



STARK COUNTY INFLUENZA SNAPSHOT, WEEK 04

Week ending January 29, 2011. With updates through 02/05/2011.

All data are preliminary and may change as additional information is received.

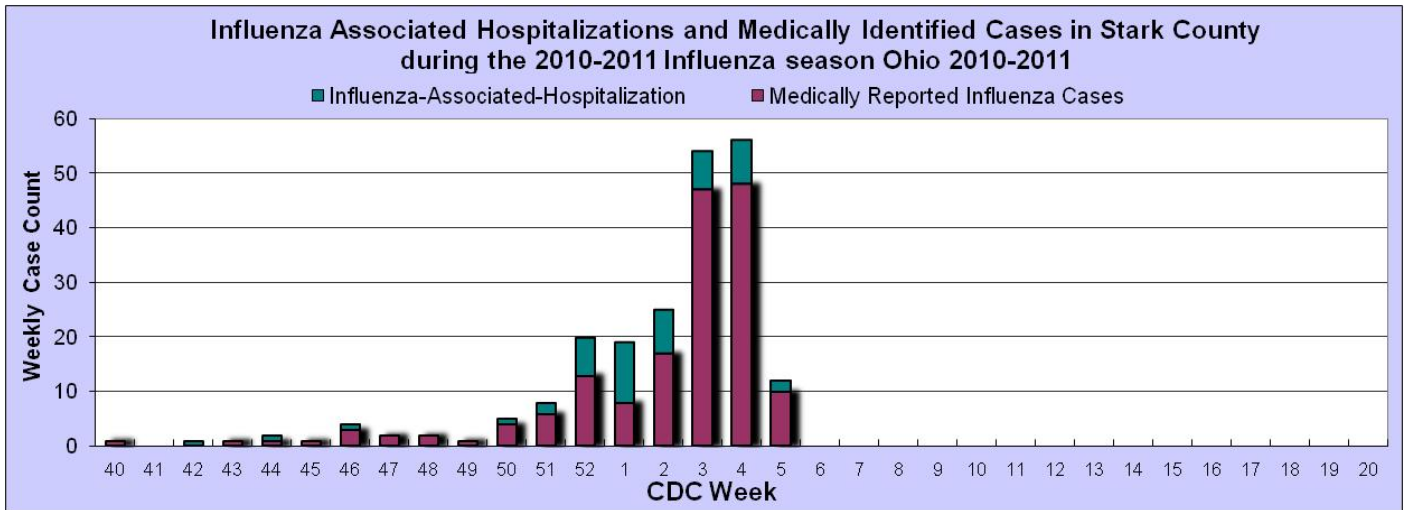
NOTE: Compilation of multiyear averages do not include the 2009/2010 H1N1 season.

During week 04, (January 23, 2010 – January 29, 2011) levels of influenza-like-illness (ILI) and cases of influenza remained at elevated levels. ILI is well dispersed amongst all age groups, with the elderly continuing to show evidence of delaying medical treatment, and our school-aged absenteeism is at a seasonal high.

