

Influenza & Respiratory Illness Activity

Annual Summary 2021-2022

A summary of influenza surveillance indicators prepared by the Division of Infectious Disease Epidemiology Prevention & Control.
Summary of the 2021 - 2022 Influenza Season.

Minnesota Influenza Key Statistics	
Hospitalizations	905
Most common strain	Influenza A/H3
School outbreaks	250
Long-term care outbreaks	46
Pediatric influenza-associated deaths	2

Contents

Hospitalized Influenza Surveillance	2
Influenza-Associated Death Surveillance	4
Respiratory Disease Outbreak Surveillance: School Outbreaks	5
Respiratory Disease Outbreak Surveillance: LTC Outbreaks	6
Sentinel Provider Surveillance (Outpatients)	7
Laboratory Surveillance	8
Minnesota Influenza Incidence Surveillance Project (MIISP)	10
Weekly U.S. Influenza Surveillance Report	12

[Minnesota Influenza Surveillance \(www.health.state.mn.us/diseases/flu/stats/\)](http://www.health.state.mn.us/diseases/flu/stats/)
[Weekly U.S. Influenza Surveillance Report \(www.cdc.gov/flu/weekly/\)](http://www.cdc.gov/flu/weekly/)
[World Health Organization \(WHO\) Surveillance \(www.who.int/teams/global-influenza-programme/\)](http://www.who.int/teams/global-influenza-programme/)

Neighboring states' influenza information:

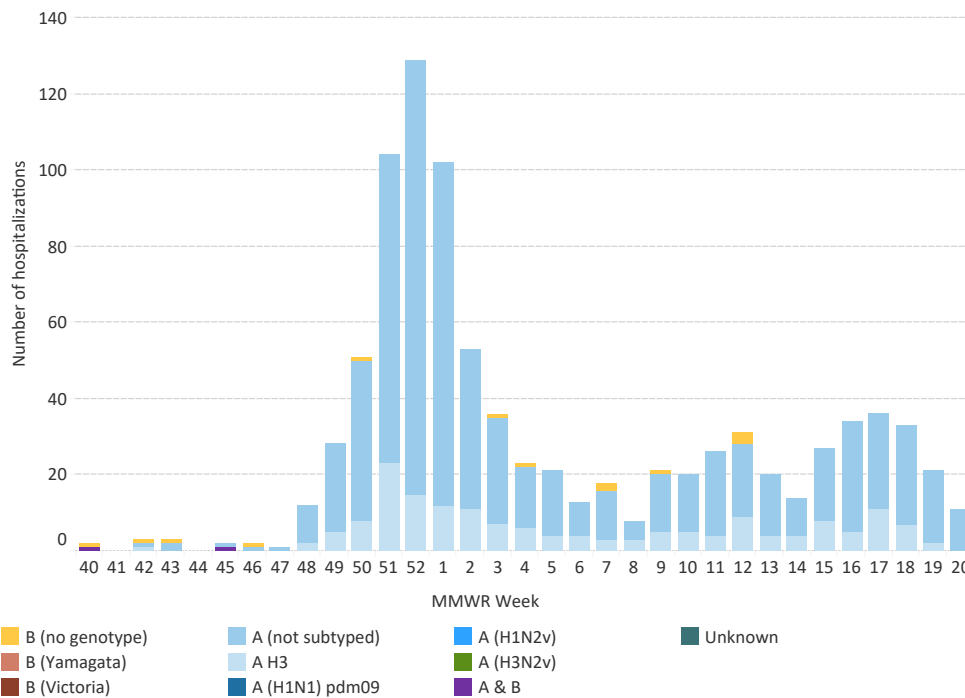
Iowa: [Iowa Influenza Surveillance \(https://hhs.iowa.gov/center-acute-disease-epidemiology/iowa-influenza-surveillance\)](https://hhs.iowa.gov/center-acute-disease-epidemiology/iowa-influenza-surveillance)
 Wisconsin: [Influenza \(Flu\) \(https://dhs.wisconsin.gov/influenza/index.htm\)](https://dhs.wisconsin.gov/influenza/index.htm)
 North Dakota: [Reported Seasonal Influenza Activity in North Dakota \(www.ndflu.com/default.aspx\)](http://www.ndflu.com/default.aspx)
 South Dakota: [South Dakota Influenza Information \(doh.sd.gov/diseases/infectious/flu/\)](http://doh.sd.gov/diseases/infectious/flu/)

Due to the COVID-19 pandemic, CDC and MDH will not be posting the weekly geographic spread indicators (no activity, sporadic, local, regional, widespread) this season as they rely on influenza-like illness data (ILI). Because these data are based on symptoms, the cause of ILI cannot reliably be attributed to influenza while COVID-19 is widely circulating.

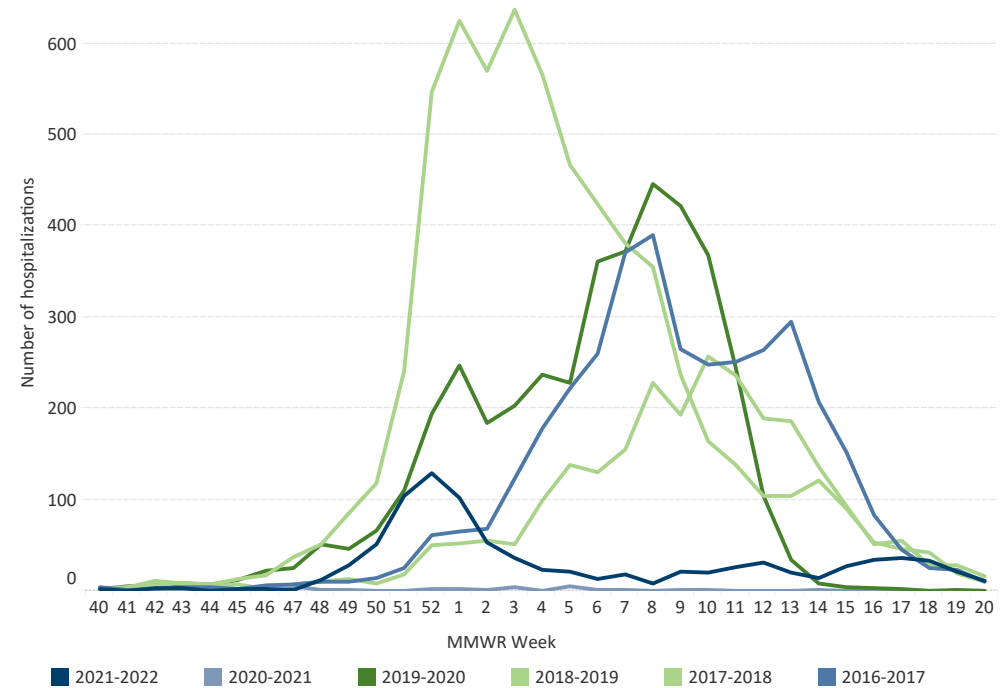
Hospitalized Influenza Surveillance

Hospitalized influenza cases are based on disease reports of laboratory-positive influenza (via DFA, IFA, viral culture, EIA, rapid test, paired serological tests or RT-PCR) and specimens from hospitalized patients with acute respiratory illness submitted to MDH-PHL by hospitals and laboratories. Due to the need to confirm reports and reporting delays, consider current week data preliminary.

