

# ABOUT THE PUBLIC HEALTH MADISON & DANE COUNTY RESPIRATORY ILLNESS DASHBOARD

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## LANDING PAGE

### Weekly Summary

These data are sourced from the Electronic Surveillance System for the Early Notification of Community-Based Epidemics (ESSENCE). ESSENCE is [syndromic surveillance](#) software used by the National Syndromic Surveillance Program (NSSP) of the Centers for Disease Control and Prevention (CDC). Syndromic surveillance is a tool that allows us to have a near real-time pulse on what is impacting the health of the community. The syndromic surveillance data we use from ESSENCE comes from emergency departments located in Dane County. All emergency departments in Dane County report to ESSENCE except for the William S. Middleton Memorial Veterans' Hospital emergency department. Data from UW Hospitals & Clinics, Meriter, and St. Mary's contain emergency department visits only. Data from Stoughton Hospital contain both emergency department visits and urgent care visits. These data include any person who seeks care from an emergency department within Dane County, even if they don't reside in Dane County.

The data we present are the weekly percentage of people who: 1) are discharged from an emergency department (ED) and diagnosed with any respiratory illness; 2) are discharged with a COVID-19 diagnosis; 3) are discharged with a flu diagnosis; and/or 4) are discharged with a respiratory syncytial virus (RSV) diagnosis. The data represent the percentage out of all ED visits in a week.

ESSENCE categorizes an ED visit based on the discharge diagnosis. These categories are made up of groupings of discharge diagnosis codes and have been developed by the CDC. For 'All respiratory illnesses,' we use the CDC [Broad Acute Respiratory discharge diagnosis definition](#), which includes COVID-

19, flu, RSV, and several other respiratory illnesses. There are [detailed definitions](#) of what discharge diagnosis codes are included for COVID-19, flu, and RSV.

## Levels

### All Respiratory Illnesses

As of Fall 2024, to classify the levels of 'All respiratory illnesses' diagnosed in the ED, we analyzed ED visit data from [MMWR week](#) 27 of 2018 through MMWR week 26 of 2024. 'All respiratory illnesses' is defined by the CDC [Broad Acute Respiratory discharge diagnosis](#) and includes COVID-19, flu, RSV and many other respiratory illnesses. We excluded data from MMWR week 10 to MMWR week 26 of the 2019 to 2020 season and excluded the entire 2020 to 2021 season due to unusual transmission patterns in all respiratory illnesses during the COVID-19 pandemic. The highest 8 values from each season are used to create a distribution of values used to determine the thresholds limits. This is an adaptation of the moving epidemic method ([MEM](#)) used frequently in influenza surveillance. We have chosen to use this method to align with the methods used by the [Wisconsin Department of Health Services](#):

### Percent of ED Visits Diagnosed as All Respiratory Illnesses (Levels)

Minimal	Low	Moderate	High	Very high
≤14.612%	14.613% to 18.464%	18.465% to 22.792%	22.793% to 29.794%	≥29.795%

### COVID-19

We used a different time range than flu and RSV to calculate levels for COVID— MMWR week 10 in 2022 to MMWR week 26 in 2024. We used this range of data because it more accurately describes post-pandemic levels of COVID-19 with decreased clinical and PCR testing for COVID-19. The highest 15 values from each season were used for COVID-19 to create a distribution of values used to determine the thresholds limits. This is an adaptation of the moving epidemic method (MEM) used frequently in influenza surveillance:

### Percent of ED visits diagnosed as COVID-19 (Levels)

Minimal	Low	Moderate	High	Very high
≤2.250%	2.251% to 2.905%	2.906% to 3.656%	3.657% to 4.899%	≥4.900%

### Flu

As of Fall 2024, to classify the levels of flu diagnosed in the ED, we analyzed ED visit data from MMWR week 27 of 2018 through MMWR week 26 of 2024. We excluded data from MMWR week 10 to MMWR week 26 of the 2019 to 2020 season and excluded the entire 2020 to 2021 season due to unusual transmission patterns in flu during the COVID-19 pandemic. The highest 8 values from each season are used to create a distribution of values used to determine the thresholds limits. This is an adaptation of the moving epidemic method (MEM) used frequently in influenza surveillance:

### Percent of ED visits diagnosed as Flu (Levels)

Minimal	Low	Moderate	High	Very high
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≤2.537%	2.538% to 4.064%	4.065% to 6.209%	6.210% to 10.648%	≥10.649%
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## RSV