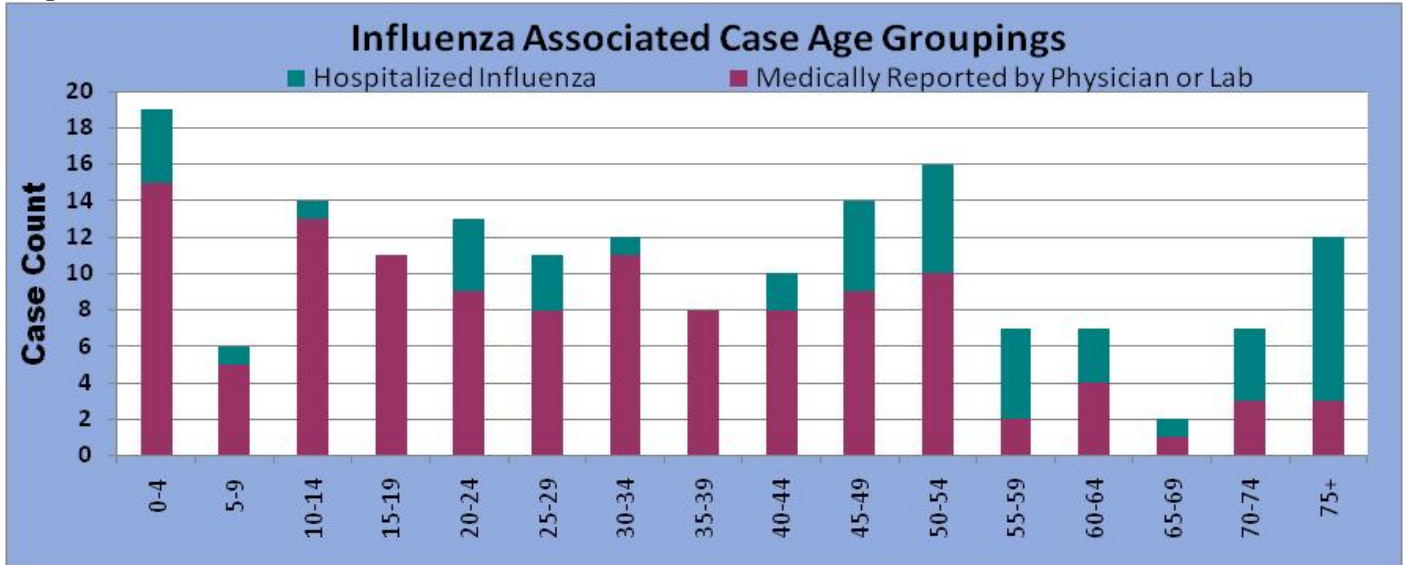
- Hospitalizations and medically/laboratory reported cases (herein after referred to as lab reports) of influenza continued at elevated levels during CDC week 4. Eight hospitalizations and 48 lab reports were received in Stark County. (Graph 1)
- Demographics for influenza-associated hospitalized cases in Stark County: the age range is 4 months to 90+ years with a **median of 53 years** and 11% African American. (Graph 2)
- Demographics for lab reported influenza cases in Stark County: the age range is 3 months to 85 years with a **median of 28 years** and 13% self-identified as African American. (Graph 2)
- Hospitalization in Seniors 75 and over continues at disproportionately high levels, accounting for 29% of hospitalizations and only 6% of lab reported cases. They appear to be reporting to emergency departments at a stage in their illness requiring hospitalization. (Graph 2)
- Circulating strains of influenza, confirmed in Ohio, include influenza A (H3), influenza A (H1) and influenza B. CDC has evidence of the following circulating strains in the United States this season: 2009 influenza A (H1N1), influenza A (H3N2), influenza B viruses (Yamagata, Victoria). All influenza A's were represented in the 2010-11 influenza vaccine, however one of the two lineages of influenza B, the Yamagata lineage, is **not a component** of the 2010-2011 influenza vaccine.
- Additionally, the CDC reported one case of human infection with a novel influenza A virus reported by the Pennsylvania Department of Health. The patient was infected with a swine origin influenza A (H3N2) virus. The patient reported contact with pigs in the week preceding symptom onset, did not require hospitalization, and has since fully recovered. Initial testing of the specimen indicated a seasonal influenza A (H3N2) virus and the specimen was submitted to CDC as a routine surveillance sample.
- National indicators of outpatient activity, as reported by Sentinel Providers, revealed **increases** in influenza-like-illness (ILI). The national level of ILI visits is 4.0%, well **above** the baseline level of 2.5%. Only one of four providers reported local activity during CDC Week 4. (Graph 3)
- The total number of patient visits and the percentage of visits to emergency departments in Stark County displaying chief complaint symptoms consistent with Constitutional and Respiratory (C & R) syndromes, and fever + ILI **increased** 4.7% and 22% respectively, and are both **above baseline levels**. (Graph 4)
- Over-the-counter sales of thermometers **increased nearly 50%** in CDC week 4. Both Thermometer and Cough/Cold Products sales remain below baseline levels. (Graph 5)
- With 52 schools reporting, school absenteeism continued to **increase** to a seasonal high of 5.2%. For the second week, absenteeism due to influenza-like-illness (ILI) remained at 0.44%. (Graph 6)
- Thirty (30) states, **including** Ohio, reported **Widespread** geographical influenza activity. As seen in the National Map on pg 4 of this report, the only areas with Regional or less activity are concentrated in the Upper Midwest and Northwestern United States. (See National map)
- Six additional influenza-associated pediatric deaths were reported to the CDC, for a total of 19 deaths during the 2010-2011 season (none from Ohio). Eight of the 19 deaths reported were associated with influenza A (H3) viruses, eight deaths were associated with influenza B viruses, one was associated with a 2009 influenza A (H1N1) virus, and two were associated with an influenza A virus for which the subtype was not determined.
- National Pneumonia and Influenza (P & I) Mortality Surveillance **increased significantly to 8.5%** of all deaths reported through the 122 Cities Mortality Reporting System as due to P & I. This percentage is **above** the epidemic threshold of 7.9% for week 04.

