Delaware Weekly Influenza Report
MMWR Week 49 (December 4 – 10, 2016)
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 49 (December 4 - 10, 2016) influenza activity increased slightly in the United States. The most frequently identified influenza virus subtype reported by public health laboratories during week 49 was influenza A (H3). The percentage of respiratory specimens testing positive for influenza in clinical laboratories increased slightly. For geographic spread: **Widespread influenza activity** was reported by Puerto Rico. **Regional influenza activity** was reported by Guam, the U.S. Virgin Islands, and seven states (Indiana, Massachusetts, New Hampshire, New York, North Carolina, Oklahoma and Washington). **Local influenza activity** was reported by the District of Columbia and 22 states (Alabama, Arizona, Colorado, Connecticut, Delaware, Hawaii, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Nebraska, Nevada, Ohio, Oregon, Pennsylvania, South Carolina, Tennessee, Texas, Utah, Virginia and Wyoming). **Sporadic influenza activity** was reported by 20 states (Alaska, Arkansas, California, Florida, Georgia, Idaho, Illinois, Iowa, Kansas, Maine, Maryland, Missouri, Montana, New Jersey, New Mexico, North Dakota, South Dakota, Vermont, West Virginia and Wisconsin). **No activity** was reported by Rhode Island. Both national and state data are provisional and subject to change as additional reports are received.

Delaware Influenza Surveillance 2016-2017:

During MMWR Week 49 there were 19 laboratory-confirmed cases of influenza reported among Delaware residents. Reports of influenza-like illness (ILI) received from participating providers, facilities and institutions in Delaware show ILI is 0.0% (Delaware's 2016-2017 baseline is 2.2%). Nationally, ILI is 1.8% (national baseline is 2.2%).

Level of Influenza Activity in Delaware, MMWR Week 49:

Local	Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in a single region of 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] 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 states with ≤ four counties.

In this report: **page**

Table 1a. Influenza positive[1] cases reported[2] statewide and county, by subtype (A) / lineage (B)[3] and MMWR week, Delaware 2016-17

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	YTD	YTD Total	YTD County %
STATEWIDE	A / 2009 H1N1	0	0	0	0	1	0	0	0	0	0	**1**	**63**	
	A / 2012 H3N2	0	0	0	2	0	2	3	6	17	11	**41**		
	A / no subtype	0	0	1	1	0	0	3	2	5	8	**20**		
	B / Yamagata	0	0	0	0	0	0	0	0	1	0	**1**		
	B / Victoria	0	0	0	0	0	0	0	0	0	0	**0**		
	B / no lineage	0	0	0	0	0	0	0	0	0	0	**0**		
New Castle County	A / 2009 H1N1	0	0	0	0	0	0	0	0	0	0	**0**	**43**	**68.3%**
	A / 2012 H3N2	0	0	0	2	0	2	2	6	15	10	**37**		
	A / no subtype	0	0	0	0	0	0	1	1	1	2	**5**		
	B / Yamagata	0	0	0	0	0	0	0	0	1	0	**1**		
	B / Victoria	0	0	0	0	0	0	0	0	0	0	**0**		
	B / no lineage	0	0	0	0	0	0	0	0	0	0	**0**		
Kent County	A / 2009 H1N1	0	0	0	0	0	0	0	0	0	0	**0**	**17**	**27.0%**
	A / 2012 H3N2	0	0	0	0	0	0	1	0	2	0	**3**		
	A / no subtype	0	0	1	1	0	0	1	1	4	6	**14**		
	B / Yamagata	0	0	0	0	0	0	0	0	0	0	**0**		
	B / Victoria	0	0	0	0	0	0	0	0	0	0	**0**		
	B / no lineage	0	0	0	0	0	0	0	0	0	0	**0**		
Sussex County	A / 2009 H1N1	0	0	0	0	1	0	0	0	0	0	**1**	**3**	**4.8%**
	A / 2012 H3N2	0	0	0	0	0	0	0	0	0	1	**1**		
	A / no subtype	0	0	0	0	0	0	1	0	0	0	**1**		
	B / Yamagata	0	0	0	0	0	0	0	0	0	0	**0**		
	B / Victoria	0	0	0	0	0	0	0	0	0	0	**0**		
	B / no lineage	0	0	0	0	0	0	0	0	0	0	**0**		

Table 1b. Influenza positive[1] cases reported[2] statewide and county, by age group and MMWR week, Delaware 2016-17