We used the same methodology for setting RSV levels as we did for Flu. As of Fall 2024, to classify the levels of RSV diagnosed in the ED, we analyzed ED visit data from MMWR week 27 of 2018 through MMWR week 26 of 2024. We excluded data from MMWR week 10 to MMWR week 26 of the 2019 to 2020 season and excluded the entire 2020 to 2021 season due to unusual transmission patterns in RSV during the COVID-19 pandemic. The highest 8 values from each season are used to create a distribution of values used to determine the thresholds limits. This is an adaptation of the moving epidemic method (MEM) used frequently in influenza surveillance:

### Percent of ED visits diagnosed as RSV (Levels)

Minimal	Low	Moderate	High	Very high
≤0.924%	0.925% to 1.206%	1.207% to 1.532%	1.533% to 2.078%	≥2.079%

All levels are calculated based on the percentage of ED visits resulting in the respiratory illness diagnosis of interest over the most recent seven-day period (from seven days before the date of the dashboard update through the day before the day of the dashboard update).

## Trend

The trend is determined by a rolling binomial model fitted to a daily time series of proportions in order to classify the ED visit trajectory for each illness as significantly increasing, significantly decreasing, or stable. The baseline parameter used is 12 days, and the calculation is made as of the day before the day of the dashboard update. For the purposes of this dashboard, if there were fewer than 10 encounters in the baseline period, the trajectory is considered to be stable. Detailed methodology and code can be found on [CDC's website](#).

## First Alert

### Wastewater

COVID-19 wastewater data comes from the [DHS COVID-19 Wastewater Dashboard](#). There are two wastewater treatment facilities that are sampled in Dane County: one located in Madison and the other in Oregon. We only include wastewater data from the Madison Wastewater Treatment Facility on our dashboard because it is sampled several times per week, compared to Oregon which is sampled less frequently. Facilities that are sampled regularly have more reliable data and trends.

COVID-19 wastewater data is included under first alert data because it can serve as an early warning of increasing COVID-19 activity in our community. People with COVID-19 shed the virus in their poop. The virus can start shedding even before people have symptoms. The virus that sheds ends up in the wastewater which is sampled and then analyzed. The increase of viral gene copies in wastewater can serve as an [early indicator before a corresponding increase in diagnosed cases or hospitalizations](#). Due to the shift in the COVID-19 testing landscape to the use of home tests, tracking confirmed cases of COVID-19 is not as complete as it used to be. Wastewater surveillance has been able to serve as a tool to understand how much COVID-19 is in the community. The COVID-19 wastewater trend displayed on our respiratory dashboard will show data from the same day that the respiratory virus dashboard was

updated. For the most up to date COVID-19 wastewater data, and to view the Oregon Wastewater Treatment Facility data, view the “Wastewater data” section on our site below the dashboard. We have embedded the DHS COVID-19 Wastewater Dashboard, and you can click on “Madison” or “Oregon” from the list on the left side to view data for those treatment facilities.

## OVERALL TRENDS

### Percent of all emergency room visits due to COVID-19, flu, or RSV

These data are sourced from the emergency department syndromic surveillance system, ESSENCE (further described in the [Weekly Summary section](#), above).

The data shown is the weekly percentage of people who are discharged from an emergency department and diagnosed with COVID-19, flu, or RSV. The data represent the percentage out of all ED visits in a week. ESSENCE can categorize an ED visit based on the discharge diagnosis. These categories are made up of groupings of discharge diagnosis codes and have been developed and used by the CDC. The discharge diagnoses included for COVID-19, flu, and RSV are included in this [companion guide](#).

### Percent of emergency room visits due to any respiratory illness

For the percent of emergency room visits due to any respiratory illness we use the CDC [Broad Acute Respiratory discharge diagnosis definition](#), which includes COVID-19, flu, RSV, and several other respiratory illnesses.

## LAB TESTING TRENDS

### Percent of tests that are positive by virus

The data on this page come from the [National Respiratory and Enteric Virus Surveillance System](#) (NREVSS). NREVSS is a CDC-run system that collects lab testing data for certain respiratory and enteric viruses from participating labs around the country. The labs participate voluntarily, and on a weekly basis report to the CDC on the number of tests performed and number detected for each of the viruses included in NREVSS. The data we show is the percent of total polymerase chain reaction (PCR) tests each week that were positive for each different respiratory virus.

