



WISCONSIN DEPARTMENT
of HEALTH SERVICES

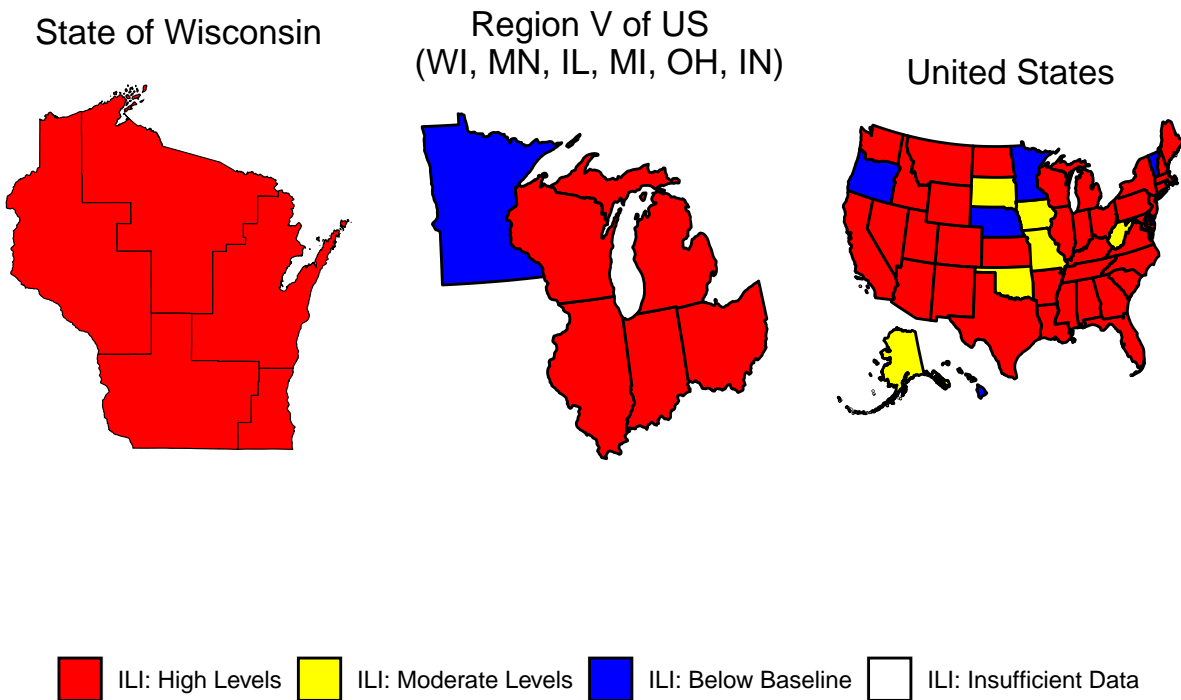


Respiratory Virus Surveillance Report

Week 52, Ending December 30, 2023

Wisconsin Department of Health Services | Division of Public Health |
Bureau of Communicable Diseases | Communicable Diseases Epidemiology Section |
www.dhs.wisconsin.gov/dph/bcd.html | dhsdphbcd@dhs.wi.gov

Influenza-like Illness (ILI) Activity



ILI: High Levels

ILI: Moderate Levels

ILI: Below Baseline

ILI: Insufficient Data

Weekly Respiratory Virus Data, At-A-Glance

Predominant virus of the week:

Influenza

Current Alerts:

- There have been three pediatric RSV deaths reported in Wisconsin since November 1, 2023.
- Influenza-like illness activity is at a high level across Wisconsin.
- Influenza, RSV, and COVID-19 are circulating widely.
- The proportion of Emergency Department visits for influenza, RSV, and COVID-19 all increased in week 52.

Influenza-associated pediatric deaths reported:

	Week 52, 2023	Since September 3
Wisconsin	0	0
Nationwide	7	27

For National US influenza surveillance statistics visit: www.cdc.gov/flu/weekly/

Respiratory Virus and Pneumonia-Associated Mortality

Percent of deaths associated with influenza, RSV, COVID-19, or pneumonia by week, Vital Records



Respiratory virus and pneumonia associated deaths by most recent 3-week period, Vital Records

Season week	Pneumonia (P)	Influenza (I)	COVID-19 (C)	RSV (R)	P, I, C or R	Percent PICR of all
50	66	0	50	2	100	9%
51	65	5	29	2	83	8%
52	47	6	28	2	63	8%