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	YTD	YTD Total	YTD County %
STATEWIDE	0-4 years	0	0	0	0	1	0	0	0	0	3	**4**	**63**	
	5-24 years	0	0	0	0	0	1	2	2	4	6	**15**		
	25-49 years	0	0	1	1	0	0	2	0	8	5	**17**		
	50-64 years	0	0	0	1	0	0	2	2	2	2	**9**		
	65+ years	0	0	0	1	0	1	0	4	9	3	**18**		
New Castle County	0-4 years	0	0	0	0	0	0	0	0	0	1	**1**	**43**	**68.3%**
	5-24 years	0	0	0	0	0	1	1	2	2	2	**8**		
	25-49 years	0	0	0	0	0	0	1	0	6	4	**11**		
	50-64 years	0	0	0	1	0	0	1	1	1	2	**6**		
	65+ years	0	0	0	1	0	1	0	4	8	3	**17**		
Kent County	0-4 years	0	0	0	0	0	0	0	0	0	2	**2**	**17**	**27.0%**
	5-24 years	0	0	0	0	0	0	1	0	2	3	**6**		
	25-49 years	0	0	1	1	0	0	0	0	2	1	**5**		
	50-64 years	0	0	0	0	0	0	1	1	1	0	**3**		
	65+ years	0	0	0	0	0	0	0	0	1	0	**1**		
Sussex County	0-4 years	0	0	0	0	1	0	0	0	0	0	**1**	**3**	**4.8%**
	5-24 years	0	0	0	0	0	0	0	0	0	1	**1**		
	25-49 years	0	0	0	0	0	0	1	0	0	0	**1**		
	50-64 years	0	0	0	0	0	0	0	0	0	0	**0**		
	65+ years	0	0	0	0	0	0	0	0	0	0	**0**		

[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 49 = December 4 - 10, 2016

Figure 1. Confirmed cases[1] of influenza by type and subtype / lineage, by MMWR week, Delaware 2016-17*

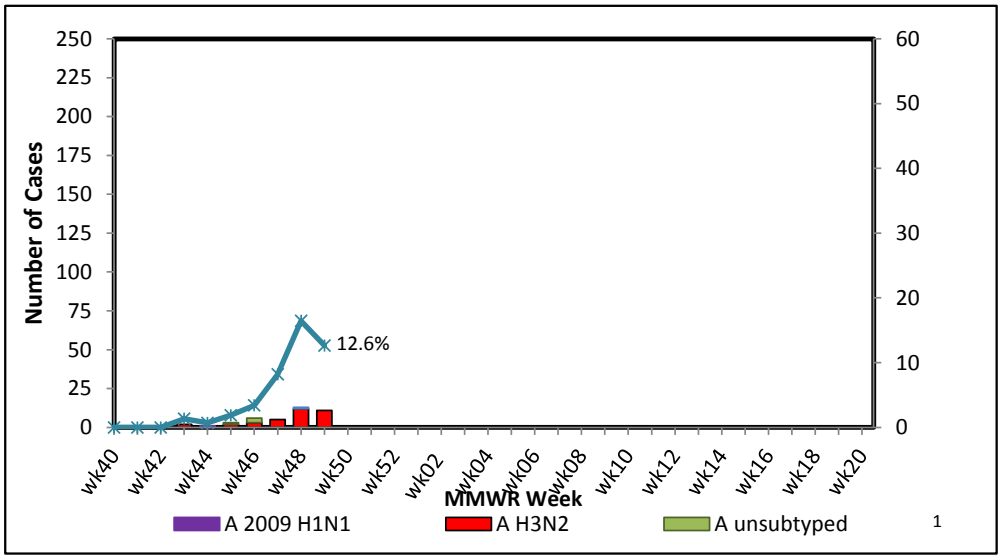


Table 2. Influenza-related hospitalizations statewide and county, by age group and MMWR week, Delaware 2016-17

