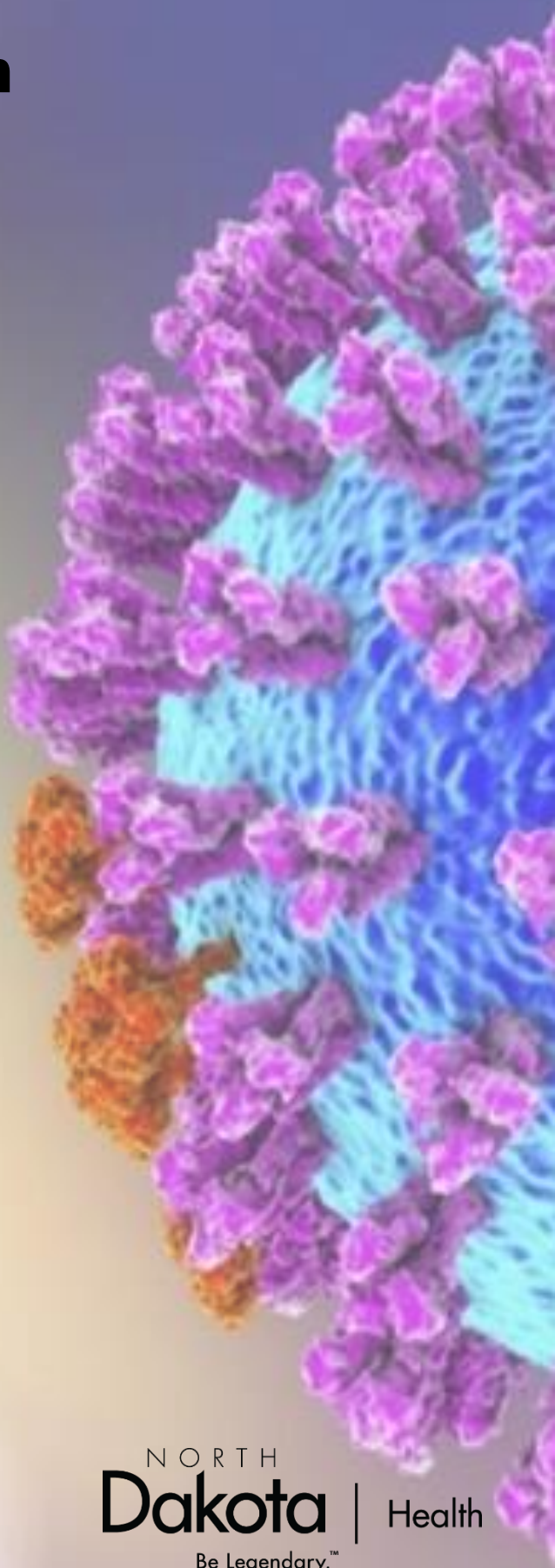
North Dakota
2020-21 Influenza Season
Final Report



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North Dakota Department of Health
Division of Disease Control

