

North Dakota 2017-18 Influenza Season Final Report

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Edited by Jill K Baber, MPH
North Dakota Department of Health
Division of Disease Control

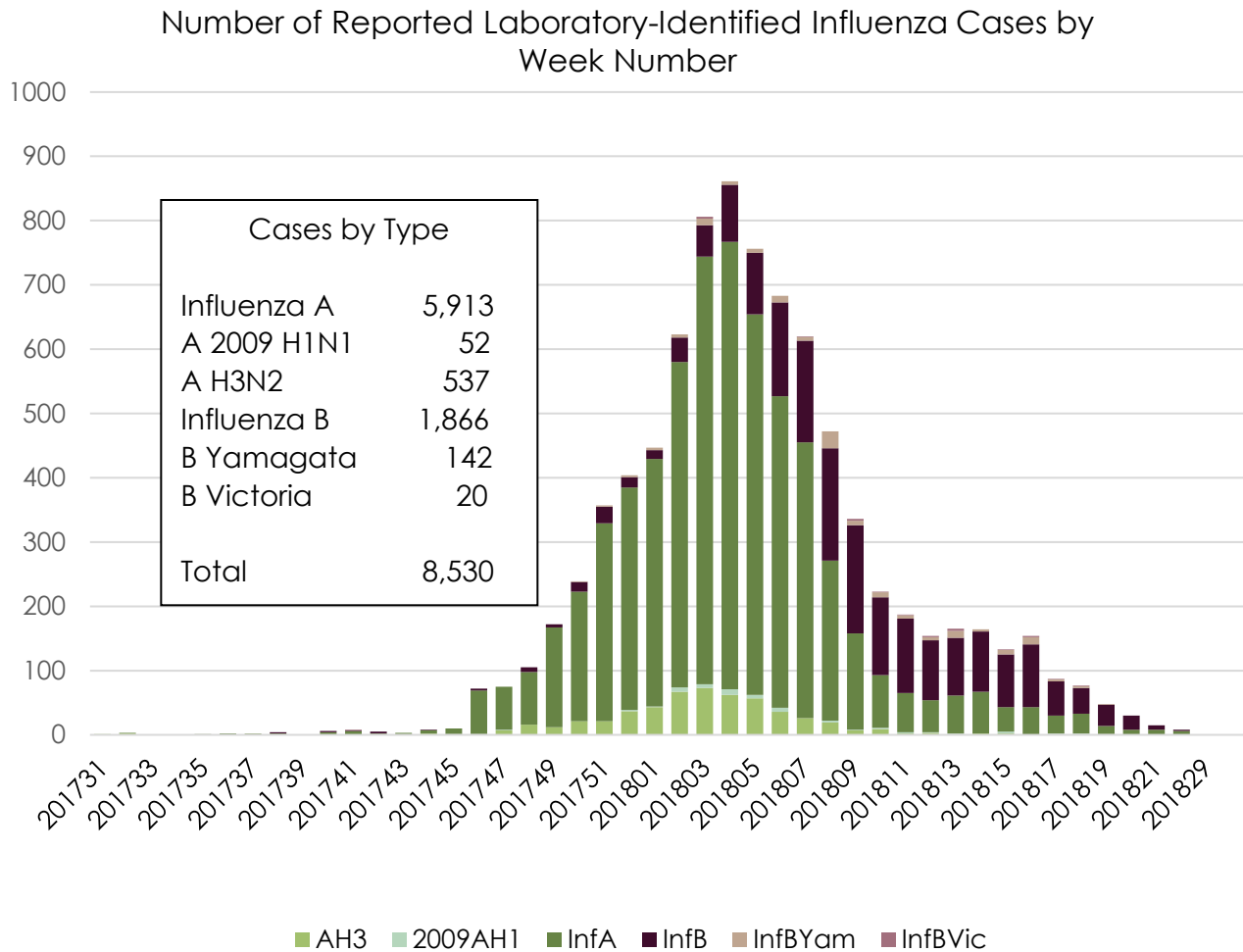
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Summary

The North Dakota Department of Health (NDDoH) received reports of 8,530 cases of laboratory-identified influenza, the largest seasonal case count on record. This statistic captures cases that are identified with a laboratory test. Cases diagnosed based on symptomology or contact with another known case are not reported. Additionally, not all people with influenza will seek the care of a medical professional. Therefore, the true seasonal burden of influenza is higher than presented in this report.