Hospitalized Flu Cases by Age Group		Week 40	Week 41	Week 42	Week 43	Week 44	Week 45	Week 46	Week 47	Week 48	Week 49	YTD	YTD Total	YTD County %
STATEWIDE	0-4 years	0	0	0	0	0	0	0	0	0	0	**0**	**20**	
	5-24 years	0	0	0	0	0	0	0	0	0	2	**2**		
	25-49 years	0	0	0	0	0	0	1	0	2	1	**4**		
	50-64 years	0	0	0	0	0	0	0	0	0	0	**0**		
	65+ years	0	0	0	1	0	1	0	3	8	1	**14**		
New Castle County	0-4 years	0	0	0	0	0	0	0	0	0	0	**0**	**16**	**80.0%**
	5-24 years	0	0	0	0	0	0	0	0	0	1	**1**		
	25-49 years	0	0	0	0	0	0	0	0	2	1	**3**		
	50-64 years	0	0	0	0	0	0	0	0	0	0	**0**		
	65+ years	0	0	0	1	0	1	0	3	7	0	**12**		
Kent County	0-4 years	0	0	0	0	0	0	0	0	0	0	**0**	**2**	**10.0%**
	5-24 years	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**		
	50-64 years	0	0	0	0	0	0	0	0	0	0	**0**		
	65+ years	0	0	0	0	0	0	0	0	1	0	**1**		
Sussex County	0-4 years	0	0	0	0	0	0	0	0	0	0	**0**	**2**	**10.0%**
	5-24 years	0	0	0	0	0	0	0	0	0	1	**1**		
	25-49 years	0	0	0	0	0	0	1	0	0	0	**1**		
	50-64 years	0	0	0	0	0	0	0	0	0	0	**0**		
	65+ years	0	0	0	0	0	0	0	0	0	0	**0**		

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

Influenza-Related Deaths	Week 40	Week 41	Week 42	Week 43	Week 44	Week 45	Week 46	Week 47	Week 48	Week 49	YTD
	0	0	0	0	0	0	0	0	0	1	**1**

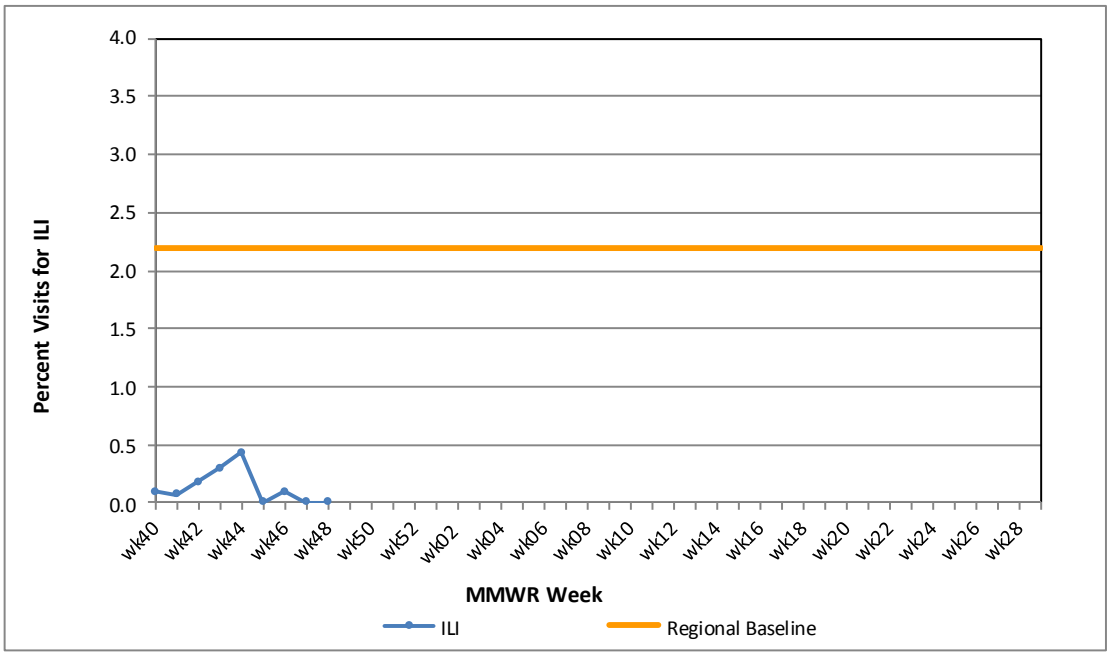
Table 4. Numbers of influenza cases reported by flu season, Delaware 2004-05 through 2016-17

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)	**63**

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.

