Delaware Weekly Influenza Report
MMWR Week 2 (January 7 - 13, 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 2 (January 7 - 13, 2018) influenza activity increased in the United States. The most frequently identified influenza virus subtype reported by public health laboratories during week 2 was influenza A(H3). The percentage of respiratory specimens testing positive for influenza in clinical laboratories increased. **Widespread influenza activity** was reported by 49 states and Puerto Rico. **Regional influenza activity** was reported by Guam. **Local influenza activity** was reported by Hawaii and the District of Columbia. **Sporadic 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 2, there were 349 laboratory-confirmed cases of influenza reported among Delaware residents, bringing the total to 912 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 0.84% compared with Delaware's 2017-2018 baseline of 2.0%. Nationally, ILI is 6.3% compared with the 2017-2018 national baseline of 2.2%.

Level of Influenza Activity in Delaware, MMWR Week 02:

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 100º 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: *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.*[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 positive[1] cases reported[2] statewide and county by subtype (A) or lineage (B)[3], Delaware 2017-18

Confirmed Flu Cases by Subtype / Lineage		Week 40	Week 41	Week 42	Week 43	Week 44	Week 45	Week 46	Week 47	Week 48	Week 49	Week 50	Week 51	Week 52	Week 1	Week 2	YTD	YTD Total	YTD County %
STATEWIDE	A / 2009 H1N1	0	0	0	1	0	0	0	1	1	1	2	3	8	5	11	33	912	
	A / 2012 H3N2	0	0	1	0	1	0	2	1	6	15	9	11	14	23	16	99		
	A / no subtype	0	0	0	4	2	4	7	4	6	17	31	59	81	110	247	572		
	B / Yamagata	0	0	0	0	0	0	0	0	1	0	3	7	8	8	5	32		
	B / Victoria	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2		
	B / no lineage	0	0	0	0	1	0	1	0	2	2	4	18	32	44	70	174		
New Castle County	A / 2009 H1N1	0	0	0	1	0	0	0	0	1	1	1	0	4	2	2	12	398	43.6%
	A / 2012 H3N2	0	0	1	0	0	0	2	1	5	13	9	9	13	19	12	84		
	A / no subtype	0	0	0	1	0	1	3	3	2	7	2	10	16	39	112	196		
	B / Yamagata	0	0	0	0	0	0	0	0	1	0	2	6	5	8	4	26		
	B / Victoria	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2		
	B / no lineage	0	0	0	0	1	0	1	0	0	1	1	10	22	16	26	78		
Kent County	A / 2009 H1N1	0	0	0	0	0	0	0	1	0	0	0	2	3	3	8	17	187	20.5%
	A / 2012 H3N2	0	0	0	0	0	0	0	0	0	2	0	0	1	2	0	5		
	A / no subtype	0	0	0	3	1	2	2	1	2	2	8	16	27	26	47	137		
	B / Yamagata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	B / Victoria	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	B / no lineage	0	0	0	0	0	0	0	0	0	0	2	1	3	10	12	28		
Sussex County	A / 2009 H1N1	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	4	327	35.9%
	A / 2012 H3N2	0	0	0	0	1	0	0	0	1	0	0	2	0	2	4	10		
	A / no subtype	0	0	0	0	1	1	2	0	2	8	21	33	38	45	88	239		
	B / Yamagata	0	0	0	0	0	0	0	0	0	0	1	1	3	0	1	6		
	B / Victoria	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	B / no lineage	0	0	0	0	0	0	0	0	2	1	1	7	7	18	32	68		

Table 1b. Influenza positive[1] cases reported[2] statewide and county by age group, Delaware 2017-18

