

Synopsis for Week Ending March 31st, 2018

The Nebraska influenza surveillance system is a collaborative effort between DHHS and its many partners in the state including, local health departments, public health and clinical laboratories, vital statistics offices, healthcare providers, clinics and emergency departments. Indicators from Nebraska's influenza surveillance systems (laboratory testing, sentinel provider visits, influenza hospitalizations, emergency department visits, and school absences due to illness) show that influenza-like-illness has peaked for the 2017-2018 season. Influenza is still circulating across the state as are many other respiratory infections.

SUMMARY STATS	
Percent of influenza tests positive	21.01% (351/1671)
Percent of RSV rapid tests positive	13.93% (106/761)
Percent of outpatient visits for ILI ¹	3.37% (regional baseline 1.8%)
Influenza-associated hospitalizations ²	266 inpatients
Percent of emergency department visits due to ILI ³	3.4%
Percent school absence due to illness ⁴	1.78%
Number of schools with ≥11% absence due to illness	1
Number of influenza outbreaks reported (Cumulative)	101
Influenza-associated mortality-all ages (Cumulative) ⁵	86
Influenza-associated pediatric mortality (Cumulative)	1
¹ ILI: Influenza-like Illness is defined as a fever of ≥100° F as well as cough and/or sore throat ² Hospitalizations due to ILI are voluntarily reported through a weekly survey of Nebraska hospitals ³ Visits due to ILI are collected by syndromic surveillance received from Nebraska hospitals ⁴ Percent school absence due to illness are reported through a weekly survey of Nebraska schools ⁵ Deaths in which influenza is listed on the death certificate. This is an underestimate of influenza-related deaths Cumulative is 10/1/2017-current week	

National Summary: Please see <http://www.cdc.gov/flu/weekly/>

International Summary: Please see http://www.who.int/influenza/surveillance_monitoring/updates/en/index.html

Please visit the DHHS influenza [webpage](#) for more influenza information.

Laboratory Surveillance

- Voluntary submission of isolates by clinical virology laboratories to the Nebraska Public Health Laboratory (NPHL) for influenza surveillance.
- Reporting by Nebraska laboratories of positive test results and total number of respiratory virus specimens tested.

Influenza Diagnostic Testing

This surveillance system counts influenza diagnostic tests performed and if they are positive or negative. When there is little influenza circulating in the community, specimens that test positive on a rapid antigen test have a greater likelihood of being “false positive” and require careful clinical correlation. As influenza circulates more widely in the population, specimens that test positive are more likely to be “true positive” and reflect actual influenza infection.

Of the 92 laboratories tracking influenza, 91 reported data for the past week. Of the 1,671 influenza diagnostic tests reported, 351 (21.01%) were positive, with 7.66% (n=128) positive for influenza A and 13.35% (n=223) positive for influenza B. The total number of tests performed decreased by 41% and the total number of positive flu A tests decreased by 31% and the total number of positive flu B tests decreased by 45%.

Influenza Diagnostic Test Surveillance 2017-2018			
Season-to-Date (October 1, 2017-March 31st, 2018) Totals			
	All Influenza	Influenza A	Influenza B
Total Positive	16452	9261	7191
Total Tests Performed	71301	56.29%	43.71%
% Positive	23.07%		
Surveillance Week Data (Mar. 25-31, 2018)			
	All Influenza	Influenza A	Influenza B
Total Positive	351	128	223
Total Tests Performed	1671	36.47%	63.53%
% Positive	21.01%		
RSV	Season-to-Date	Surveillance Week	
Total Positive	3756	106	
Total Tests Performed	19346	761	
% Positive	19.41%	13.93%	

Of the specimens that were able to be typed for influenza type A, there has been:

- * 664 flu A H3N2
- * 1 flu A H3N2v
- * 49 flu A 2009 H1N1

15 influenza B specimens were tested to determine lineage.