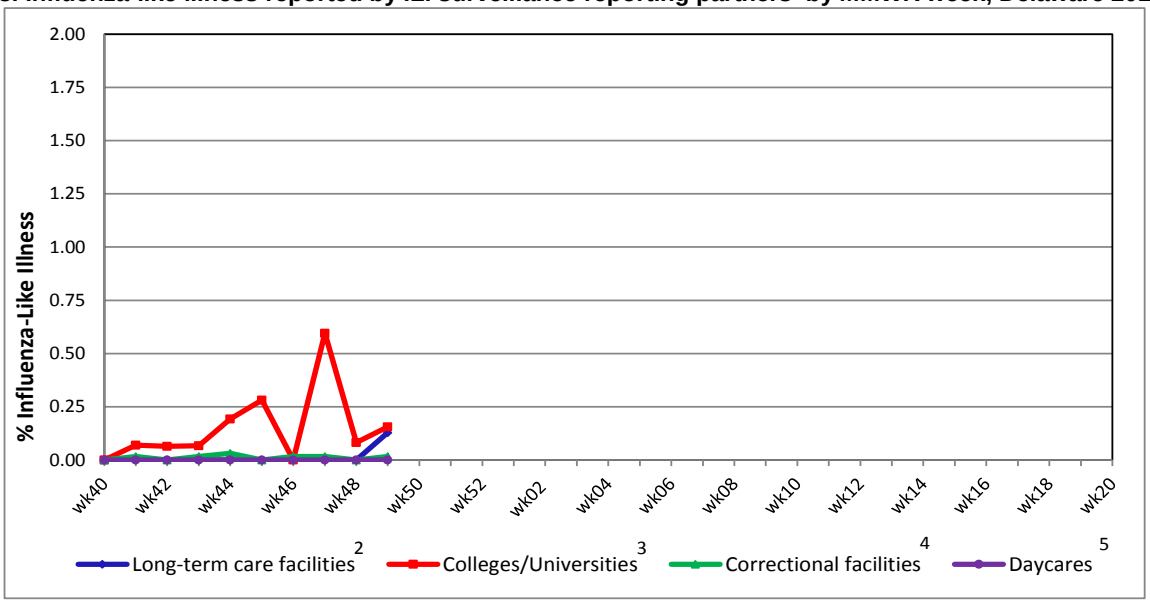
Figure 2. Percentage of visits for influenza-like illness reported by sentinel providers[1] participating in CDC's Outpatient ILI Surveillance Network (ILINet), Delaware 2016-17



[1] Thirteen 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 partners[1] 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. Eight 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; No daycare providers reported.

Figure 4a. Percentage of emergency department (ED) visits due to ILI/Flu by MMWR week, Delaware 2016-17