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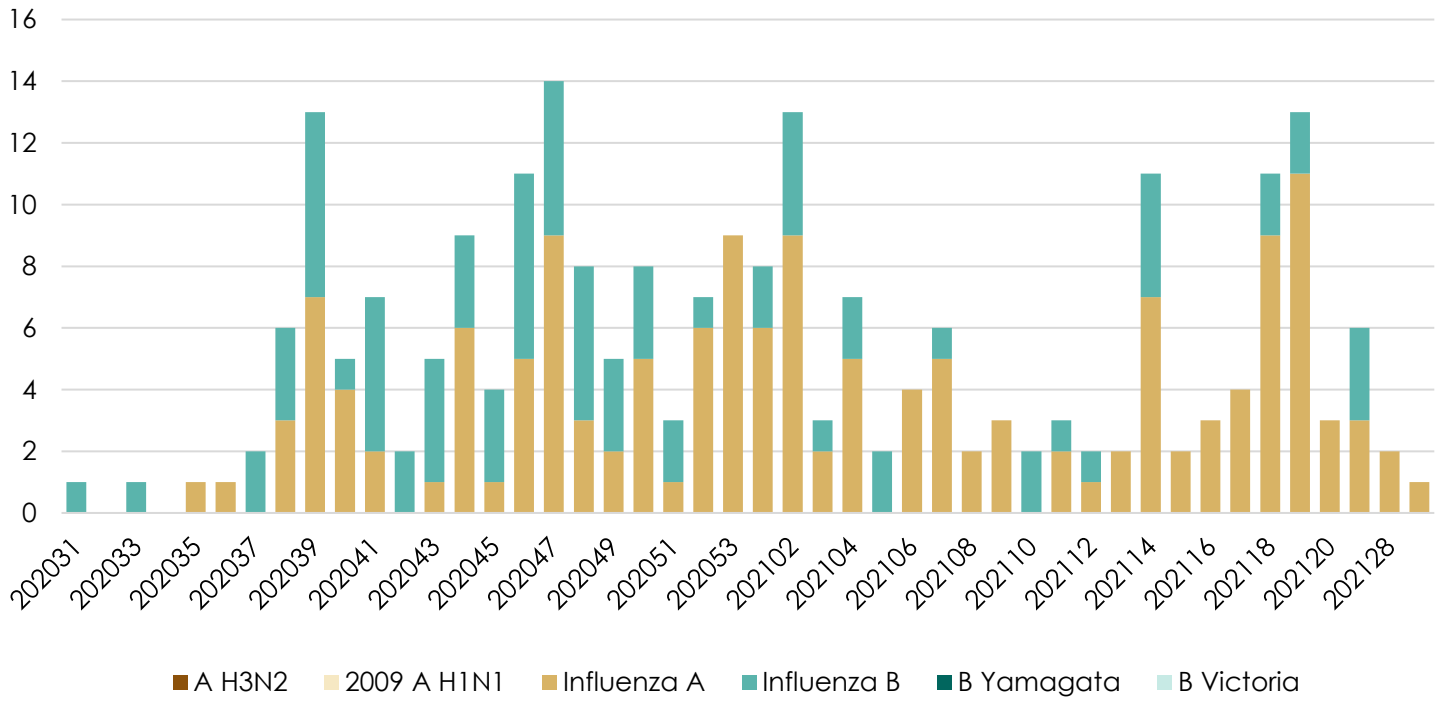
Summary

The North Dakota Department of Health (NDDoH) received reports of 245 cases of laboratory-identified influenza, one of the smallest seasonal case counts 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. This low activity in ND echoes a trend nationwide, where only 0.2% of respiratory specimens tested at clinical labs for influenza were positive.

Influenza viruses can be further classified into different subtypes, based on the genes that make up the surface proteins. This subtyping may be performed by our state laboratory and outside reference labs on specimens positive for influenza. There was no additional subtyping or lineage information available for the 2020-21 season, due to low specimen availability combined with low positivity rates. Nationally, the predominant strain reported by public health laboratories was influenza A H3N2. In North Dakota, the predominant strain for the previous season was 2009 Influenza A H1N1, with 375 laboratory-confirmed cases of the strain. 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.

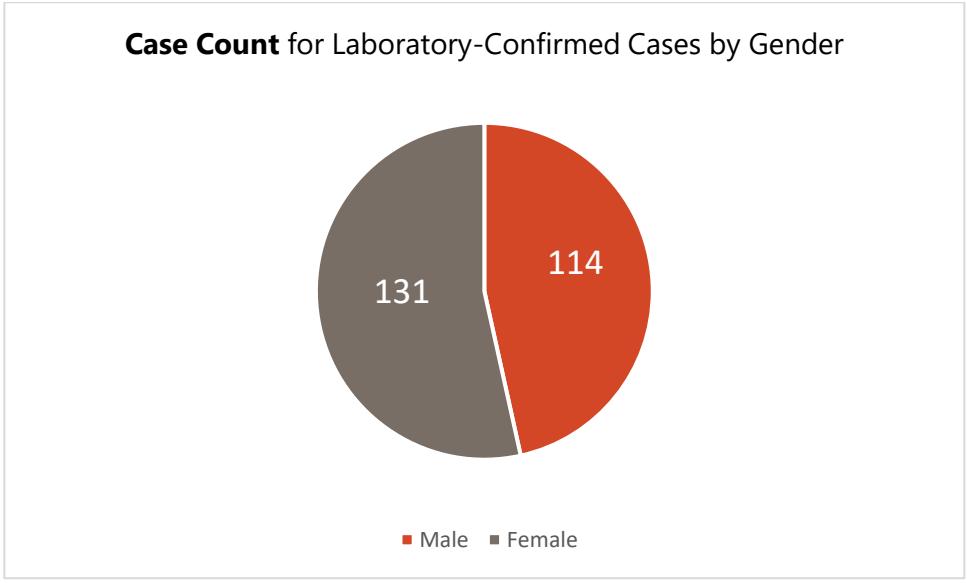
Number of Reported Laboratory-Identified Influenza Cases by Week Number