For questions, or to receive this report weekly by email, send requests to either chenning@cantonhealth.org or schanzk@starkhealth.org.

Graph 1: Influenza Cases reported to Local Health Departments Note: Influenza is only reportable if associated with a hospitalization; therefore, this only represents a small number of actual influenza cases in Stark County.

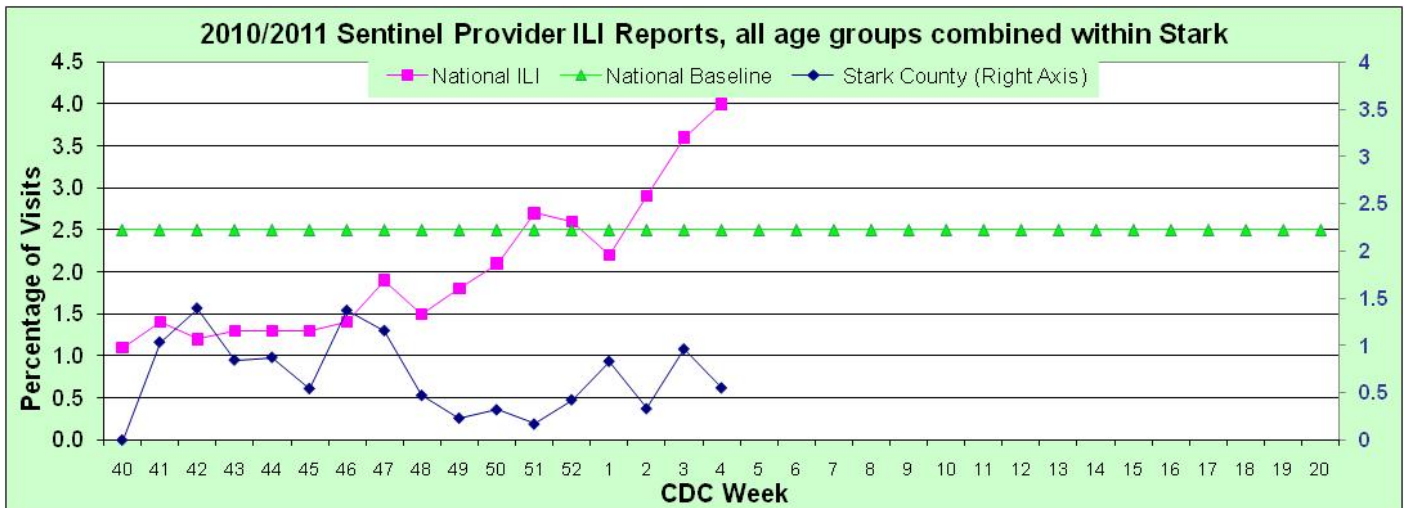


Graph 2: Age Groupings of Influenza Cases Reported to Local Health Departments. The graph shows the total number of influenza associated cases per age group. The two colors reflect the number hospitalized and not hospitalized.



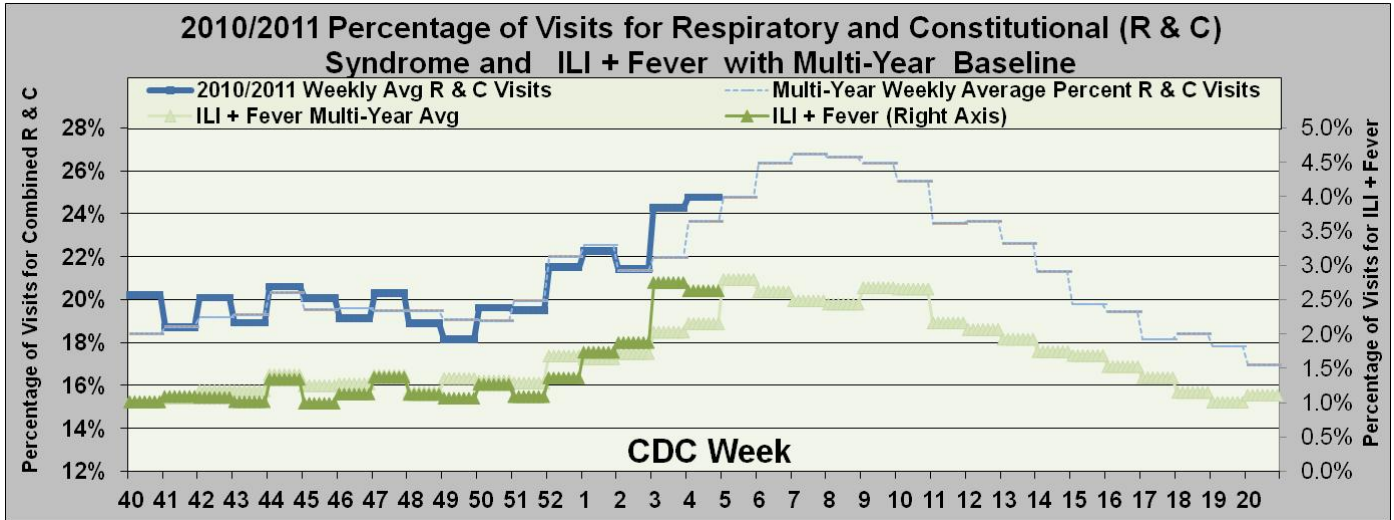
Graph 3: Sentinel Provider Reported Influenza-Like-Illness in Stark County