Note that the factors that drive people to be tested for the different pathogens are different. More severe respiratory illnesses (COVID-19, RSV, and flu) are more likely to cause people to seek care, and therefore they’re more likely to be tested for these three viruses. Illnesses that are typically less severe (hMPV, parainfluenza, and rhino/enterovirus) are tested for less frequently because it is less common for people to seek care. Therefore, the underlying populations tested for the different pathogens are different.

Because lab participation in this reporting network is voluntary, the number of labs in Dane County that consistently report to NREVSS each week varies from 4 to 5.

### Additional information about the other viruses included on this page:

- [Human metapneumovirus \(hMPV\)](#)
- [Parainfluenza](#)

- [Rhino- and Enterovirus](#)

## SCHOOL ABSENCES

### Number of school absences due to any illness

These data represent total school absences due to any illness by week from the UW Oregon Child Absenteeism due to Respiratory Disease Study ([ORCHARDS research study](#)) conducted in the Oregon School District. This study has been monitoring cold and flu symptoms in pre-k through high school students in the Oregon School District since the Fall of 2014. Approximately [4,000 students](#) attend school in the Oregon School District

Previously, students who reported having respiratory illness symptoms and chose to participate were tested using a respiratory virus panel, which tested for many respiratory viruses. This portion of the study concluded in the spring of 2024. The study continues to track absentee data for each of the seven schools that participate and the reason for each absence. The absences shown in this graph are due to any reported illness. An increase in absences due to any illness can act as an early warning sign for flu impacting the surrounding community by up to ten days, based on a [study](#) conducted by the ORCHARDS team. If a student is absent more than one day in a week, they are included in the total count for the week for each day they are absent. School absence data is only tracked and updated on the dashboard while school is in session between September through June.

## AIR SAMPLERS

The air sampling data included on the dashboard is collected by the teams of UW-Madison researchers [Drs. Shelby O'Connor](#) and [Dave O'Connor](#). During the COVID-19 pandemic, air sampling was used as another tool to detect the presence of SARS-CoV-2 (COVID-19) in a variety of real world settings. To our knowledge we are the first public health department in the world with a dashboard that incorporates this type of air sampling data. [Learn more](#) about the impact air samplers have had on not only detecting viruses, but also supplementing the efforts to sequence SARS-CoV-2. Learn more [about the team's work](#) and the history of air sampling.

As of Fall 2025, seventeen continuous air samplers have been deployed in two districts and two independent schools in or near Dane County. There are nine elementary schools, five middle schools, and three high schools with air samplers. Middle and high schools were combined on the dashboard. Air cartridges from the samplers are collected and tested for viral genetic material. For the 2023-2024 school year, testing was done to detect SARS-CoV-2 and influenza A viruses. For the 2024-2025 school year, a multiplex assay was used to generate data on several more pathogens: flu A, flu B, three different human coronaviruses (HKU1, NL63, and OC43), hMPV, parainfluenza, RSV, and SARS-CoV-2. On the dashboard, flu A and B are combined to just "Flu," and the three human coronaviruses are combined to "Human coronavirus." The 2025-2026 school year will continue to use the multiplex assay, with the addition of one more coronavirus (229E), two more flu A strains (H1N1, H3N2), rhinovirus, and enterovirus,



*An air sampler placed in an area with lots of student traffic.*



*A researcher prepares to collect the air sampler cartridge to bring back to the lab for testing.*

The data shown is the percent of air samples that were positive for each pathogen each week and grouped by elementary or middle/high schools. If a school spans multiple categories, it was grouped into the youngest of the categories (e.g., a K-8 school would be categorized as elementary). Air sample results are assigned to the last date of the week in which the cartridge collected air in the school. Each school supports the study by mailing in the air sampler cartridges for analysis. This process can sometimes cause the number of samples tested each week to vary. Samples are not collected during school breaks or closures.



# HOSPITALIZATIONS

## People hospitalized with COVID-19 by date

“People hospitalized with COVID-19 by date” is shown as a daily trend over time. Each day is a sum of people reported as being hospitalized with a positive COVID-19 test result by individual hospitals in Dane County to a system called EMResource. This number can include patients who live in Dane County and patients who don’t live in Dane County but were cared for at a Dane County hospital. This data system does not provide identifiable data, so we are unable to discern what proportion of patients live in Dane County versus those who don’t, the vaccination status or demographics of the people who are hospitalized, or whether each individual is hospitalized due to COVID-19.

As of late spring 2023, our local hospitals shifted to testing inpatients for COVID-19 when they are suspected of having COVID-19, versus testing all inpatients upon admission. Therefore, under the current policy, most hospitalizations listed here are likely to be due, at least in part, to COVID-19.

