

How does the New Jersey Department of Health (NJDOH) monitor the progress of the influenza (flu) season?

The overall health impact (e.g., infections, hospitalizations, and deaths) of a flu season varies from season to season. NJDOH, in conjunction with our local health departments, collects information from laboratories, hospitals, healthcare providers, school and long-term care facilities. NJDOH collects, compiles, and analyzes this information on influenza activity year-round and produces a weekly surveillance report which provides an in-depth exploration of influenza surveillance data. The data collected allows NJDOH to:

- Detect when and where influenza activity is occurring
- Track influenza-related illness
- Describe clinical infections, track epidemiologic changes, and determine groups at highest risk
- Monitor illness severity/intensity
- Detect unusual events or change in influenza viruses
- Monitor outbreaks of disease

New Jersey flu surveillance data are published weekly to the NJDOH website (<https://www.nj.gov/health/cd/statistics/flu-stats/>). Surveillance data is also sent to the Centers for Disease Control and Prevention (CDC) where information is combined with other states. CDC also publishes a weekly report which can be found at: <https://www.cdc.gov/flu/weekly/index.htm>

When is the NJDOH Respiratory Virus Surveillance Report published? How is this impacted by holidays?

A publicly available report containing information on influenza and other viral respiratory disease is published on Wednesday of each week from MMWR week 40 (October) to MMWR week 20 (May). While a public report is only produced from October to May, surveillance is conducted year-round to monitor for unusual influenza activity and the occurrence of novel (new) influenza viruses. State holidays (<https://www.state.nj.us/nj/about/facts/holidays/>) can impact the day the report is published. If a state holiday falls on a Monday, Tuesday or Wednesday, the weekly report will be sent and posted to the website by Thursday of that week.

How can I get a copy of the NJDOH Respiratory Virus Surveillance Report?

The respiratory virus report is posted weekly during the influenza season to the NJDOH website (<https://www.nj.gov/health/cd/statistics/flu-stats/>). An email is also sent to public health and healthcare providers who are signed up to receive emails from NJ's health alert network known as NJLINCS. Individuals interested in receiving a copy of the report should contact their local health department (www.localhealth.nj.gov).

Why can't the weekly report be produced sooner in the week?

A large number of data sources are reviewed and analyzed each week. Some of these data come directly from health care providers who need time to collect and report data. Once data is received, it is verified for accuracy, analyzed and compiled into a single report. All of these processes take time to complete and the report is produced as quickly as possible.

The report is produced by MMWR week? What is that?

Morbidity and Mortality Weekly Report (MMWR) dates are used by the Centers for Disease Control and Prevention (CDC) to standardize how weekly data is reported to them. An MMWR week begins on a Sunday and ends the following Saturday. Values for MMWR week range from 1 to 53, although most years consist of 52 weeks. Additional information can be found at: https://wwwn.cdc.gov/nndss/document/MMWR_Week_overview.pdf

Is influenza a reportable condition in New Jersey?

Unlike other communicable disease, healthcare providers are not required to report all individual cases of influenza to public health authorities. However, confirmed or suspect cases of novel influenza are immediately reportable as well as influenza-associated pediatric deaths which are reportable within 24 hours of diagnosis.

New Jersey laboratories are required to report patients who test positive for influenza. This is typically done through an electronic connection with a secure online database maintained by NJDOH. Laboratories can also enter data manually into the system. These data are very helpful in understanding which strains are currently circulating but because not all laboratories are reporting and not all individuals who have influenza are tested, the number of reported positive tests alone cannot tell us exactly how many cases of influenza are occurring in New Jersey.

How many New Jersey residents are infected with influenza each season?

The goal of influenza-like illness (ILI) surveillance systems is to monitor when and where influenza is circulating. This is accomplished by identifying and tracking a subset of individuals who seek healthcare for ILI or are tested for influenza. It is not possible to count every case of influenza that occurs since some individuals will not seek medical care for their illness, or are never tested, making it impossible to count these individuals. In order to track ILI, a number of different surveillance systems (e.g., emergency departments, doctors' offices, urgent care) are used in combination to track trends in the disease. For these reasons, it is not possible to provide the exact number of influenza cases which occur each season. ***The information produced in the weekly Respiratory Surveillance Report should never be used to indicate the number of cases of influenza which have occurred in New Jersey as this number is not available for the reason explained above.***

How many New Jersey residents die from influenza each season?