Hospitalized Influenza Cases by Type, Minnesota (FluSurv-NET*)



Hospitalized Influenza Cases by Season, Minnesota (FluSurv-NET*)



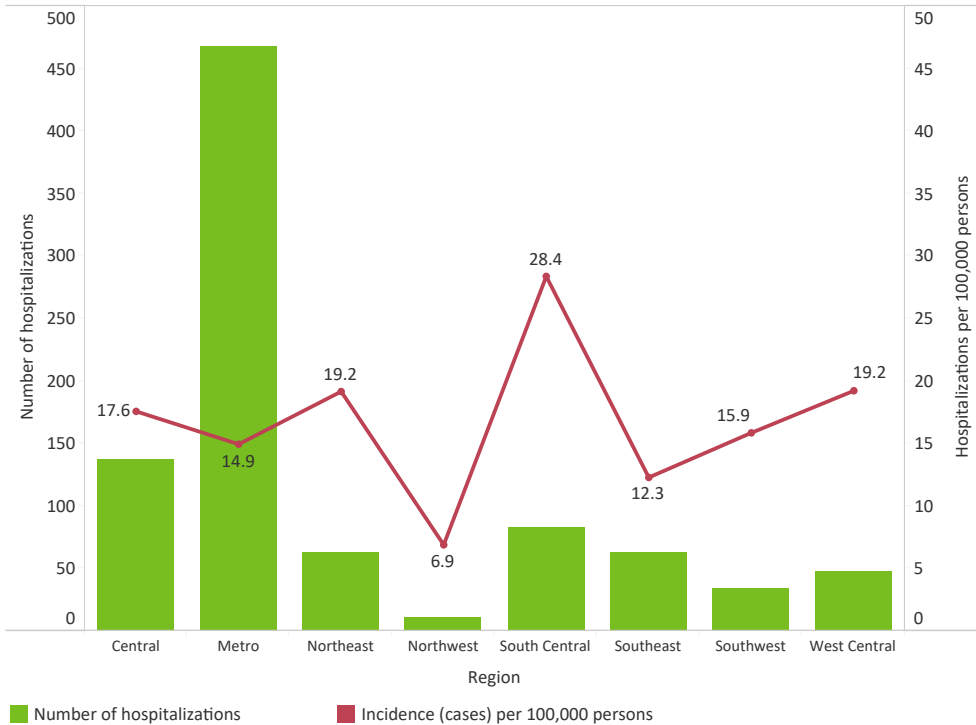
Total hospitalizations
905

Season	Total hospitalizations (historic)
2016-2017	3,695
2017-2018	6,446
2018-2019	2,543
2019-2020	4,022
2020-2021	35
2021-2022	905

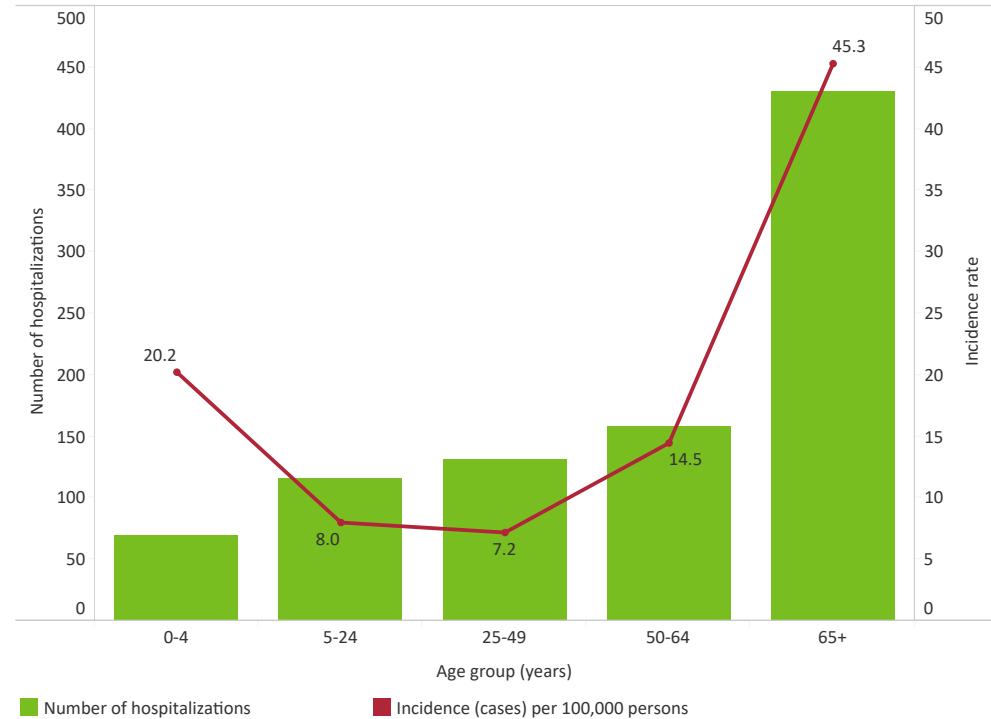
*FluSurv-NET = Influenza Surveillance Network

Hospitalized Influenza Surveillance (continued)

Number of Influenza Hospitalizations and Incidence by Region, Minnesota



Number of Influenza Hospitalizations and Incidence by Age, Minnesota



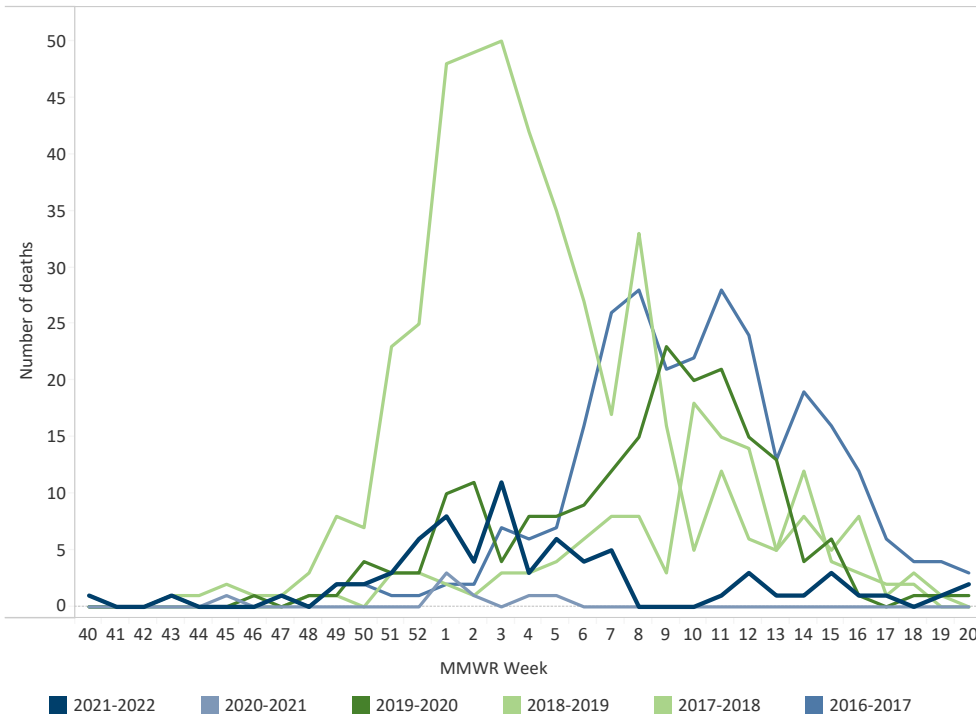
Region	Total	% Hospitaliations Total
Central	137	15%
Metro	468	52%
Northeast	62	7%
Northwest	11	1%
South Central	83	9%
Southeast	63	7%
Southwest	34	4%
West Central	47	5%