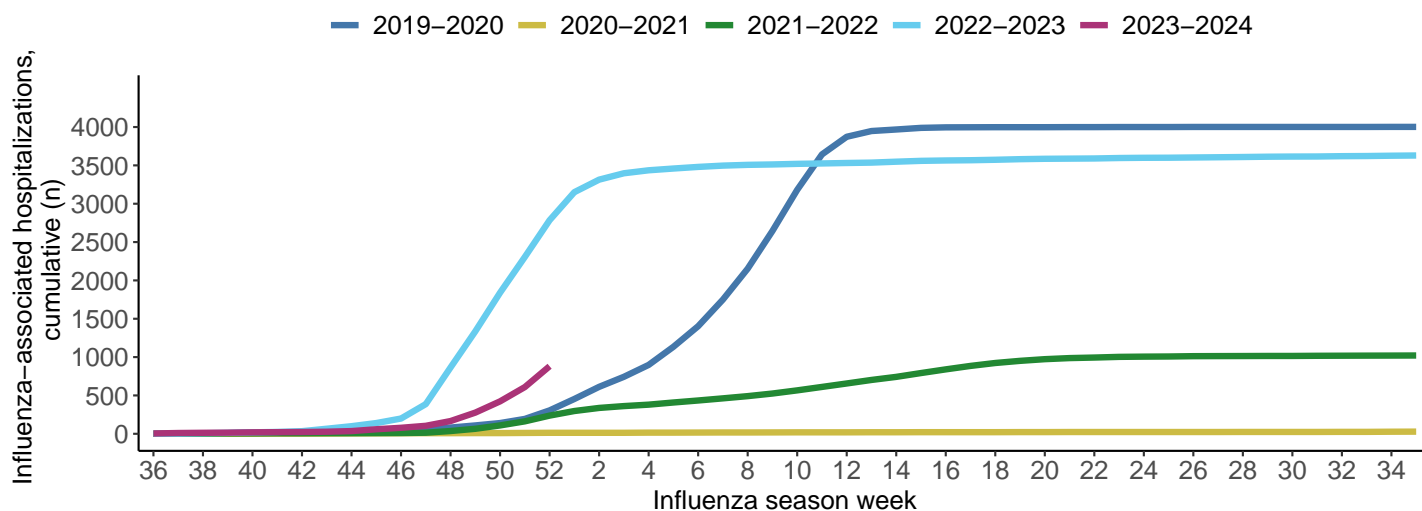
Influenza-Associated Hospitalizations

Influenza-associated hospitalizations, WEDSS

September 3, 2023 to present

Age Group	Total Reported (n)	A (2009 H1N1)	A (H3N2)	A (Unknown)	B	Admitted to ICU	Required Mechanical Ventilation	Pregnant
<1	9	1	1	4	0	0	0	0
1-4	29	0	0	10	2	4	0	0
5-17	47	2	1	16	5	9	0	0
18-49	133	8	5	75	4	15	0	7
50-64	196	7	5	100	3	34	1	0
65+	467	21	16	241	12	42	0	0
Total	881	39	28	446	26	104	1	7

Reported cumulative influenza-associated hospitalizations by influenza season, WEDSS



Influenza Season	Through Week 52	Entire Season
2019-2020	305	4002
2020-2021	13	28
2021-2022	237	1021
2022-2023	2,785	3629
2023-2024	881	-

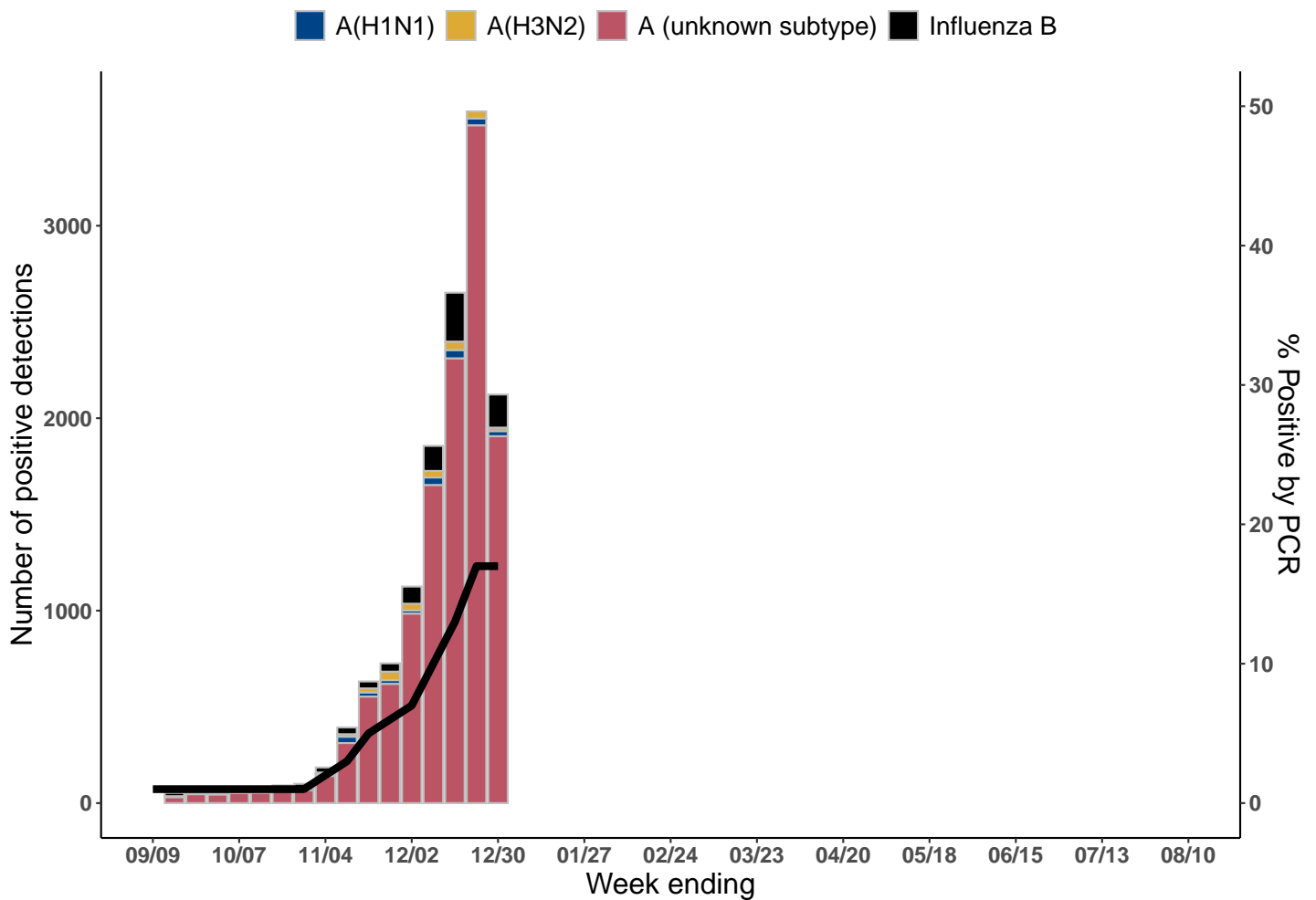
These data are preliminary and subject to change as more information is received.