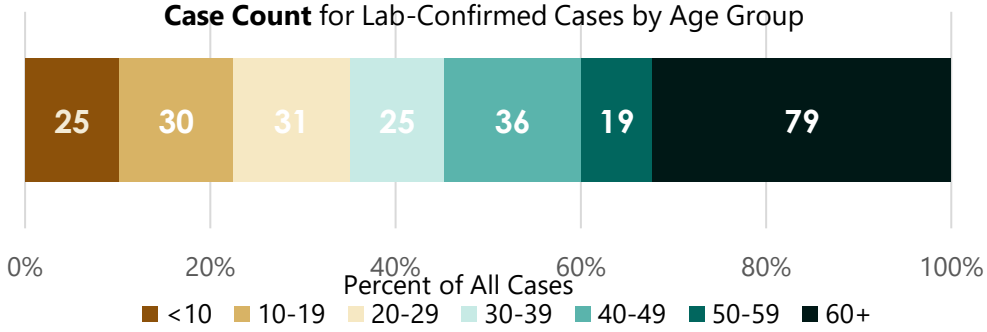


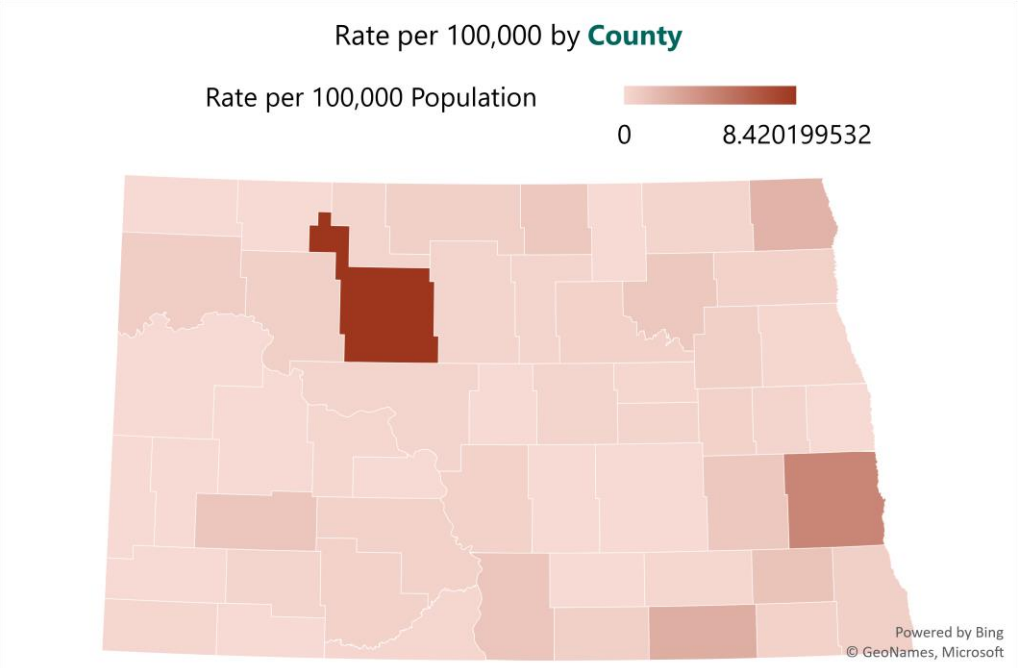
County	Total Cases
Adams	0
Barnes	7
Benson	3
Billings	0
Bottineau	4
Bowman	1
Burke	0
Burleigh	3
Cass	33
Cavalier	2
Dickey	17
Divide	0
Dunn	0
Eddy	1
Emmons	8
Foster	2
Golden Valley	0
Grand Forks	1
Grant	3
Griggs	3
Hettinger	2
Kidder	0
Lamoure	1
Logan	0
McHenry	2
Mcintosh	4
McKenzie	0
Mclean	2
Mercer	1
Morton	3
Mountrail	4
Nelson	4
Oliver	0
Pembina	15
Pierce	2
Ramsey	7
Ransom	9
Renville	2
Richland	4
Rolette	7
Sargent	3
Sheridan	0
Sioux	1
Slope	0
Stark	8
Steele	2
Stutsman	0
Towner	0
Traill	0
Walsh	3
Ward	64
Wells	2
Williams	5

