



Delaware Weekly Influenza Report MMWR Week 5 (January 28 - February 3, 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 5 (January 28 – February 3, 2018) influenza activity again increased in the United States. The most frequently identified influenza virus subtype reported by public health laboratories during week 5 was influenza A(H3). The percentage of respiratory specimens testing positive for influenza in clinical laboratories remained elevated. **Widespread influenza activity** was reported by 48 states and Puerto Rico. **Regional influenza activity** was reported by Hawaii and Oregon. **Local influenza activity** was reported by the District of Columbia and Guam. **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 5, there were 995 laboratory-confirmed cases of influenza reported among Delaware residents, bringing the total to 2,966 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 3.5% compared with Delaware's 2017-2018 baseline of 2.0%. Nationally, ILI is 7.7% compared with the 2017-2018 national baseline of 2.2%.

Level of Influenza Activity in Delaware, MMWR Week 5:

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	Wk 41	Wk 42	Wk 43	Wk 44	Wk 45	Wk 46	Wk 47	Wk 48	Wk 49	Wk 50	Wk 51	Wk 52	Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	YTD	YTD Total	YTD County %
STATEWIDE	A / 2009 H1N1	0	0	0	1	0	0	0	1	1	1	2	3	8	5	15	16	32	41	126	2,966	
	A / 2012 H3N2	0	0	1	0	1	0	2	1	6	15	9	11	14	23	26	25	42	35	211		
	A / no subtype	0	0	0	4	2	4	7	4	6	17	31	59	81	110	239	247	448	684	1943		
	Co-infection	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	4		
	B / Yamagata	0	0	0	0	0	0	0	0	1	0	3	7	8	8	6	6	4	9	52		
	B / Victoria	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	5	1		
B / no lineage	0	0	0	0	1	0	1	0	2	2	4	18	32	44	71	86	137	222	620			
New Castle County	A / 2009 H1N1	0	0	0	1	0	0	0	1	1	1	0	4	2	4	6	7	18	45	1,118	37.7%	
	A / 2012 H3N2	0	0	1	0	0	0	2	1	5	13	9	9	13	19	19	20	26	25			162
	A / no subtype	0	0	0	1	0	1	3	3	2	7	2	10	16	39	108	97	138	179			606
	Co-infection*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0			1
	B / Yamagata	0	0	0	0	0	0	0	0	1	0	2	6	5	8	5	6	3	8			44
	B / Victoria	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	5			1
B / no lineage	0	0	0	0	1	0	1	0	0	1	1	10	22	16	27	46	55	70	250			
Kent County	A / 2009 H1N1	0	0	0	0	0	0	0	1	0	0	0	2	3	3	8	6	18	15	56	767	25.9%
	A / 2012 H3N2	0	0	0	0	0	0	0	0	0	2	0	0	1	2	0	2	7	5	19		
	A / no subtype	0	0	0	3	1	2	2	1	2	2	8	16	27	26	48	65	153	212	568		
	B / Yamagata	0	0	0	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	0	0	0		
B / no lineage	0	0	0	0	0	0	0	0	0	0	2	1	3	10	12	21	21	54	124			
Sussex County	A / 2009 H1N1	0	0	0	0	0	0	0	0	0	0	1	1	1	0	3	4	7	8	25	1,081	36.5%
	A / 2012 H3N2	0	0	0	0	1	0	0	0	1	0	0	2	0	2	7	3	9	5	30		
	A / no subtype	0	0	0	0	1	1	2	0	2	8	21	33	38	45	83	85	157	293	769		
	A,B Co-infection	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3		
	B / Yamagata	0	0	0	0	0	0	0	0	0	0	1	1	3	0	1	0	1	1	8		
	B / Victoria	0	0	0	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	19	61	98	246			

