

NYS Health Connector

New York State Flu Tracker

Overview

Office of Quality and Patient Safety
Division of Information and Statistics

Division of Epidemiology
Bureau of Communicable Disease Control and the
Statistical Unit

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Introduction

Influenza (flu) is a contagious respiratory illness caused by influenza viruses. Influenza causes seasonal epidemics and although the annual impact of influenza varies, it places a substantial burden on the health of New Yorkers each year. This dashboard displays the number of laboratory-confirmed influenza cases, by county, week, and influenza type (type A, type B, or type unspecified), for the current and each of the three previous influenza seasons. This information helps to track flu-related illness, determine which influenza viruses are circulating, and communicate when and where influenza activity is occurring.

The goal of this dashboard is to provide timely information about local, regional, and statewide influenza activity throughout the current influenza season. Although each influenza season is unique, historical data is also provided for trend comparison. Data is updated weekly.

The data represents laboratory-confirmed cases of influenza reported to the New York State Department of Health (NYSDOH) during the influenza season which meet a standardized case definition. The data do not represent all cases of influenza because the following are not reported: 1) undiagnosed influenza cases, 2) clinical diagnoses, 3) diagnoses based on influenza tests performed outside of clinical laboratories, unless voluntarily reported, and 4) false negative test results. Data are updated weekly during the influenza surveillance season, i.e., from week 40 (first week of October) of one calendar year through week 20 (third week of May) of the following calendar year.

Dashboard Data Sources and Methods

Data displayed are derived from the Communicable Disease Electronic Surveillance System (CDESS) and are available in the Health Data NY dataset: **Influenza Laboratory Confirmed Cases by County: Beginning 2009-10 Season.**

Reporting of laboratory-confirmed influenza is mandated under Part 2 of the New York State Sanitary Code. Clinical laboratories, as defined in Public Health Law (PHL) § 571, and optionally, other laboratories, electronically report positive influenza laboratory test results to the NYSDOH via the Electronic Clinical Laboratory Reporting System (ECLRS). As of 2018, more than 200 laboratories report influenza results to ECLRS. The Division of Epidemiology's Statistical Unit creates confirmed influenza cases on the Communicable Disease Electronic Surveillance System (CDESS) when positive results are reported from any of the following influenza laboratory tests:

- Rapid Influenza Diagnostic Tests (RIDT)
- Immunofluorescence assays (DFA and IFA)
- Rapid Molecular Assays
- Reverse Transcriptase Polymerase Chain Reaction (RT-PCR)
- Other Nucleic Acid Amplification tests
- Viral Culture

Single serology tests are not interpretable and cases are not created from such ECLRS reports; paired acute and convalescent sera are required for case ascertainment. Cases may be revoked when a more reliable test (e.g., RT-PCR) rules out infection.

Cases are counted as “Influenza A” or “Influenza B” when the laboratory test can discern virus type. When the type cannot be differentiated, cases are counted as “type unspecified”.

Cases are assigned to a county based on this order of preference: 1) the patient’s address, 2) the ordering healthcare provider’s address, or 3) the ordering facility’s address.

Definitions

Influenza case: A report of influenza identified in a person’s qualifying laboratory specimen; see Methods for more details.

Season: Because influenza activity peaks in winter, the influenza season is named for the two calendar years over which a single influenza epidemic spans. CDC defines the influenza season as beginning with week 40 (generally the first week in October) of one calendar year and ending with week 20 of the following calendar year (generally the third week in May).

CDC Week: CDC designates each week of the year with a sequential number starting with 1 to a maximum of 52 or 53. Week 1 is the first week of the year that has at least four days in the calendar year. CDC defines the influenza season as beginning with CDC week 40 (the first week in October) and ending with CDC week 20 of the following calendar year (the third week in May). Also known as MMWR week. Detailed information about how CDC week is calculated is at https://www.cdc.gov/nndss/document/MMWR_Week_overview.pdf.

Week ending date: The last date of each CDC week. Each week begins on Sunday and ends on Saturday; week ending dates are always on a Saturday.

Influenza Type: Influenza types A and B cause seasonal influenza epidemics. NYSDOH counts cases as “Type A” influenza or “Type B” influenza according to the test result. Rarely, when the virus type cannot be distinguished, cases are counted as “Type Unspecified”.
<https://www.cdc.gov/flu/about/viruses/types.htm>

Case rate per 100,000 population: The rate is calculated by dividing the number of influenza cases in a category (county, region, week, type, etc.) by the number of residents of the corresponding geography (county, region, or statewide). Please note that weekly case rates (calculated using the number of cases reported during a single week) will vary from season-to-date case rates (calculated using the sum of cases so far during the current season) and case rates over an entire season (calculated using the sum of cases over the entire 33 or 34 weeks of the season; applicable to past seasons only). Population denominators are CDC’s Bridged-Race Population Estimates for the year preceding the influenza season (e.g., the 2017 population estimate is used for the 2018-19 influenza season):
<https://wonder.cdc.gov/bridged-race-population.html>.