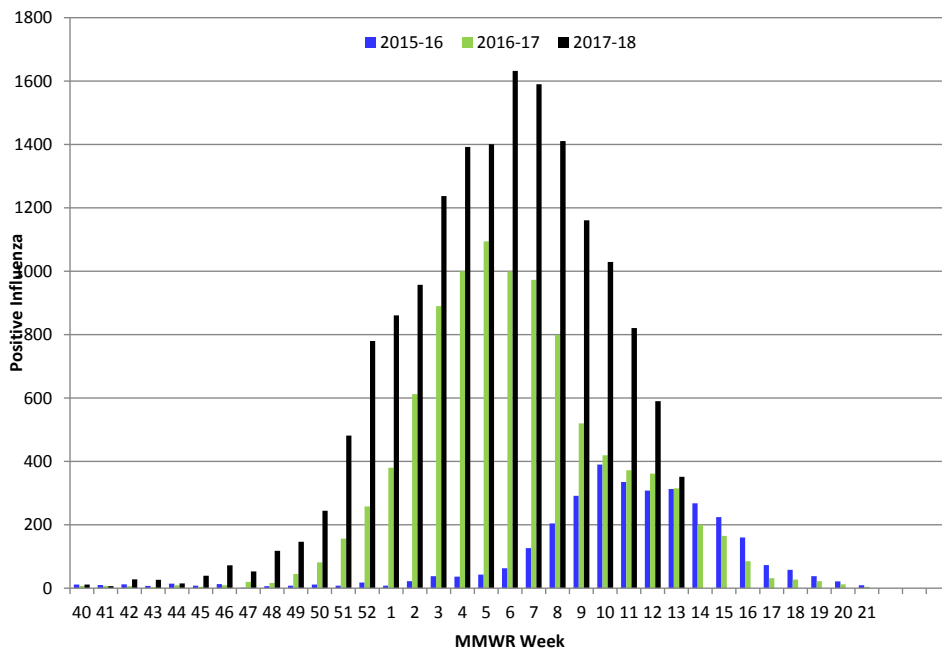
- * 14 B/Yamagata
- * 1 B/Victoria

Laboratory Surveillance

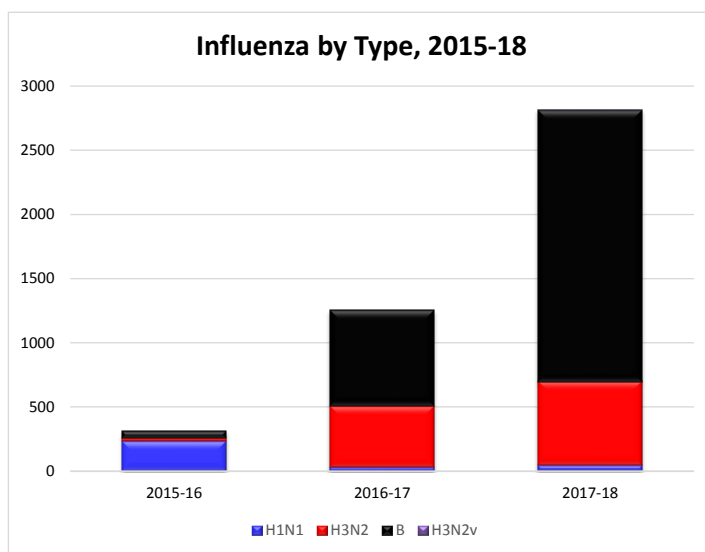
Year-to-Year Comparison



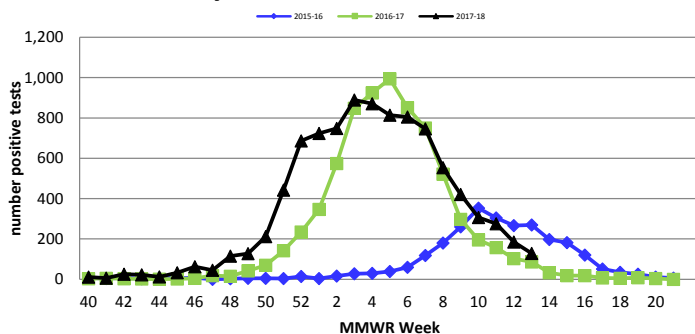
Positive Influenza Laboratory Tests by Nebraska Laboratories