Confirmed Flu Cases by Age Group		Week 40	Week 41	Week 42	Week 43	Week 44	Week 45	Week 46	Week 47	Week 48	Week 49	Week 50	Week 51	Week 52	Week 1	Week 2	YTD	YTD Total	YTD County %
STATEWIDE	0-4 years	0	0	0	0	1	1	0	0	1	4	3	10	15	19	47	101	912	
	5-24 years	0	0	0	0	1	0	1	2	2	7	9	19	26	32	79	178		
	25-49 years	0	0	0	3	0	0	2	0	3	5	5	20	34	38	65	175		
	50-64 years	0	0	0	0	0	1	3	2	5	4	15	13	34	36	55	168		
	65+ years	0	0	1	2	2	2	4	2	5	15	17	36	35	66	103	290		
New Castle County	0-4 years	0	0	0	0	0	1	0	0	0	2	2	5	7	8	13	38	398	43.6%
	5-24 years	0	0	0	0	0	0	1	1	2	4	3	8	13	15	35	82		
	25-49 years	0	0	0	1	0	0	2	0	1	4	0	8	20	12	30	78		
	50-64 years	0	0	0	0	0	0	1	2	2	1	6	6	12	18	32	80		
	65+ years	0	0	1	1	1	0	2	1	4	11	4	8	9	32	46	120		
Kent County	0-4 years	0	0	0	0	0	0	0	0	0	0	0	2	4	4	14	24	187	20.5%
	5-24 years	0	0	0	1	1	0	0	1	0	0	1	6	9	9	15	42		
	25-49 years	0	0	0	1	0	0	0	0	0	1	2	2	3	12	14	36		
	50-64 years	0	0	0	0	0	1	1	0	2	2	3	2	6	7	10	34		
	65+ years	0	0	0	1	0	1	1	1	0	1	4	7	12	9	14	51		
Sussex County	0-4 years	0	0	0	0	1	0	0	0	1	2	1	3	4	7	20	39	327	35.9%
	5-24 years	0	0	0	0	0	0	0	0	0	3	5	5	4	8	29	54		
	25-49 years	0	0	0	0	0	0	0	0	2	0	3	10	11	14	21	61		
	50-64 years	0	0	0	0	0	0	1	0	1	1	6	5	16	11	13	54		
	65+ years	0	0	0	0	1	1	1	0	1	3	9	21	14	25	43	119		

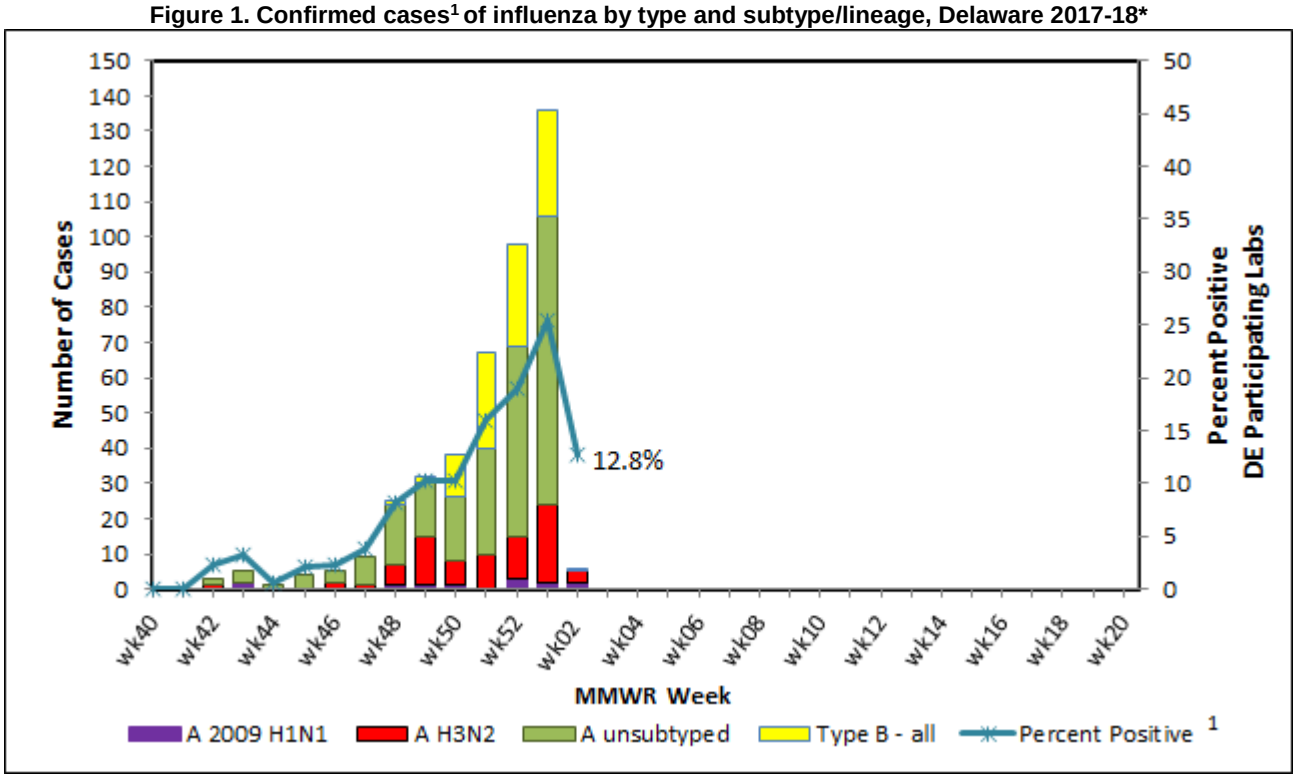
[1] Based on patients with positive nucleic acid or viral culture test results reported to the Division of Public Health.