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Wisconsin Laboratory Surveillance

Wisconsin positive influenza results and subtypes by PCR, NREVSS

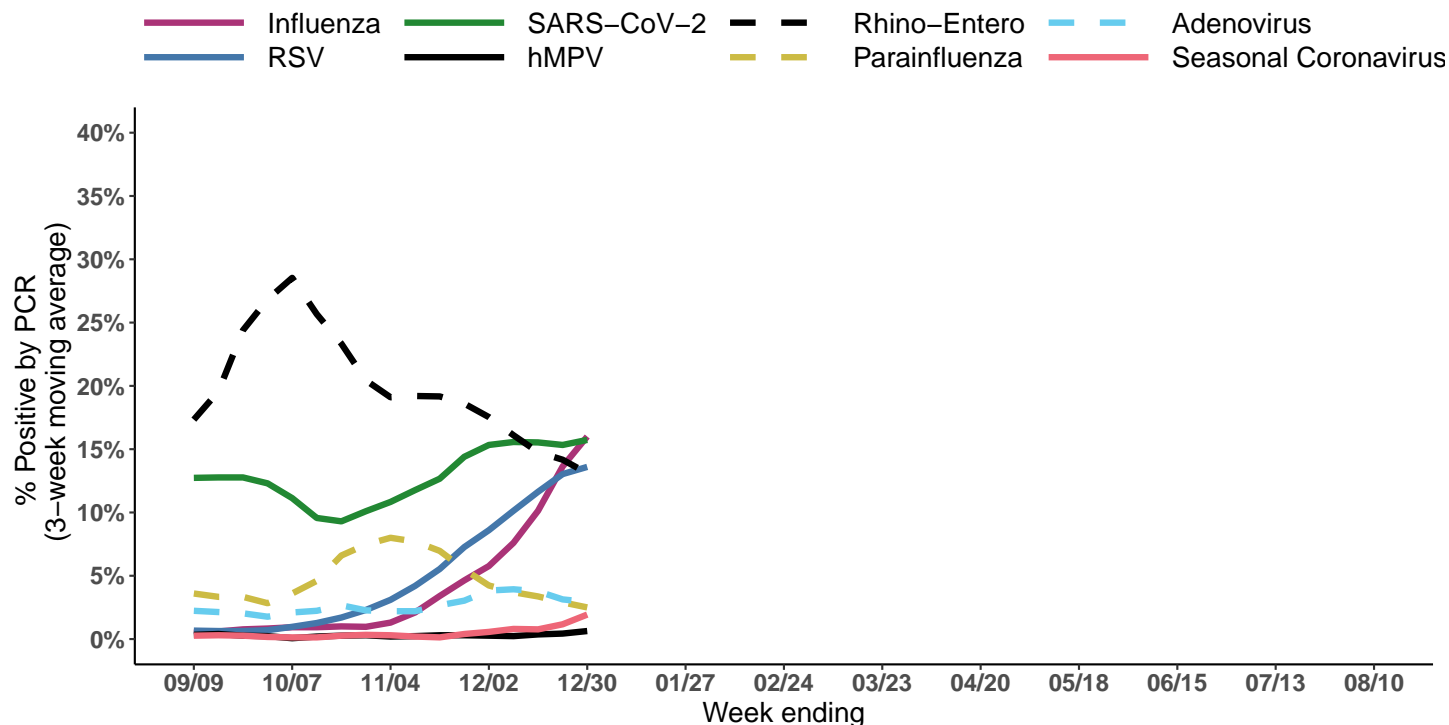


Cumulative number of positive influenza PCR tests by subtype, NREVSS
September 3, 2023 to present

Measure	Influenza A(H1N1)pdm2009	Influenza A(H3N2)	Influenza A Unknown	Influenza B	Total
Total positive (n)	305	276	12371	1187	14139
% of total positive	2%	2%	87%	8%	100%

Wisconsin Laboratory Surveillance for Respiratory Viruses

Percent positivity of respiratory viruses tested by PCR, NREVSS



Number and percent positivity of respiratory viruses tested by PCR, NREVSS

Week 52, Ending on December 30, 2023

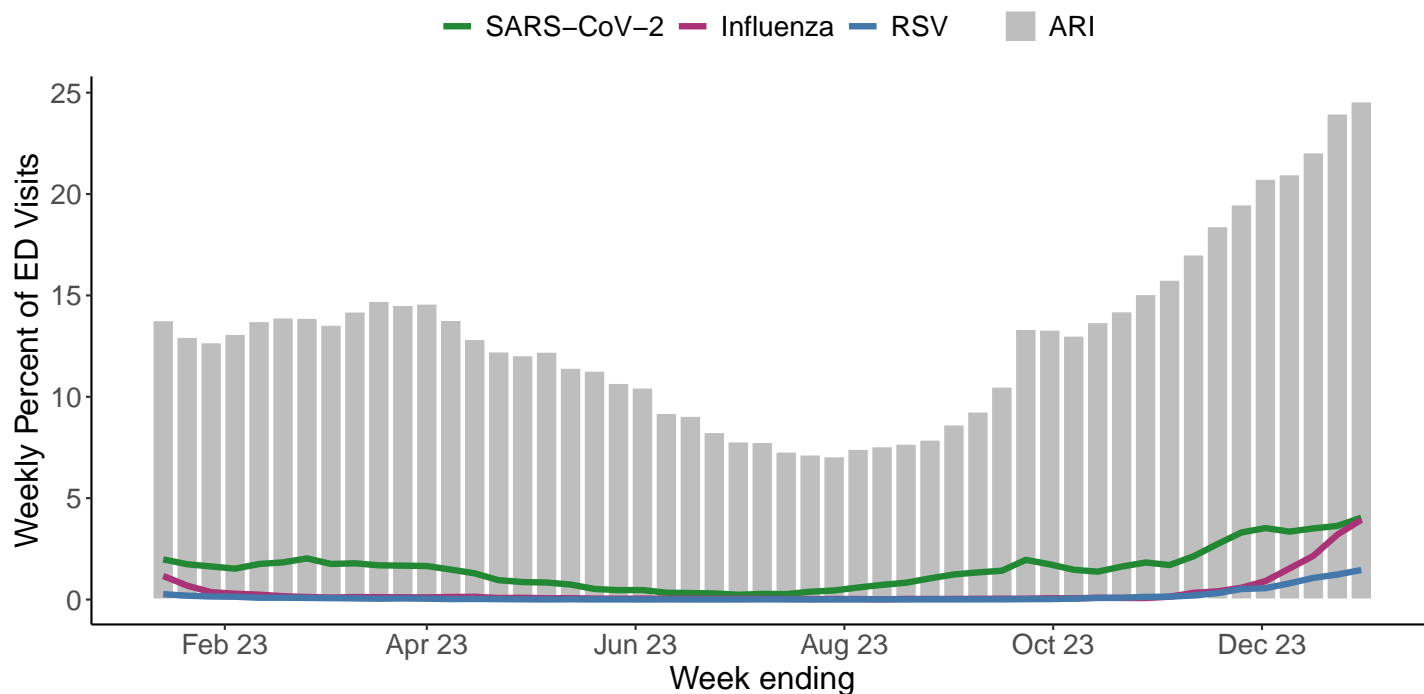
Respiratory virus	Tested	Positive (n)	Positive (%)	H3N2	2009 H1N1	Unknown	Influenza B
Influenza	12,161	2,123	17.5%	18	27	1,906	172
Respiratory virus	Tested	Positive (n)	Positive (%)	Parainfluenza 1	Parainfluenza 2	Parainfluenza 3	Parainfluenza 4
Parainfluenza	976	22	2.3%	3	3	4	12

