



Delaware Weekly Influenza Report

MMWR Week 16 (April 16 - 22, 2017)

Delaware Division of Public Health

National Influenza Synopsis 2016-2017:

National data are updated Friday of each week. Please visit <http://www.cdc.gov/flu/weekly/> for the most current information. During MMWR Week 16 (April 16 - 22, 2017) influenza activity decreased in the United States. The most frequently identified influenza virus type reported by public health laboratories during week 16 was influenza B. The percentage of respiratory specimens testing positive for influenza in clinical laboratories decreased. **Widespread influenza activity** was reported by seven states (Alaska, Connecticut, Delaware, Maine, Massachusetts, New Hampshire and New York). **Regional influenza activity** was reported by Guam, Puerto Rico and 11 states (Arizona, Colorado, Iowa, Kentucky, New Jersey, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina and Texas). **Local influenza activity** was reported by the District of Columbia and 19 states (Arkansas, California, Florida, Kansas, Louisiana, Maryland, Michigan, Minnesota, Missouri, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Tennessee, Washington, West Virginia and Wisconsin). **Sporadic influenza activity** was reported by 13 states (Alabama, Georgia, Hawaii, Idaho, Illinois, Indiana, Mississippi, Oregon, South Dakota, Utah, Vermont, Virginia and Wyoming). **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 2016-2017:

During MMWR Week 16 there were 59 laboratory-confirmed cases of influenza reported among Delaware residents with a total of 4,499 for the 2016-2017 season. Reports of influenza-like illness (ILI) received from participating providers, facilities and institutions in Delaware show ILI is 0.23% (Delaware's 2016-2017 baseline is 2.2%). Nationally, ILI is 1.8%, below the national baseline of 2.2%.

Level of Influenza Activity in Delaware, MMWR Week 16:

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 2016-2017 Region 3 (DE, DC, MD, PA, VA and WV) baseline = 2.2%.

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 Delaware and other states with ≤ four counties.

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Table 1a. Influenza positive¹ cases reported² statewide and county, by subtype (A) / lineage (B)³ and MMWR Week, Delaware 2016-17

Confirmed Flu Cases by Subtype / Lineage		Wk 40-52	Wk 01	Wk 02	Wk 03	Wk 04	Wk 05	Wk 06	Wk 07	Wk 08	Wk 09	Wk 10	Wk 11	Wk 12	Wk 13	Wk 14	Wk 15	Wk 16	YTD	YTD Total	YTD County %
STATEWIDE	A / 2009 H1N1	1	1	0	1	0	0	2	1	0	0	0	0	0	0	0	0	0	6	4,499	
	A / 2012 H3N2	89	27	42	42	52	69	101	72	92	37	32	27	15	17	12	5	0	731		
	A / no subtype	104	45	57	71	84	159	250	286	399	250	204	160	172	139	54	27	6	2467		
	A,B co-infection	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	3		
	B / Yamagata	1	1	3	5	3	5	4	7	10	9	10	9	13	13	10	9	6	118		
	B / Victoria	0	2	0	0	1	0	3	1	0	3	2	1	0	1	3	1	4	22		
B / no lineage	5	9	3	9	12	14	38	52	86	95	88	127	153	212	134	73	42	1152			
New Castle County	A / 2009 H1N1	0	1	0	1	0	0	2	1	0	0	0	0	0	0	0	0	0	5	2,141	47.6%
	A / 2012 H3N2	69	21	34	37	39	52	85	54	72	23	18	18	5	13	8	3	0	551		
	A / no subtype	22	20	23	28	47	93	135	139	156	105	73	55	62	52	32	10	5	1057		
	A,B co-infection	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2		
	B / Yamagata	1	0	1	3	3	3	4	4	4	4	2	6	5	4	5	5	3	57		
	B / Victoria	0	2	0	0	1	0	3	0	0	0	0	0	0	1	2	0	2	11		
B / no lineage	3	0	0	6	9	8	22	18	26	30	27	43	49	95	59	39	24	458			
Kent County	A / 2009 H1N1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,374	30.5%
	A / 2012 H3N2	11	0	1	2	4	6	4	4	3	2	6	0	3	2	2	1	0	51		
	A / no subtype	56	15	27	23	21	46	79	96	137	98	91	61	61	52	11	9	0	883		
	A,B co-infection	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1		
	B / Yamagata	0	0	1	0	0	0	0	0	2	2	3	1	2	5	1	2	0	19		
	B / Victoria	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2		
B / no lineage	2	8	3	2	1	1	11	18	39	30	37	58	65	76	40	19	8	418			
Sussex County	A / 2009 H1N1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	984	21.9%
	A / 2012 H3N2	9	6	7	3	9	11	12	14	17	12	8	9	7	2	2	1	0	129		
	A / no subtype	26	10	7	20	16	20	36	51	106	47	40	44	49	35	11	8	1	527		
	B / Yamagata	0	1	1	2	0	2	0	3	4	3	5	2	6	4	4	2	3	42		
	B / Victoria	0	0	0	0	0	0	0	1	0	3	2	0	0	0	1	1	1	9		
	B / no lineage	0	1	0	1	2	5	5	16	21	35	24	26	39	41	35	15	10	276		