• - Coinfection: A:H1N1 and a:H3N2

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

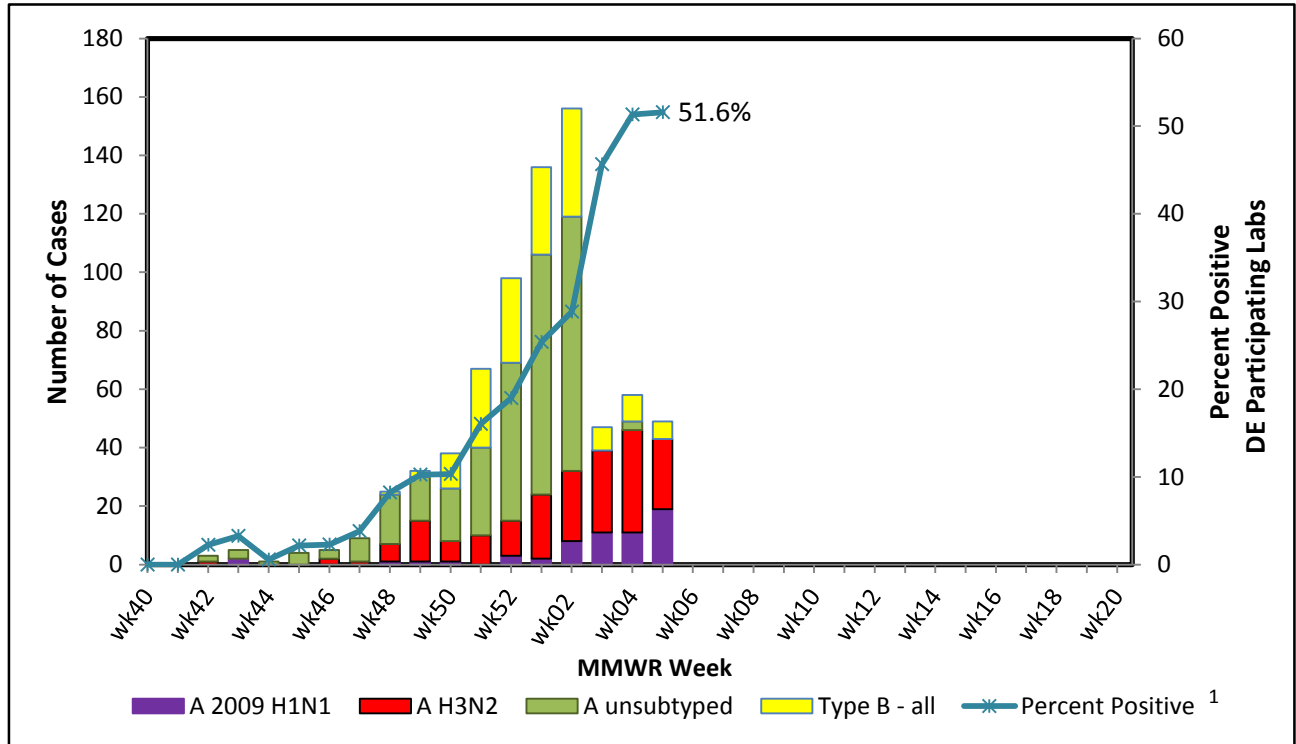
Confirmed Flu Cases by Age Group		Wk 40	Wk 41	Wk 42	Wk 43	Wk 44	Wk 45	Wk 46	Wk 47	Wk 48	Wk 49	Wk 50	Wk 51	Wk 52	Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	YTD	YTD Total	YTD County %
STATEWIDE	0-4 years	0	0	0	0	1	1	0	0	1	4	3	10	15	19	47	58	122	180	461	2,966	
	5-24 years	0	0	0	0	1	0	1	2	2	7	9	19	26	32	79	102	210	385	875		
	25-49 years	0	0	0	3	0	0	2	0	3	5	5	20	34	38	68	83	135	162	558		
	50-64 years	0	0	0	0	0	1	3	2	5	4	15	13	34	36	56	62	96	116	443		
	65+ years	0	0	1	2	2	4	2	5	15	17	36	35	66	107	77	106	152	629			
New Castle County	0-4 years	0	0	0	0	0	1	0	0	2	2	5	7	8	13	25	36	49	148	1,118	37.7%	
	5-24 years	0	0	0	0	0	0	1	1	2	4	3	8	13	15	35	47	69	95			293
	25-49 years	0	0	0	1	0	0	2	0	1	4	0	8	20	12	33	37	51	53			222
	50-64 years	0	0	0	0	0	0	1	2	2	1	6	6	12	18	33	27	35	52			195
	65+ years	0	0	1	1	1	0	2	1	4	11	4	8	9	32	49	41	44	52			260
Kent County	0-4 years	0	0	0	0	0	0	0	0	0	0	0	2	4	4	14	15	48	63	150	767	25.9%
	5-24 years	0	0	0	1	1	0	0	1	0	0	1	6	9	9	15	29	64	115	250		
	25-49 years	0	0	0	1	0	0	0	0	0	1	2	2	3	12	14	20	34	48	138		
	50-64 years	0	0	0	0	0	1	1	0	2	2	3	2	6	7	10	17	25	24	100		
	65+ years	0	0	0	1	0	1	1	1	0	1	4	7	12	9	15	13	28	36	129		
Sussex County	0-4 years	0	0	0	0	1	0	0	0	1	2	1	3	4	7	20	18	38	68	163	1,081	36.5%
	5-24 years	0	0	0	0	0	0	0	0	0	3	5	5	4	8	29	26	77	175	332		
	25-49 years	0	0	0	0	0	0	0	0	2	0	3	10	11	14	21	26	50	61	198		
	50-64 years	0	0	0	0	0	0	1	0	1	1	6	5	16	11	13	18	36	40	148		
	65+ years	0	0	0	0	1	1	1	0	1	3	9	21	14	25	43	23	34	64	240		

