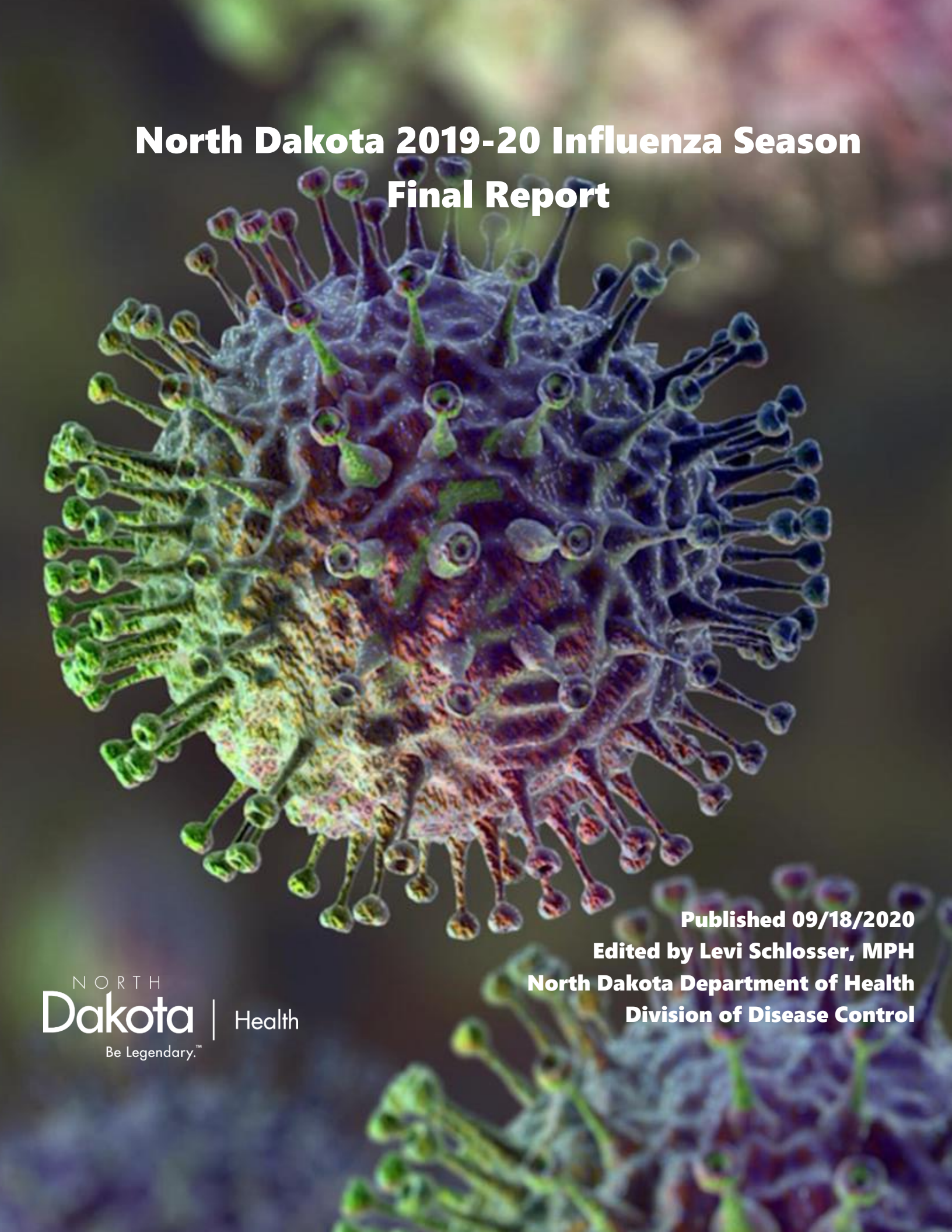
North Dakota 2019-20 Influenza Season Final Report



Published 09/18/2020

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North Dakota Department of Health
Division of Disease Control

