STARK COUNTY INFLUENZA SNAPSHOT, WEEK 52

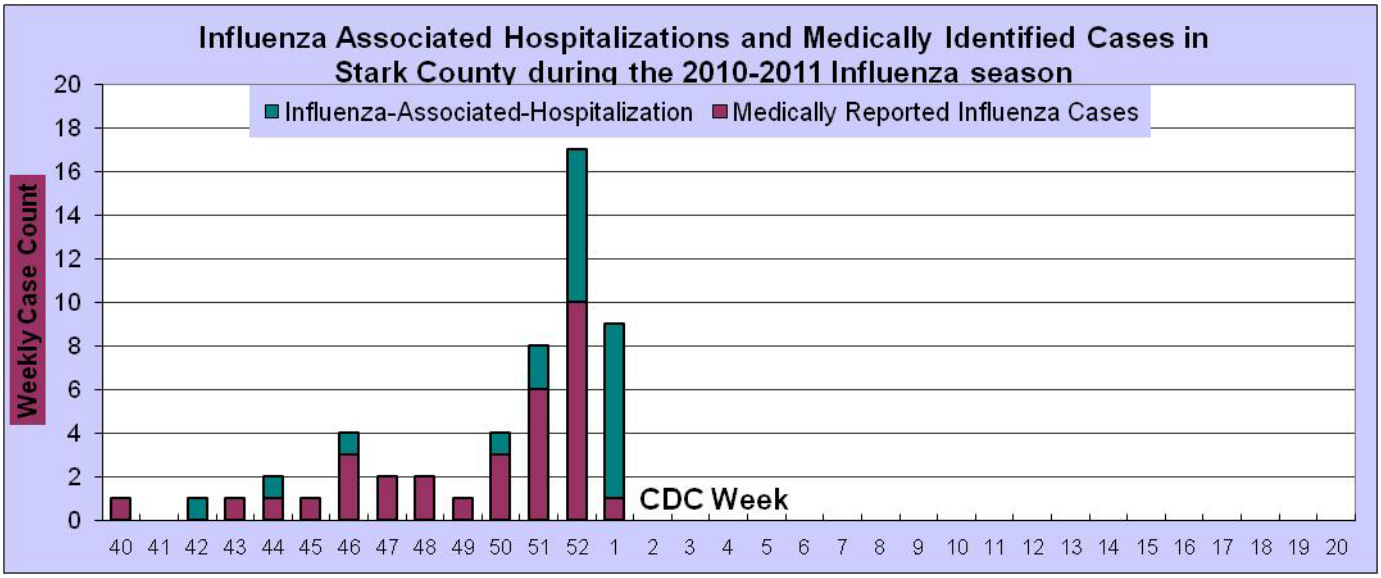
Week ending January 1, 2011. With updates through 01/07/2011.
All data are preliminary and may change as additional information is received.
NOTE: Compilation of multiyear averages do not include the 2009/2010 H1N1 season.

During week 52, (December 26, 2010 – January 01, 2011) health departments received a significant increase in influenza-associated hospitalizations, hospitals were at maximum bed capacity, the state of Ohio raised the influenza activity level to Regional and influenza B was identified in local surveillance activities. Nationally influenza continues to spread across the United States and a strain of influenza B that is not a component of this season's vaccine was antigenically characaterized. Many of the increase reflects expected seasonal trends for influenza surveillance.