Table 1b. Influenza positive¹ cases reported² statewide and county, by age group and MMWR Week, Delaware 2016-17

Confirmed Flu Cases by Age Group		Wk 40-52	Wk 01	Wk 02	Wk 03	Wk 04	Wk 05	Wk 06	Wk 07	Wk 08	Wk 09	Wk 10	Wk 11	Wk 12	Wk 13	Wk 14	Wk 15	Wk 16	YTD	YTD Total	YTD County %
STATEWIDE	0-4 years	27	15	24	24	26	39	68	65	119	74	67	59	62	61	39	21	17	807	4,499	
	5-24 years	41	23	35	42	59	88	202	202	204	138	132	113	129	146	63	30	9	1,656		
	25-49 years	52	13	13	25	18	44	56	61	94	60	50	58	70	58	31	16	12	731		
	50-64 years	34	14	12	16	21	27	29	42	67	54	37	44	37	45	24	17	10	530		
	65+ years	46	20	21	21	28	49	43	49	103	69	50	50	55	73	56	31	11	775		
New Castle County	0-4 years	7	9	12	10	20	27	54	41	67	37	30	30	21	30	28	11	13	447	2,141	47.6%
	5-24 years	20	10	19	26	36	61	123	103	88	62	33	41	45	67	33	16	6	789		
	25-49 years	26	8	8	16	10	20	35	30	34	19	20	22	18	18	14	6	3	307		
	50-64 years	15	5	7	10	14	23	19	17	26	18	20	11	11	22	10	9	6	243		
	65+ years	27	12	12	13	19	25	20	25	43	26	17	18	26	29	21	15	7	355		
Kent County	0-4 years	18	6	9	8	4	9	7	14	30	29	24	22	26	21	9	6	2	244	1,374	30.5%
	5-24 years	17	8	12	6	12	19	53	63	62	42	66	46	46	50	15	8	1	526		
	25-49 years	16	2	3	4	5	11	14	17	33	25	19	21	30	26	11	6	5	248		
	50-64 years	9	3	4	4	3	3	4	10	24	15	10	20	12	15	4	5	1	146		
	65+ years	9	4	4	5	2	11	16	14	32	22	18	12	17	23	15	6	0	210		
Sussex County	0-4 years	2	0	3	6	2	3	7	10	22	8	13	7	15	10	2	4	2	116	984	21.9%
	5-24 years	4	5	4	10	11	8	26	36	54	34	33	26	38	29	15	6	2	341		
	25-49 years	10	3	2	5	3	13	7	14	27	16	11	15	22	14	6	4	4	176		
	50-64 years	10	6	1	2	4	1	6	15	17	21	7	13	14	8	10	3	3	141		
	65+ years	10	4	5	3	7	13	7	10	28	21	15	20	12	21	20	10	4	210		

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, by MMWR Week, Delaware 2016-17*