The predominant strain this season was the influenza A H3N2. This strain also predominated last season. According to the Centers for Disease Control and Prevention, the 2017-18 season was one of the most severe seasons on records, and the most severe since the 2009 pandemic.

As usual, the influenza A 2009 H1N1 pandemic strain circulated as well, in much lower numbers. As did both influenza B lineages, with B Yamagata making up a large majority of the influenza B cases.

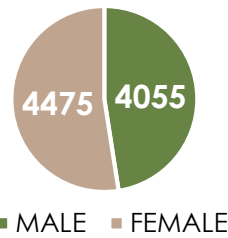


County	Case Count
Adams	37
Barnes	111
Benson	169
Billings	0
Bottineau	51
Bowman	47
Burke	36
Burleigh	955
Cass	1983
Cavalier	115
Dickey	48
Divide	50
Dunn	73
Eddy	24
Emmons	36
Foster	24
Golden Valley	26
Grand Forks	227
Grant	22
Griggs	33
Hettinger	29
Kidder	37
Lamoure	33
Logan	30
McHenry	81
McIntosh	35
McKenzie	166
McLean	85
Mercer	146
Morton	371
Mountrail	116
Nelson	35
Oliver	31
Pembina	231
Peirce	34
Ramsey	173
Ransom	47
Renville	28
Richland	104
Rolette	148
Sargent	46
Sheridan	22
Sioux	38
Slope	4
Stark	758
Steele	12
Stutsman	194
Towner	20
Traill	28
Walsh	129
Ward	711
Wells	58
Williams	483

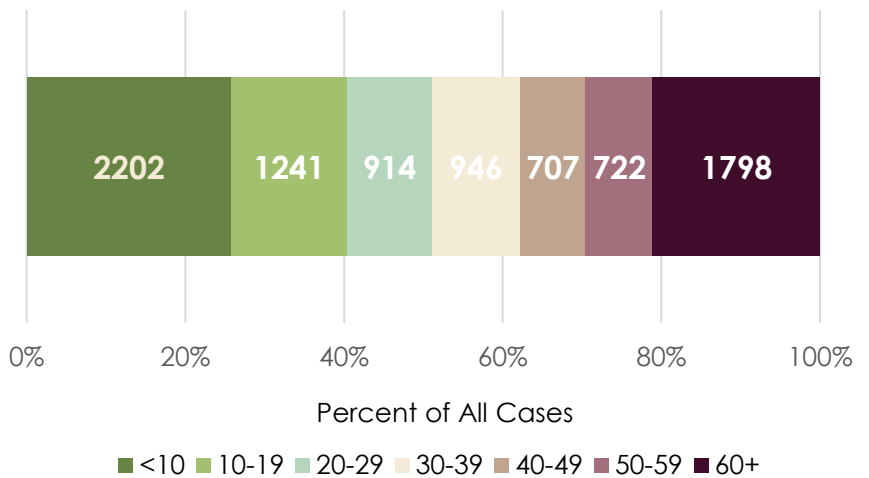
Demographics

Influenza cases were reported for all counties in North Dakota. An increase in the number of hospitals and clinics sending influenza reports electronically likely contributed to the high case count for this season.