- CDC Week 52 shows a distinct increase in both medically/laboratory (herein after referred to as lab reports) reported cases of influenza and influenza-associated hospitalizations. Seven hospitalizations and ten lab reports were received in Stark County. The season-to-date total is twenty-one influenza-associated hospitalizations and thirty-two lab reported cases of influenza. (Graph 1)
- Demographics for influenza-associated hospitalized cases in Stark County: the age range is 2 to 86 years with a **median of 50 years** and 15% African American.
- Demographics for lab reported influenza cases in Stark County: the age range is 2 years to 71 years with a **median of 29.5 years** and 27% self- identified as African American.
- Type B Influenza was reported for the first time this week in a hospitalized patient. Six additional cases of influenza this season were sub typed as influenza A (H3). The State of Ohio also has confirmation of circulation of the influenza A (H1).
- CDC has antigenically characterized 257 influenza viruses [29 2009 influenza A (H1N1) viruses, 137 influenza A (H3N2) viruses, and 91 influenza B viruses (8 Yamagata, 83 Victoria)] collected by U.S. laboratories since October 1, 2010. All influenza A's were represented in the 2010-11 influenza vaccine, however two lineages of influenza B have now been identified with the Yamagata lineage not being a component of the 2010-2011 influenza vaccine.
- Stark County Sentinel Providers continue to report very few patient visits attributed to ILI. The National level of ILI visits **remained above** the baseline level of 2.5%, with 2.6% of visits for ILI. (Graph 2)
- The total number of patient visits, by Stark County residents, to emergency departments **increased** nearly **17%** from weed 51. At least three of our local hospitals also reported 100% bed capacity at some point during week 52 and/or week 1 2011. (Graph 4)
- The percentage of visits to emergency departments in Stark County displaying chief complaint symptoms consistent with Constitutional and Respiratory (C & R) syndromes **increased** 10% to 21.55% in week 52. (Graph 3)
- The percentage of visits to emergency departments in Stark County displaying chief complaint symptoms consistent with the syndrome classifier, fever + ILI is 1.4%, which is an increase from the previous week while remaining **below** the expected level of 1.68%. (Graph 3)
- Consistent **increases** in Over-the-counter sales of Cough/Cold Products and Thermometers have been observed in the past three weeks. (Note, December 25 was eliminated due to store closures). (Graph 5)
- Due to the holidays School absenteeism was not reported for Week 52. The graph has been updated to reflect late reporting from week 51. (Graph 6)
- The state of Ohio **increased** the level of influenza activity to **Regional**. National geographic indicators of influenza continue to indicate increases in geographical spread. Widespread activity was reported by eight states, Regional influenza activity was reported by sixteen states, Local influenza activity was reported by eleven states, and sporadic activity was reported by fifteen states. (See National map)
- National Pneumonia and Influenza (P & I) Mortality Surveillance **decreased to 7.2**% of all deaths reported through the 122 Cities Mortality Reporting System as due to P & I. This percentage is **below** the epidemic threshold of 7.7% for week 52.
- A fourth pediatric death associated with influenza was reported to the CDC this season. The infant was a resident of Arizona and was linked with influenza B.

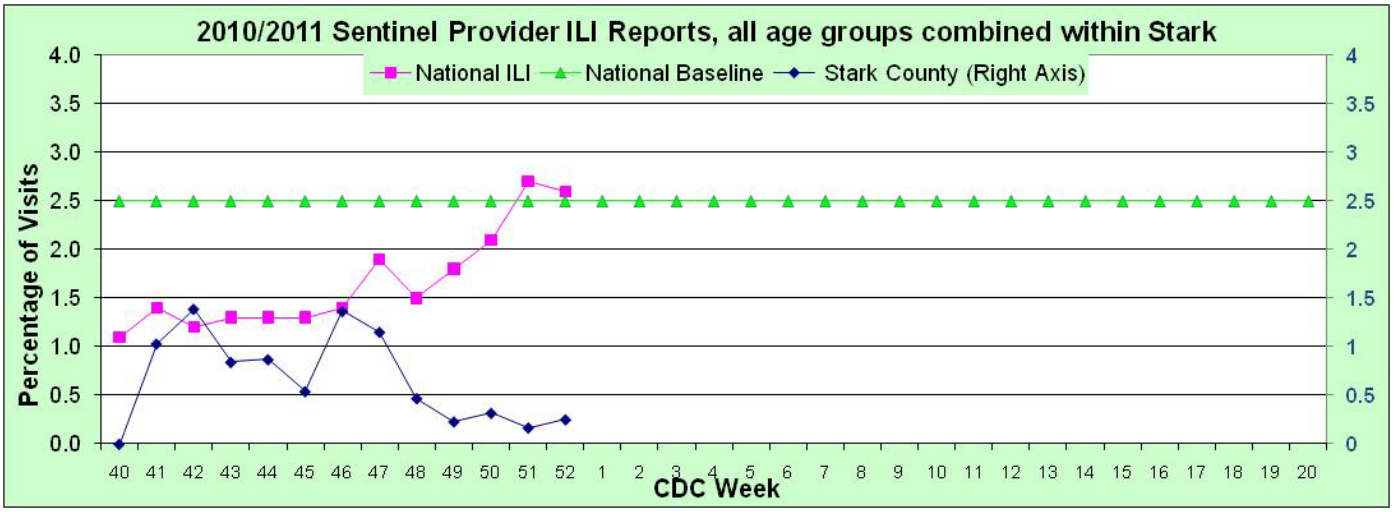
For questions, or to receive this report weekly by email, send requests to either chenning@cantonhealth.org or schanzk@starkhealth.org.