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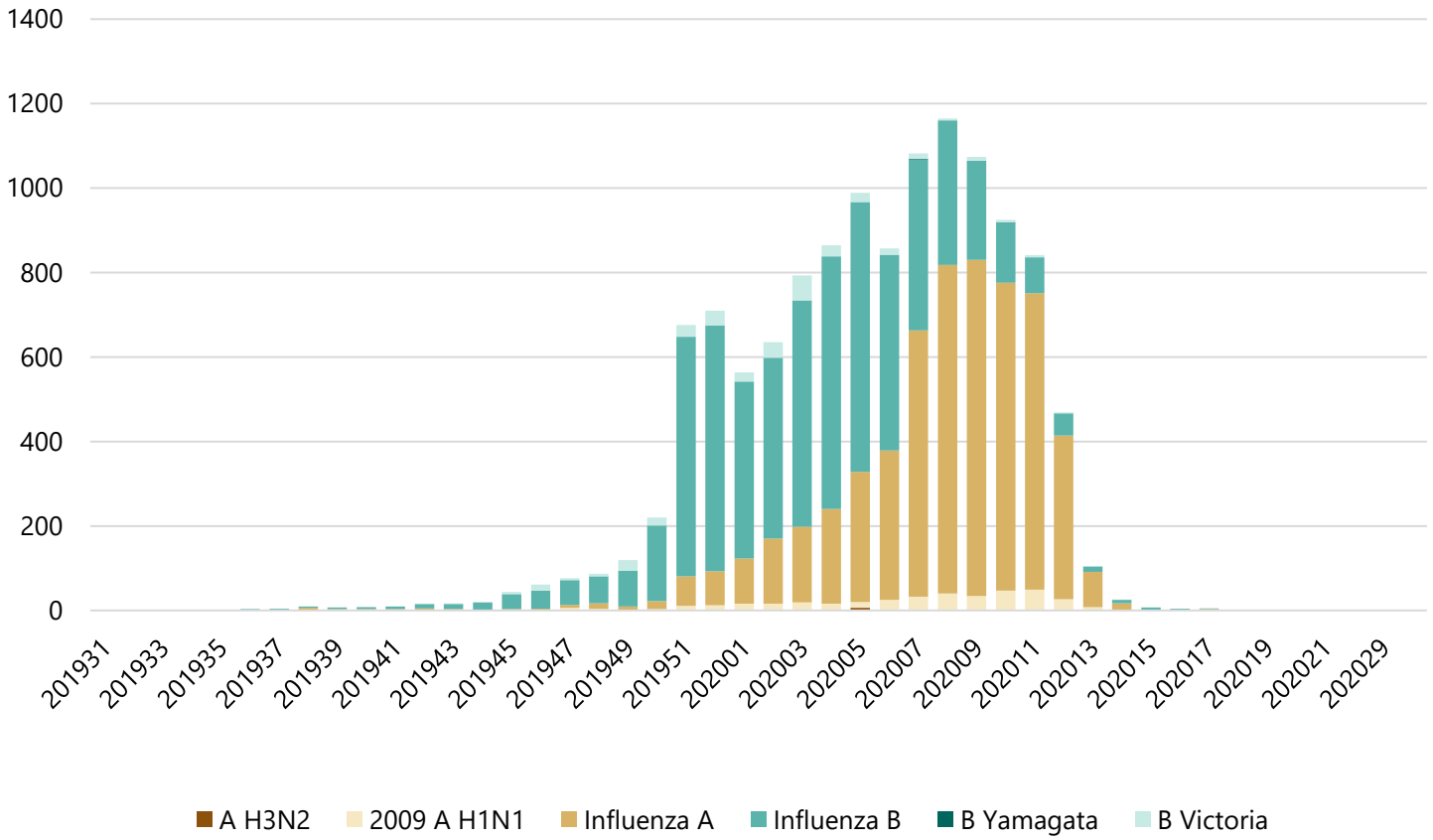
Summary

The North Dakota Department of Health (NDDoH) received reports of 12,502 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 and are not included. Additionally, not all people with influenza will seek the care of a medical professional. Therefore, the true seasonal burden of influenza is likely higher than presented in this report.