Demographics

Influenza cases were reported for all counties in North Dakota.



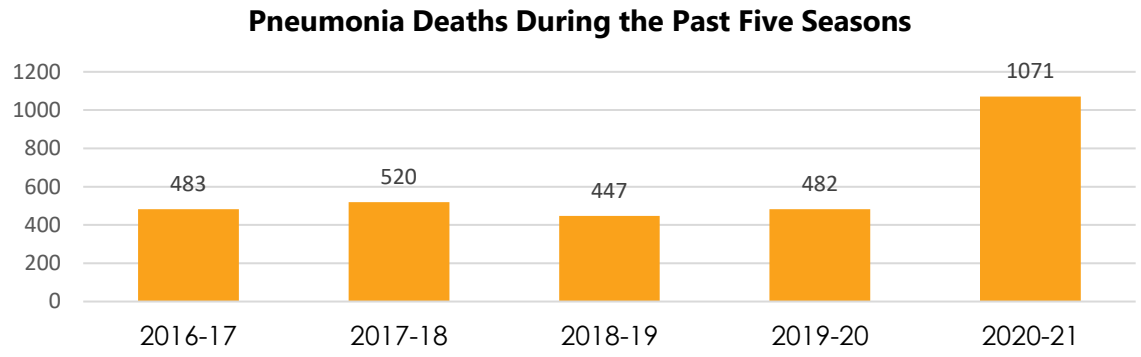




Deaths

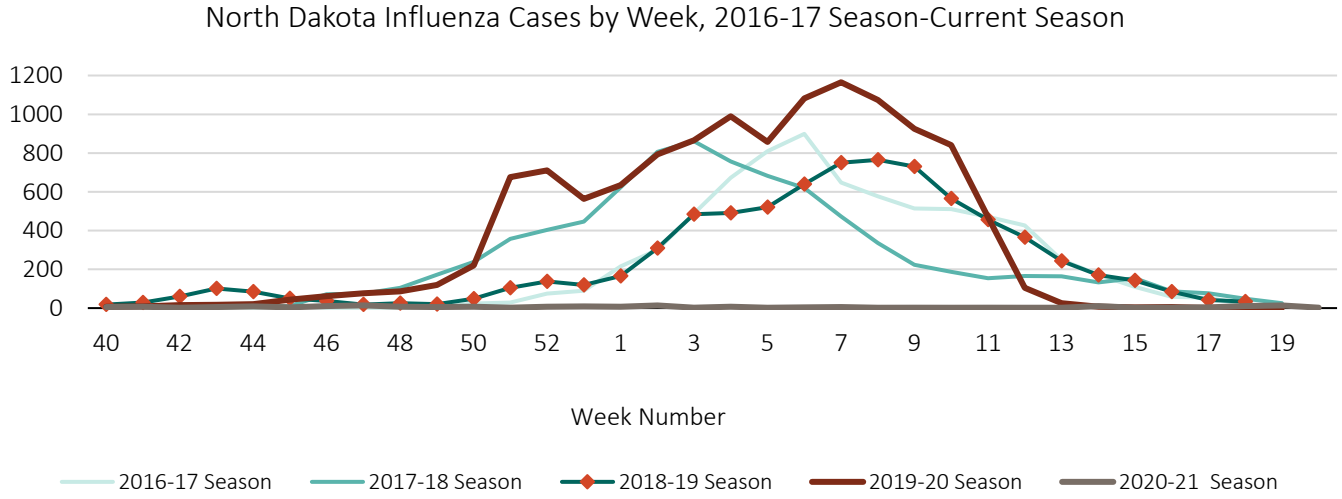
For the 2020-21 influenza season, six deaths were attributed to influenza in North Dakota. This data is gathered using Vital Records, as well as individual reports from physicians. Influenza deaths in North Dakota are often underreported; influenza deaths are not reportable to the NDDoH, and flu-related deaths may be attributed to other common conditions such as pneumonia.

