125		
	65+ years	18	3	4	4	23	32	23	23	35	44	48	35	29	12	333		
Kent County	0-4 years	0	0	0	0	0	0	0	1	4	0	1	0	2	0	8	222	21.7%
	5-24 years	0	0	0	0	0	0	1	1	0	1	2	2	1	0	8		
	25-49 years	0	0	0	0	2	1	0	0	4	5	2	6	4	3	27		
	50-64 years	2	2	0	0	2	3	1	8	3	3	10	5	1	2	42		
	65+ years	3	2	2	7	5	10	4	18	22	21	23	11	9	0	137		
Sussex County	0-4 years	0	1	0	0	0	0	0	0	0	2	0	1	0	0	4	234	22.5%
	5-24 years	0	1	0	0	0	0	0	1	0	1	0	1	0	0	4		
	25-49 years	0	0	0	0	0	3	1	1	1	2	2	1	2	1	14		
	50-64 years	0	3	0	3	1	0	1	5	3	7	9	10	2	2	46		
	65+ years	1	4	4	5	9	17	13	15	17	20	29	20	8	4	166		

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	YTD
	1	0	1	0	0	1	1	0	3	7	6	6	4	0	30

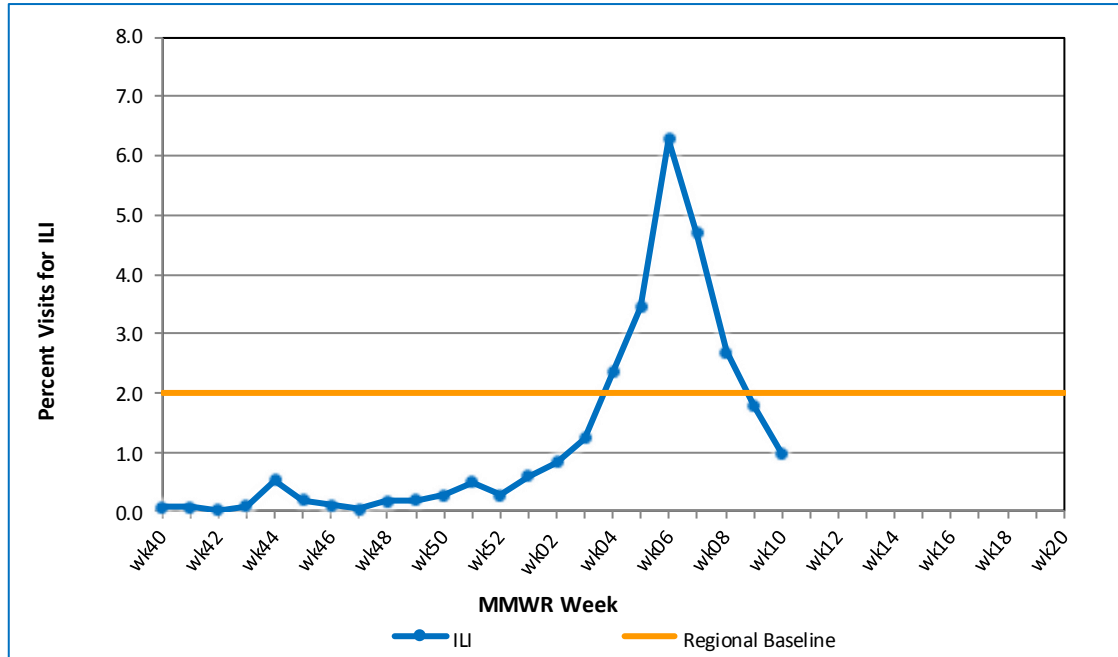
Table 4. Annual number of influenza cases reported by flu season, Delaware 2004-05 through 2017-18

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)	7,433

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.

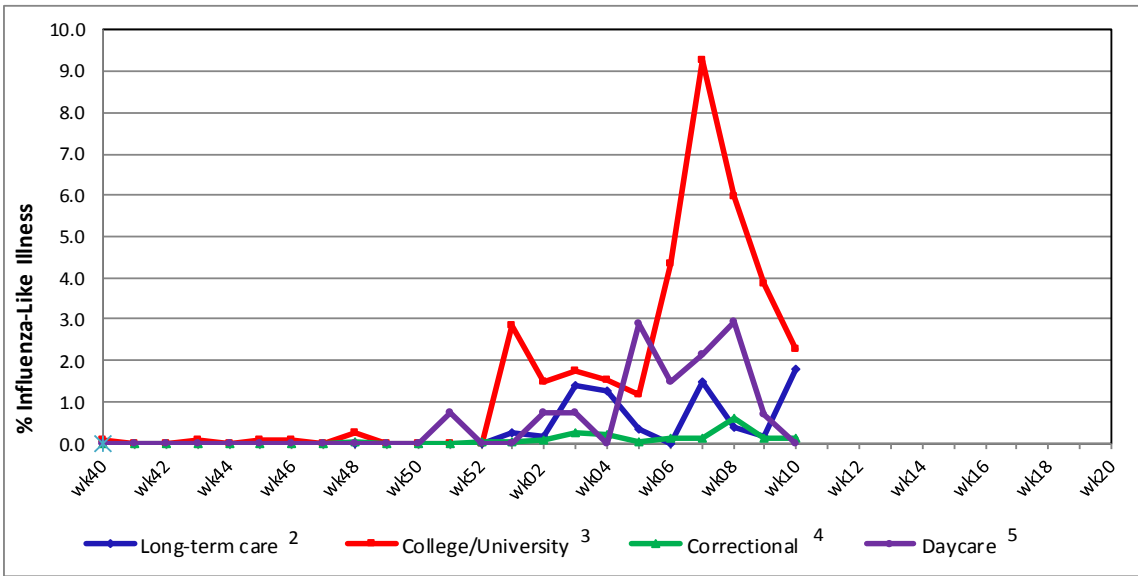
Figure 2. Percentage of visits for influenza-like illness reported by sentinel providers¹ participating in the U.S. Outpatient ILI Surveillance Network (ILINet), Delaware 2017-18