The predominant strain this season was 2009 Influenza A H1N1, with 375 laboratory-confirmed cases of the strain; this was also the predominant strain in the 2018-19 season. As usual, the influenza AH3N2 strain also circulated in much lower numbers, as did the Influenza B Yamagata strain. This season saw a high number of Influenza B cases early in the influenza season, which is unusual compared to recent seasons. Influenza B Victoria circulated in similar numbers to 2009 A H1N1, with 364 confirmed cases. According to the Centers for Disease Control and Prevention (CDC), the 2019-2020 season was one of the most severe seasons on records, and the second most severe since the 2009 pandemic.

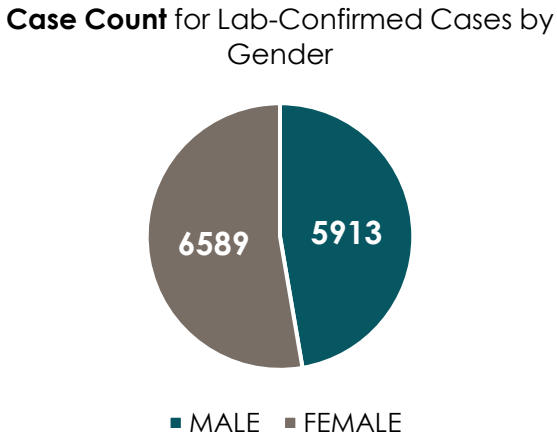
Number of Reported Laboratory-Identified Influenza Cases by Week Number