There were 1,071 pneumonia deaths 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. However, the number of pneumonia deaths during the 2020-21 season was significantly higher than that of previous seasons, likely due to the ongoing COVID-19 pandemic. SARS-CoV-2 infections likely attributed to the overall number of pneumonia deaths; because of this, nationally the percentage of deaths attributed to pneumonia and influenza was above the pandemic threshold for the duration of the 2020-21 season.



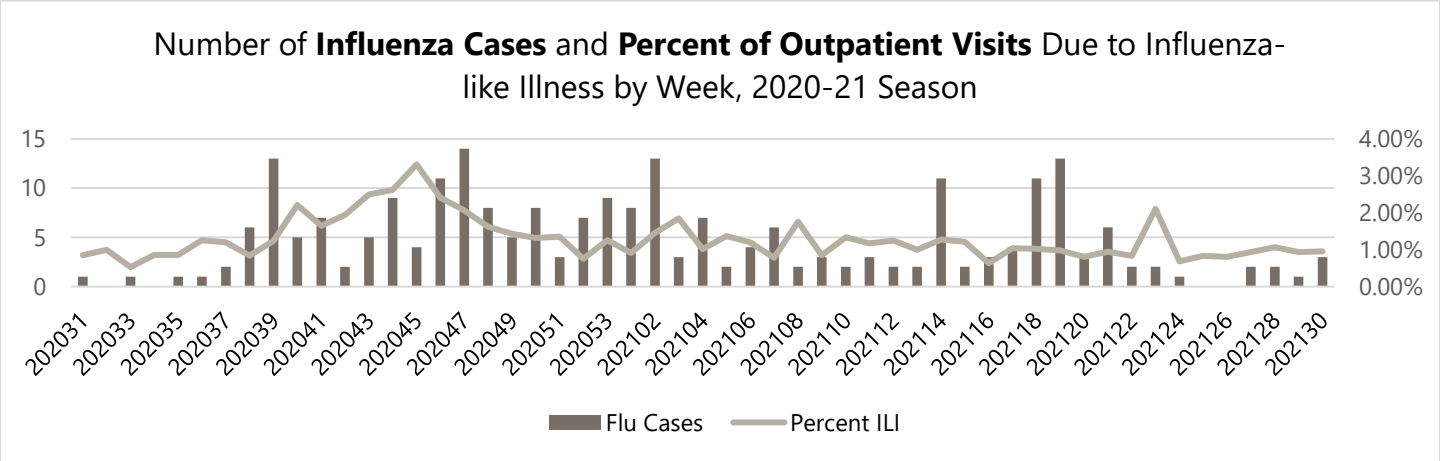
Seasonal Timing and Multi-Season Comparison

Case numbers for the 2020-21 influenza season peaked the week ending November 22nd (week 47), several months earlier than the previous season. Overall, influenza season in North Dakota typically peaks between January and March, so timing for 2020-21 was unusual. This trend was echoed at the national level, with activity peaking the week ending November 7th (week 45).