Respiratory virus	Tested	Positive (n)	Positive (%)
Respiratory Syncytial Virus	9,882	1,323	13.4%
Adenovirus	988	28	2.8%
Seasonal Coronavirus	887	28	3.2%
HMPV	988	9	0.9%
Rhinovirus/Enterovirus	1,890	215	11.4%
COVID-19	14,015	2,258	16.1%

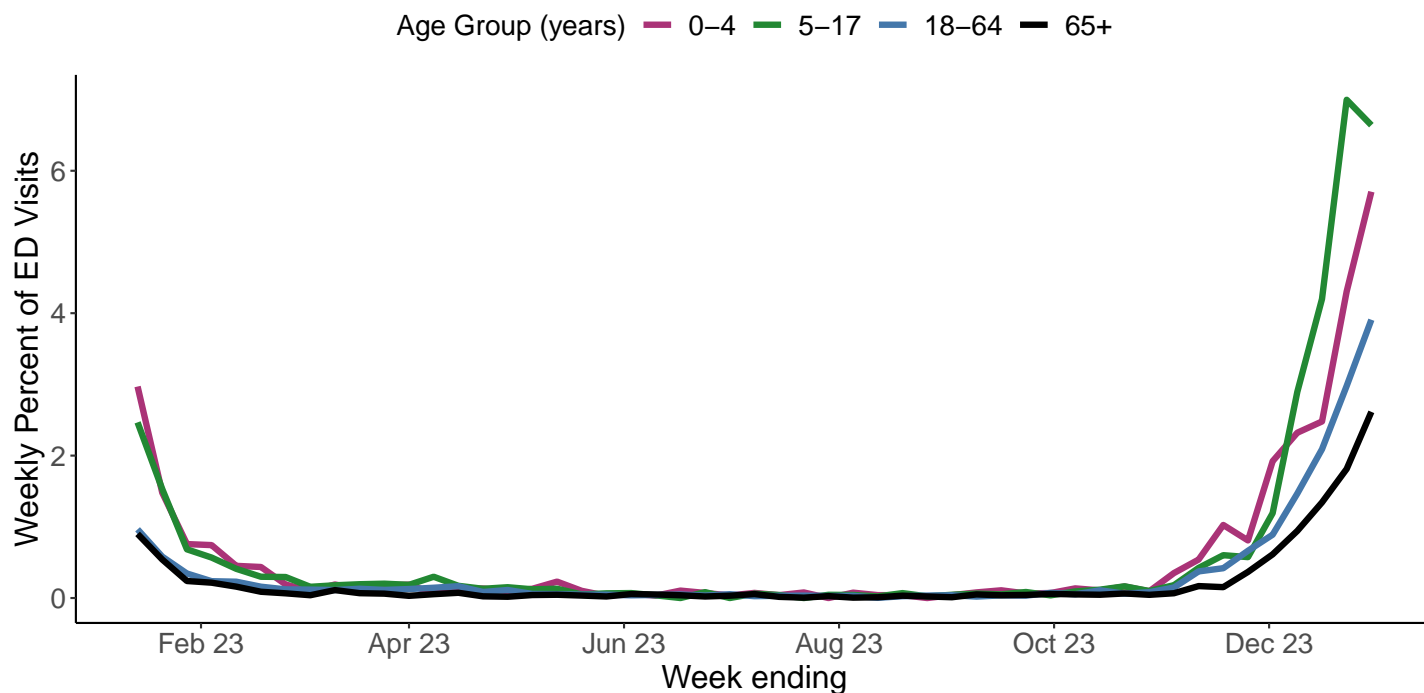


Respiratory Virus Activity in the Emergency Department (ED)