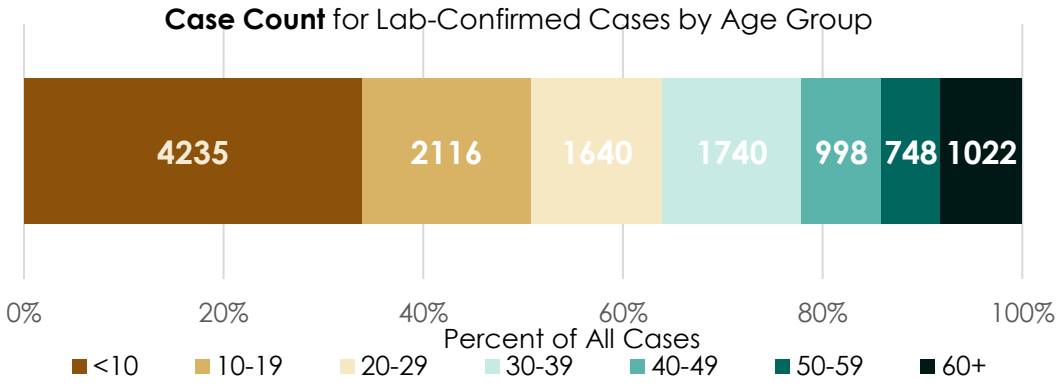


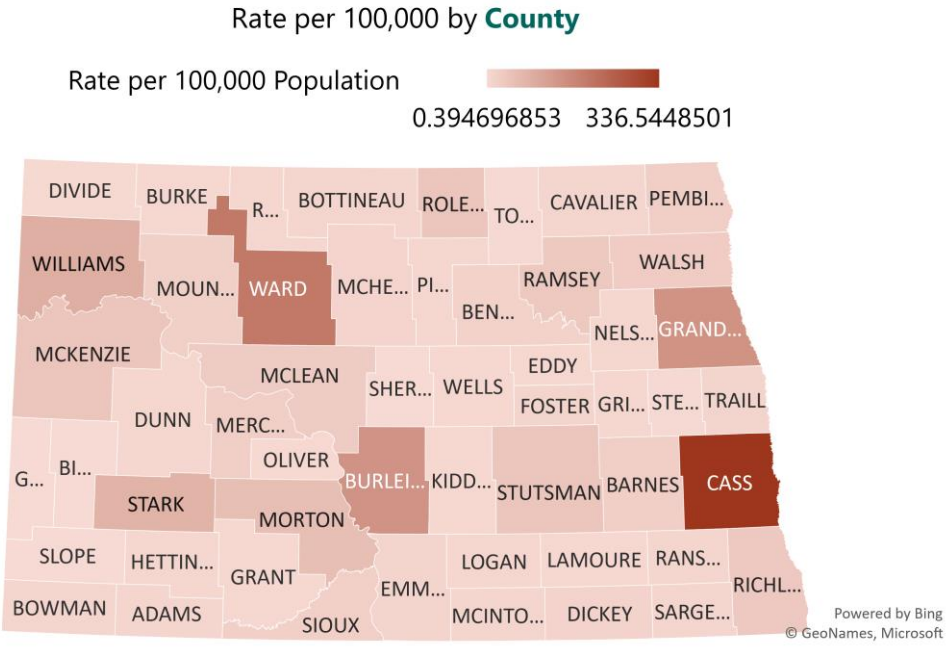
County	Total Cases
Adams	60
Barnes	189
Benson	126
Billings	3
Bottineau	72
Bowman	62
Burke	34
Burleigh	1096
Cass	2558
Cavalier	61
Dickey	113
Divide	25
Dunn	57
Eddy	33
Emmons	76
Foster	83
Golden valley	8
Grand forks	1110
Grant	28
Griggs	54
Hettinger	42
Kidder	36
Lamoure	40
Logan	47
Mchenry	95
Mcintosh	69
Mckenzie	332
Mclean	225
Mercer	189
Morton	425
Mountrail	163
Nelson	48
Oliver	17
Pembina	181
Pierce	46
Ramsey	269
Ransom	69
Renville	46
Richland	260
Rolette	331
Sargent	71
Sheridan	7
Sioux	160
Slope	6
Stark	614
Steele	21
Stutsman	311
Towner	20
Traill	84
Walsh	218
Ward	1512
Wells	34
Williams	666

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.





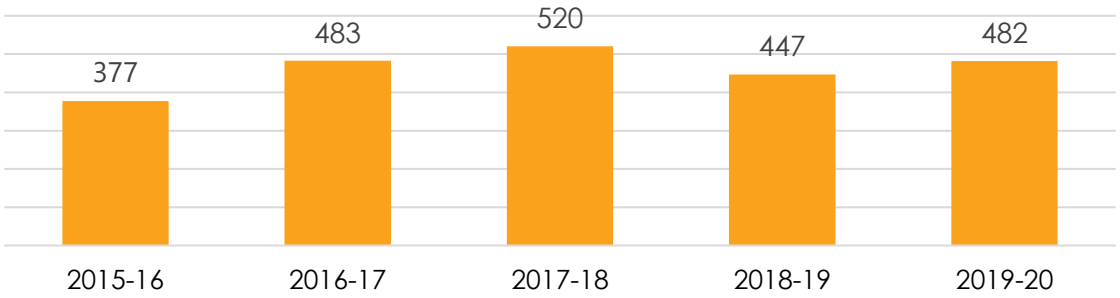


Deaths

For the 2019-20 influenza season, 21 deaths were reported in North Dakota. This data is gathered using Vital Records data, as well as individual reports from physicians. Influenza deaths in North Dakota are often under-reported; influenza deaths are not reportable to the NDDoH, and flu-related deaths may be attributed to other common conditions such as pneumonia.