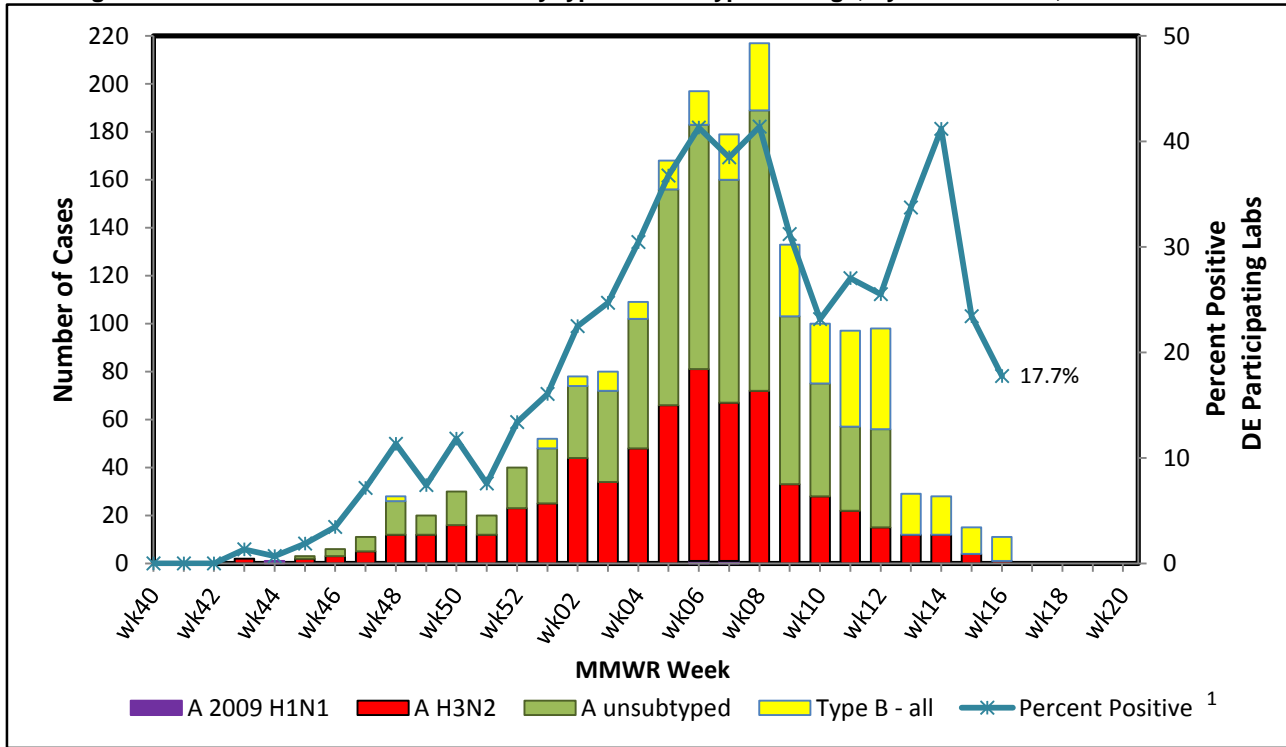


Table 2. Influenza-related hospitalizations statewide and county, by age group and MMWR Week, Delaware 2016-17

Hospitalized Flu Cases by Age Group	Wk 40-52	Wk 01	Wk 02	Wk 03	Wk 04	Wk 05	Wk 06	Wk 07	Wk 08	Wk 09	Wk 10	Wk 11	Wk 12	Wk 13	Wk 14	Wk 15	Wk 16	YTD	YTD Total	YTD County %	
STATEWIDE	0-4 years	2	2	2	1	1	6	6	7	0	1	0	1	3	0	1	0	35	757		
	5-24 years	3	1	2	4	3	6	11	11	7	6	1	3	1	4	3	0	1			67
	25-49 years	8	2	2	4	3	6	7	4	6	4	1	6	7	6	4	1	0			71
	50-64 years	9	5	3	4	5	10	7	8	17	19	6	13	8	14	6	6	3			143
	65+ years	33	13	17	11	20	23	27	25	57	35	32	28	30	32	32	22	4			441
New Castle County	0-4 years	2	2	1	1	0	1	6	5	4	0	0	0	0	3	0	1	0	26	448	59.2%
	5-24 years	1	1	2	3	3	5	11	8	6	2	0	3	1	2	3	0	1	52		
	25-49 years	6	1	2	3	2	4	5	2	4	0	0	5	4	4	4	1	0	47		
	50-64 years	3	4	2	3	4	9	6	3	11	9	4	7	5	10	4	4	2	90		
	65+ years	21	6	10	8	16	13	11	13	31	16	11	17	16	19	14	9	2	233		
Kent County	0-4 years	0	0	1	1	1	0	0	1	3	0	1	0	0	0	0	0	0	8	185	24.4%
	5-24 years	1	0	0	0	0	1	0	2	1	3	0	0	0	2	0	0	0	10		
	25-49 years	1	0	0	1	1	1	2	2	1	2	1	1	2	2	0	0	0	17		
	50-64 years	4	1	1	1	1	1	0	2	1	4	2	3	3	2	1	2	0	29		
	65+ years	8	4	4	3	1	6	12	9	16	9	12	8	8	10	7	4	0	121		
Sussex County	0-4 years	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	124	16.4%
	5-24 years	1	0	0	1	0	0	0	1	0	1	1	0	0	0	0	0	0	5		
	25-49 years	1	1	0	0	0	1	0	0	1	2	0	0	1	0	0	0	0	7		
	50-64 years	2	0	0	0	0	0	1	3	5	6	0	3	0	2	1	0	1	24		
	65+ years	4	3	3	0	3	4	4	3	10	10	9	3	6	3	11	9	2	87		