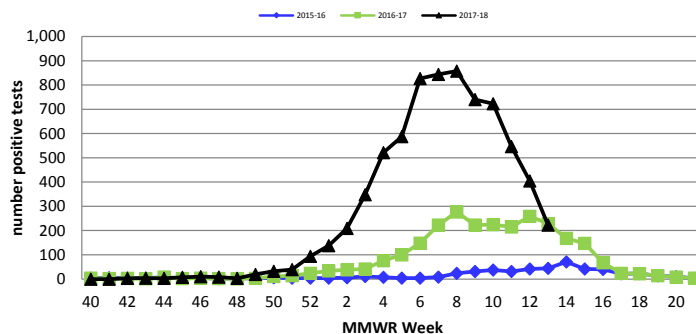
Influenza by Type, 2015-18



Total Positive Influenza A Laboratory Tests by Nebraska Laboratories



Total Positive Influenza B Laboratory Tests by Nebraska Laboratories

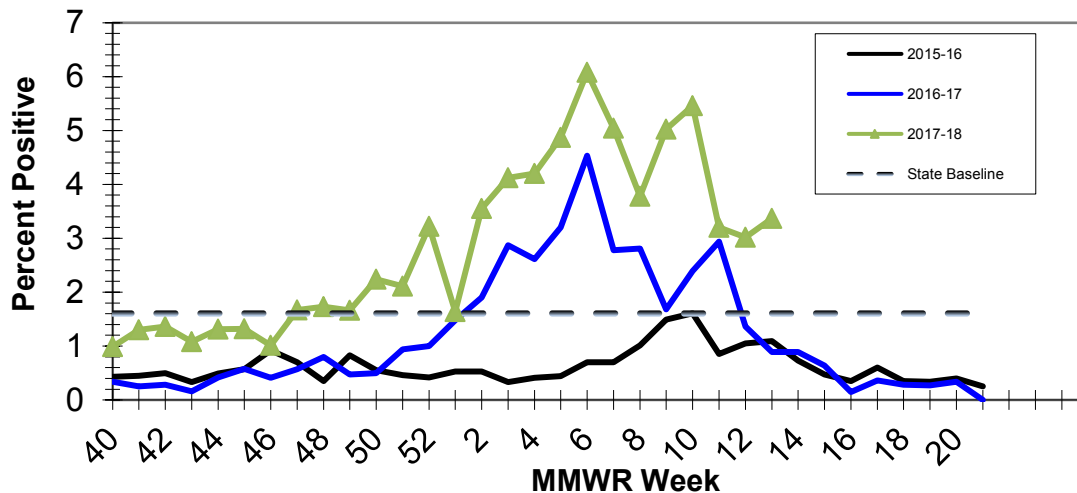


Outpatient Surveillance—ILINet

- Voluntary reporting by a statewide network of sentinel clinicians of the number of patients presenting with influenza-like illness (ILI) and the total number of patient visits by age group each week.

Sentinel Provider Surveillance: 13 of the 17 sentinel-site physician offices in Nebraska which are designated to track ILI reported data for the surveillance week. Of 2,228 total patient visits reported, 75 (3.37%) met ILI criteria.

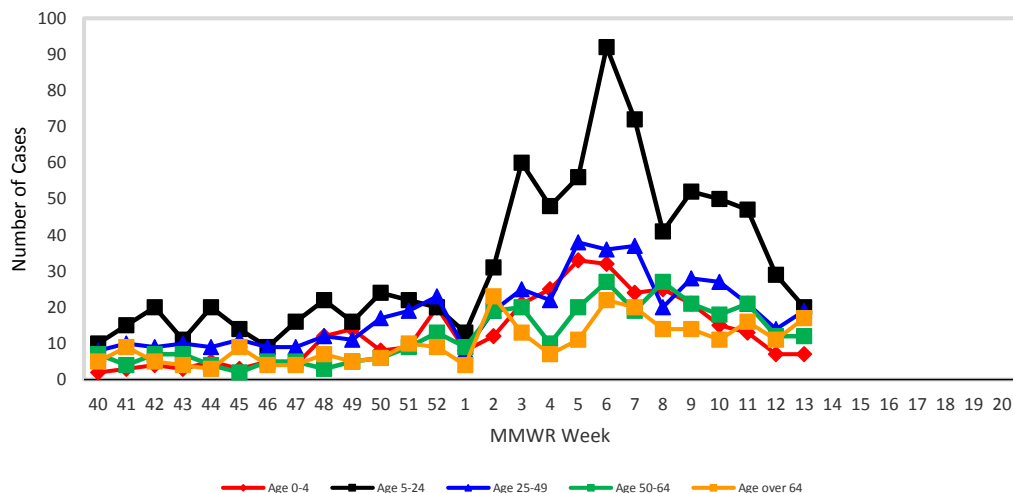
Percentage of Visits for Influenza-like Illness (ILI) Reported by the Nebraska Outpatient Influenza-like Illness Surveillance Network (ILINet) 2015-2018