## People hospitalized with flu by date

“People hospitalized with flu by date” is shown as a daily trend over time. Each day is a sum of people reported as being hospitalized with a positive flu test result by individual hospitals in Dane County to a system called EMResource. This number can include patients who live in Dane County and patients who don’t live in Dane County but were cared for at a Dane County hospital. This data system does not provide identifiable data, so we are unable to discern what proportion of patients live in Dane County versus those who don’t, the vaccination status or demographics of the people who are hospitalized, or whether each individual is hospitalized *for* flu or with flu. Hospitals have various criteria for testing for flu, although most will generally test upon suspicion of having a respiratory illness. Therefore, most hospitalizations listed here are likely to be due, at least in part, to flu.

## People hospitalized with RSV by date

“People hospitalized with RSV by date” is shown as a daily trend over time. Each day is a sum of people reported as being hospitalized with a positive RSV test result by individual hospitals in Dane County to a system called EMResource. This number can include patients who live in Dane County and patients who don’t live in Dane County but were cared for at a Dane County hospital. This data system does not provide identifiable data, so we are unable to discern what proportion of patients live in Dane County versus those who don’t, the demographics of the people who are hospitalized, or whether each individual is hospitalized *for* RSV or *with* RSV. Hospitals have various criteria for testing for RSV, although most will generally test upon suspicion of having a respiratory illness. Therefore, most hospitalizations listed here are likely to be due, at least in part, to RSV.

As of November 1, 2024, the Centers for Medicare and Medicaid Services (CMS) implemented a new rule requiring hospitals to report RSV related hospitalizations (in addition to COVID-19 and flu related hospitalizations). Before this rule, RSV hospitalizations were not required to be reported to EMResource. Thus, we show data on people hospitalized with RSV starting on November 1, 2024.

# HOSPITALIZATION RATES

As of November 1, 2023, hospitalizations due to COVID-19 and RSV became reportable to the health department (hospitalizations due to flu have been reportable since 2010). Reportable diseases are considered to have significant public health impact. For more information on reportable diseases, see the [data notes](#) from our [Reportable Disease Data Dashboard](#).

When someone is hospitalized for COVID-19, flu, or RSV, we receive a report from the health care provider through the Wisconsin Electronic Disease Surveillance System, or WEDSS. These reports contain demographic information such as age, gender, race, and ethnicity. We used this information to calculate age-adjusted hospitalization rates for COVID-19, flu, and RSV by race and ethnicity from 11/1/23 through 9/14/24. The data will be updated each fall. Some groups have very small hospitalization numbers so we need to combine the data for a large period of time in order to ensure confidentiality and accurate data.

The graph on the left shows the hospitalization rates for Hispanic or Latino people, Not Hispanic or Latino people, and everyone combined. The graph on the right shows the hospitalization rates for Black people, American Indian or Alaska Native people, White people, Asian or Pacific Islander people, and everyone combined. The categories of Asian and Native Hawaiian or Other Pacific Islander were combined into “Asian or Pacific Islander” due to very small numbers for the Native Hawaiian or Other Pacific Islander group. Each colored circle represents the estimated hospitalization rate per 100,000 people within that group. 95% confidence intervals are also displayed in the light gray boxes, which represent where the true rates could plausibly be. Groups with smaller populations, like American Indian people, have bigger gray boxes which means we are less certain about the true rate. When the gray boxes between two groups don't overlap, we can say that the two estimates likely represent a true difference because they are statistically significantly different from each other. Alternatively, when the boxes do overlap, it means that additional statistical testing is necessary to determine if the observed difference is likely a true difference.

# DEATH DATA

## Percent of all deaths caused by respiratory illness

This graph shows the 14-day average percent of all deaths caused by respiratory illness among people who live in Dane County. This graph does not encompass every possible respiratory illness-related death, but captures deaths where pneumonia, influenza, COVID, or RSV were listed on the death certificate. While the majority of death records for natural deaths (which includes most deaths due to illness) are certified and filed within two weeks of the date of death, death data should be considered preliminary due to reporting delays and potential changes to death data. Death certificates often take significantly longer to finalize when an autopsy is conducted and/or when toxicology testing is completed.

Before COVID-19, pneumonia and/or influenza (P&I) deaths were [tracked by the CDC](#) to better understand and estimate the burden of influenza on mortality. Not all persons who die with influenza are admitted to a hospital prior to their death or are tested for influenza, so death certificate monitoring alone will underestimate the total burden of death due to influenza.