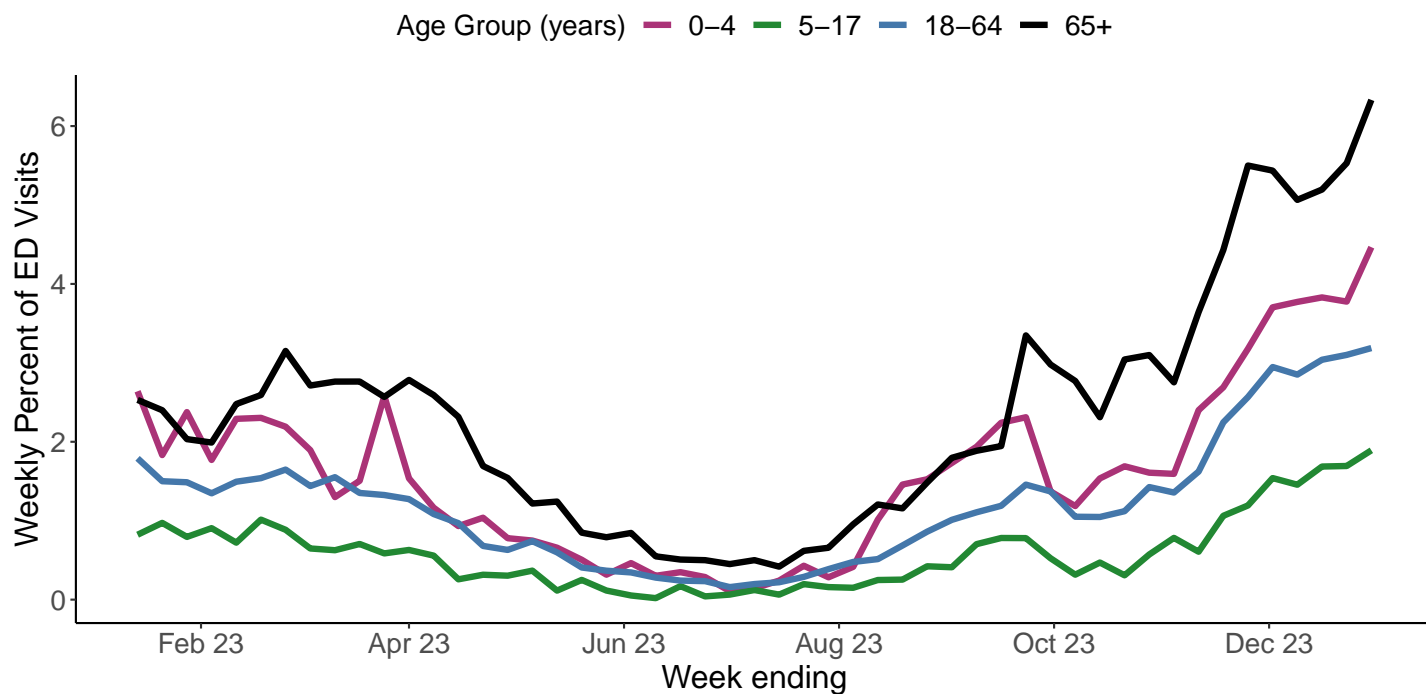
Percent of ED visits with a diagnosis for a respiratory virus or acute respiratory infection (ARI), NSSP



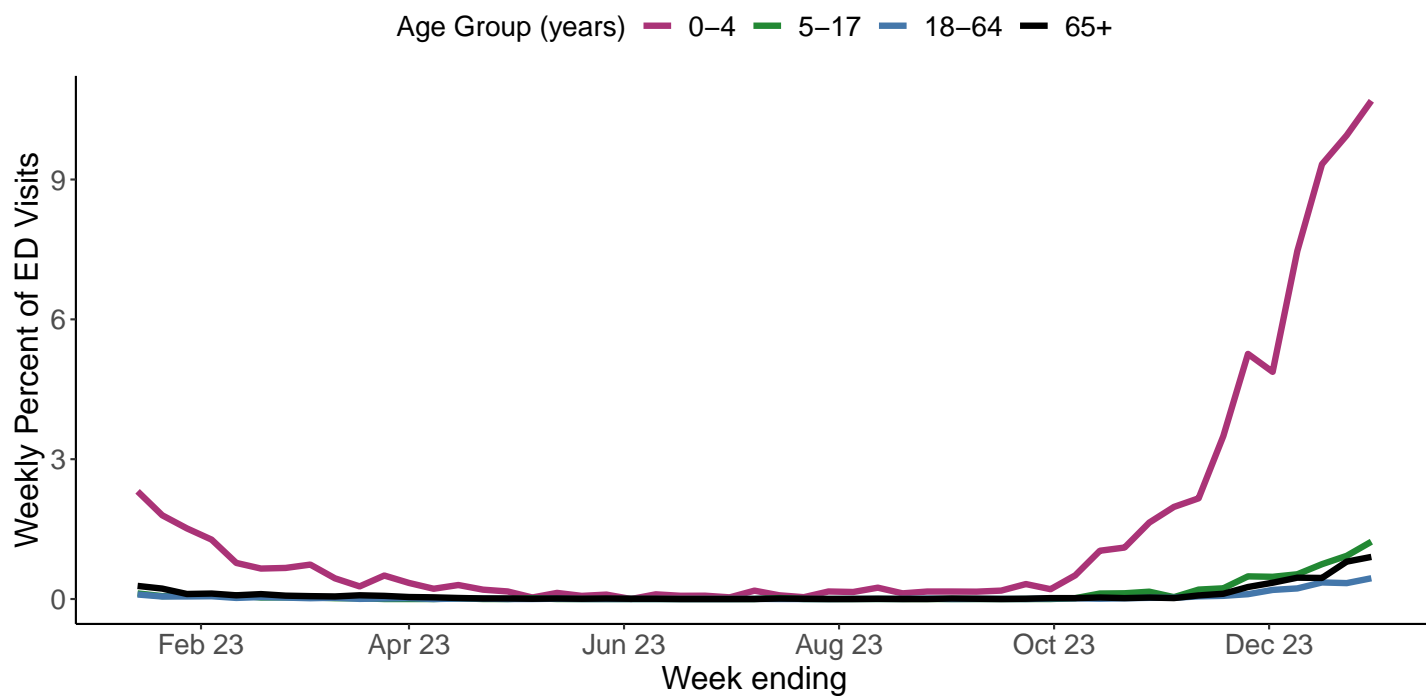
Percent of ED visits with a diagnosis for influenza by age group, NSSP



