



FACT SHEET

Overview of Influenza Surveillance in the United States

The Influenza Branch at CDC collects and reports information on influenza activity in the United States each week from October through May. The U.S. influenza surveillance system has 7 different components that allow CDC to:

- Find out when and where influenza activity is occurring
- Determine what type of influenza viruses are circulating
- Detect changes in the influenza viruses
- Track influenza-related illness
- Measure the impact influenza is having on deaths in the United States

The 7 Components of Influenza Surveillance:

1.) World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) Collaborating Laboratories

About 75 WHO and 50 NREVSS collaborating laboratories located throughout the United States report the total number of respiratory specimens tested and the number positive for influenza types A and B each week. Some laboratories also report the influenza A subtype (H1N1 or H3N2) of the viruses they have isolated and the ages of the persons from whom the specimens were collected. Some of the influenza viruses collected by laboratories are sent to CDC for more testing.

2.) U.S. Influenza Sentinel Providers Surveillance Network

Each week, approximately 1,000 health-care providers around the country report the total number of patients seen and the number of those patients with influenza-like illness (ILI) by age group. For this system, ILI is defined as fever (temperature of $>100^{\circ}\text{F}$) plus either a cough or a sore throat. The percentage of patient visits to sentinel providers for ILI reported each week is weighted on the basis of state population. This percentage is compared each week with the national baseline of 2.5%. The baseline is the mean percentage of visits for ILI during non-influenza weeks for the 2001-02 to 2003-04 seasons plus 2 standard deviations. Due to wide variability in regional level data, it was not possible to calculate region-specific baselines, and it is not appropriate to apply the national baseline to regional data.

3.) 122 Cities Mortality Reporting System

Each week, the vital statistics offices of 122 cities report the total number of death certificates filed and the number of those for which pneumonia or influenza was listed as the underlying or as a contributing cause of death. The percentage of all deaths due to pneumonia and influenza are compared with a baseline and epidemic threshold value calculated for each week.

4.) State and Territorial Epidemiologists Reports

State health departments report the estimated level of influenza activity in their states each week. States report influenza activity as no activity, sporadic, local, regional, or widespread. These levels are defined as follows:

- **No Activity:** No laboratory-confirmed cases of influenza and no reported increase in the number of cases of ILI.

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- **Sporadic:** Small numbers of laboratory-confirmed influenza cases or a single influenza outbreak has been reported, but there is no increase in cases of ILI.
- **Local:** Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in a single region of the state.
- **Regional:** Outbreaks of influenza or increases in ILI and recent laboratory confirmed influenza in at least 2 but less than half the regions of the state.
- **Widespread:** Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in at least half the regions of the state.

5.) Influenza-associated pediatric mortality

Influenza-associated pediatric mortality is a newly added nationally notifiable condition. Laboratory-confirmed influenza-associated deaths in children less than 18 years old are reported through the Nationally Notifiable Disease Surveillance System.

6.) Emerging Infections Program (EIP)

The EIP Influenza Project conducts surveillance for laboratory-confirmed influenza related hospitalizations in persons less than 18 years of age in 57 counties covering 11 metropolitan areas of 10 states (San Francisco CA, Denver CO, New Haven CT, Atlanta GA, Baltimore MD, Minneapolis/St. Paul MN, Albuquerque NM, Albany NY, Rochester NY, Portland OR, and Nashville TN). Cases are identified by reviewing hospital laboratory and admission databases and infection control logs for children with a documented positive influenza test (culture, DFA/IFA, PCR, or a rapid test) conducted as a part of routine patient care.

7.) New Vaccine Surveillance Network (NVSN)

The New Vaccine Surveillance Network (NVSN) provides population-based estimates of laboratory-confirmed influenza hospitalization rates for children less than 5 years old residing in 3 counties: Hamilton County OH, Davidson County TN, and Monroe County NY. Children admitted to NVSN hospitals with fever or respiratory symptoms are prospectively enrolled and respiratory samples are collected and tested by viral culture and RT-PCR. NVSN estimated rates are reported every 2 weeks.

Together, the 7 influenza surveillance components are designed to provide a national picture of influenza activity. Pneumonia and influenza mortality is reported on a national level only. Sentinel physician and laboratory data are reported on a national level and by influenza surveillance region (www.cdc.gov/flu/images/usregmap.gif). The state and territorial epidemiologists' reports of influenza activity are the only state-level information reported. Both the EIP and NVSN data provide population-based, laboratory-confirmed estimates of influenza-related pediatric hospitalizations but are reported from limited geographic areas.

It is Important to Remember the Following about Influenza Surveillance in the United States:

- All influenza activity reporting by states and health-care providers is voluntary.
- The reported information answers the questions of where, when, and what influenza viruses are circulating. It can be used to determine if influenza activity is increasing or decreasing, but cannot be used to ascertain how many people have become ill with influenza during the influenza season.
- The system consists of 7 complementary surveillance components. These components include reports from more than 120 laboratories, 2,000 sentinel health care providers, vital statistics offices in 122 cities, research and health-care personnel at the NVSN and EIP sites, and influenza surveillance coordinators and state epidemiologists from all 50 state health departments, and the New York City and District of Columbia health departments.

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- Influenza surveillance data collection is based on a reporting week that starts on Sunday and ends on Saturday of each week. Each surveillance participant is requested to summarize weekly data and submit it to CDC by Tuesday afternoon of the following week. Those data are then downloaded, compiled, and analyzed at CDC. The report is distributed and posted on the CDC Web site (www.cdc.gov/flu/weekly/fluactivity.htm) each Friday.

For more information, visit www.cdc.gov/flu or call the CDC Flu Information Line at 800-CDC-INFO (English and Spanish) or 888-232-6358 (TTY).

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