Median age (years) at time of admission
64

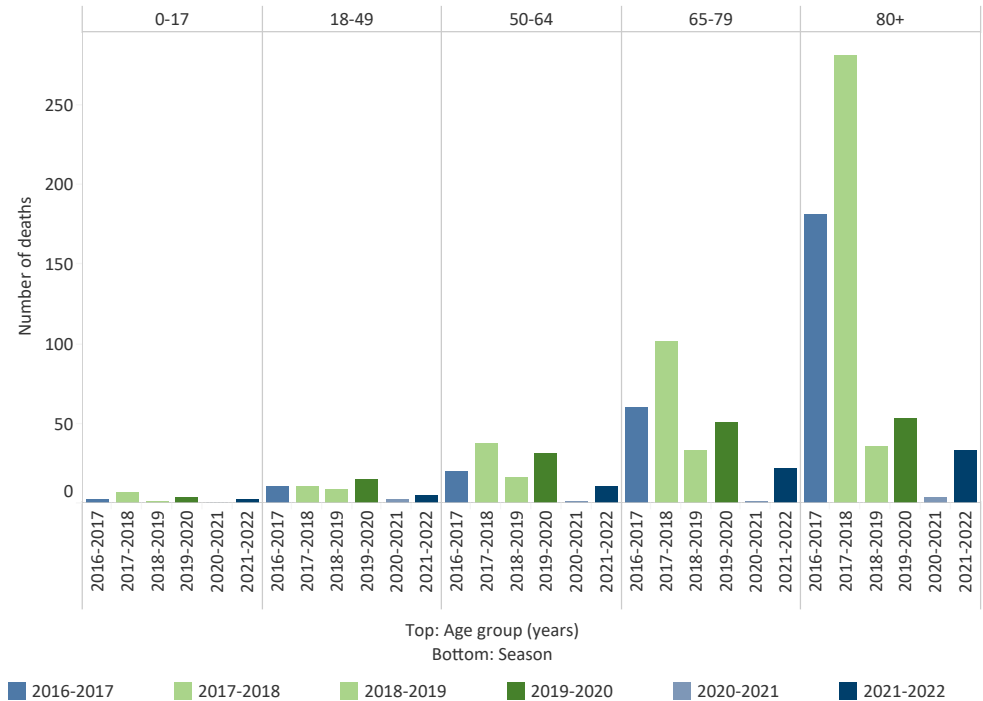
Influenza-Associated Death Surveillance

Influenza deaths are collected via reports from Minnesota's death certificate database, hospitals, and long-term care facilities. Decedents with influenza listed as a cause of or contributor to death, have recent laboratory confirmation of influenza, or are part of an ongoing influenza outbreak at a long-term care facility are reported to influenza surveillance. Due to the need to confirm reports and reporting delays, consider current week data preliminary.

Deaths Associated with Influenza by Season, Minnesota



Deaths Associated with Influenza by Age Group and Season, Minnesota



Season	Total deaths (historic)	Total pediatric (<18 years) deaths (historic)
2016-2017	273	2
2017-2018	440	6
2018-2019	126	1
2019-2020	197	3
2020-2021	7	0
2021-2022	71	2

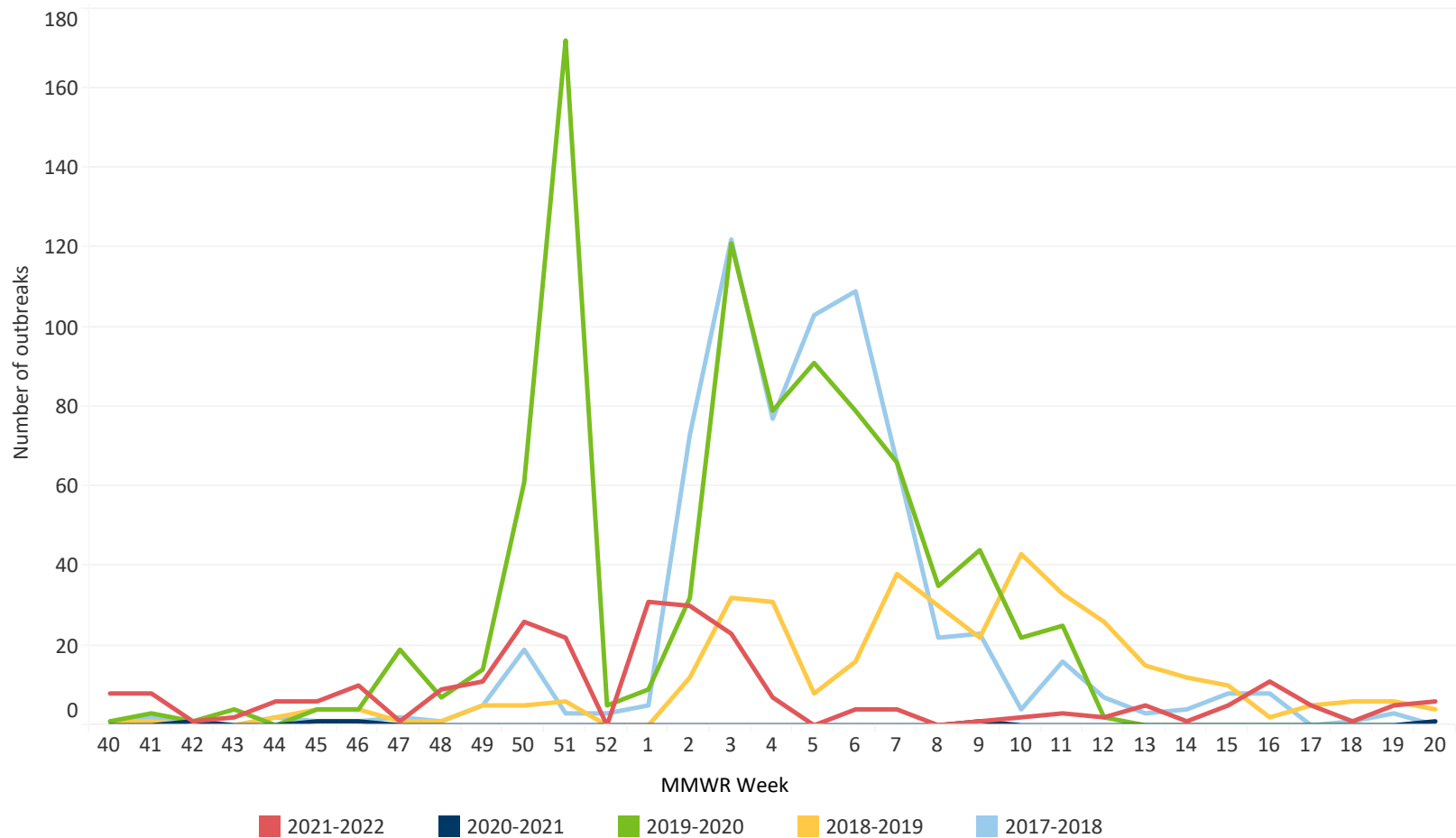
Season	Median age (years) at time of death
2016-2017	86.0
2017-2018	85.0
2018-2019	75.0
2019-2020	73.0
2020-2021	76.0
2021-2022	77.0