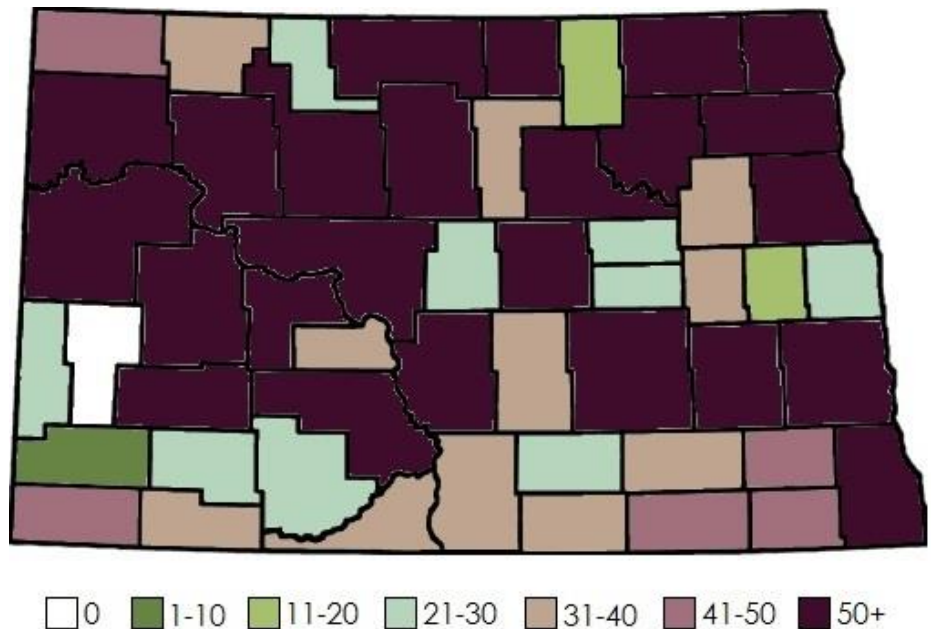
Case County by **Gender**



Case Count by Age Group



Case Burden by **County**

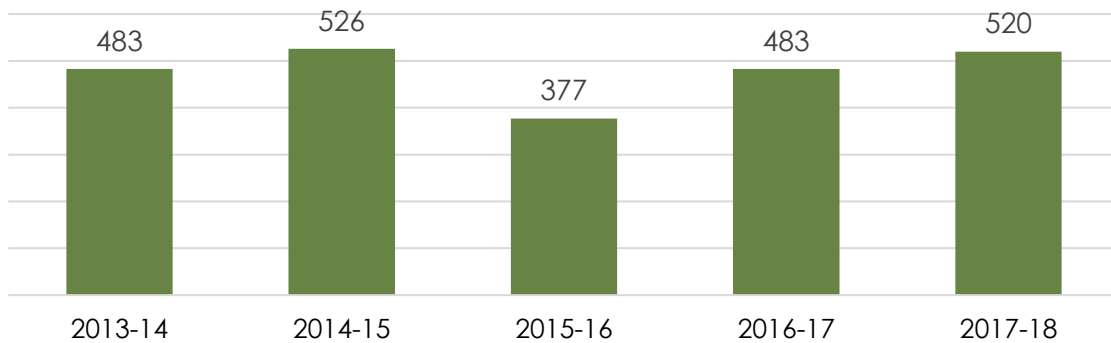


Deaths

For the 2017-18 influenza season, 31 deaths were reported in North Dakota. This data is gathered using Vital Records data, as well as physician reports. Influenza deaths in North Dakota are not reportable.

In addition, 520 pneumonia deaths were identified in the death record. The NDDoH tracks pneumonia deaths because influenza generally contributes significantly to the number of deaths due to pneumonia during the influenza season. Because influenza is not always diagnosed with a laboratory test, tracking pneumonia deaths is another way to illustrate the magnitude of the influenza season. Although a record number of cases were reported this year, 2014-15 had more deaths than this season. This is not a trend that was repeated nationally. At the national level, there were more deaths in 2017-18 than in 2014-15, according to national vital records data.