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	Wk 41	Wk 42	Wk 43	Wk 44	Wk 45	Wk 46	Wk 47	Wk 48	Wk 49	Wk 50	Wk 51	Wk 52	Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	YTD	YTD Total	YTD County %	
STATEWIDE	0-4 years	0	0	0	0	0	0	0	0	0	0	1	1	1	1	3	2	8	9	26	513		
	5-24 years	0	0	0	0	0	0	0	0	0	0	1	1	0	2	1	2	6	6	7			26
	25-49 years	0	0	0	0	0	0	0	0	0	0	2	0	1	3	2	10	6	6	8			38
	50-64 years	0	0	0	0	0	0	0	1	3	1	8	2	9	11	16	11	21	19	102			
	65+ years	0	0	1	2	1	1	1	2	3	11	9	10	16	36	59	41	57	71	321			
New Castle County	0-4 years	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	2	7	4	17	289	56.3%	
	5-24 years	0	0	0	0	0	0	0	0	0	0	1	0	0	2	1	1	5	3	6			19
	25-49 years	0	0	0	0	0	0	0	0	0	2	0	1	3	0	6	4	5	3	24			
	50-64 years	0	0	0	0	0	0	0	1	2	0	3	2	6	8	13	9	8	13	65			
	65+ years	0	0	1	1	1	0	1	1	3	10	3	4	4	23	32	23	24	33	164			
Kent County	0-4 years	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	5	8	115	22.4%	
	5-24 years	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	1	5			
	25-49 years	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	1	0	4	8			
	50-64 years	0	0	0	0	0	0	0	0	1	1	2	0	0	2	3	1	8	3	21			
	65+ years	0	0	0	1	0	1	0	1	0	0	2	2	7	4	10	5	18	22	73			
Sussex County	0-4 years	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	109	21.2%	
	5-24 years	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	2			
	25-49 years	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	1	1	6			
	50-64 years	0	0	0	0	0	0	0	0	0	0	3	0	3	1	0	1	5	3	16			
	65+ years	0	0	0	0	0	0	0	0	0	1	4	4	5	9	17	13	15	16	84			

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

Influenza-Related Deaths	Wk 40	Wk 41	Wk 42	Wk 43	Wk 44	Wk 45	Wk 46	Wk 47	Wk 48	Wk 49	Wk 50	Wk 51	Wk 52	Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	YTD
	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	3	6

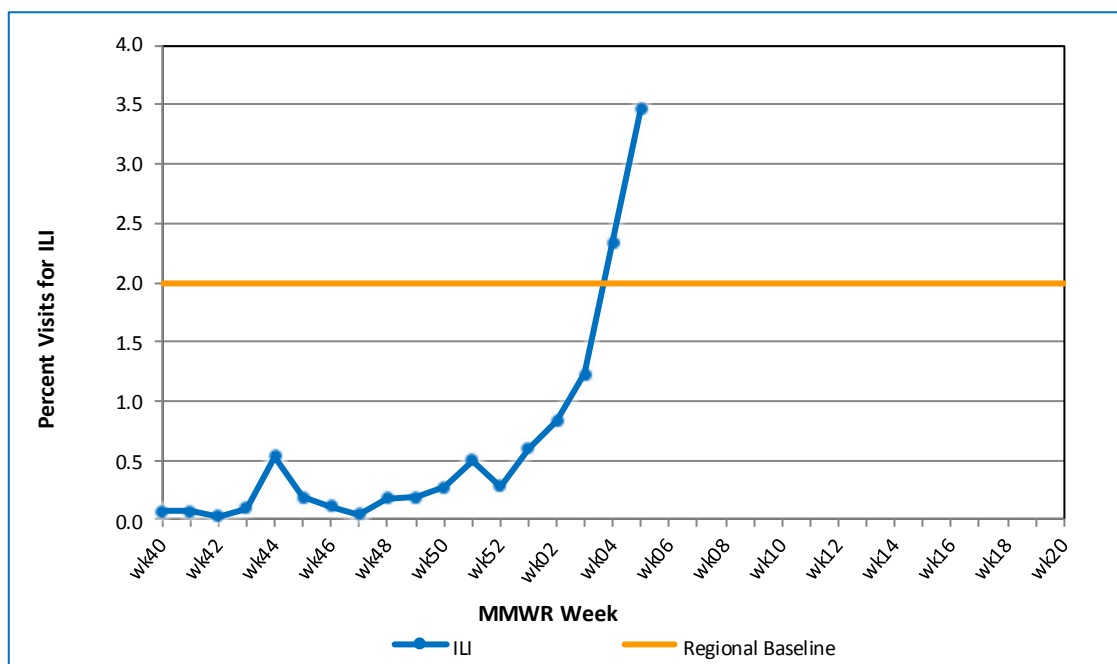
Table 4. Annual number of influenza cases reported by flu season, Delaware 2004-05 through 2017-18