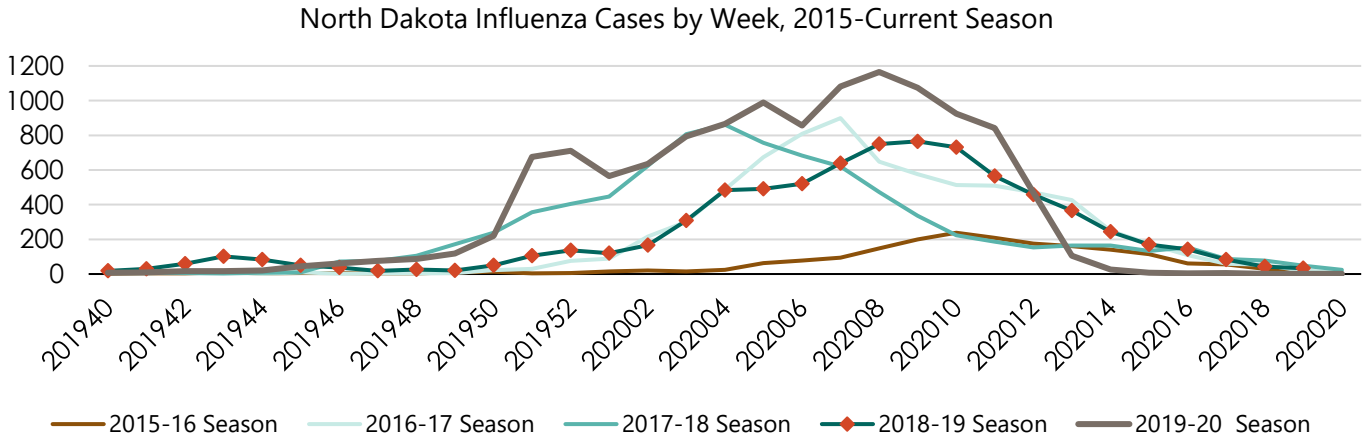
In addition, 482 pneumonia deaths were identified in the death record. The NDDoH tracks pneumonia deaths because influenza generally contributes significantly to the number of deaths due to pneumonia during the influenza season. Because influenza is not always diagnosed with a laboratory test, tracking pneumonia deaths is another way to illustrate the magnitude of the influenza season. While this influenza season had the largest number of laboratory-confirmed cases reported, there were more total deaths attributed to pneumonia during the 2017-18 season. Nationally, the percentage of deaths attributed to pneumonia and influenza was above the pandemic threshold beginning week 1.

Pneumonia Deaths During the Past Five Seasons



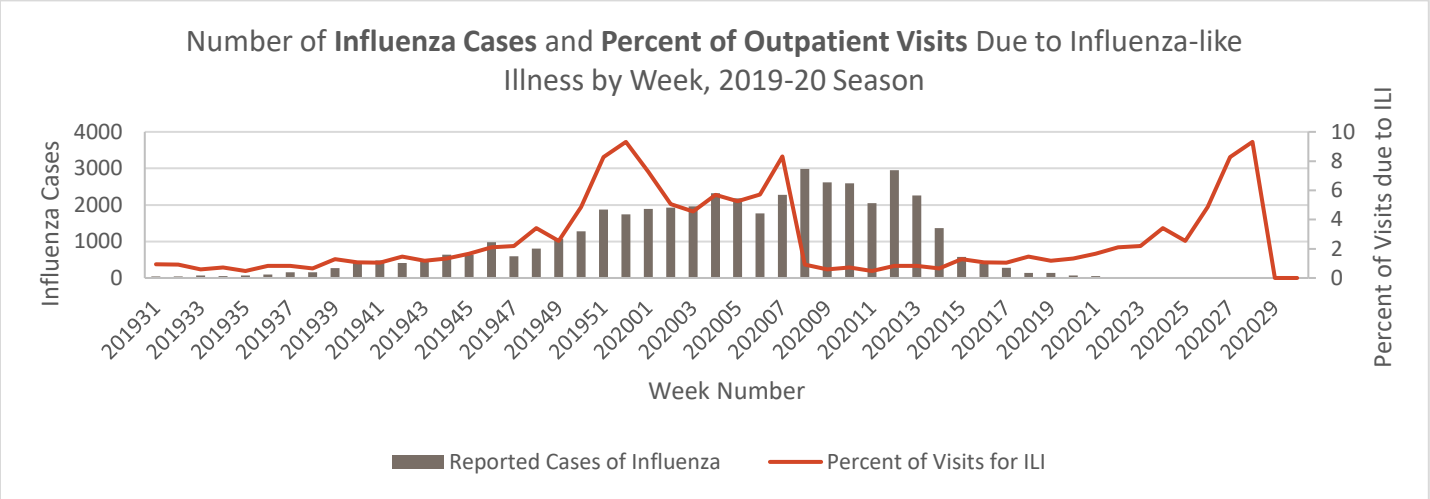
Seasonal Timing and Multi-Season Comparison