Sentinel Providers-An influenza sentinel provider conducts surveillance for influenza-like illness (ILI) in collaboration with the state health department and the Centers for Disease Control and Prevention (CDC). Data reported by Stark Counties 4 providers are combined with other influenza surveillance data to provide a national picture of influenza virus and ILI activity.



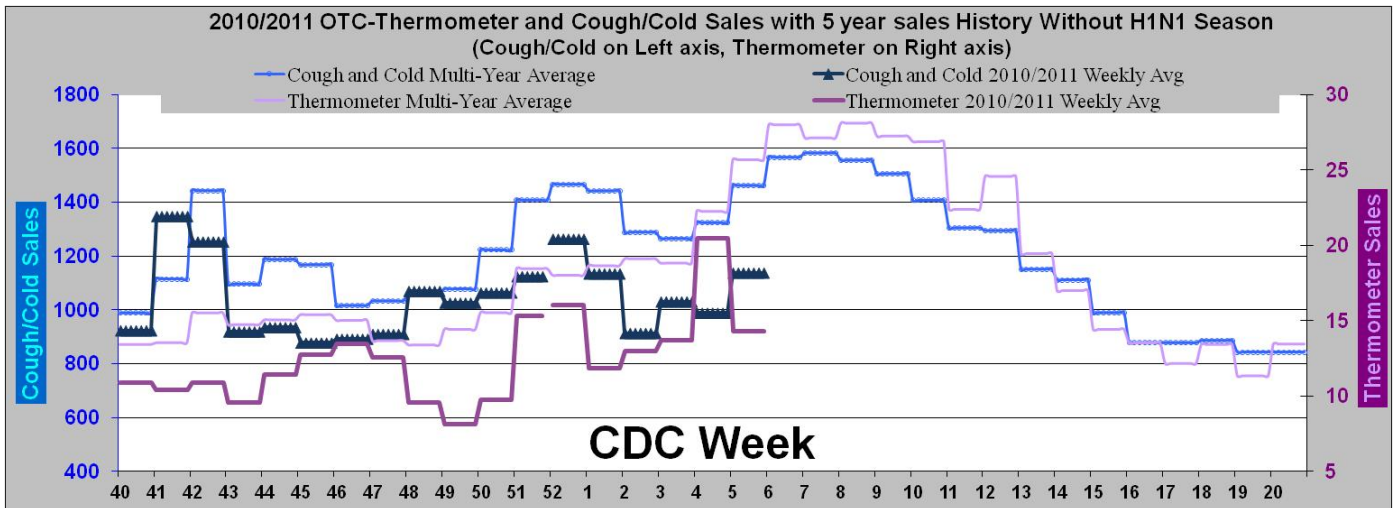
Graph 4: Emergency Department Visits for combined Respiratory and Constitutional Syndromes

(Source Health Monitoring Systems, EpiCenter, hospital patient visit surveillance system)