*FluSurv-NET = Influenza Surveillance Network

Respiratory Disease Outbreak Surveillance: School Outbreaks

K-12 schools report an outbreak of influenza-like illness (ILI) when the number of students absent with ILI reaches 5% of total enrollment or three or more students with ILI are absent from the same elementary classroom.

Influenza-like Illness (ILI) in Schools by Season

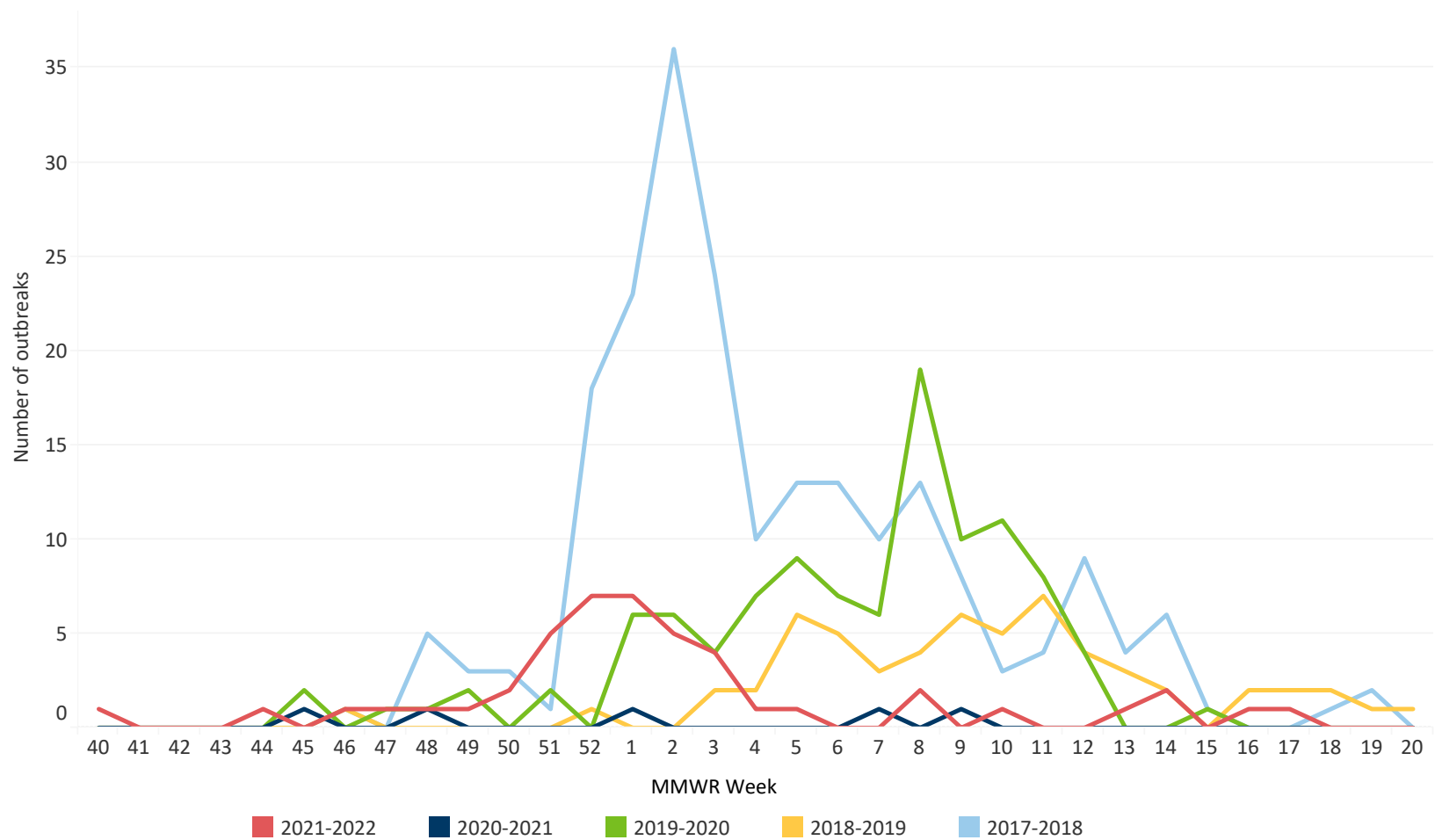


School outbreaks this season	School outbreaks last season
256	5

Respiratory Disease Outbreak Surveillance: LTC Outbreaks

Long-Term Care (LTC) facilities report to MDH when they suspect an outbreak of influenza in their facility. Laboratory-confirmed outbreaks are reported here.