¹ Twelve 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

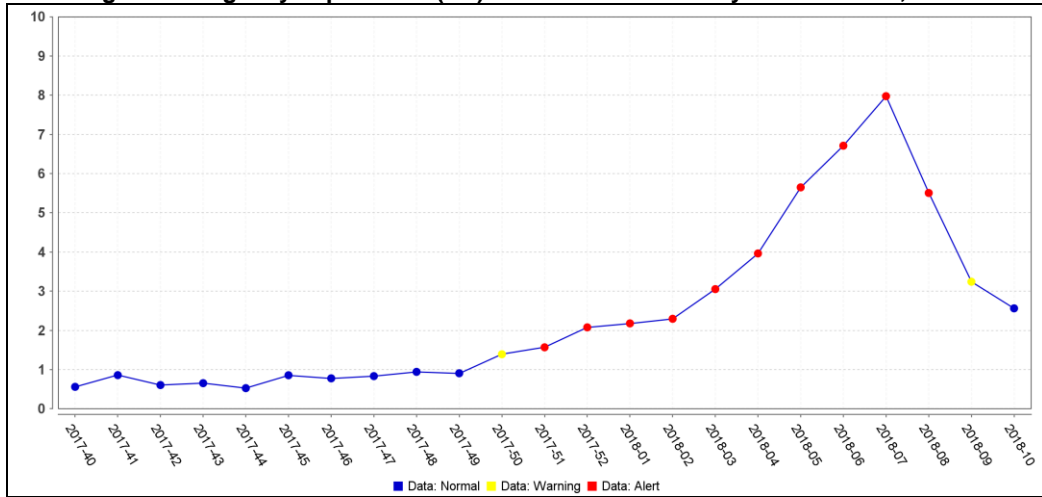
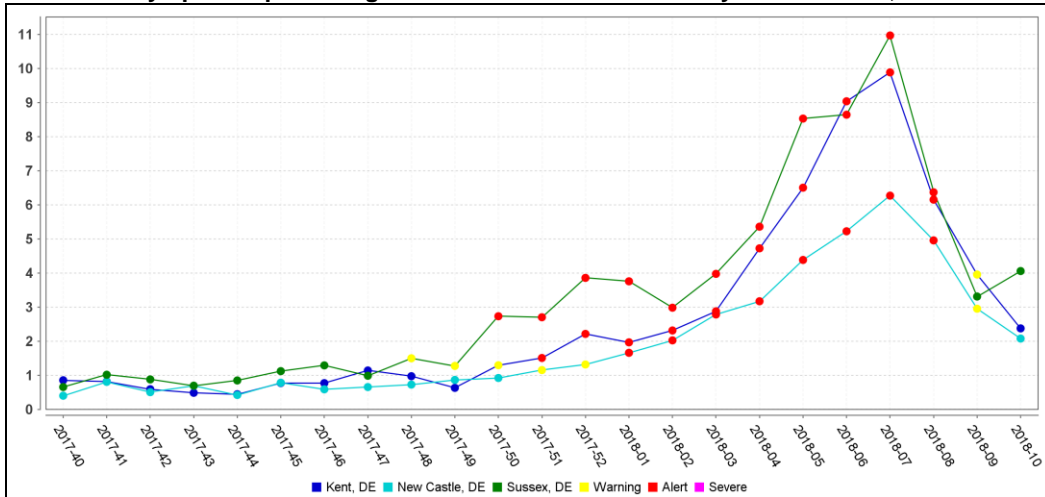


Figure 4b. County-specific percentages of ED visits due to ILI/Flu by MMWR Week, Delaware 2017-18



Summary of International Influenza Activity

Influenza activity remained high in the temperate zone of the northern hemisphere while in the temperate zone of the southern hemisphere activity was at inter-seasonal levels. Worldwide, influenza A and influenza B accounted for a similar 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 United States and Canada, ILI activity was above threshold levels, while in Mexico SARI/ILI activity increased 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 Saint Lucia, ILI activity increased in recent weeks.

In Europe, influenza continues to circulate widely in the region and some eastern European countries are experiencing a slow start. Countries experiencing a cold spell may experience a more severe season. Both influenza virus types A and B were co-circulating with a higher proportion of type B viruses. Differences in proportions of circulating influenza virus types and A subtypes were observed between countries.

In most countries within the temperate zone of the Northern Hemisphere, ILI and influenza activity is higher than the corresponding period of previous years.

Reference: World Health Organization (WHO), 2017. Influenza Update number 310 (3/5/18). Retrieved March 9, 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.