[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.

MMWR Week 2 = January 7 - 13, 2018.

Figure 1. Confirmed cases[1] 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		Week 40	Week 41	Week 42	Week 43	Week 44	Week 45	Week 46	Week 47	Week 48	Week 49	Week 50	Week 51	Week 52	Week 1	Week 2	YTD	YTD Total	YTD County %
STATEWIDE	0-4 years	0	0	0	0	0	0	0	0	0	0	1	1	1	1	3	7		
	5-24 years	0	0	0	0	0	0	0	0	0	1	1	0	2	1	2	7		
	25-49 years	0	0	0	0	0	0	0	0	0	2	0	1	3	2	10	18	233	
	50-64 years	0	0	0	0	0	0	0	1	3	1	8	2	9	11	16	51		
	65+ years	0	0	1	2	1	1	1	2	3	11	9	10	16	36	57	150		
New Castle County	0-4 years	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	4		
	5-24 years	0	0	0	0	0	0	0	0	0	1	0	0	2	1	1	5		
	25-49 years	0	0	0	0	0	0	0	0	0	2	0	1	3	0	6	12	139	59.7%
	50-64 years	0	0	0	0	0	0	0	1	2	0	3	2	6	8	13	35		
	65+ years	0	0	1	1	1	0	1	1	3	10	3	4	4	23	31	83		
Kent County	0-4 years	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2		
	5-24 years	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1		
	25-49 years	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	42	18.0%
	50-64 years	0	0	0	0	0	0	0	0	1	1	2	0	0	2	3	9		
	65+ years	0	0	0	1	0	1	0	1	0	0	2	2	7	4	9	27		
Sussex County	0-4 years	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1		
	5-24 years	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1		
	25-49 years	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	52	22.3%
	50-64 years	0	0	0	0	0	0	0	0	0	0	3	0	3	1	0	7		
	65+ years	0	0	0	0	0	0	0	0	0	1	4	4	5	9	17	40		

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

Influenza-Related Deaths	Week 40	Week 41	Week 42	Week 43	Week 44	Week 45	Week 46	Week 47	Week 48	Week 49	Week 50	Week 51	Week 52	Week 1	Week 2	YTD
	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	2