ILINet for week ending March 31st, 2018

Age 0-4	Age 5-24	Age 25-49	Age 50-64	Age over 64	Total ILI	Total patients	% ILI
7	20	19	12	17	75	2228	3.37%
0.31%	0.90%	0.85%	0.54%	0.76%			

Influenza-like Illness (ILI) Reported by the Nebraska Outpatient Influenza-like Illness Surveillance Network (ILINet), by age group, 2017-2018



Emergency Department Syndromic Surveillance

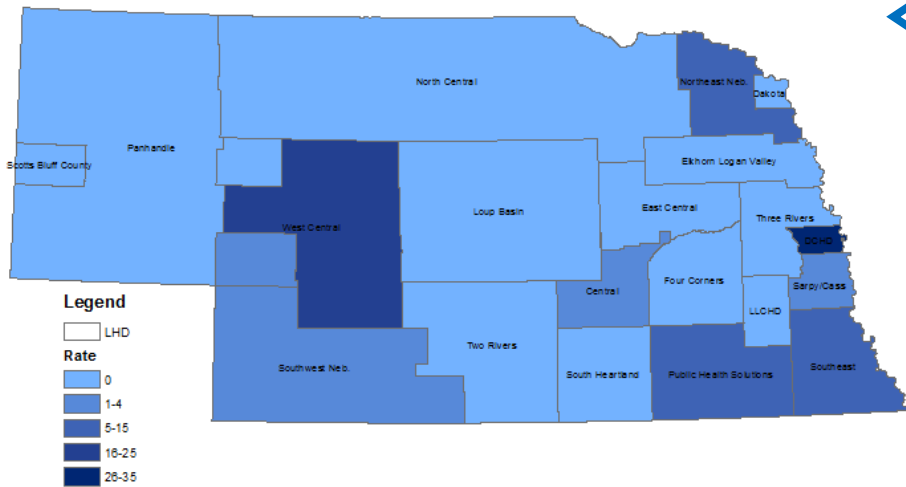
Monitoring influenza-like illness (ILI) syndromic surveillance data received by emergency departments.

The ILINet electronic ILI report includes 32 facilities

MMWR week 13 percent of ILI visits: 3.4%

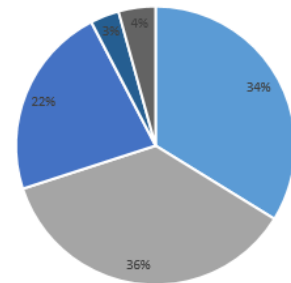
MMWR Week 13 ILI Visits by Age Group						
	00-04	05-24	25-49	50-64	65+	Totals
ILI Visits (n)	71	76	47	7	9	210
Total Visits (N)	921	1474	1815	775	932	5921
ILI%	7.7	5.2	2.6	0.9	0.9	3.4

2018 Nebraska ILI Visits in Emergency Departments by local health department (LHD) jurisdiction, rate per 100,000



Where is the flu?