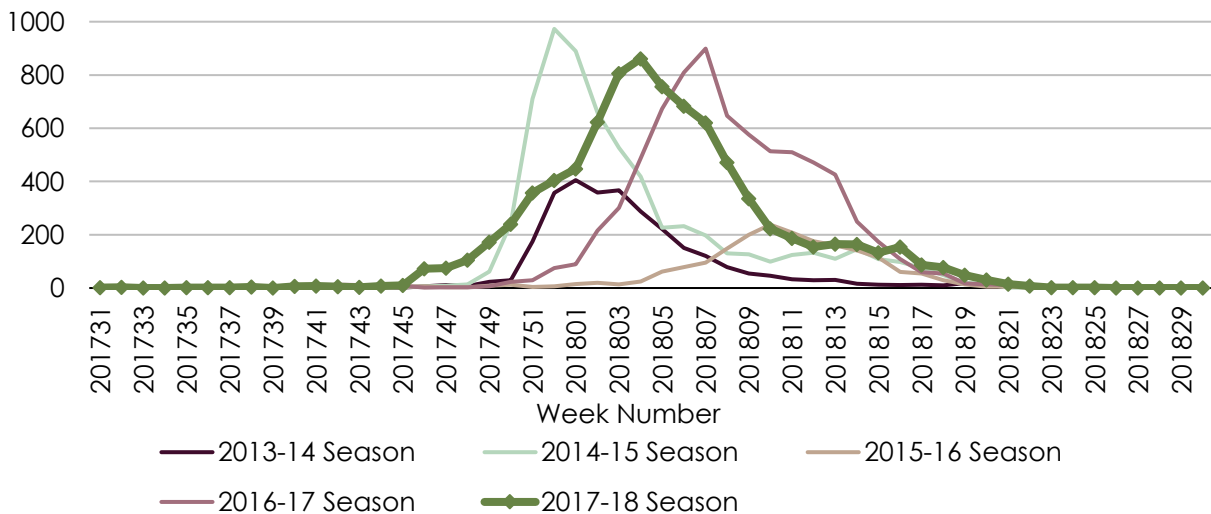
Punumonia Deaths During the Past Five Seasons



Seasonal Timing and Multi-Season Comparison

The 2017-18 influenza season peaked the week ending January 27, 2018 (week 4). The peak three weeks earlier than the previous season. Overall, influenza season in North Dakota typically peaks between January and March, so timing for 2017-18 was average. However, significant circulation started earlier than average, and the season lasted longer than average, contributing to the large case count.

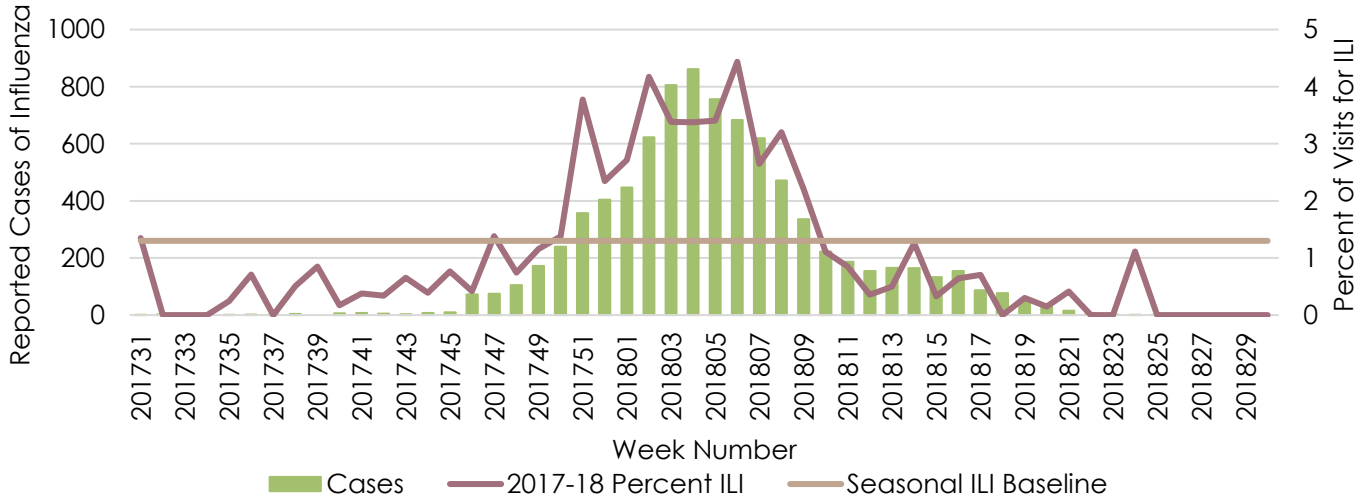
North Dakota Influenza Cases by Week, 2013-Current Season



Outpatient Influenza-like Illness Network (ILINet)

Ten individual health care providers or clinics located throughout the state submitted influenza-like illness (ILI) data to the NDDoH as part of the national ILINet sentinel provider program. ILI is defined as having a fever accompanied by a cough and/or sore throat. Percent ILI peaked the 6th week of 2018, the week ending February 10th, with 4.44 percent of visits due to ILI. The seasonal threshold for ILI in North Dakota is 1.3 percent. For the 2017-18 season, this threshold was exceeded for 12 straight weeks, starting with week 50 (the week ending December 16th, 2017).