Percent of ED visits with a diagnosis for SARS-CoV-2 by age group, NSSP

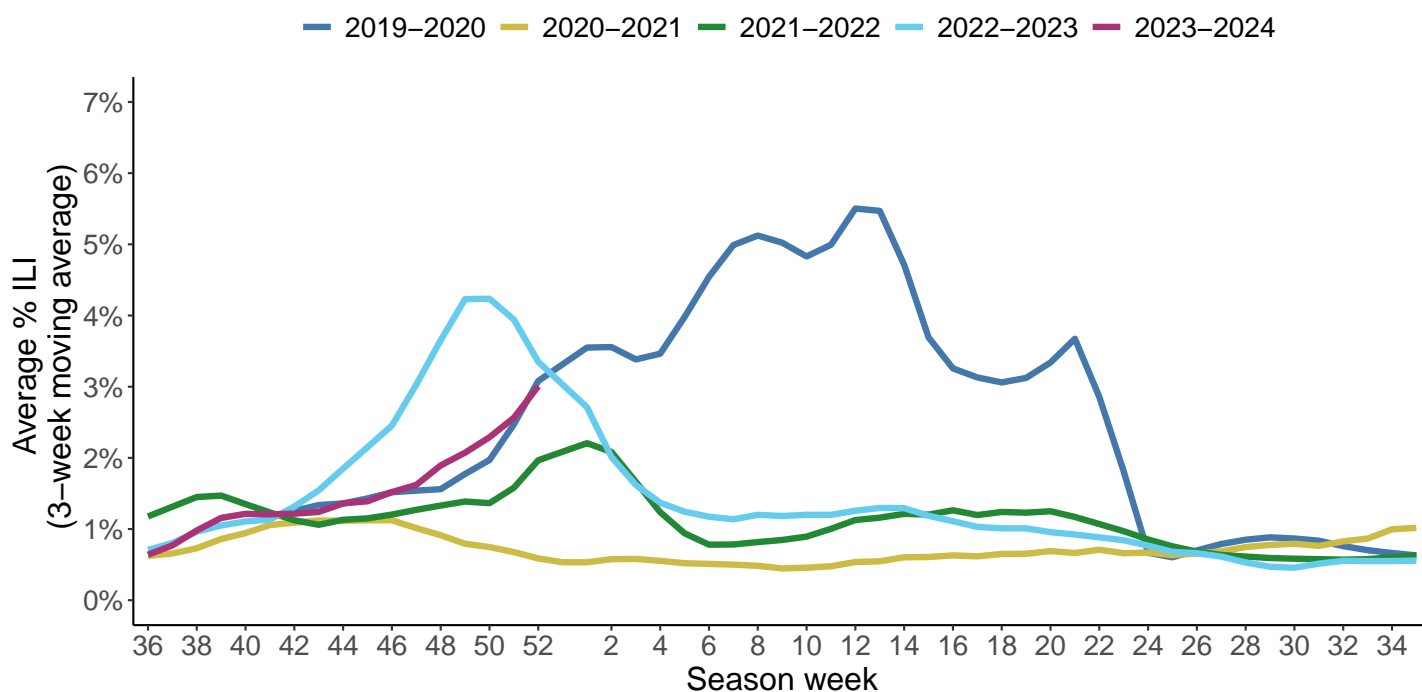


Percent of ED visits with a diagnosis for RSV by age group, NSSP



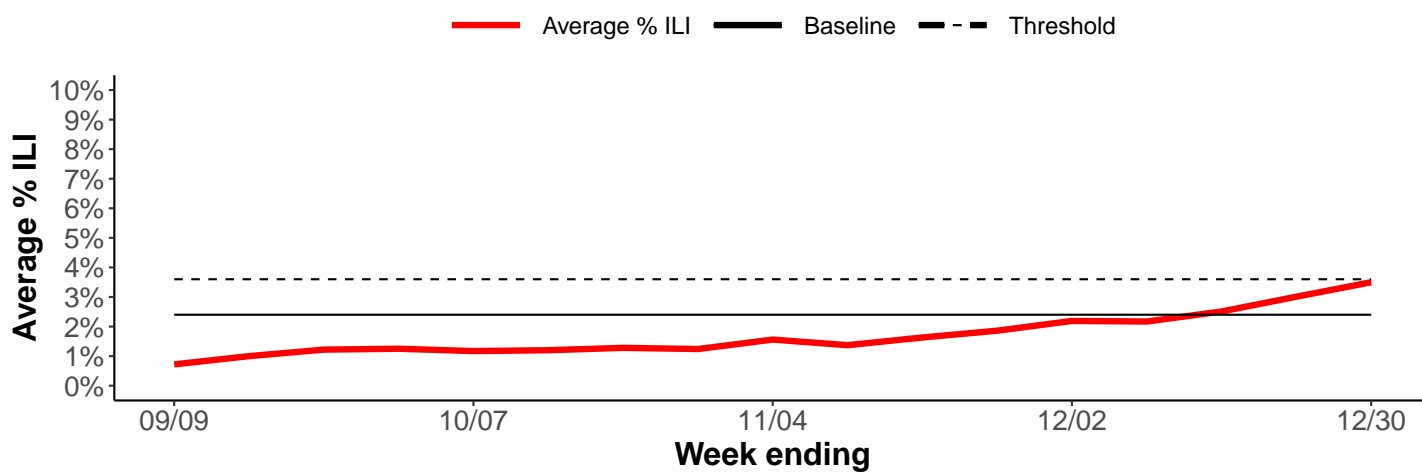