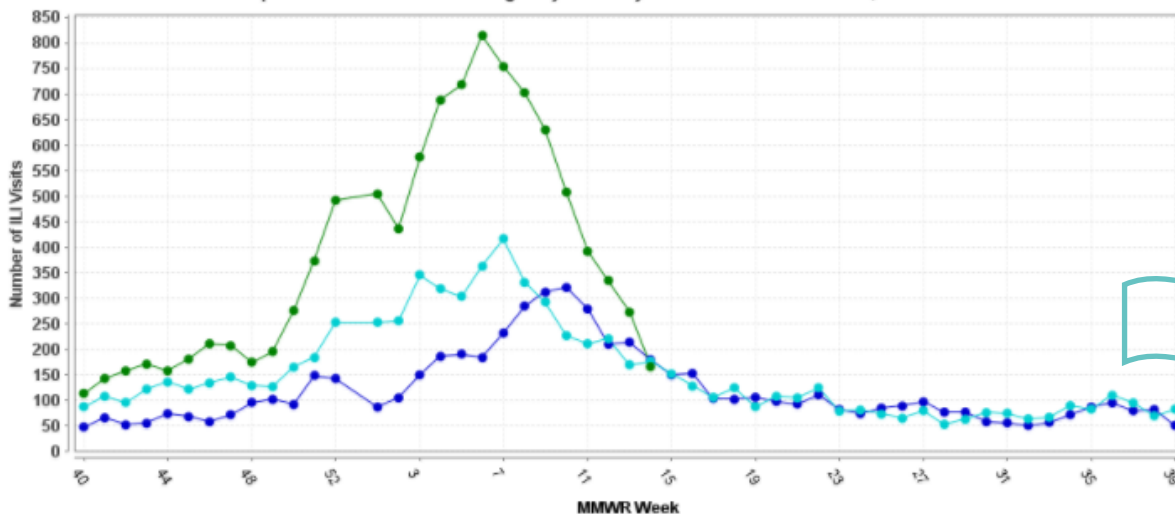
Percentage of ILI Age Groups Week 13



■ (0-4) ■ (5-24) ■ (25-49) ■ (50-64) ■ (65+)

A Look at the Seasons...

Comparison of Nebraska Emergency Visits by Flu Season in Nebraska, 2015-2018



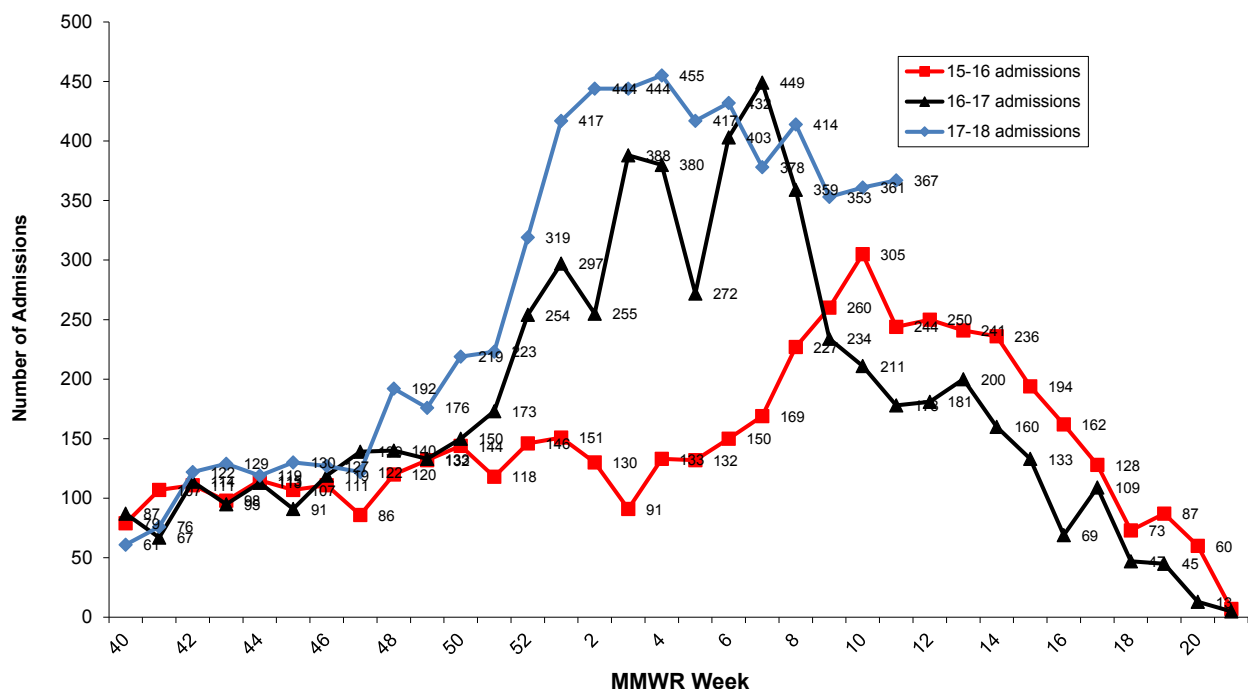
Who has it?