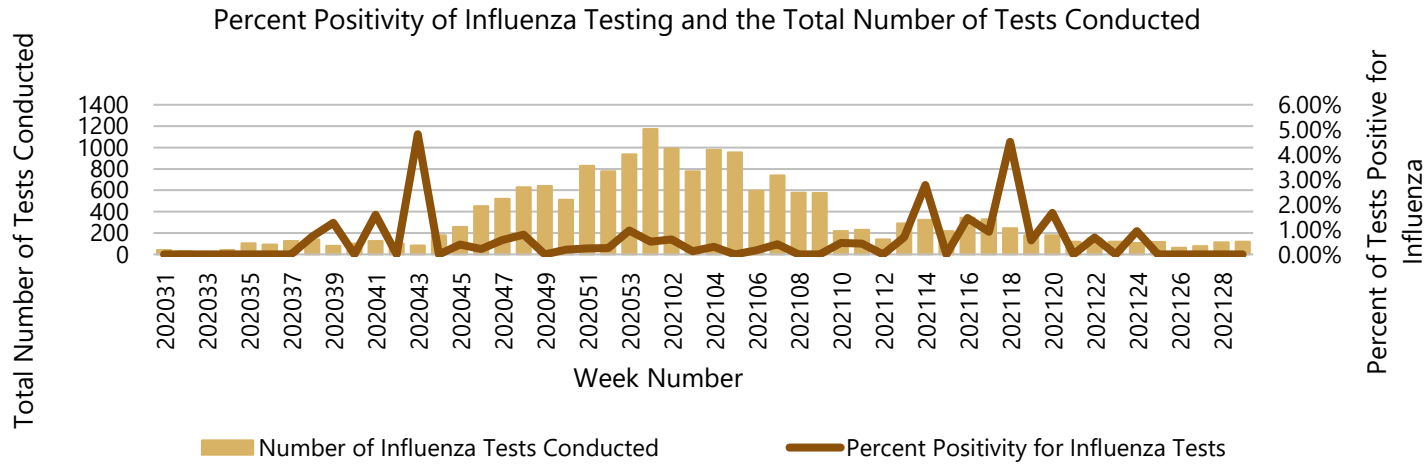
Outpatient Influenza-like Illness Network (ILINet)

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 45th week of 2020, the week ending November 7th, with 3.31 percent of visits due to ILI; this was the only week where outpatient ILI visits exceeded the seasonal threshold for ILI in North Dakota (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 health care seeking behavior, and visits for influenza-like illness likely include visits COVID-19-like illness.



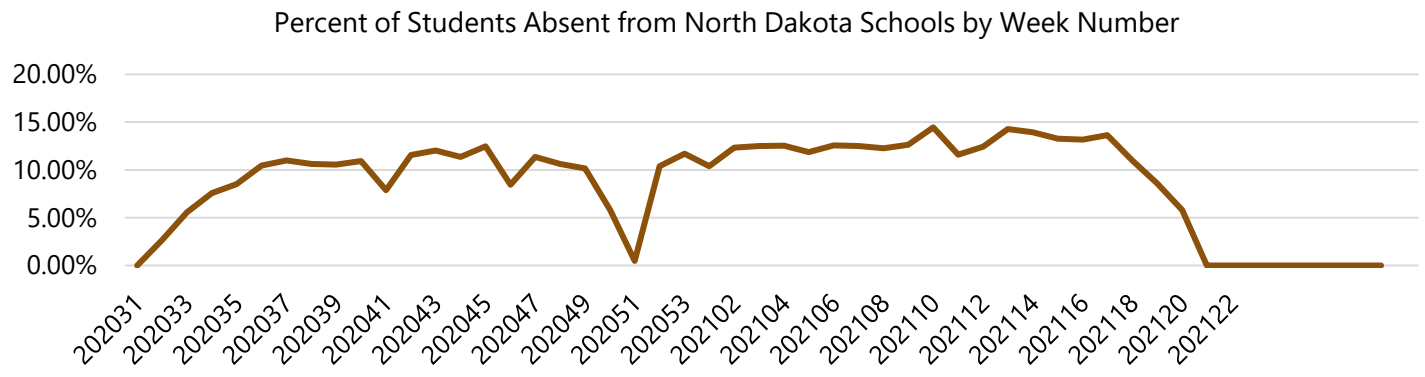
Laboratory Surveillance

Twenty-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. Due to low influenza activity, lab positivity did not cross this baseline during the 2020-21 influenza season. The highest percent positivity was 4.82% during week 43, the week ending October 24th, 2020.