The 2019-20 influenza season peaked the week ending February 22nd (week 8), one week later than the previous season. Overall, influenza season in North Dakota typically peaks between January and March, so timing for 2019-20 was not unusual. However, we did see significant circulation (particularly of influenza B) early in the season, which slightly decreased before peaking in late February, a trend not seen in recent seasons.



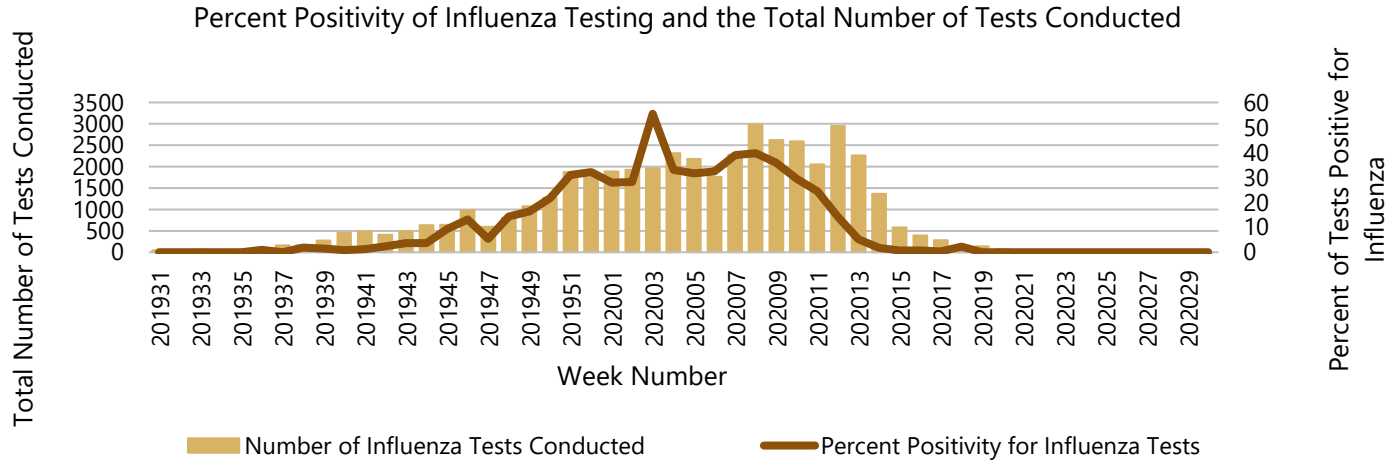
Outpatient Influenza-like Illness Network (ILINet)

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 52nd week of 2019, the week ending December 28th, with 9.31 percent of visits due to ILI. The seasonal threshold for ILI in North Dakota is 2.8 percent. For the 2019-20 season, this threshold was exceeded for 9 straight weeks, starting with week 50 (the week ending December 14th, 2019). It is important to note that the COVID-19 pandemic affected healthcare seeking behavior, and visits for influenza-like illness likely include visits COVID-19-like illness.