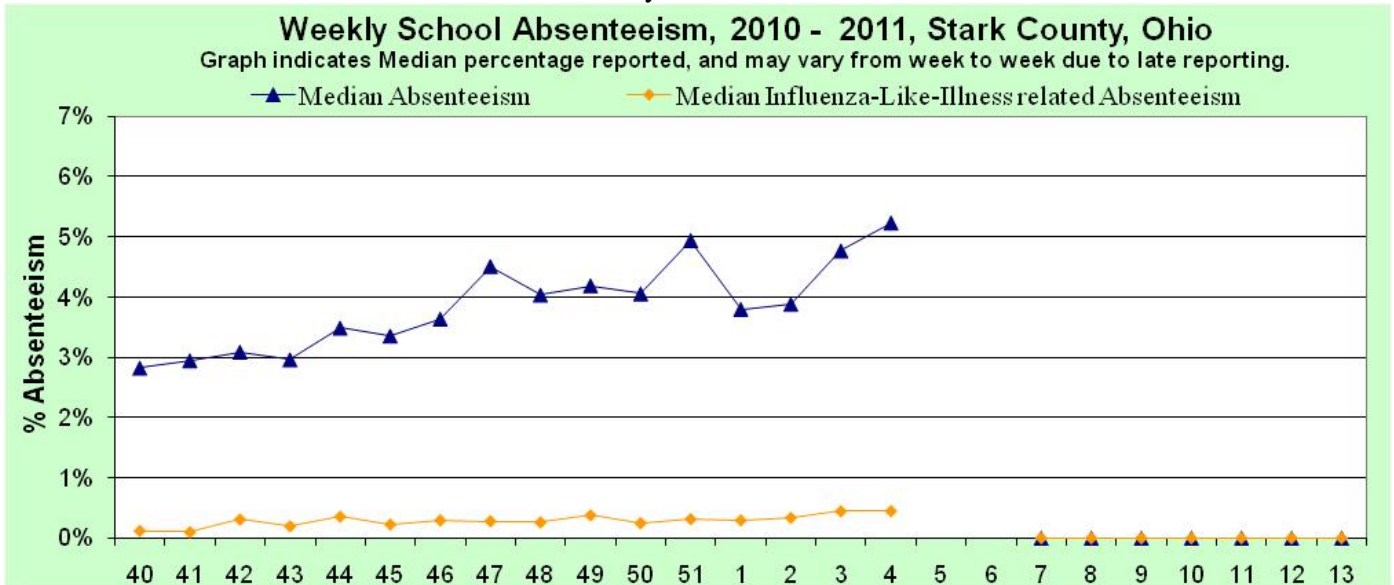


Graph 5: Over-The-Counter Sales of Cough/Cold Product Sales in Stark County Over-The-Counter Sales of Thermometers in Stark County

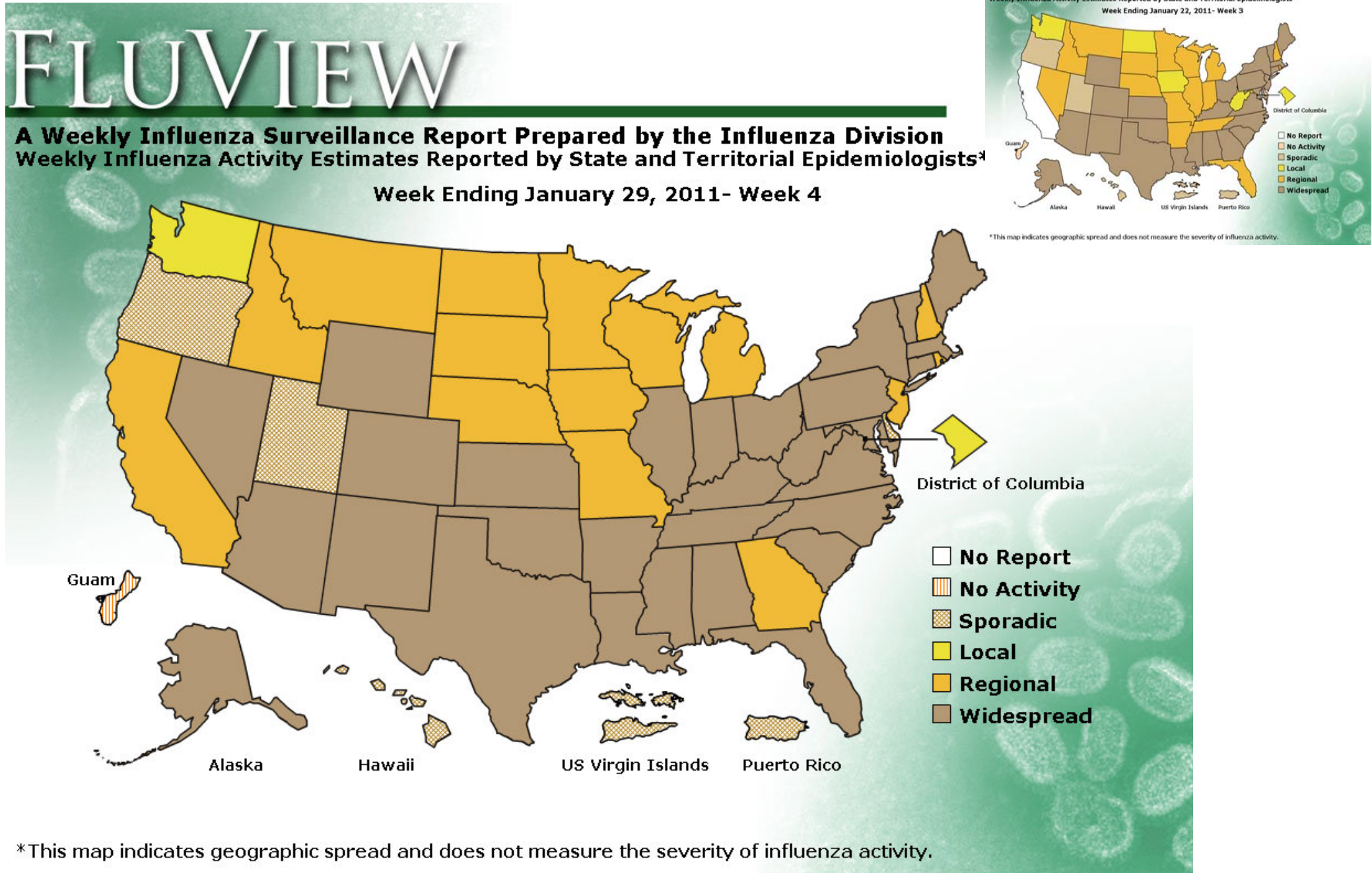
Source: RODS Real time Outbreak Disease Surveillance, Retail pharmaceutical sales.