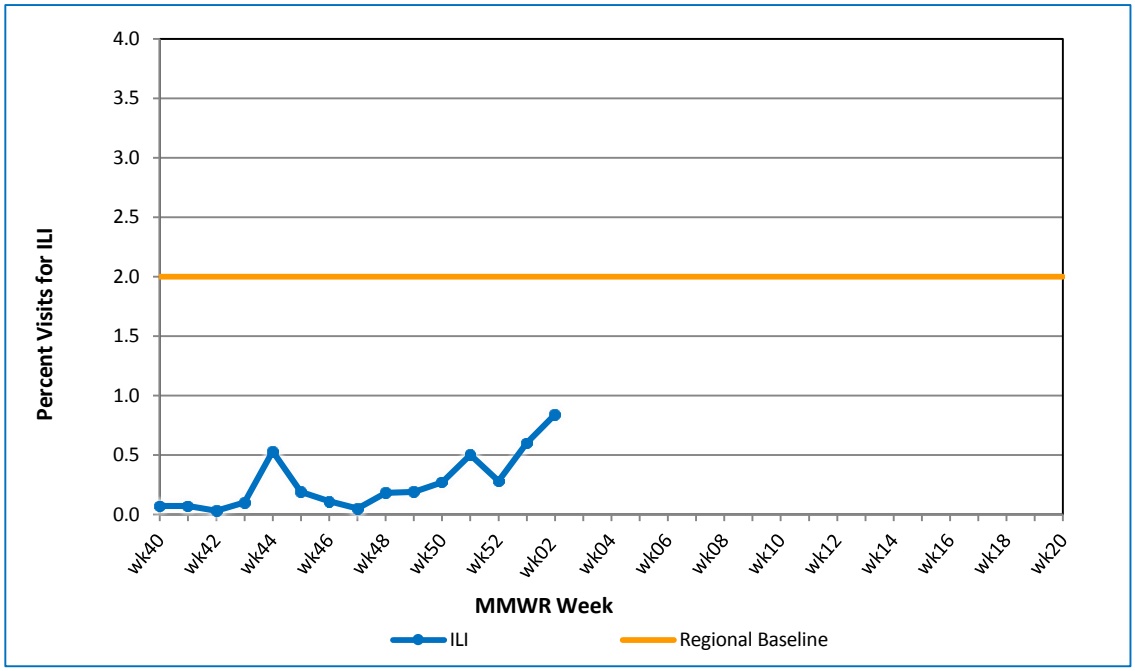
Table 4. Annual number of influenza cases reported by flu season, Delaware 2004-05 through 2017-18

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)	**912**

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.

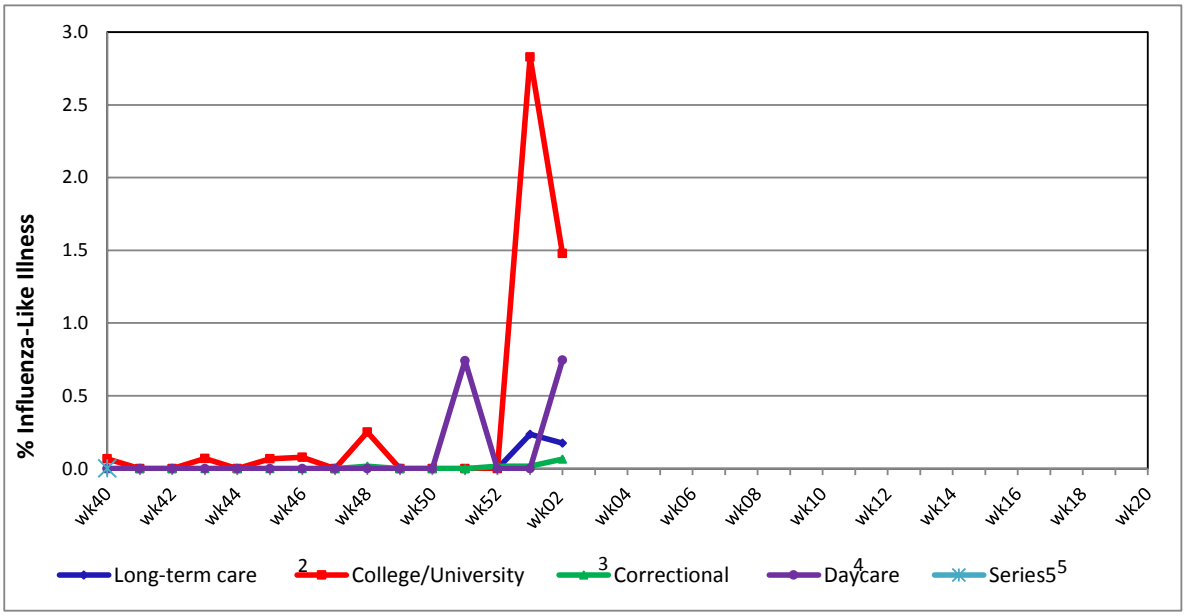
Figure 2. Percentage of visits for influenza-like illness reported by sentinel providers[1] participating in the U.S. Outpatient ILI Surveillance Network (ILINet), Delaware 2017-18