Table 3. Influenza-related deaths by MMWR Week, Delaware 2016-17

Influenza-Related Deaths	Wk 40-52	Wk 01	Wk 02	Wk 03	Wk 04	Wk 05	Wk 06	Wk 07	Wk 08	Wk 09	Wk 10	Wk 11	Wk 12	Wk 13	Wk 14	Wk 15	Wk 16	YTD
	1	0	1	0	1	0	1	2	0	2	2	1	0	3	1	0	0	15

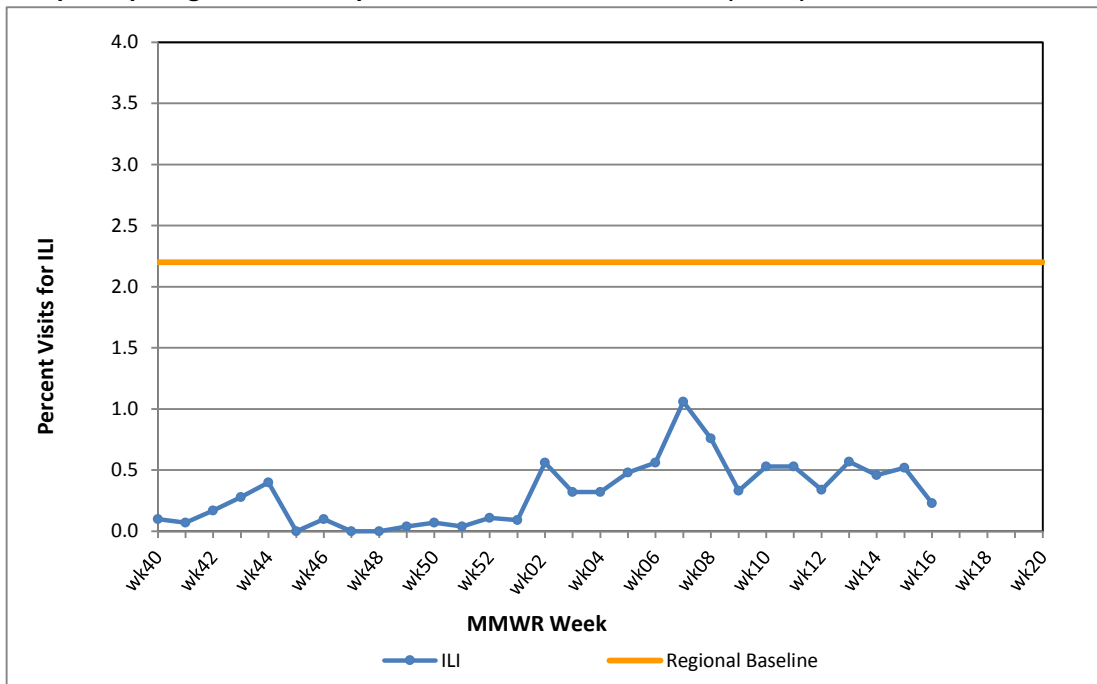
Table 4. Numbers of influenza cases reported by flu season, Delaware 2004-05 through 2016-17

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	2,251
2016 – 2017 (YTD)	4,499

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.

