



WEEKLY INFLUENZA SURVEILLANCE ACTIVITY
DOUGLAS COUNTY, NEBRASKA
 INFLUENZA SEASON 2016-2017
 January 20, 2017

Key Points:

- Influenza activity has significantly increased and multiple outbreaks have been reported
- Influenza A H3 is the most predominant circulating strain and tends to cause more severe disease, especially among the elderly, young children, and others with co-morbidities
- Six confirmed influenza outbreaks have been reported in long term care facilities

Douglas County: Influenza activity in Douglas County, Nebraska has increased significantly. This week Douglas County Health Department (DCHD) received 118 positive test results for influenza. The majority of reported test results were positive for influenza type A, with nine being confirmed as influenza A H3. The percentage of outpatient visits with influenza-like illness (ILI) increased last week and the percent of hospitalizations with ILI decreased (Table 2, Figure 4). The percentage of emergency department visits with ILI and the percentage of school absenteeism due to illness remained relatively the same as last week.

A total of 510 laboratory-confirmed cases of influenza have been reported this season (since October 2, 2016); with 118 reported cases this week (Table 1, Figure 1). A total of 321 cases were rapid (RIDT) influenza type A, 128 were PCR-confirmed influenza type A (influenza A H3 being the most common subtype), 47 were RDIT influenza type B, five were PCR-confirmed influenza type B, and nine were RDIT influenza type A/B, with no additional confirmation.

Douglas County Health Department has not received any reports of adult or pediatric deaths due to influenza this season. However, influenza-associated adult deaths are not reportable by law and may be underreported.

This season, six confirmed influenza outbreaks have been reported in Douglas County long-term care facilities. It is very important to protect vulnerable populations such as these by ensuring all caregivers and close contacts are vaccinated every year. For guidance in managing outbreaks of influenza in long-term care facilities and to report outbreaks to DCHD, please call 402.444.7214.

There were 17 positive respiratory syncytial virus (RSV) tests were reported this week (17 of 90 tested).

Resources for Long-Term Care Facilities:

- Nebraska DHHS Flow Chart for Prevention and Control of Influenza in LTC Facilities: <http://www.douglascountyhealth.com/images/stories/disease/flu/LTC%20Flu%20Recommendations.pdf>
- CDC Influenza Outbreak Management in LTC Facilities <https://www.cdc.gov/flu/professionals/infectioncontrol/ltc-facility-guidance.htm>
- Nebraska DHHS HAN: Long Term Care Facilities and Nursing Homes; Primary Care Providers; Hospitals, and Public Health <http://www.douglascountyhealth.com/images/stories/disease/2017-01-11%20NE%20DHHS%20Norovirus%20January%2011%202017.pdf>

TABLE 1. LABORATORY-CONFIRMED INFLUENZA CASES ¹ Douglas County, Nebraska			
INFLUENZA TYPE	TIME PERIOD		
	CURRENT WEEK ¹	PREVIOUS WEEK ²	FLU SEASON ³
Rapid - A (Not sub-typed)	87	91	321
PCR - A (Unknown Subtype)	8	37	69
PCR - A (H1N1) 2009 - Seasonal	0	4	9
PCR - A (H3) - Seasonal	9	18	50
Rapid - B	11	12	47
PCR - B	0	2	5
Rapid A/B (Not typed)	3	3	9
TOTAL	118	167	510

¹Table reflects all reported positive influenza tests. When influenza activity is low in the community, positive rapid influenza test results have a greater likelihood of being "false positive".

Figure 1: Number of Positive Influenza Laboratory Reports in Douglas County Residents by Flu Type, 2016-17 Season