Wisconsin ILI Activity

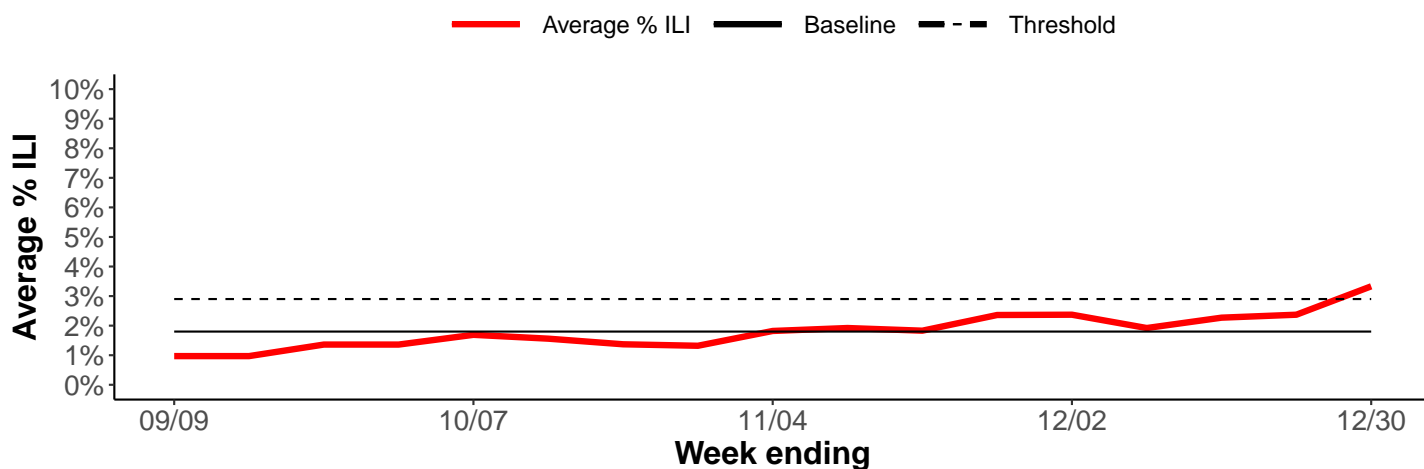
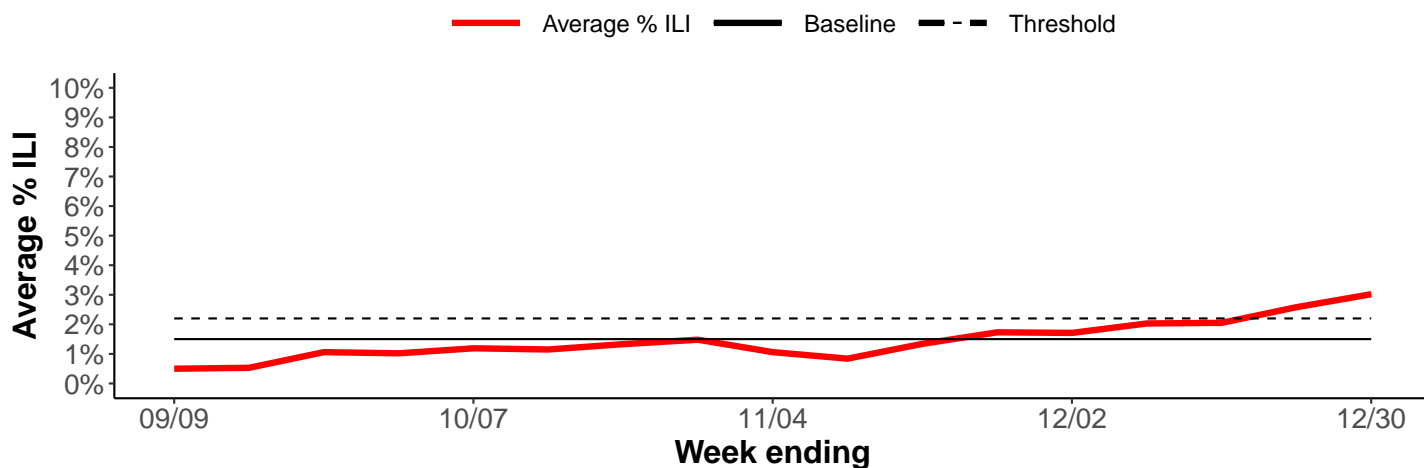
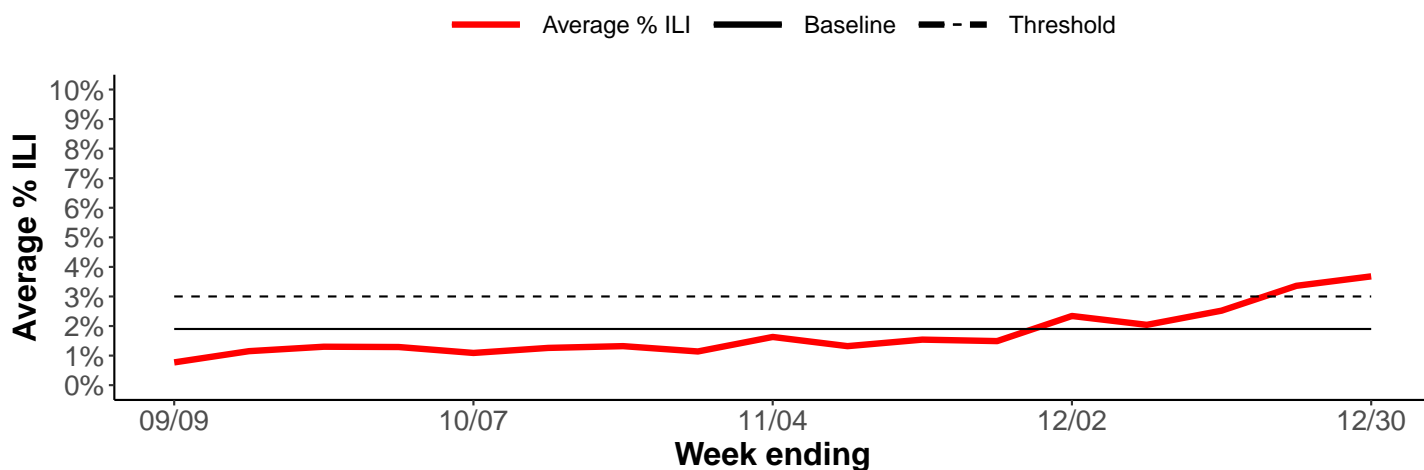
Three-week average percent of visits for ILI by influenza season, ILINET