Region: The five regions in New York are defined by county as:

Capital District Region counties: Albany, Clinton, Columbia, Delaware, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

Central Region counties: Broome, Cayuga, Chenango, Cortland, Herkimer, Jefferson, Lewis, Madison, Oneida, Onondaga, Oswego, St Lawrence, Tioga, Tompkins

Metropolitan Region counties: Dutchess, Nassau, Orange, Putnam, Rockland, Suffolk, Sullivan, Ulster, Westchester

New York City counties/boroughs: Bronx, Kings, New York, Queens, Richmond

Western Region counties: Allegany, Cattaraugus, Chautauqua, Chemung, Erie, Genesee, Livingston, Monroe, Niagara, Ontario, Orleans, Schuyler, Seneca, Steuben, Wayne, Wyoming, Yates

Season-to-date: The cumulative number of cases, or the cumulative case rate, since the beginning of the season (starting with week 40).

County: Cases are assigned to a county based on this order of preference: 1) the patient's address, 2) the ordering healthcare provider's address, or 3) the ordering facility's address.

How to Interpret the Data

These data are not intended to represent all influenza illnesses. However, because data is collected systematically from all clinical laboratories, fluctuations in case numbers provide a useful and timely indicator of influenza activity. Case rates (cases standardized to 100,000 population) are provided to aid when comparing activity between geographic areas of different population size. Weekly data is provided to track how influenza activity changes over time, and county-level data is provided to allow focus on a particular geography. Because influenza A tends to circulate earlier in the season than influenza B, influenza type is provided to provide information about the currently circulating viruses. Data from the current influenza season in progress and each of the three most recent previous seasons are displayed.

Data are displayed in three separate tabs. First, the latest weekly data are displayed on the "Current Week" tab. Here, the number of reported cases (or case rate/100,000 population) are displayed by county, region, and statewide. The percentage change over the previous week, and the case breakdown by type are also displayed. Individual counties, or groups of counties, can be selected on either the map or the percent change graph on the right.

Second, influenza trends during the current season are displayed on the "Current Season" tab. The graphs at the top display influenza trends (cases or case rates) by influenza type and by region, respectively, over the course of the season. The bottom map displays influenza data by county; each week of the season can be selected separately. When a county (or group of counties) is selected on the map, the graph to its right will display the trend for that county (or group of counties) under the statewide trend for the entire season.

Third, influenza trends for the current season can be compared with the three most recent previous seasons on the "Compare with Previous Seasons" tab. The map displays the cumulative number of cases (or case rates/100,000 population) for the selected season; season-to-date data will be displayed when the current season is selected. The table on the right displays weekly data for each season; darker colors indicate greater numbers of cases (or case rates). The bottom graph displays influenza trends for the four seasons. All fields are interactive. Influenza type can be selected at the top of the page. A hover-over table at the top displays the week ending date for each week.

Limitations

These data are not intended to represent all influenza illnesses. The data do not represent all cases of influenza because the following are not reported: 1) undiagnosed influenza cases, 2) clinical diagnoses, 3) diagnoses based on influenza tests performed outside of clinical laboratories, unless voluntarily reported, and 4) false negative test results. It is unknown how many influenza patients do not seek medical care, are not tested by a reliable assay, or are tested in settings that do not report results to ECLRS. Further, certain tests such as RIDTs have limited accuracy; false negative and false positive results do occur.

The number of laboratories reporting data to ECLRS has increased over time. However, it is not known how influenza testing practices or the proportion of all tests being performed in clinical laboratory settings have changed over time or how they vary geographically. Thus, caution should be used when comparing data such as absolute numbers of cases between seasons or counties. Also, because the onset of influenza activity varies annually, caution should be used when comparing a single week's data (or season-to-date data) to the corresponding week(s) in previous seasons as a measure of relative activity.

The number of cases reported is only one measure of influenza's impact; information on illness severity cannot be derived from the case counts.

Despite these limitations, the data can provide useful situational awareness (e.g., trend) information during an influenza season. Data may also be used to compare epidemic characteristics, e.g., timing or proportion of virus types, between seasons. However, comparing absolute numbers of cases between seasons should be approached with caution, as noted above.

De-identification

The New York State Department of Health adheres to all applicable federal and state rules, regulations and standards for the de-identification of protected health information. For more information on de-identification methods, please visit: https://www.hhs.gov/hipaa/for-professionals/privacy/special-topics/de-identification/index.html#_edn1.

Contact Information

For more information or questions about this data, please contact nysapd@health.ny.gov.