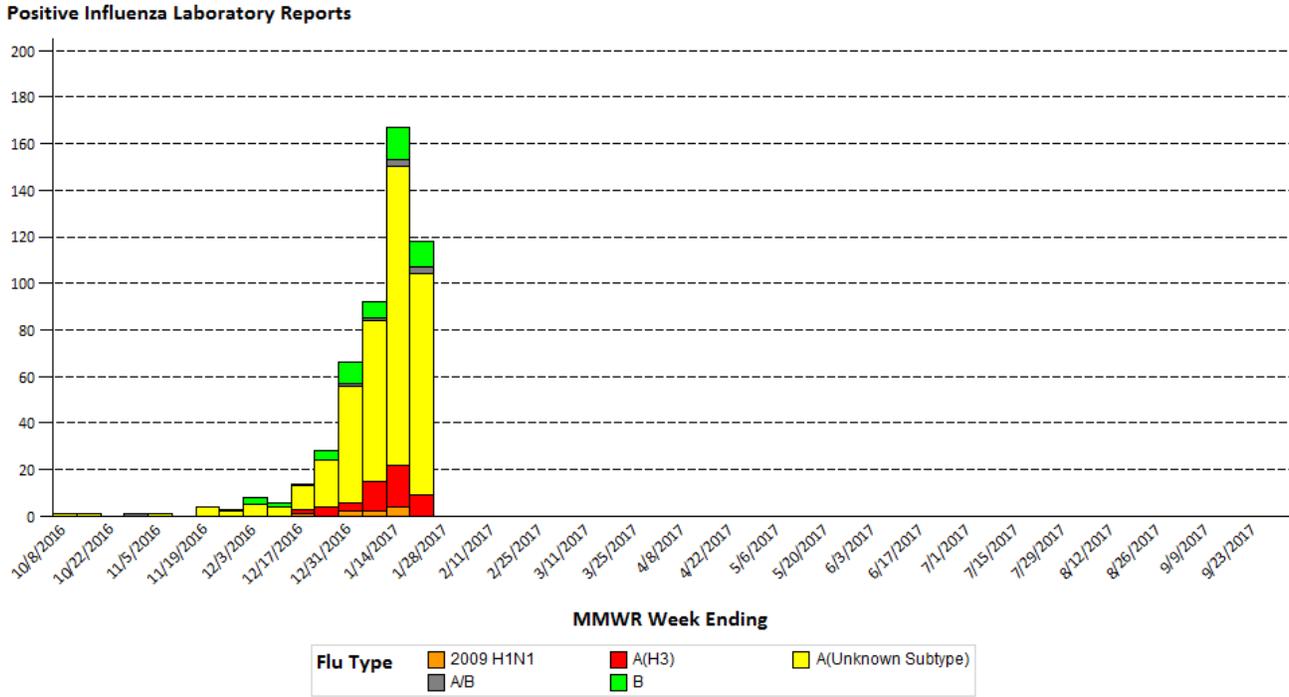


Figure 2: Number and Percentage of Positive Influenza Laboratory Reports in Douglas County Residents by Age Group and Flu Type, Cumulative Total, 2016-17 Season

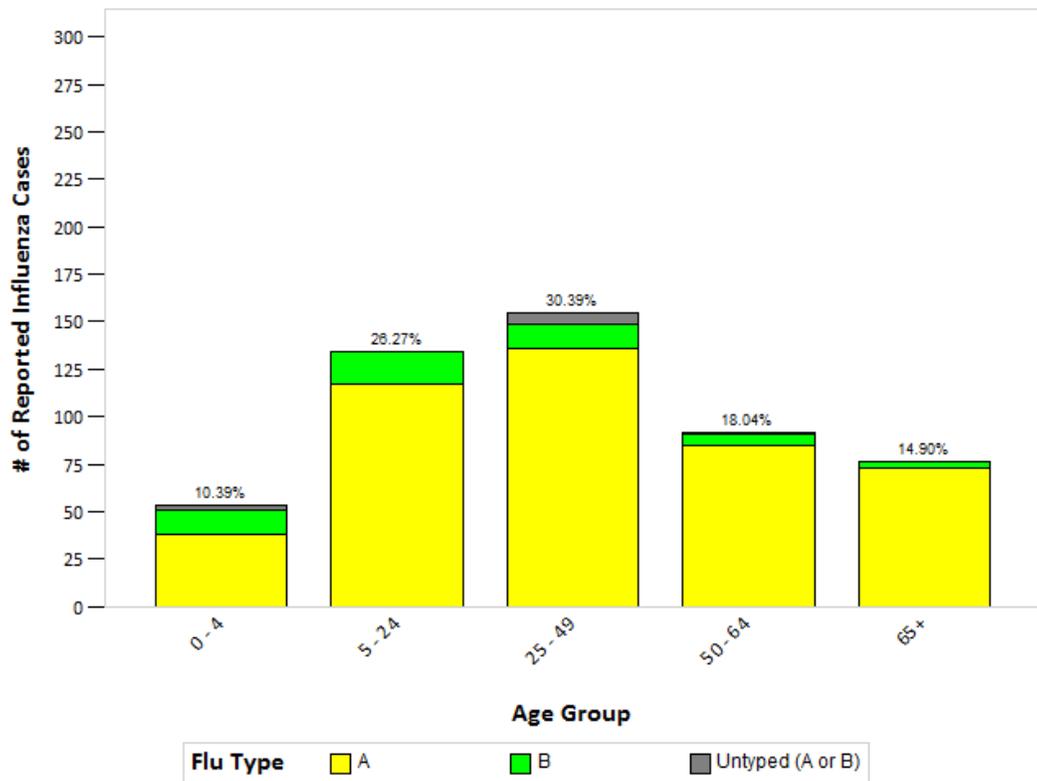


Figure 3: Number and Percentage of Hospital Admissions with Influenza Like Illness in Douglas County Residents by Age Group, Cumulative Total, 2016-17 Season