[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 partners[1], 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

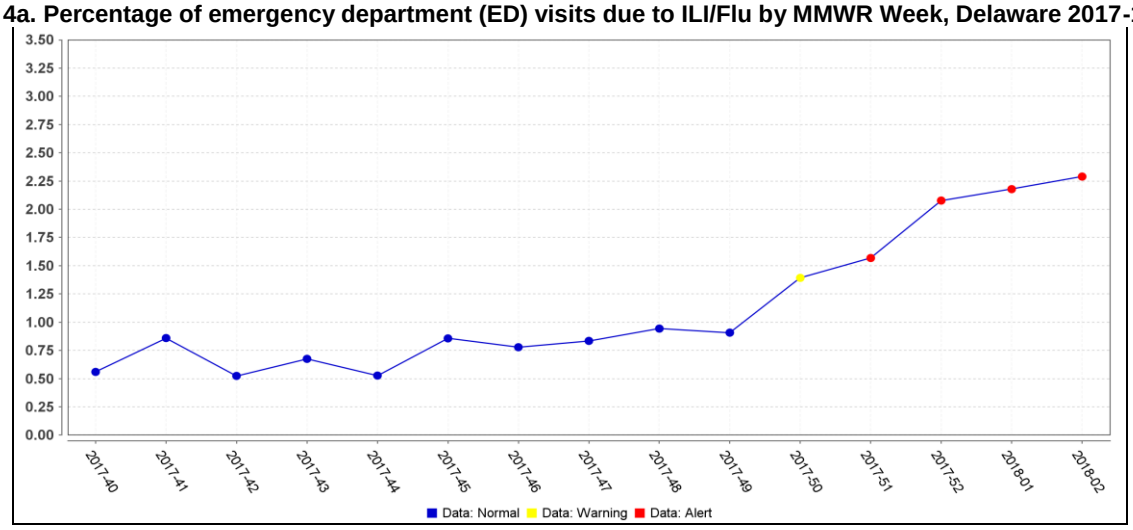
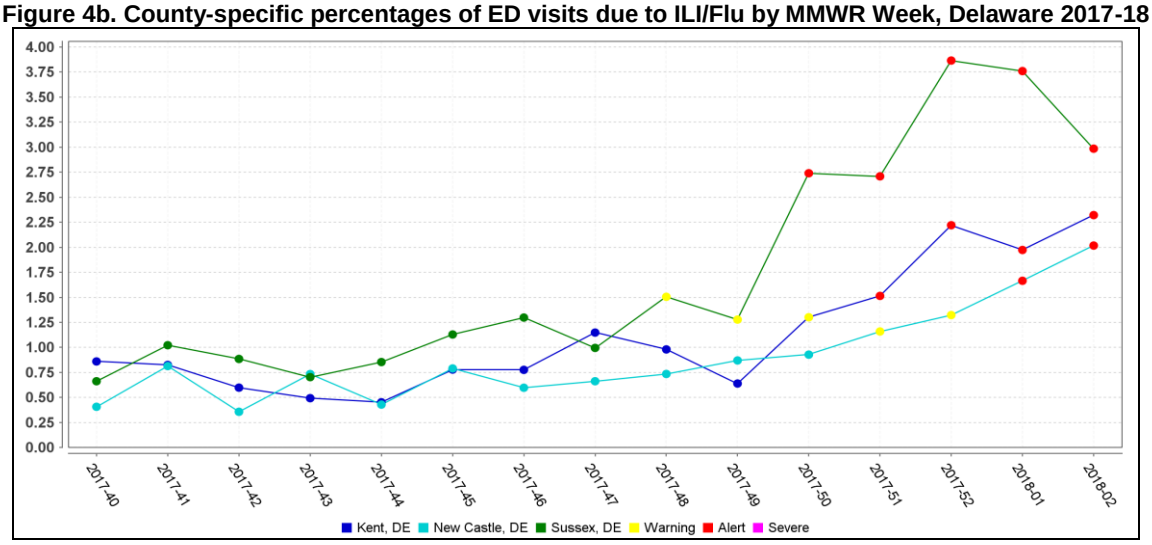