Confirmed Influenza Outbreaks in LTC by Season

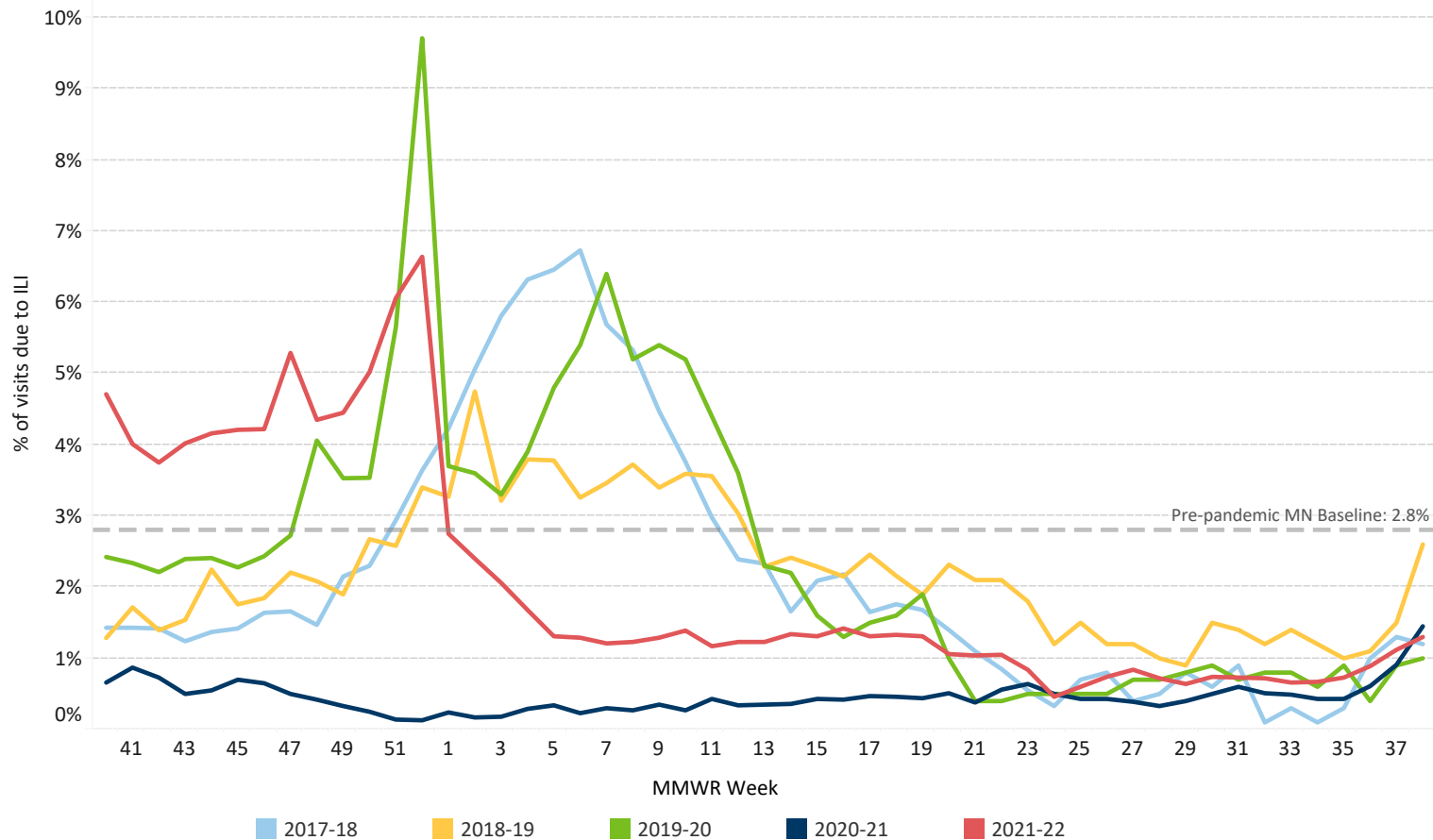


LTC outbreaks this season	LTC outbreaks last season
46	0

Sentinel Provider Surveillance (Outpatients)

MDH collaborates with healthcare providers who report the total number of patients seen and the total number of those patients presenting to outpatient clinics with influenza-like illness.

Percentage of Persons Presenting to Outpatient Clinics with Influenza-Like Illness (ILI)



* Indicates current week-data may be delayed by 1 or more weeks

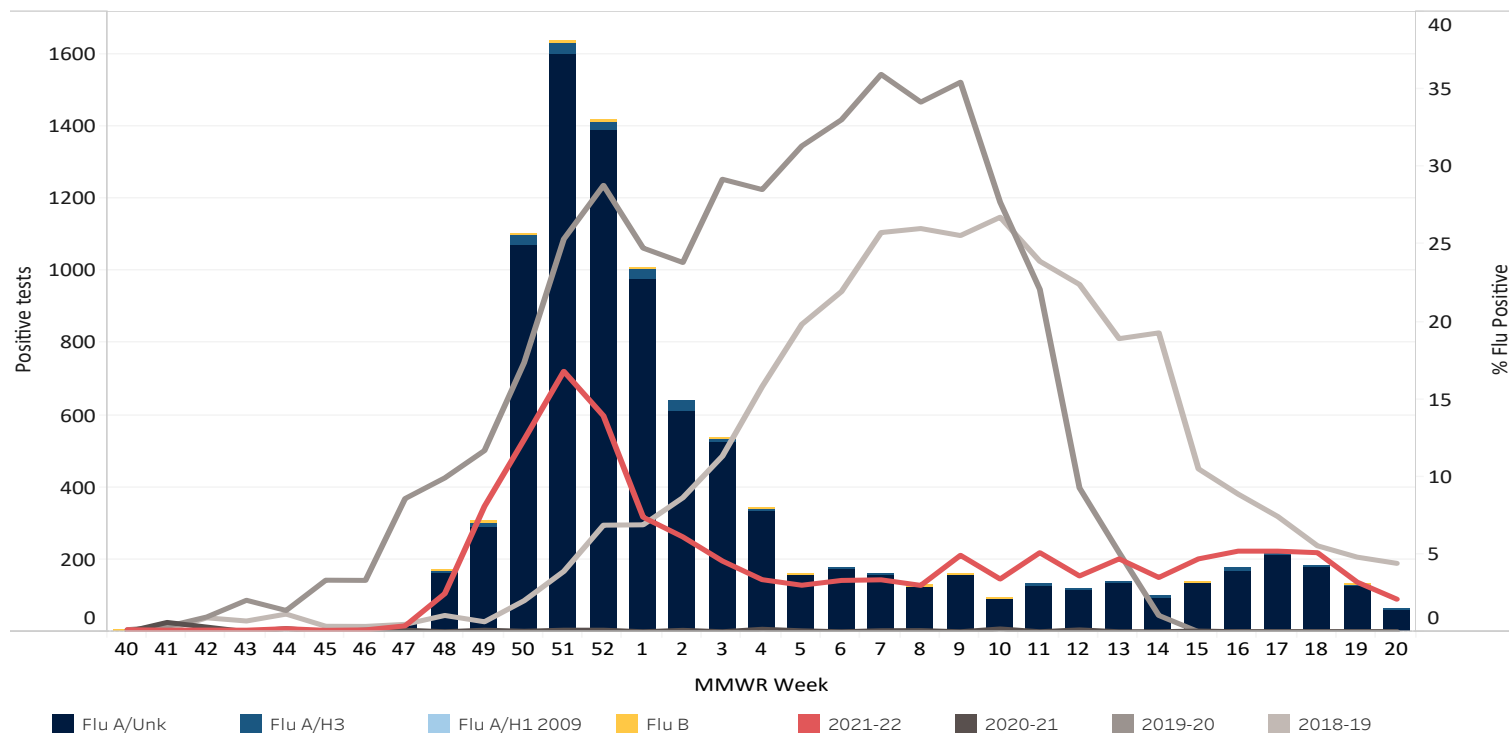
‡ MN Baseline valid for 2020-21 season only, do not compare it with previous seasons. The baseline is calculated by averaging the ILI percent for non-influenza weeks over the previous four seasons and adding two standard deviations. Non-influenza weeks account for less than 2% of the season's total flu-positive specimens tested at Public Health Labs in HHS Region 5. Weeks where ILI % is above baseline reflect weeks with excess health care visits due to ILI.