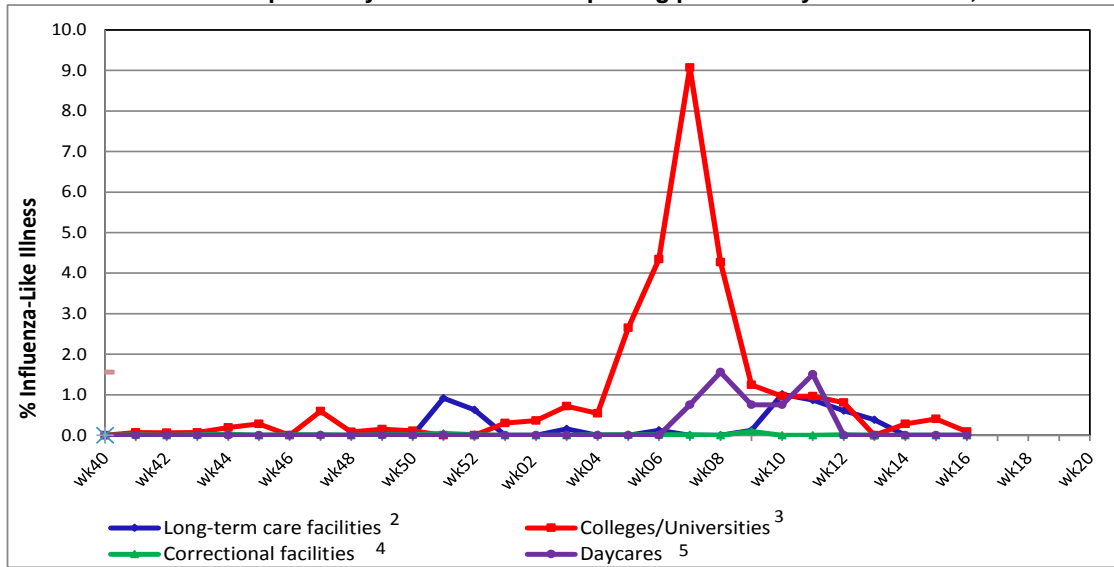
Figure 2. Percentage of visits for influenza-like illness reported by sentinel providers¹ participating in CDC’s Outpatient ILI Surveillance Network (ILINet), Delaware 2016-17



¹ Twelve of 18 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 ILI surveillance reporting partners¹ by MMWR Week, Delaware 2016-17



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; Three 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 2016-17