Pneumonia is included because it is a frequent complication of severe influenza. Additionally, increases in flu activity at the community level are associated with increases in pneumonia deaths. Because many COVID-19-related deaths also have pneumonia, COVID-19 deaths were added to P&I to create the PIC (pneumonia, influenza, and/or COVID-19) classification. PIC includes all deaths with pneumonia, influenza, and/or COVID-19 listed on the death certificate. We have also included RSV deaths in this data, which are very few in number as RSV is also often not listed on the death certificate, but is a disease of importance for us to monitor and helps us identify more respiratory-related deaths.

[Pneumonia deaths excluded](#) are those outside of the ICD-10 codes J10-J18, which would be allergic, eosinophilic, aspiration, meconium, neonatal aspiration, congenital, lipid, rheumatic, and ventilator-associated pneumonia, and pneumonia due to solids and liquid (unless COVID-19, influenza, or RSV is also listed on the death certificate, in which case the death would be included as a death due to respiratory illness).

## Number of deaths by date

In this graph, deaths due to COVID-19, flu, RSV, and coinfections are displayed by disease and by month. These deaths are identified through death certificates of people who live in Dane County, where the death certificate lists COVID-19, influenza, or RSV as an underlying cause of death or a significant condition contributing to death. A coinfection means that an individual who died had more than one of COVID-19, flu, or RSV listed on their death certificate. While the majority of death records for natural deaths (which includes most deaths due to illness) are certified and filed within two weeks of the date of death, death data should be considered preliminary due to reporting delays and potential changes to death data. Death certificates often take significantly longer to finalize when an autopsy is conducted and/or when toxicology testing is completed.

Note that this is an undercount of deaths attributable to COVID-19, flu, and RSV. Deaths likely attributable to influenza, COVID, and RSV may not have those conditions listed on the death certificate because infections are often not confirmed with a test, or people are hospitalized later due to secondary complications like pneumonia, and the virus is no longer detectable.

## TAKE ACTION TO PROTECT YOURSELF AND YOUR LOVED ONES

[Learn strategies](#), including vaccination, masking, and improving air quality, to help protect yourself and your loved ones from respiratory illnesses.

## FREQUENTLY ASKED QUESTIONS

### How should I use First Alert data?

First Alert data is intended to help you plan. Whether that looks like assuring you are up to date on flu, COVID, and RSV vaccinations, donning a mask in public spaces when levels are high, being extra careful while visiting immunocompromised family members, or incorporating flexibility in travel plans that align with surges in community levels of respiratory virus, you are best positioned to know what action makes most sense for you and your family. Keep in mind that these data aren't perfect. Just because we are seeing an increase in wastewater data doesn't mean we will see an increase in other data 100% of the

time. We intend for these data to be one piece of information among many that you can use to guide your decision-making.

You can find more guidance on how to protect yourself from respiratory illnesses on the [CDC website](#).

## **The Weekly Summary and First Alert levels are different—why?**

It is possible to see seemingly contradictory levels between the Weekly Summary and First Alert data elements. For example, the Weekly Summary COVID trend may indicate “stable,” while the First Alert COVID wastewater status may indicate “significant increase.” The reason for this difference stems from sections using different data sources. The Weekly Summary uses emergency department data to provide a picture of what is happening “right now,” whereas the First Alert section uses wastewater data for COVID to preview what may happen “in the near future.” Furthermore, the two data sources differ in the level of illness severity captured: Weekly Summary data capture those who were sick enough to go to the emergency department, while wastewater data captures the entire population connected to municipal sewers.

## **Why do you use emergency department data on the homepage?**

The emergency department (ED) discharge data from ESSENCE has the most robust data available for COVID-19, flu, and RSV, along with the other respiratory illnesses that we’ve included on the dashboard. There is also historical data available so that we can compare current data to previous respiratory seasons, which can add context to the severity of each virus. ESSENCE also receives ED data in near real time from the facilities that report, allowing us to get a picture of the current respiratory illness impact on the community.

## **What community feedback did you get for this dashboard?**

We deeply appreciate the representatives from impacted populations who provided guidance on the dashboard design. We interviewed a library director, childcare professional, long-term care facility staff, school nurse, preschool director, older adults, and hospital infection control staff. We also reviewed feedback from over 30 people who responded to a survey we posted in the last issue of our COVID-19 Data Notes series.