% of outpatients with ILI this week	% of outpatients with ILI last week
1.06%	1.31%

Laboratory Surveillance

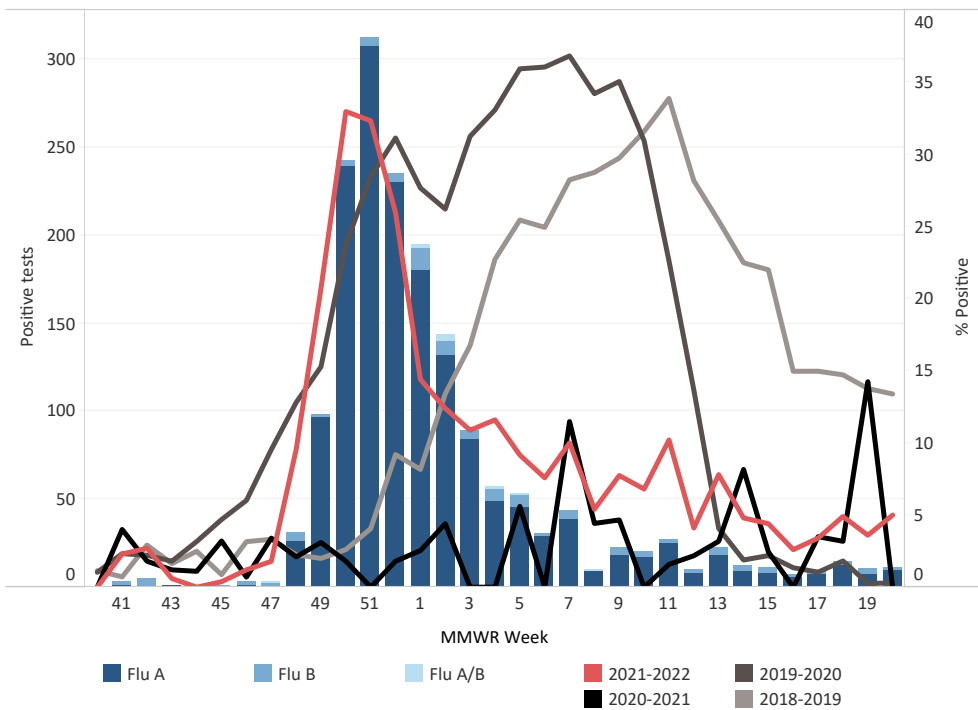
The MN Lab System (MLS) Laboratory Influenza Surveillance Program is made up of more than 310 clinic- and hospital-based laboratories, voluntarily submitting testing data weekly. These laboratories perform rapid testing for influenza and Respiratory Syncytial Virus (RSV). Significantly fewer labs perform PCR testing for influenza and three also perform PCR testing for other respiratory viruses. MDH-PHL provides further characterization of submitted influenza isolates to determine the hemagglutinin serotype to indicate vaccine coverage. Tracking the laboratory results assists healthcare providers with patient diagnosis of influenza-like illness and provides an indicator of the progression of the influenza season as well as prevalence of disease in the community.

Specimens Positive for Influenza by Molecular Testing*, by Week

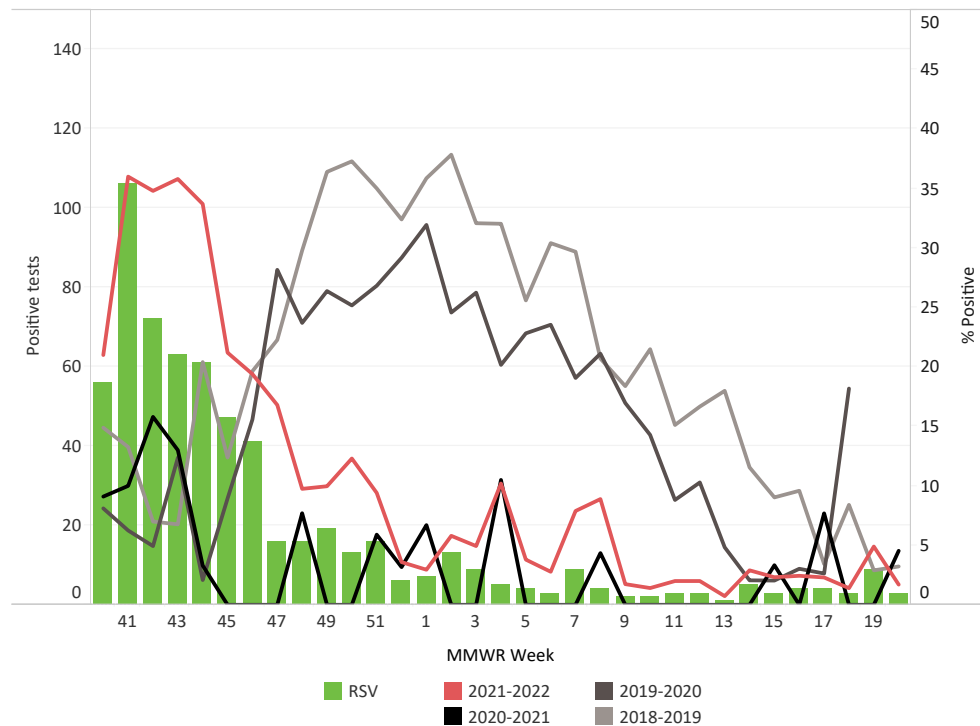


Laboratory Surveillance

MLS Laboratories – Influenza Testing
Specimens Positive by Influenza Rapid Antigen Test, by Week