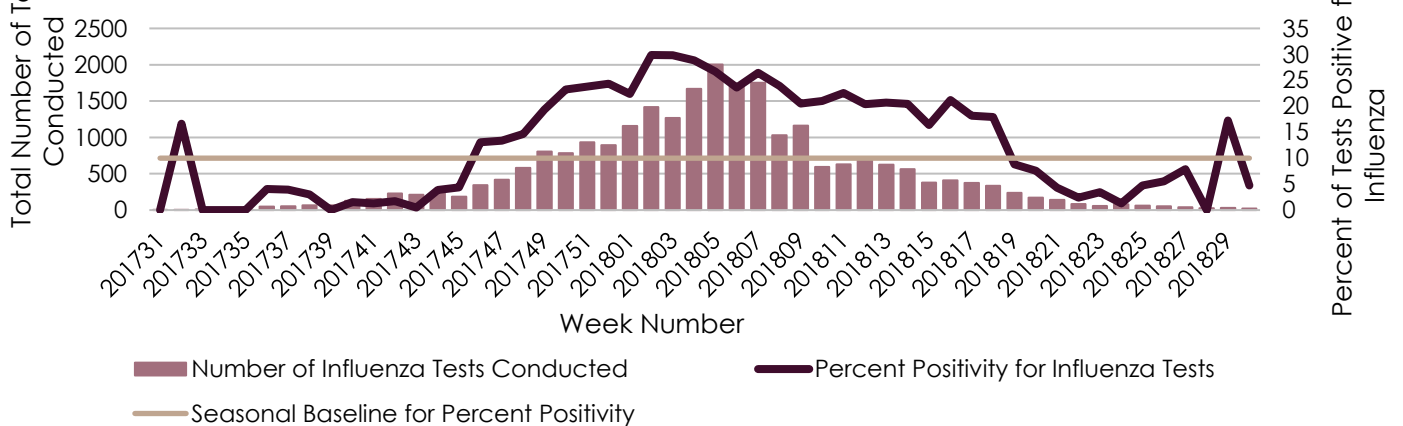
Number of Influenza Cases and Percent of Outpatient Visits Due to Influenza-like Illness by Week, 2017-18 Season



Laboratory Surveillance

Thirty-two laboratories in North Dakota participated in the laboratory sentinel program for the season, submitting the total number of influenza tests conducted and the total number of positive results. Tests include rapid, DFA, culture, and molecular methodology. Ten percent or greater positivity is considered season-level influenza activity. Percent positivity for the 2017-18 season was above 10 percent for 25 weeks (a new record), beginning in week 46, the week ending November 18th, 2017. The highest percent positivity was 29.88 percent during week 2, the week ending January 13th, 2018.

Percent Positivity of Influenza Testing and the Total Number of Tests Conducted



Vaccination

The North Dakota Immunization Information System (NDIIS) collects data on vaccinations administered to North Dakotans. Vaccines given to children are required to be entered into the NDIIS, while vaccines given to adults are often entered into the NDIIS but are not required to be entered. Many providers in North Dakota have established an electronic connection with the NDIIS, allowing all vaccinations for that provider to be sent to the NDIIS automatically.

According to the NDIIS, vaccination rates for all age groups were higher during the 2017-2018 influenza season compared with the 2016-2017 season. We continue to see higher vaccination rates for children 6 months to 4 years and adults 65 years and older. Adults 19 to 49 consistently have the lowest vaccination rates for influenza in North Dakota.

Percent of ND Residents who Received at Least One Dose of Influenza Vaccine During the Flu Season