It is difficult to track the exact number of deaths associated with influenza. Since only influenza-associated deaths in children less than 18 are reported to public health officials, using death certificates is the only other information that can be used to count influenza-related deaths. To complicate matters, underlying health conditions place individuals at increased risk for poor health outcomes, such as death, when they become infected with influenza. When a person dies, a healthcare provider must complete a death certificate indicating what health conditions contributed to the cause of death. A person who was in failing health prior to becoming ill with influenza may or may not have influenza listed on their death certificate as a contributing factor. For example, when a death occurs in a patient with end-stage liver cancer and influenza, a health care provider must select whether the death was related to cancer or influenza. Since only influenza-associated deaths in pediatrics are reportable to public health officials, using death certificate information is the only information that can be used to count influenza-related deaths. In addition, the process of reporting the cause of death can be significantly delayed and data collected on deaths is also not as timely as some of the other sources of data.

The weekly influenza report contains Pneumonia and Influenza (P&I) Mortality from the National Center for Health Statistic (NCHS). How is this data interpreted?

When a person dies, a healthcare provider must complete a death certificate indicating what health conditions contributed to the cause of death. Records of all deaths are maintained by state officials and are submitted to the National Center for Health Statistics (NCHS). NCHS collects death certificate data from all state vital statistics offices for all deaths occurring in the United States. Pneumonia and influenza (P&I) deaths are identified and compiled by the week of death occurrence and percent of P&I deaths is calculated. Pneumonia has been included in this statistic as it is one of the most common complications associated with influenza, however, pneumonia can be caused by many other illnesses besides influenza.

The percent P&I is reported each week both nationally, regionally and for each state. CDC makes this data available through their FluView Interactive tool (<https://gis.cdc.gov/grasp/fluview/mortality.html>). This percentage indicates the number of deaths for which NCHS has coded that death as being associated with an influenza or pneumonia cause. This number should not be interpreted as influenza-related deaths. Currently, this data does not provide deaths associated with only influenza and does not break down deaths by age group. There is also a 2-4 week lag period between the week the deaths have occurred and when the data for that week is reported. This occurs because there is often a delay in the completion of a death certificate and also delays associated with re-coding these death certificates at NCHS.

Can you compare the number of laboratory positive numbers from year to year?

No. NJDOH is always working to improve our surveillance systems and new laboratories are added all the time. Some of these laboratories are large and some of them are small but they can cause the number of reported positive influenza tests to increase dramatically. *For this reason, laboratory data should not be used as an indicator of the exact number of influenza cases occurring in New Jersey and should not be compared from season to season.*

What do influenza activity levels mean? How are activity levels determined?

Influenza activity levels are used to describe how widespread influenza is in the state. It does not describe the impact (i.e., severity) of influenza that is circulating. NJDOH has divided up the state into five regions (Northwest, Northeast, Central East, Central West and South). NJDOH evaluates the number of counties in a region which are seeing above average amounts of ILI and also observes which of these counties have had influenza a positive test results for influenza in the past three weeks. The fewer the number of counties in a region to have both of these factors, the lower the activity level. The more counties in a region that have an increase in both ILI and laboratory-confirmed tests, the greater the activity level assigned.

When does the influenza season begin? When will it peak?

The timing of flu is very unpredictable and can vary in different parts of the country and from season to season. Influenza can be found circulating year-round, however, increases in activity typically begin to occur between November and December. The peak of activity tends to occur between December and February with activity lasting often until April or May.

How severe is this flu season compared to previous seasons?

Influenza severity is a difficult measure as a clear definition for severity is not available. Generally, NJDOH evaluates surveillance data collected on the percent of deaths associated with pneumonia and influenza (P&I) and the number of hospital admissions. Determining the severity of influenza can be challenging since influenza-associated hospital admissions are not reportable to NJDOH and the reporting of influenza associated deaths are not timely.

NJDOH is currently working with the CDC to develop a statistical method that would encompass data from multiple surveillance systems and allow for an assignment of influenza intensity. The level can be compared to previous seasons to provide some insight into how the current influenza season compares to past influenza seasons.