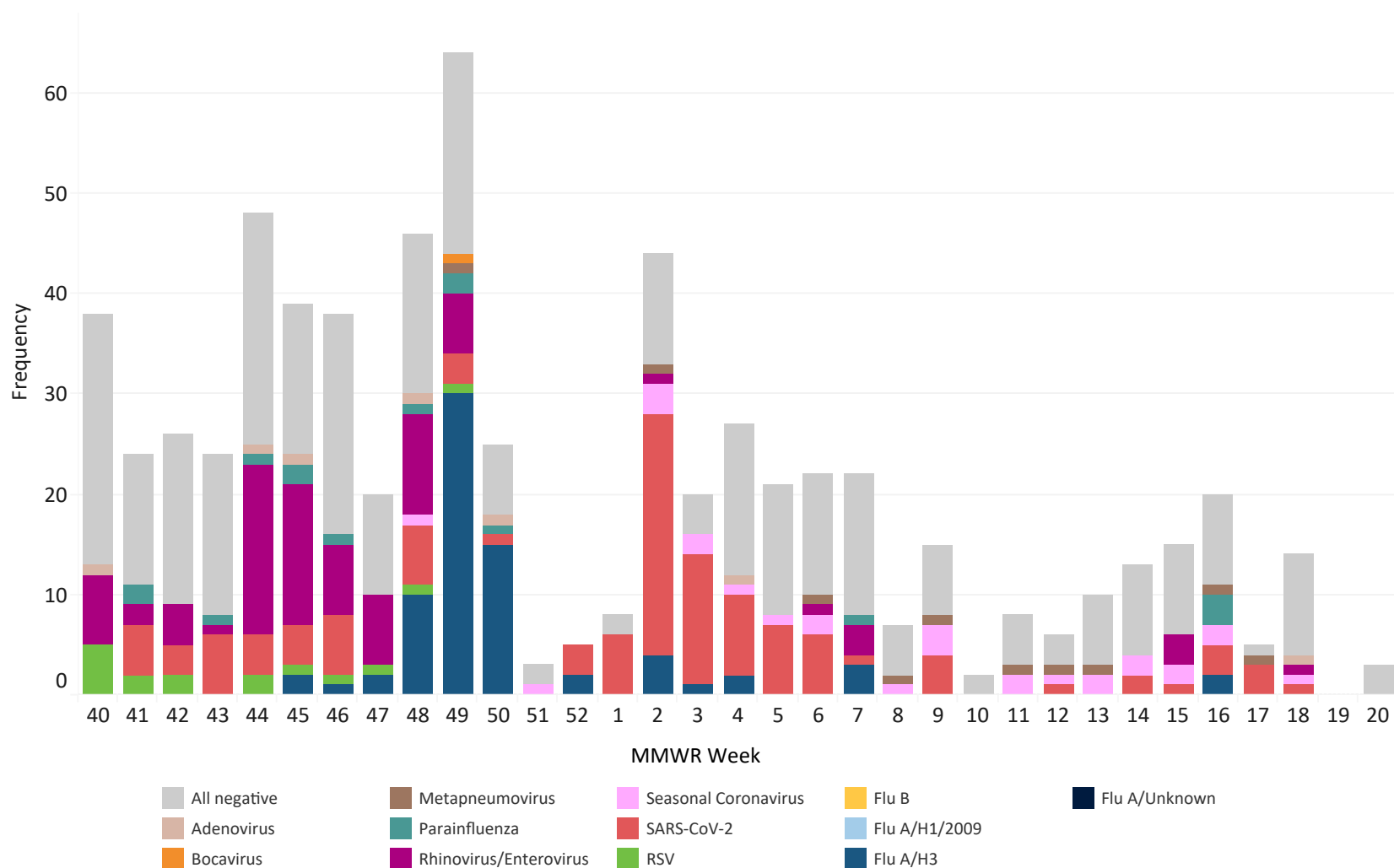
MLS Laboratories – RSV Testing
Specimens Positive by RSV Rapid Antigen Test, by Week



Minnesota Influenza Incidence Surveillance Project (MIISP)

MIISP surveillance sites collect 10-20 specimens every week on patients presenting with acute respiratory illness with or without fever. The graph below illustrate the number of positive results by virus family detected each week. The primary purpose of these graphs is to visualize the respiratory viruses circulating in Minnesota.

MIISP Testing (Outpatient), by Week



Minnesota Influenza Incidence Surveillance Project (continued)

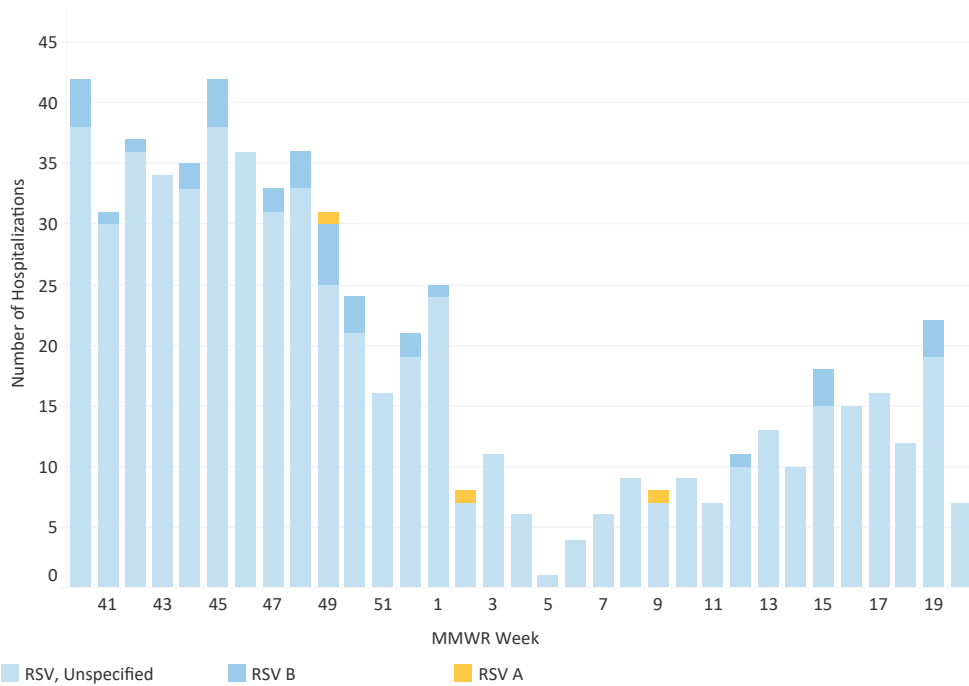
This table details the specific viruses detected during the 2020-21 Influenza season. Viruses are grouped by the virus family they belong to, with the exception of SARS-CoV-2 (the virus that causes COVID-19), which is singled out from the seasonal coronaviruses that regularly circulate throughout the year.

Pathogen Group	Pathogen	Frequency	Percent of detections
All Negative	None	327	
Adenovirus	Adenovirus	7	2.00%
Bocavirus	Bocavirus	1	0.30%
Influenza	Flu A/H1/2009	0	
	Flu A/H1/seasonal	0	
	Flu A/H3	74	20.80%
	Flu A/Unknown	0	
	Flu A/Unsubtypeable	0	
	Flu B	0	
Parainfluenza	Parainfluenza-1	0	
	Parainfluenza-2	3	0.80%
	Parainfluenza-3	4	1.10%
	Parainfluenza-4	8	2.30%
RSV/Metapneumovirus	Metapneumovirus	10	2.80%
	RSV	16	4.50%
Seasonal Coronavirus	Coronavirus-229E	14	3.90%
	Coronavirus-HKU1	1	0.30%
	Coronavirus-NL63	1	0.30%
	Coronavirus-OC43	11	3.10%
Rhinovirus/Enterovirus	Enterovirus	1	0.30%
	Rhinovirus	61	17.20%
	Rhinovirus/Enterovirus (non-differentiated)	22	6.20%
SARS-CoV-2 (COVID-19)	SARS-CoV-2	121	34.10%