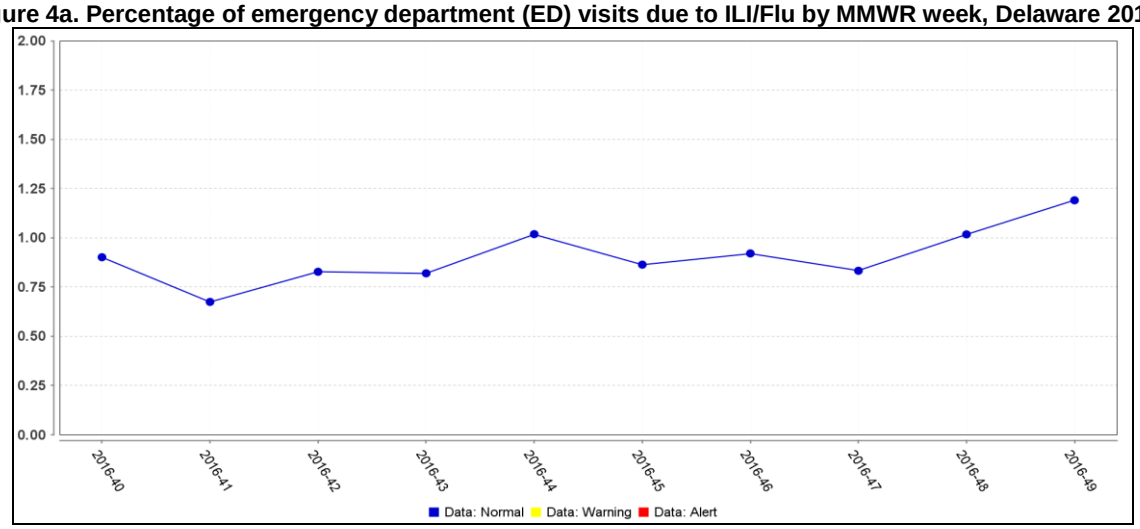
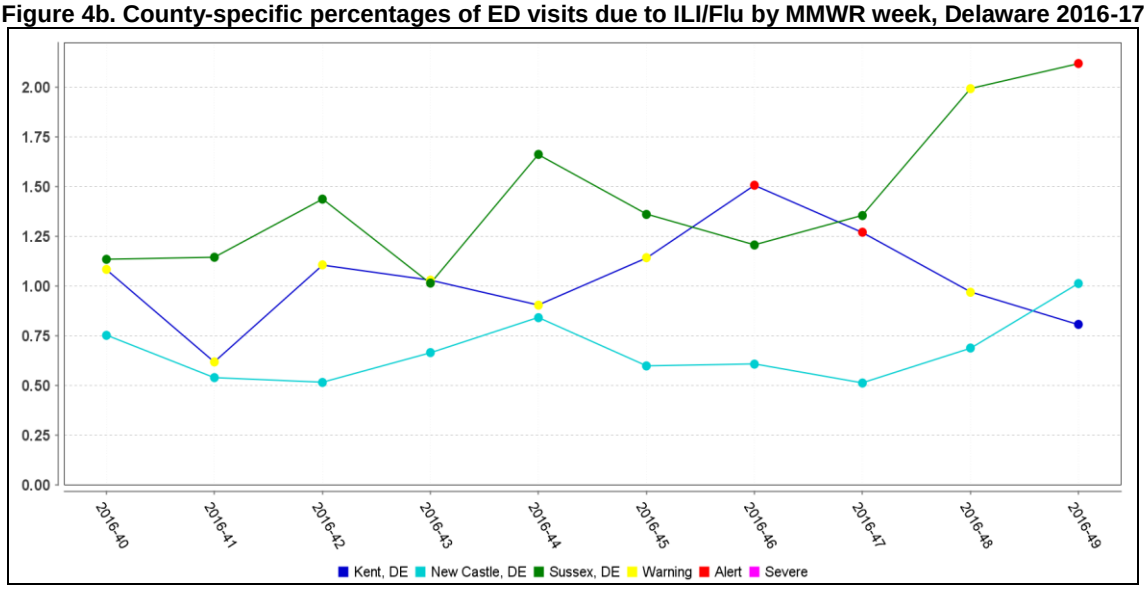


Figure 4b. County-specific percentages of ED visits due to ILI/Flu by MMWR week, Delaware 2016-17



Summary of International Influenza Activity

Influenza activity in the temperate zone of the northern hemisphere increased slightly. Influenza activity in temperate southern hemisphere countries was back at inter-seasonal levels.

In North America, influenza activity slightly increased with influenza A(H3N2) virus predominating. Influenza-like illness (ILI) levels remained below seasonal thresholds. In the United States, respiratory syncytial virus (RSV) activity continued to be reported.

In the Caribbean countries, influenza and other respiratory virus activity remained low. In Central America, there was a slight decrease in influenza and other respiratory virus activity. RSV continued to circulate in Costa Rica.

In tropical South America, influenza and other respiratory virus activity remained low with exception of Colombia where RSV activity continued to be reported. In temperate South America, influenza and RSV activity continued to decrease throughout the sub-region.

In Europe, influenza activity was low but has started to rise, particularly in Northern European countries. Influenza A viruses were predominating with the most frequent subtype being A(H3N2).

In Northern Africa, influenza detections increased in Morocco with influenza A(H3N2) viruses dominating. In West Africa, influenza detections increased in Ghana with B viruses dominating. In Southern Africa, influenza activity continued at inter-seasonal levels. In Oceania, influenza virus activity was reported at inter-seasonal levels.

In East Asia, influenza activity increased slightly with influenza A(H3N2) remaining the dominant virus circulating. In Western Asia influenza detections remained low. In South East Asia, influenza activity continued to be reported at low levels, with influenza A(H3N2) virus predominant in the region. A slight increase in influenza A(H1N1) detections was reported in Vietnam. In Southern Asia, there was a slight increase in influenza detections in both Iran and Sri Lanka with influenza A(H3N2) as the most frequently detected virus in this region.

Reference: World Health Organization (WHO), 2016. Influenza update number 278 (12/12/16). Retrieved December 14, 2016, 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.