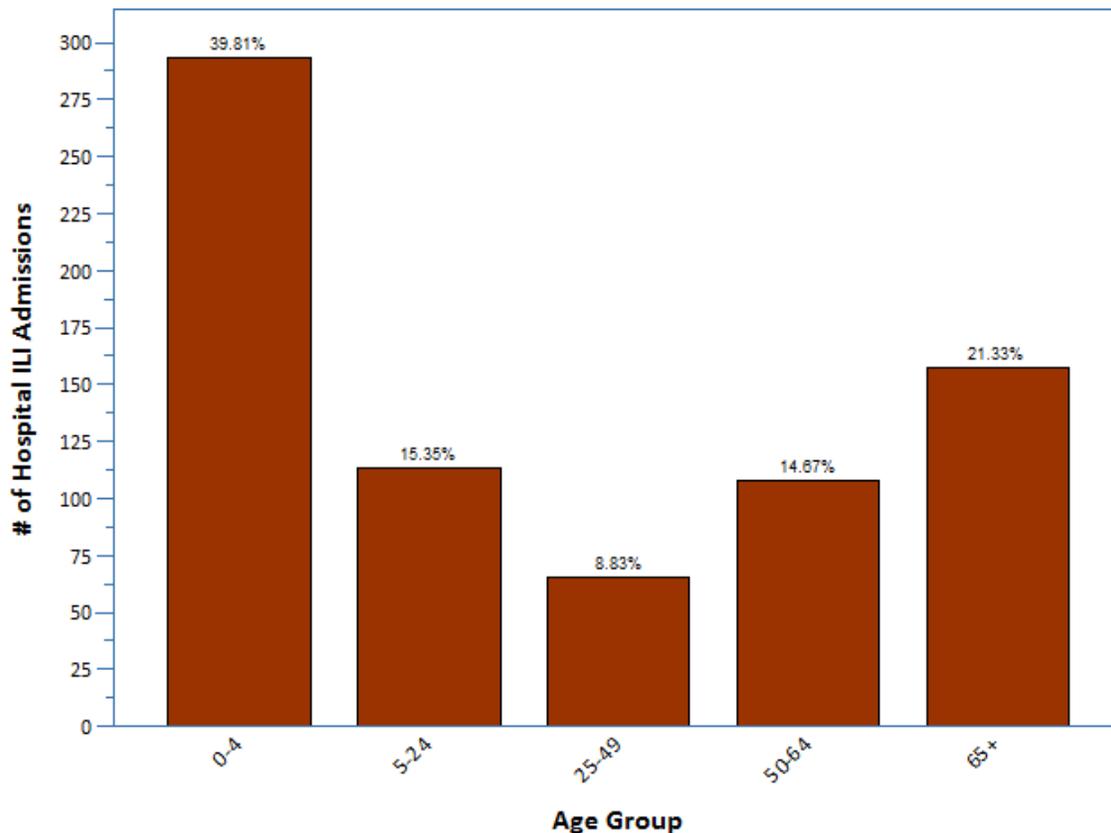


TABLE 2. INFLUENZA SURVEILLANCE STATS

SURVEILLANCE DESCRIPTION	MOST RECENT WEEK	PREVIOUS WEEK
% Percent of outpatient visits with influenza-like illness (ILI) ^{1,2}	0.8%	0.6%
% Percent of emergency department visits with ILI ^{1,2,6}	4.1%	4.4%
% Percent of hospitalizations with ILI ²	2.2%	3.8%
# Number of hospitalizations on ventilators with ILI ²	3	10
% Percent Pneumonia & Influenza Deaths (EDRS) ^{3,4}	10.4%	10.4%
# Number of Laboratory-confirmed influenza pediatric deaths ^{2,5}	0	0
% Percent of school absenteeism due to illness ²	2.2%	2.1%
% Percent of RSV tests positive ² (positives/total tests)	18.9% (17/90)	7.8% (6/77)

¹ILI: Influenza-like Illness is defined as a fever of $\geq 100^{\circ}$ F as well as cough and/or sore throat.