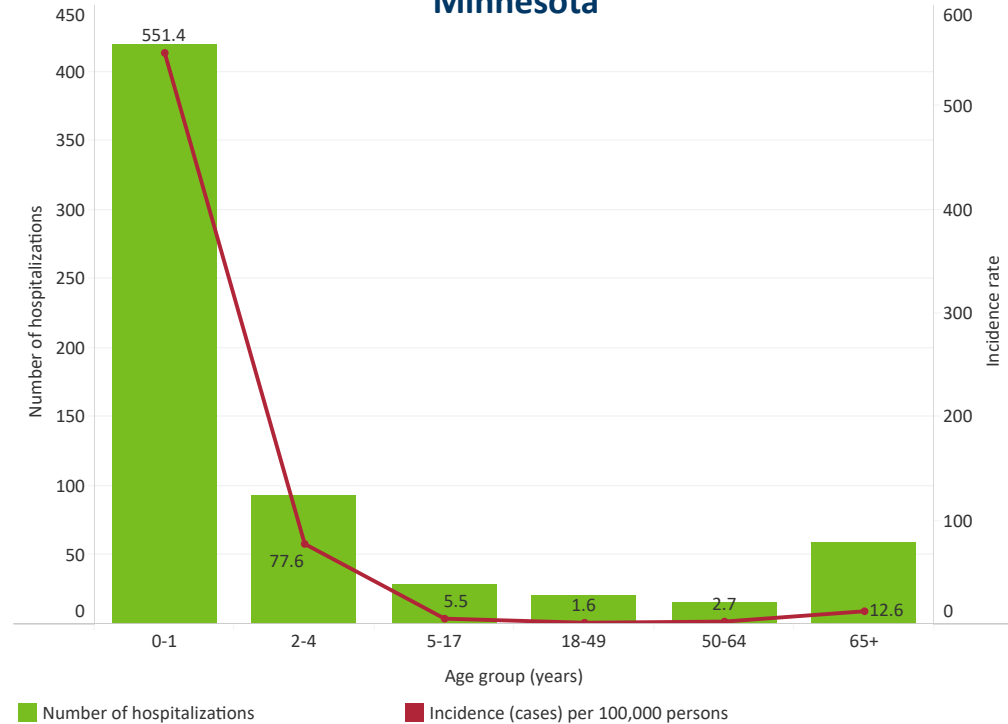
Hospitalized RSV Surveillance

Surveillance for respiratory syncytial virus (RSV) began in September 2016. Hospitalized inpatients of all ages who reside in the 7-county Twin Cities metropolitan area (Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington) with laboratory-confirmed RSV are reportable. Due to the need to confirm reports and reporting delays, consider current week data preliminary.

Hospitalized RSV Cases by Subtype, Minnesota



Number of RSV Hospitalizations and Incidence by Age, Minnesota



Total hospitalizations

637

Median age (years) at time of admission

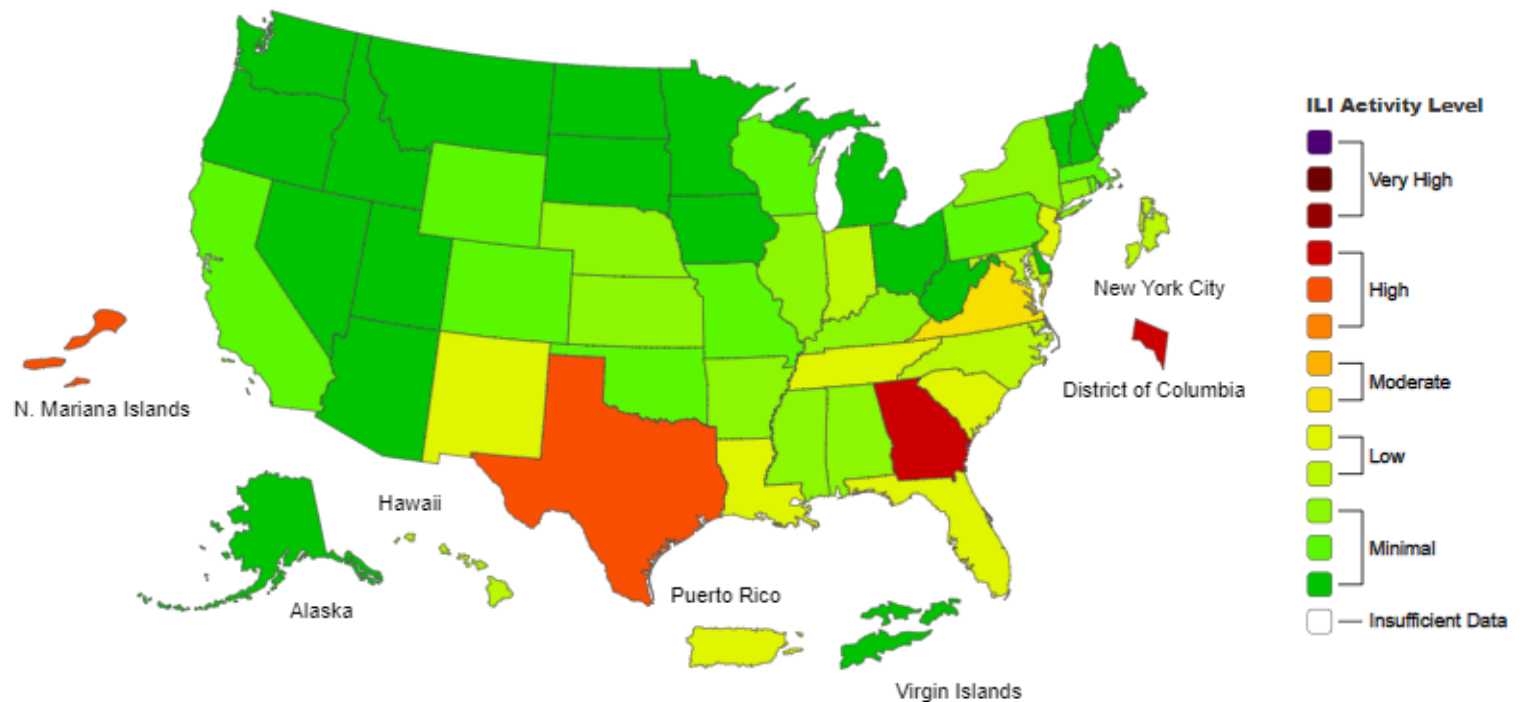
0.86

Weekly U.S. Influenza Surveillance Report

2021-22 Influenza Season Week 39 ending October 01, 2022

- Flu activity is unusually low at this time.
- An annual flu vaccine is the best way to protect against flu and its potentially serious complications.
- There are also flu antiviral drugs that can be used to treat flu illness.

Outpatient Illness: ILINet Activity Map



CDC National Influenza Surveillance (<http://www.cdc.gov/flu/weekly/>)