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)	2,966

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.

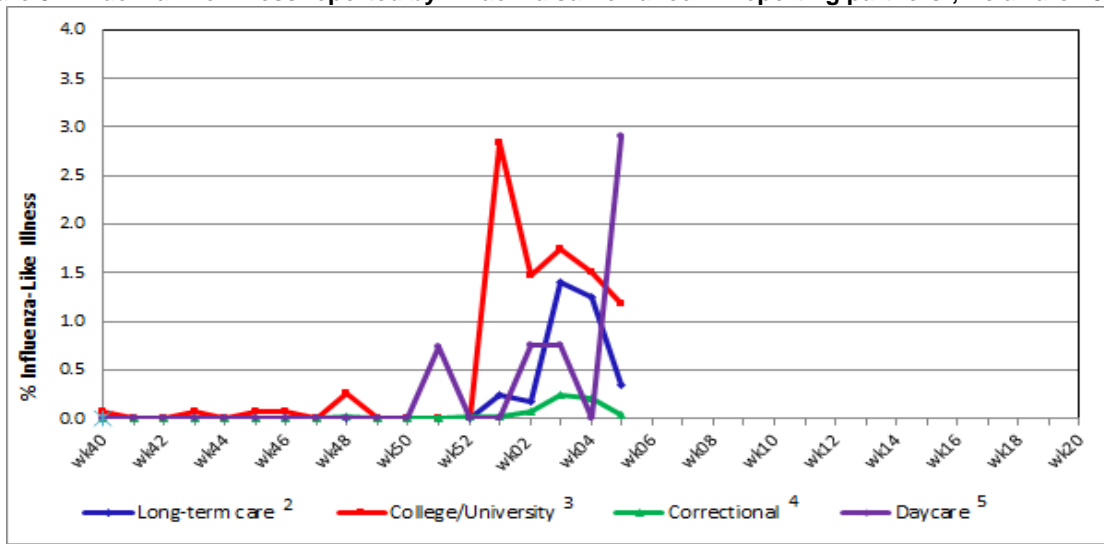
Figure 2. Percentage of visits for influenza-like illness reported by sentinel providers¹ participating in the U.S. Outpatient ILI Surveillance Network (ILINet), Delaware 2017-18



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. 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