²As of 01/14/2017

³As of 01/07/2017

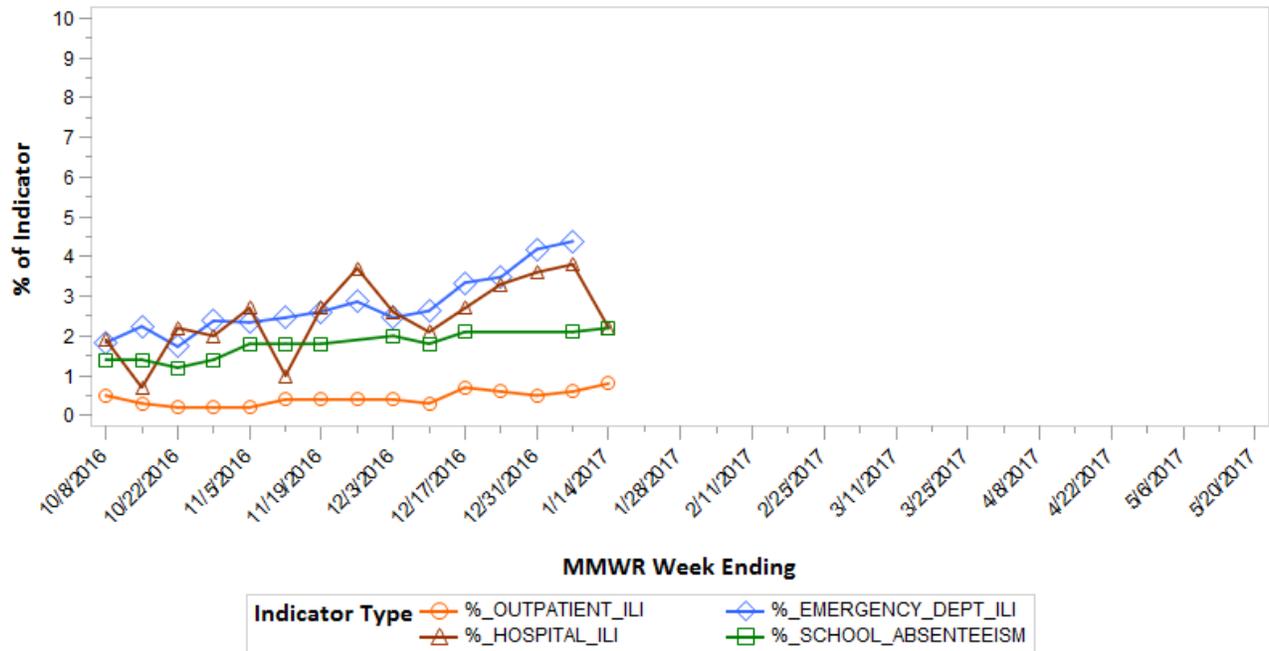
⁴Nebraska Electronic Death Records

⁵Laboratory-confirmed or cause of death related to influenza

⁶Douglas County Hospital ED ILI data source: Nebraska Syndromic Surveillance

-Data Not Available

Figure 4: Percent of Influenza Surveillance Indicator by MMWR Week Ending and Indicator Type, 2016-17 Season



*Influenza-Like-Illness (ILI) is defined as a fever of ≥ 100 degrees Fahrenheit as well as cough and/or sore throat.

TABLE 3. REPORTED INFLUENZA CASES BY FLU SEASON AND MONTH
Douglas County, Nebraska

MONTH	FLU SEASON											Total (ALL) N
	2016-2017 N	2015-2016 N	2014-2015 N	2013-2014 N	2012-2013 N	2011-2012 N	2010-2011 N	2009-2010 N	2008-2009 N	2007-2008 N	2006-2007 N	
October	3	33	23	3	9	0	1	570	1	2	2	646
November	14	14	44	44	19	2	5	171	3	0	1	303
December	116	63	847	291	385	32	7	19	4	2	3	1653
January	377	126	1035	423	1167	64	111	2	15	104	33	3080
February	-	335	603	238	449	99	269	5	59	945	359	3361
March	-	750	742	152	74	117	185	6	261	288	117	2692
April	-	505	228	147	12	19	20	4	100	45	12	1092
May	-	94	33	35	1	2	1	1	73	1	6	247
June	-	18	6	4	0	1	0	1	56	8	2	96
July	-	4	1	1	0	0	0	0	87	0	1	94
August	-	4	1	1	0	1	0	1	125	0	1	134
September	-	4	5	1	0	0	0	0	312	0	0	322
Total	510	1950	3568	1340	2116	337	599	780	1096	1395	537	13720

Links to local graphs, and state and national reports:

Graphs of Current Flu Activity Surveillance (Douglas County, NE)
http://www.douglascountyhealth.com/images/stories/disease/flu/Flu_Week.pdf

Nebraska Weekly Surveillance Activity
http://dhhs.ne.gov/publichealth/Pages/flu_report.aspx

U.S. Weekly Surveillance Activity
<http://www.cdc.gov/flu/weekly/>