Inpatient Surveillance

- Voluntary reporting by hospital infection preventionists of the number of hospitalizations with a diagnosis of ILI and the total number of admissions by age group each week.

Hospital Inpatient Surveillance: 63 of 86 hospitals tracking hospitalized influenza patients reported for the surveillance week. Of the 4,177 total admissions reported for this week, 266 (6.37%) were for ILI.

Number of ILI Admissions by MMWR Week, Nebraska, 2015-2018



Week ending	MMWR Week	Admitted this week					Total ILI Admissions	% of ILI admissions among total admissions
		0-4	5-24	25-49	50-64	65+		
March 10, 2018	10	36	19	24	66	216	361	7.20%
March 17, 2018	11	29	16	30	73	219	367	7.41%
March 24, 2018	12	36	10	27	58	166	297	6.37%
March 31, 2018	13	32	16	17	60	141	266	6.37%

Mortality Surveillance

Pediatric deaths associated with influenza are required to be reported. Influenza-associated deaths in adults are not reportable. Voluntary reporting to public health of deaths in adults is encouraged to help determine the severity of the current circulating virus.

- 85 influenza-associated deaths in adults and 1 death in a child have been reported for the season.
- Average age = 78 years old

Outbreak Surveillance

- Reporting of influenza outbreaks in long-term care facilities (LTCF), schools and other congregate settings is required by rules and regulations.

Outbreaks are required to be reported by rules and regulations.

173 NAC 1 1-004.01B Clusters, Outbreaks, or Unusual Events, Including Possible Bioterroristic Attacks: Clusters, outbreaks, or epidemics of any health problem, infectious or other, including food poisoning, healthcare-associated outbreaks or clusters, influenza, or possible bioterroristic attack; increased disease incidence beyond expectations; unexplained deaths possibly due to unidentified infectious causes; and any unusual disease or manifestations of illness must be reported immediately.

LTCF OUTBREAK SURVEILLANCE



Definition of an influenza outbreak:

A sudden increase in acute febrile respiratory illness* over the normal background rate (e.g., 2 or more cases of acute respiratory illness occurring within 72 hours of each other)

*Acute febrile respiratory illness is defined as fever > 100°F AND one or more respiratory symptoms (runny nose, sore throat, laryngitis, or cough). However, please note that elderly patients with influenza may not develop a fever.

There were 8 reports of an influenza-associated outbreak in a LTCF during the last surveillance week.

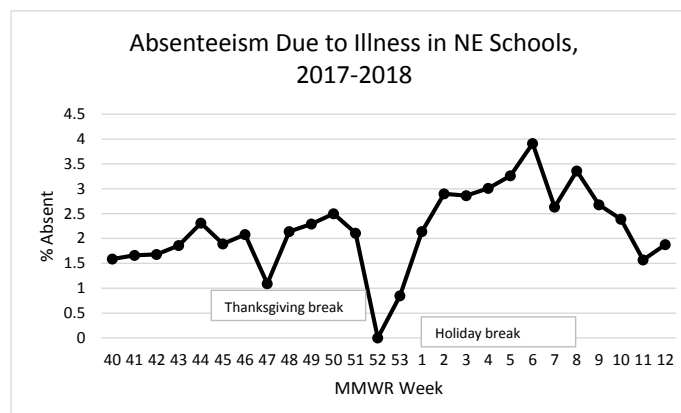
For more information on preventing outbreaks in long-term care facilities, visit: [Interim Guidance for Influenza Outbreak Management in Long-Term Care Facilities](#)