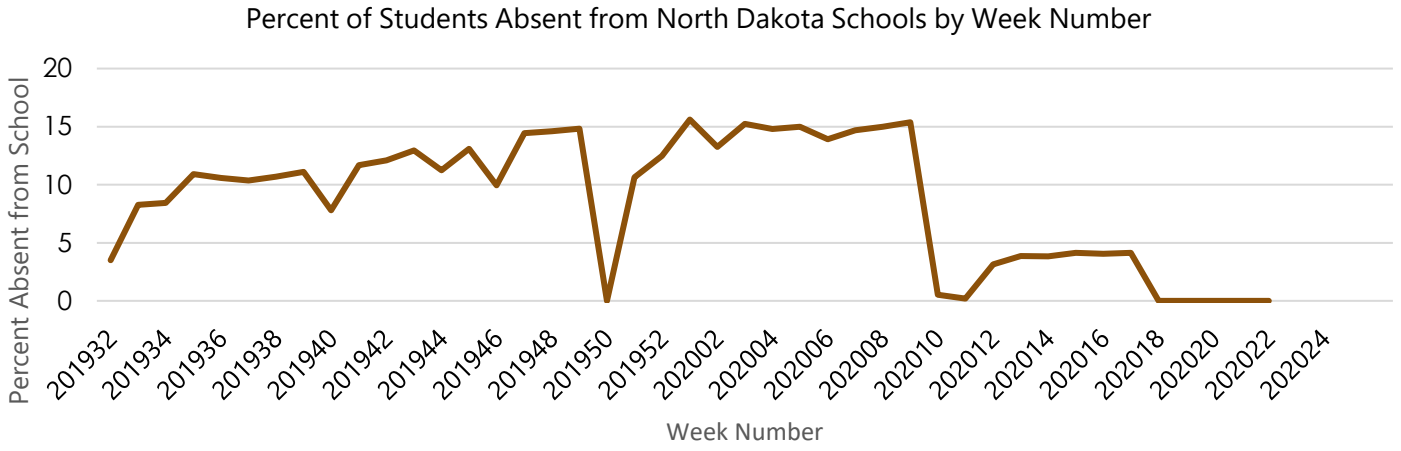
Laboratory Surveillance

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 a baseline for season-level influenza activity. Percent positivity for the 2019-20 season was above 10 percent for 18 weeks (down from 20 last year) beginning in week 46, the week ending November 14th, 2019. The highest percent positivity was 36.99 percent during week 10, the week ending March 9th, 2019.



School Absenteeism

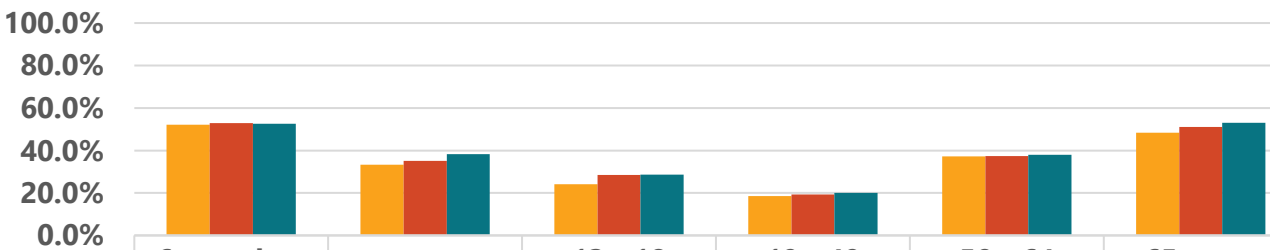
The NDDOH collects school absenteeism data that is reported to the state through the State Longitudinal Data Service (SLDS). This system compiles information from the Power School platform for use in examining absenteeism rates. School absences steadily rose until week 10, where statewide school closures took effect.



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 almost all age groups were higher during the 2018-19 influenza season compared with the two previous seasons. The percent of children 6 months- 4 years old who were vaccinated decreased by 0.2%. We continue to see higher vaccination rates for children 5-12 years, 13-28 years, and adults 19 and older. Adults 19 to 49 consistently have the lowest vaccination rates for influenza in North Dakota.



	6 months - 4 years	5 - 12 years	13 - 18 years	19 - 49 years	50 - 64 years	65 years and older
2016-2017	52.1%	33.2%	24.1%	18.5%	37.2%	48.4%
2017-2018	52.8%	35.1%	28.5%	19.2%	37.4%	51.1%
2018-2019	52.6%	38.2%	28.6%	20.0%	37.9%	53.0%