Figure 4b. County-specific percentages of ED visits due to ILI/Flu by MMWR Week, Delaware 2017-18



Summary of International Influenza Activity

Worldwide, influenza A(H3N2) and B viruses accounted for the majority of influenza detections although influenza A(H1N1)pdm09 viruses were predominant in some countries. Influenza activity continued to increase in the temperate zone of the northern hemisphere while in the temperate zone of the southern hemisphere activity was at inter-seasonal levels.

In North America, overall influenza activity continued to increase in the region, with detections of predominantly influenza A(H3N2) viruses.

In the Caribbean and Central American countries, low to no influenza activity was reported.

In Europe, influenza activity increased above baseline levels in most countries in Northern and Southwestern Europe with sharp increases in respiratory illness indicators in some countries. Activity remained low in countries in Eastern Europe. Influenza B virus detections remained frequent and the subtype of the influenza A viruses detected varied depending on the country and the surveillance system (outpatient or inpatient systems).

In Western Asia, increasing influenza activity was reported in Israel and Jordan with predominantly influenza B and A(H1N1)pdm09 virus detections, respectively. In Central Asia, low to no influenza activity was reported. In Southern Asia, increased influenza activity was reported in Iran with detection of all seasonal subtypes. In South East Asia, low levels of influenza activity were reported. In East Asia, influenza activity continued to increase in recent weeks. In both Northern and Southern China, ILI and influenza activity continued to increase, with influenza B Yamagata-lineage viruses predominantly detected followed by influenza A(H3N2) viruses. Increasing detections of influenza B and A(H3N2) viruses were reported in the Republic of Korea.

In Northern Africa, influenza activity was predominantly due to influenza A(H1N1)pdm09 virus detections. Activity increased in Egypt and Morocco; and Tunisia reported sharp increases in activity. In Western Africa, influenza activity continued at lower levels compared to previous weeks. Detections of predominantly influenza A(H1N1)pdm09 viruses were reported from Burkina Faso, Côte d'Ivoire, Ghana and Togo. In Middle Africa, Cameroon reported activity with influenza A and B viruses and the Democratic Republic of Congo reported detections of influenza A(H1N1)pdm09 viruses. In Eastern Africa, sporadic influenza detections were reported in Madagascar, Mozambique, and the United Republic of Tanzania.

In the tropical countries of South America, low to no influenza activity was reported.

In the temperate zone of the Southern Hemisphere, influenza activity decreased overall to inter-seasonal levels.

Reference: World Health Organization (WHO), 2017. Influenza Update number 306 (1/8/18). Retrieved January 12, 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.