SCHOOL ABSENTEEISM SURVEILLANCE



Voluntary reporting by school health officials of the number of students absent due to illness. This surveillance system helps determine if influenza-like illness is circulating in communities which could lead to outbreaks. For more information on preventing outbreaks in schools, visit: [Guidance for School Administrators to Help Reduce the Spread of Seasonal Influenza in K-12 Schools](#)

Absenteeism due to illness was 1.78% with 68.16% of NE schools reporting for the previous surveillance week. For the current surveillance week, there were no school closures due to influenza-like illness reported and 1.93% absenteeism with 70.69% report rate. 3 schools reported absenteeism over 11%.



Influenza Surveillance Background

The Nebraska influenza surveillance system is a collaborative effort between DHHS and its many partners in the state including, local health departments, public health and clinical laboratories, vital statistics offices, healthcare providers, clinics and emergency departments. Nebraska monitors influenza activity in several ways:

- Voluntary submission of isolates by clinical virology laboratories to the Nebraska Public Health Laboratory (NPHL).
- Voluntary reporting by virology laboratories that participate in the Nebraska Laboratory Information Network (LIN) of positive test results and total number of respiratory virus specimens tested.
- Voluntary reporting by a statewide network of sentinel clinicians of the number of patients presenting with influenza-like illness (ILI) and the total number of patient visits by age group each week.
- Voluntary reporting by hospital infection preventionists of the number of hospitalizations with a diagnosis of ILI and the total number of admissions by age group each week.
- Voluntary reporting by school health officials of the number of students absent due to illness.
- Monitoring ILI syndromic surveillance data received by emergency departments.
- Required reporting of influenza outbreaks in long-term care facilities, schools and other congregate settings.
- Required reporting of pediatric deaths associated with influenza.

Many cases are never reported because influenza is not a reportable disease in Nebraska unless the laboratory performing the test participates in electronic laboratory reporting. We do not attempt to track – or get reports on – all cases. Most cases are never reported to anyone, since most people with influenza never see a doctor about their illness – and many of those who do are never tested.

Even if it were possible to track all cases of influenza in the state, it wouldn't be useful to do so. Influenza is so common during the winter months that we could never actively investigate all of the cases reported to us. We would simply be "counting cases" – and that wouldn't help us protect the health of the public. Because some providers actively test for influenza and others do not, counting the number of cases would not be a reliable way to track influenza.

Although confirmed cases may provide a rough indication of activity, that's not the primary reason we keep track of them. Confirmed cases allow us to:

- determine when we first start to see influenza activity each year (the "first influenza case of the season") AND
- determine what strains of influenza are circulating in any given year.

The main reason we confirm cases in the lab is to determine what kind of influenza is around, and whether the current vaccine protects against it. Only a tiny fraction of all cases are ever confirmed in our lab.

Preventing the Flu

The single best way to prevent seasonal flu is to get vaccinated each year, but good health habits like covering your cough and washing your hands often can help stop the spread of germs and prevent respiratory illnesses like the flu. There also are flu antiviral drugs that can be used to treat and prevent the flu.

1. Avoid close contact.

Avoid close contact with people who are sick. When you are sick, keep your distance from others to protect them from getting sick too.

2. Stay home when you are sick.

If possible, stay home from work, school, and errands when you are sick. You will help prevent others from catching your illness.

3. Cover your mouth and nose.

Cover your mouth and nose with a tissue when coughing or sneezing. It may prevent those around you from getting sick.

4. Clean your hands.

Washing your hands often will help protect you from germs. If soap and water are not available, use an alcohol-based hand rub.

5. Avoid touching your eyes, nose or mouth.

Germs are often spread when a person touches something that is contaminated with germs and then touches his or her eyes, nose, or mouth.

6. Practice other good health habits.

Clean and disinfect frequently touched surfaces at home, work or school, especially when someone is ill. Get plenty of sleep, be physically active, manage your stress, drink plenty of fluids, and eat nutritious food.

<http://www.cdc.gov/flu/protect/habits.htm>