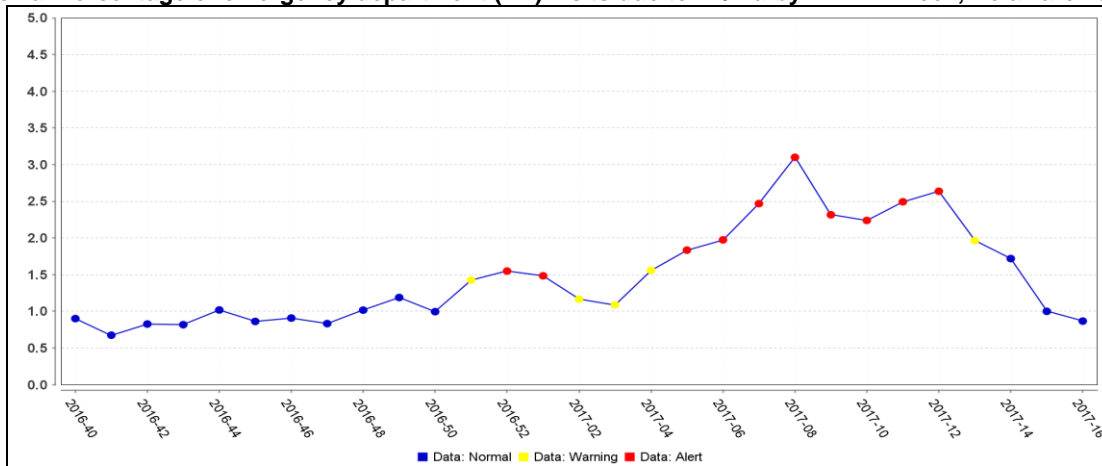
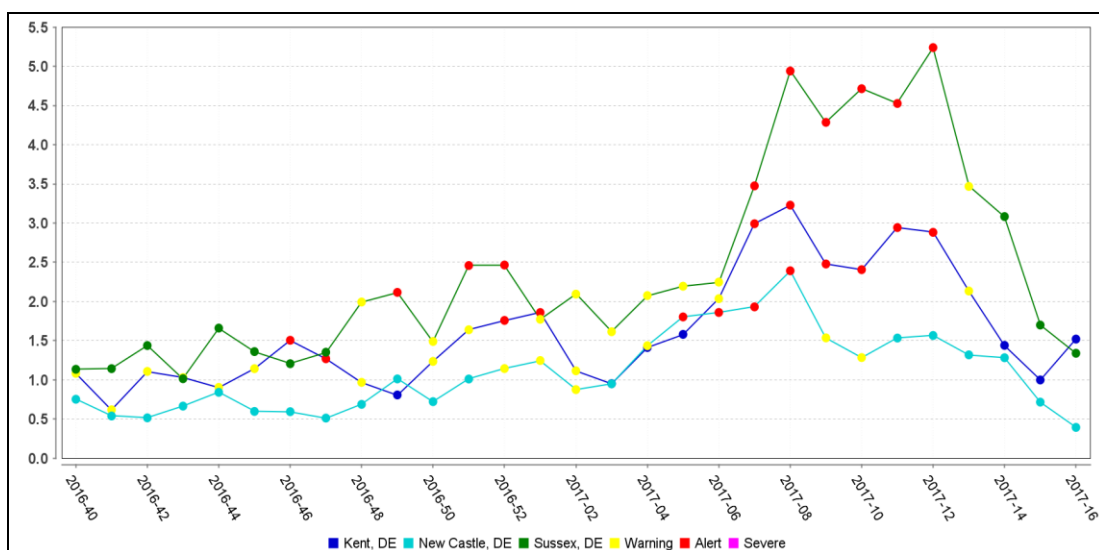


Figure 4b. County-specific percentages of ED visits due to ILI/Flu by MMWR Week, Delaware 2016-17



Summary of International Influenza Activity

Influenza activity in the temperate zone of the northern hemisphere continued to decrease. Influenza activity remained low in the temperate zone of the southern hemisphere. Worldwide, influenza A(H3N2) and B viruses were predominant, with an increased proportion of influenza B viruses detected in recent weeks.

In North America, influenza activity decreased slightly in Canada and the United States; influenza A(H3N2) viruses predominated with slight increases in influenza B virus detections. In Mexico, influenza activity decreased with all seasonal influenza subtypes detected.

In the Caribbean and Central America countries, respiratory virus activity remained low. In tropical South America, influenza and other respiratory virus activities remained low. Respiratory syncytial virus (RSV) activity remained elevated in Colombia.

In Europe, influenza activity continued to decrease to low levels, with detections of predominantly influenza B viruses in Northern and Eastern Europe. Influenza-like illness (ILI) and severe acute respiratory infection (SARI) indicators were generally low or below baseline.

In Central Asia, ILI and SARI activities decreased but an update on influenza virus detections was not available. In Western Asia, influenza activity continued to decrease with influenza B viruses predominant. In East Asia, influenza activity continued to be reported with all seasonal influenza subtypes detected. In Southern Asia, influenza activity continued to be reported although it appeared to be decreasing. In South East Asia, influenza activity remained low.

In Northern Africa, low influenza activity was reported in Tunisia, with influenza A(H3N2) and B viruses predominant. In East and West Africa, low influenza activity was reported in recent weeks, with influenza A(H1N1)pdm09, A(H3N2) and B viruses co-circulating.

In the temperate zone of the Southern Hemisphere, influenza activity was at inter-seasonal levels. In Chile, ILI activity increased to seasonal threshold in recent weeks, consistent with past seasonal trends.

Reference: World Health Organization (WHO), 2017. Influenza update number 287 (4/17/17). Retrieved April 21 2017 from http://www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/. Reports are updated biweekly

NOTE: The 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.