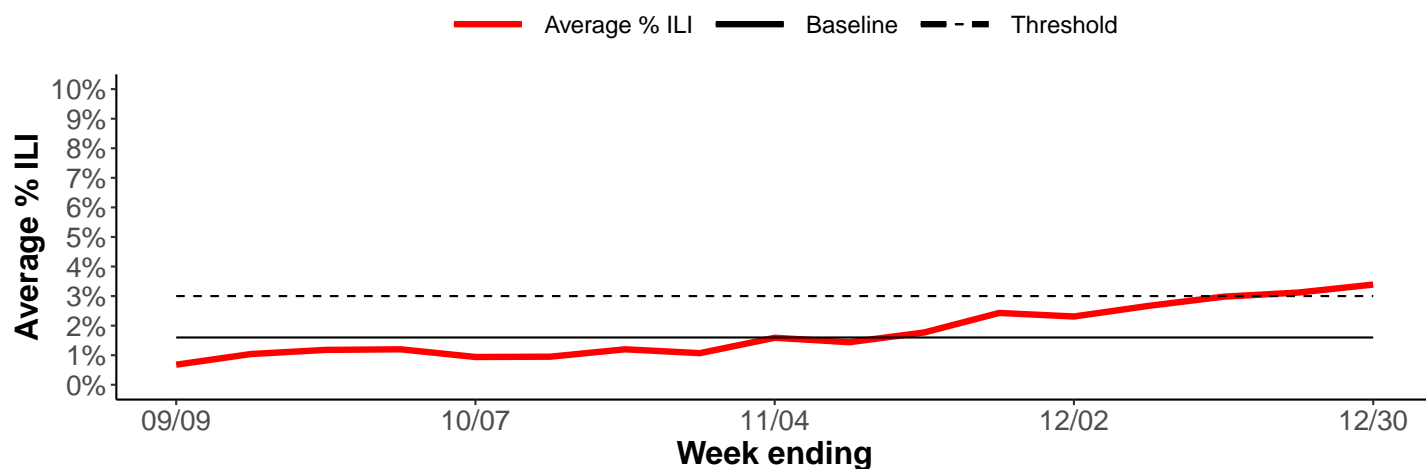
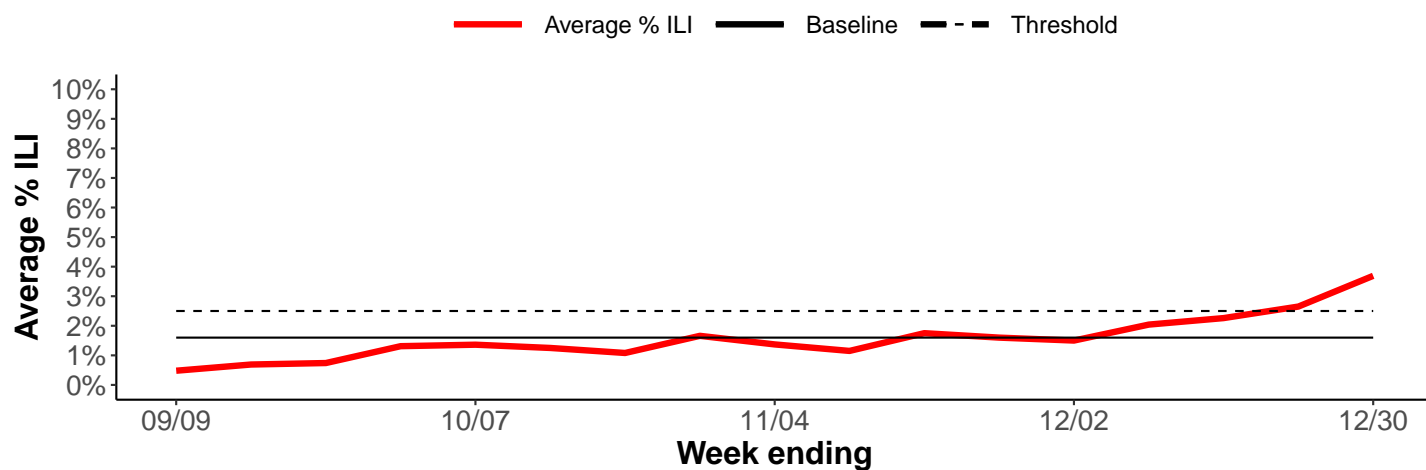


Average percent of visits for ILI by public health region, ILINET

Wisconsin



Northeastern Region**Northern Region****Southeastern Region**

Southern Region**Western Region**

Understanding the Data

Surveillance Report Description

Influenza-like Illness (ILI)	Patients who present to a clinician with a fever ≥ 100 degrees F and either a cough or sore throat.
Influenza-like Illness (ILI) Activity	Using baseline (expected value data used for comparison) in each of the public health regions in Wisconsin (https://www.dhs.wisconsin.gov/lh-depts/counties/index.htm), ILI below baseline is considered low activity, ILI between baseline and threshold levels is considered moderate activity and above threshold is considered high activity. (1)
Acute Respiratory Illness (ARI)	ARI is a broad definition designed to capture all diagnoses related to respiratory illness, including SARS-CoV-2, influenza, pneumonia, and cough
Predominant virus of the week	These data are compiled from over 40 laboratories in Wisconsin that perform rt-PCR testing, and shows the viruses that have the highest percentage of positive tests.(2)
Influenza-Associated Pediatric Mortality	Deaths among children <18 years old, with influenza as the cause of associated cause of death. This is a state and nationally reportable condition. (3)
Deaths Due to Pneumonia, SARS-CoV-2, Influenza and RSV	Proportion of deaths due to pneumonia, RSV, influenza, and SARS-CoV-2 are extracted from Vital Records managed by the Office of Health Informatics through ICD-10 codes and death certificate text searches. (4)
Respiratory Viruses by PCR	A molecular laboratory method used to detect nucleic acid (DNA/RNA) in viruses, including influenza and RSV.
Influenza-Associated Hospitalizations	Patients hospitalized for >24 hours with a laboratory-identified (by rapid antigen or rt-PCR tests) influenza.(3)
Emergency Department Data	These data are from the National Syndromic Surveillance Program or NSSP. Visit information from almost all EDs in Wisconsin are reported from hospital electronic medical records to NSSP in near-real-time. Diagnoses used included the CDC Broad Acute Respiratory DD v1, the CDC COVID-Specific DD v1, CDC Influenza DD v1, and the CDC Respiratory Syncytial Virus DD v1.(5)

Additional Resources

- The CDC Influenza Homepage (<https://www.cdc.gov/flu/>)
- The National Respiratory and Enteric Virus Surveillance System (NREVSS) (<https://www.cdc.gov/surveillance/nrevss/index.html>)

Data Sources

1. CDC Outpatient Influenza-like Illness Surveillance Network (ILINet)
2. Wisconsin Laboratory Information Network and CDC National Respiratory and Enteric Virus Surveillance System (NREVSS)
3. Wisconsin Electronic Disease Surveillance System (WEDSS)
4. Division of Public Health, Office of Health Informatics, Vital Records
5. National Syndromic Surveillance Program (NSSP) data from ESSENCE (Electronic Surveillance System for Early Notification of Community Based Epidemics).