School Absenteeism

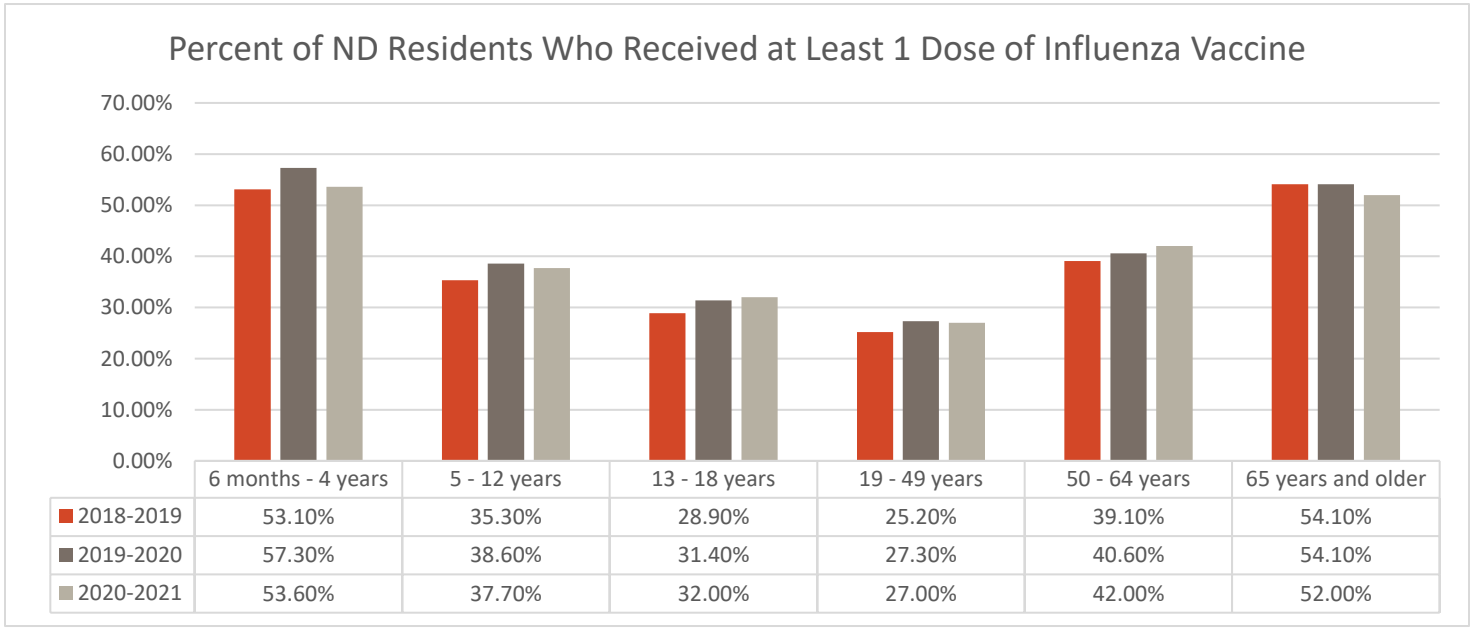
The NDDoH collects school absenteeism data that is reported to the state through the State Longitudinal Data Service (SLDS). This system compiles information from the Power School platform for use in examining absenteeism rates for any reason. School absences remained steadily between 10-15%, peaking at 14.45% during week 10.



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 lower during the 2020-21 influenza season compared with the two previous seasons. However, the percent of adults 50-64 years old appeared to increase slightly by 1.4%. Adults 18 to 49 consistently have the lowest vaccination rates for influenza in North Dakota, while adults 65 and over consistently have the highest rates.



	6 months - 4 years	5 - 12 years	13 - 18 years	19 - 49 years	50 - 64 years	65 years and older
2018-2019	53.10%	35.30%	28.90%	25.20%	39.10%	54.10%
2019-2020	57.30%	38.60%	31.40%	27.30%	40.60%	54.10%
2020-2021	53.60%	37.70%	32.00%	27.00%	42.00%	52.00%