Graph 7: School Absenteeism. School systems from throughout Stark County report total absenteeism and absenteeism due to influenza-like-illness on a weekly basis.



Map: Weekly Geographic Influenza Activity Estimates Reported by State and Territorial Epidemiologists (Inset is previous week) (Source: <http://www.cdc.gov/flu/weekly>)



Sources of Influenza Surveillance Data

Six types of data sources are examined on a weekly basis to help paint a picture of influenza activity in our community:

Emergency Department Visits (EpiCenter): EpiCenter collects emergency department chief complaint data from 4 hospital facilities across Stark County in real time and classifies them into symptom and syndrome categories. Chief complaints from the combined constitutional and respiratory syndrome category and coming soon the fever + ILI symptoms classifier are analyzed for influenza surveillance.

National Retail Data Monitor (NRDM)-OTC Drug Purchases: The NRDM collects over-the-counter (OTC) drug sales information from approximately 1,420 Ohio chain drug stores and grocery stores. For influenza surveillance, thermometer and adult cold relief sales are monitored on a weekly basis from sales in Stark County.

Sentinel Providers (ILINet): Sentinel providers, through the US Influenza-like Illness Surveillance Network (ILINet), collect outpatient ILI data. Providers report the total number of patients seen and the number of patients with ILI by age group on a weekly basis. Sentinel providers also submit specimens for influenza testing to the ODH laboratory throughout the influenza season. There are 68 sentinel providers enrolled in Ohio and 4 in Stark County for the 2010-2011 season.

ODH and Local Laboratory Surveillance: The Ohio Department of Health Laboratory reports the number of specimens that test positive for influenza each week. Generally, specimens are submitted by sentinel provider participants. A subset of the positive specimens is sent to CDC for further testing during the season. Laboratory reports from larger physician practices and hospital laboratories in the county are voluntarily submitted each week to the four health departments. They may include age, zip code, and race and help to describe the demographic pattern of illness and type of influenza circulating in the community.

Influenza-associated Hospitalizations (ODRS): Influenza-associated hospitalizations are reported to the four local health departments and hospitals by direct entry into the Ohio Disease Reporting System (ODRS). Hospitalizations can be used as an indicator of the severity of illness during a particular influenza season. This condition became reportable in 2009.

School Absenteeism, total and ILI: Numerous school systems of various sizes in Stark County report the number of students absent for medical reasons and for specific medical conditions including ILI. Increases in school absenteeism for ILI are often an early indicator to larger community trends.