



Syndromic Surveillance Data

Data for Syndromic Surveillance are available on EpiQuery. EpiQuery is an interactive, user-friendly system designed to guide users through basic data analysis of aggregate-level data.

The Syndromic Surveillance Unit in the Bureau of Communicable Disease collects data from all 53 emergency departments (ED) in New York City, as required by Section 11.03(d) of the New York City Health Code. All ED patient encounters are sent to the Health Department on a daily basis.

Data available from EpiQuery

Data are available from 2006 through yesterday by date of visit, age group, geographic unit (citywide, borough, and ZIP code area), and syndrome (asthma, diarrhea, influenza-like illness, respiratory, and vomit). EpiQuery data represent the most recent data available and may differ from information reported elsewhere due to reporting delays, data refinements and the use of different population denominators.

Variable definitions

Syndrome: ED patient encounters are categorized into broad syndromes based on chief complaint, or the patient's reason of visit. Text processing algorithms are used to identify words or character strings in the chief complaint which subsequently identifies whether the patient falls into one of the following syndrome categories:

- **Asthma:** includes mention of asthma, wheezing, airway, or chronic obstructive pulmonary disorder (COPD)
- **Diarrhea:** includes mention of diarrhea, enteritis, gastroenteritis, loose stools, and stomach flu
- **Influenza-like-illness (ILI):** includes mention of flu, fever, and cough or sore throat
- **Respiratory:** includes mention of bronchitis, chest cold, chest congestion, chest pain, cough, difficulty breathing, pneumonia, shortness of breath, and upper respiratory infection
- **Vomiting:** includes mention of throwing up and vomit

Geographic data: Data are provided at the citywide, borough, and ZIP code levels. There are 140 ZIP code areas, with some small-population ZIPs merged to larger contiguous ZIPs. Each ZIP area has 30,000 residents or more. Borough is based on the ZIP code of the patient's residence. In the case of missing ZIP code data, the patients are allocated to a probable ZIP code of residence based on the address of ED and demographic characteristics.

Age: Age of the patient at the time of ED admission is separated into four categories: 0-4 years, 5-17 years, 18-64 years, and 65 years and older (65+). In the case of missing age data, the patients are included in the all age group data but excluded from the age-specific categories.

Population denominators

Ratios are calculated using the proportion of daily syndrome visits (numerator) among all other daily visits (denominator). Non-syndrome visits are calculated by subtracting all syndrome-related visits from total emergency department visits (i.e., total ED visits – syndrome-related visits).

Data characteristics and limitations

Syndromic data typically show a day-of-week pattern, with the highest volume of ED visits on Monday and the lowest volume on weekends. Major holidays also tend to have a lower volume of ED visits. In addition, there may be occasional under-reporting from some hospitals. Data for the most recent two weeks may change daily due to reporting delays from some hospitals.

Some boroughs (i.e., Staten Island) may be more prone to missing data due to lack of chief complaint reporting before 2016.

Syndrome data are inherently non-specific and not based on diagnostic testing.

While the New York City syndromic surveillance system captures 100% of all ED visits in the city (as of 5/1/16, 99% prior to that), the data are not comprehensive as only a proportion of residents seek care in EDs. Therefore the data are not exact measures of morbidity.

Data export

In order to increase the accessibility of the data, results are available for export to Microsoft Excel.