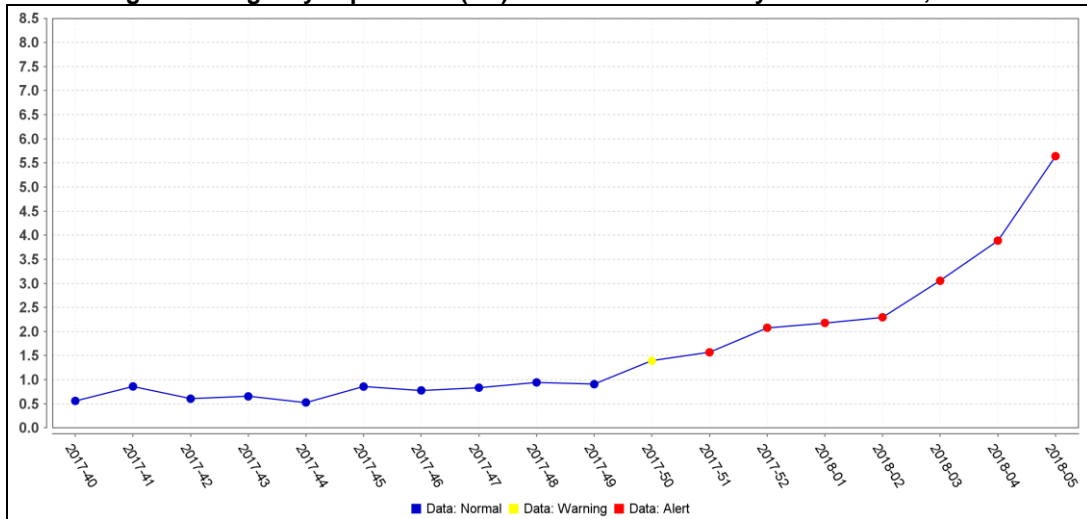
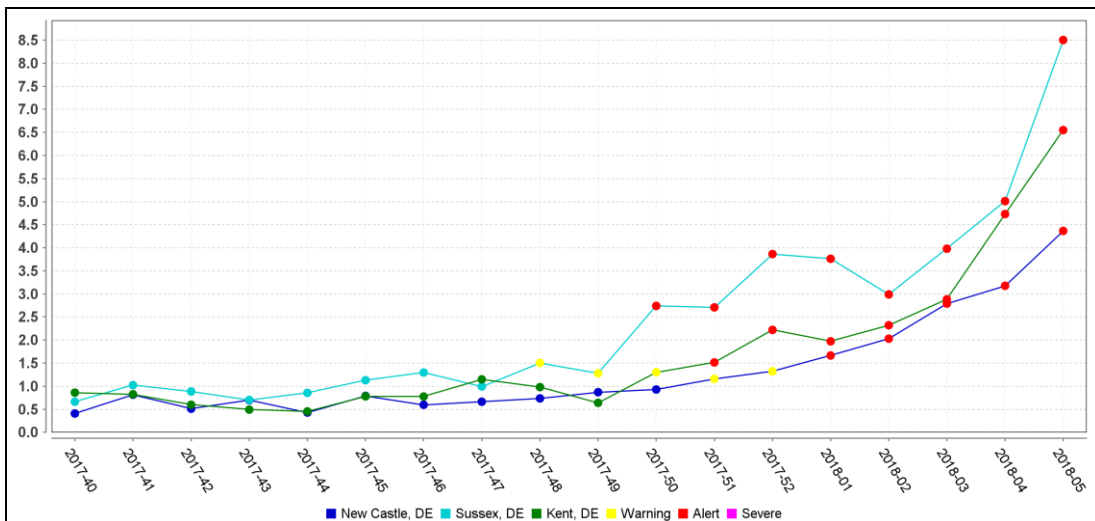


Figure 4b. County-specific percentages of ED visits due to ILI/Flu by MMWR Week, Delaware 2017-18



Summary of International Influenza Activity

Worldwide, influenza A accounted still for the majority of influenza detections but influenza B (mostly from the Yamagata lineage) increased in recent weeks.

Up to now, the majority of countries which are in the influenza season, reported influenza like illness reaching moderate levels in comparison with previous years, with few reaching levels exceeding those of previous years. Some countries however have reported levels of hospitalization and ICU admissions reaching or exceeding peak levels of previous influenza seasons. WHO recommends countries with current influenza activity or entering their season to adopt necessary measures for ensuring appropriate case management, compliance with infection control measures and seasonal influenza vaccination for high risk groups.

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.

In North America, overall influenza activity remained high, with detections of predominantly influenza A(H3N2) viruses.

In the Caribbean and Central American countries, respiratory illness indicators and influenza activity remained low in general.

In Europe, influenza activity remained high in Northern and Southwestern Europe, and peaked in few countries but started to increase in Eastern Europe. Influenza B remained the virus most frequently detected and the subtype of the influenza A viruses detected varied depending on the country and the surveillance system.

In Western Asia, increasing influenza activity was reported in some countries, with influenza A(H1N1)pdm09 and B viruses present in the region. In Central Asia, influenza activity increased slightly, although it remained low across the region. In East Asia, high levels of illness indicators and influenza activity were reported in most of the countries. Influenza A(H1N1)pdm09 and influenza B-Yamagata lineage viruses were predominantly detected. In South East Asia, low levels of influenza activity were reported. In Southern Asia, influenza activity continued to be high in Iran and Pakistan, with detection of all seasonal influenza subtypes.

In Northern Africa, influenza detections remained high in Algeria, Egypt and Morocco, while decreased in Tunisia. Influenza A(H1N1)pdm09 virus and influenza B were predominantly detected in the region. In Western Africa, little to no influenza activity was reported across the region. In Middle Africa, there were no updates available for this reporting period. In Eastern Africa, increased influenza activity was reported in Madagascar.

In the tropical countries of South America, influenza activity and respiratory illness indicators were generally low, with exception of Ecuador.

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

Reference: World Health Organization (WHO), 2017. Influenza Update number 308 (2/5/18). Retrieved February 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.