## **Why did you make this dashboard?**

During the Public Health COVID-19 Emergency, there was remarkable interest in the data shared on the Dane County COVID-19 Dashboard, with the dashboard being viewed over half a million times. Our community remains interested in respiratory illnesses. In response, we’ve pivoted from a [COVID-19](#)-focused dashboard to a broader respiratory illness dashboard. In April 2023, we brought together a collaborative of public health staff, researchers, laboratory experts, healthcare providers, and wastewater professionals to learn how everyone was preparing for respiratory virus season. Each partner robustly monitors a piece of the respiratory virus puzzle. We saw our role as a public health agency in bringing all the data pieces together to present one clear picture of what is happening locally with respiratory illness activity.

In addition to COVID-19, this dashboard will also focus on [Influenza \(flu\)](#) and [Respiratory Syncytial Virus \(RSV\)](#). We are able to include flu and RSV in this dashboard due to the more robust surveillance data available for these two viruses. Surges in these viruses, especially now with the addition of COVID-19, can cause strains on the healthcare system. We believe it is important to monitor trends in all of these respiratory illnesses in order to make sure the community is aware and able to take steps to protect

themselves. Our hope is that this respiratory illness dashboard can help people in the community answer questions like, “Is it bad out there? What’s circulating?” and, based on that knowledge, make decisions to protect their health.

## APPENDIX: PREVIOUSLY USED METHODS

When the dashboard was launched in October 2023, the following methods were used, and thresholds were applied to the Weekly Summary emergency department data on the landing page. The current methods and thresholds used are on pages 2 and 3 of this document.

### Levels

To classify the levels of ‘All respiratory illnesses’ diagnosed in the ED, we analyzed ED visit data from [MMWR week](#) 36 of 2018 through MMWR week 35 of 2023. ‘All respiratory illnesses’ is defined by the CDC [Broad Acute Respiratory discharge diagnosis](#) and includes COVID-19, flu, RSV and many other respiratory illnesses. We split the range of the percent of ED visits resulting in a respiratory illness over this five-year period into five levels (quintiles):

#### Percent of ED Visits Diagnosed as All Respiratory Illnesses (Levels)

Very low	Low	Moderate	High	Very high
<6.56%	6.56% to 8.44%	8.45% to 10.41%	10.42% to 12.72%	≥12.73%

To classify the level of COVID-19 diagnosed in ED visits, we previously used the [CDC-established levels and thresholds](#) for COVID-19 ED visits. As of January 4<sup>th</sup>, 2024, we have created our own levels and thresholds for COVID-19, to more accurately describe the level of COVID in our community. We used a different time range than flu and RSV to calculate levels for COVID— MMWR week 5 in 2022 to MMWR week 39 in 2023. We used this range of data because it more accurately describes post-pandemic levels of COVID-19 with decreased clinical and PCR testing for COVID-19. We split the range of the percent of ED visits resulting in a COVID-19 diagnosis over these time periods into five levels (quintiles):

#### PREVIOUS: Percent of ED visits diagnosed as COVID-19 (Levels)

Minimal	Low	Moderate	Substantial	High
<1.5%	1.5% to 2.9%	3.0% to 4.4%	4.5% to 5.9%	≥6.0%

#### AS OF 1/4/24: Percent of ED visits diagnosed as COVID-19 (Levels)

Very low	Low	Moderate	High	Very high
≤0.914%	0.915% to 1.510%	1.511% to 1.960%	1.961% to 2.852%	>2.853%

To classify the levels of flu and RSV diagnosed in the ED, we analyzed ED visit data from three previous respiratory virus seasons: 2018-2019, 2019-2020, and 2022-2023. For flu we included [MMWR weeks](#) 40-

20, and for RSV we included MMWR weeks 36-20. We split the range of the percent of ED visits resulting in a flu or RSV diagnosis over these time periods into five levels (quintiles):

#### Percent of ED visits diagnosed as Flu (Levels)

Very low	Low	Moderate	High	Very high
$\leq 0.014\%$	0.015% to 0.074%	0.075% to 0.484%	0.485% to 2.424%	$\geq 2.425\%$

#### Percent of ED visits diagnosed as RSV (Levels)

Very low	Low	Moderate	High	Very high
$\leq 0.014\%$	0.015% to 0.047%	0.048% to 0.202%	0.203% to 0.624%	$\geq 0.625\%$

All levels are calculated based on the percentage of ED visits resulting in the respiratory illness diagnosis of interest over the most recent seven-day period (from seven days before the date of the dashboard update through the day before the day of the dashboard update).