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.



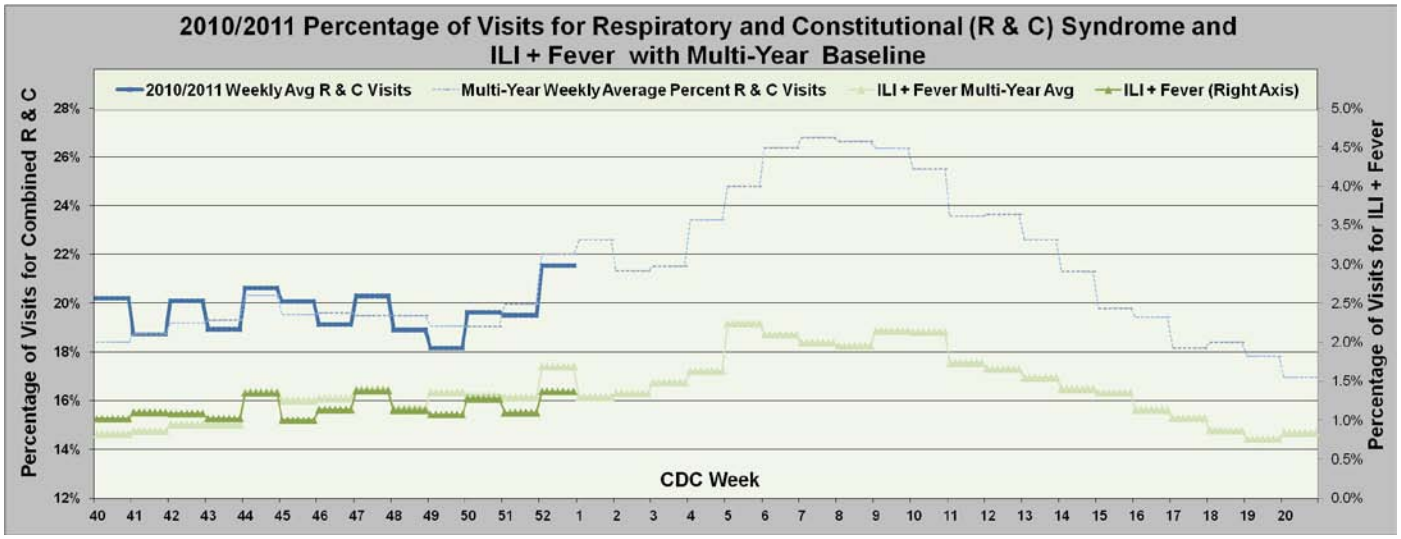
Graph 2: Sentinel Provider Reported Influenza-Like-Illness in Stark County

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.



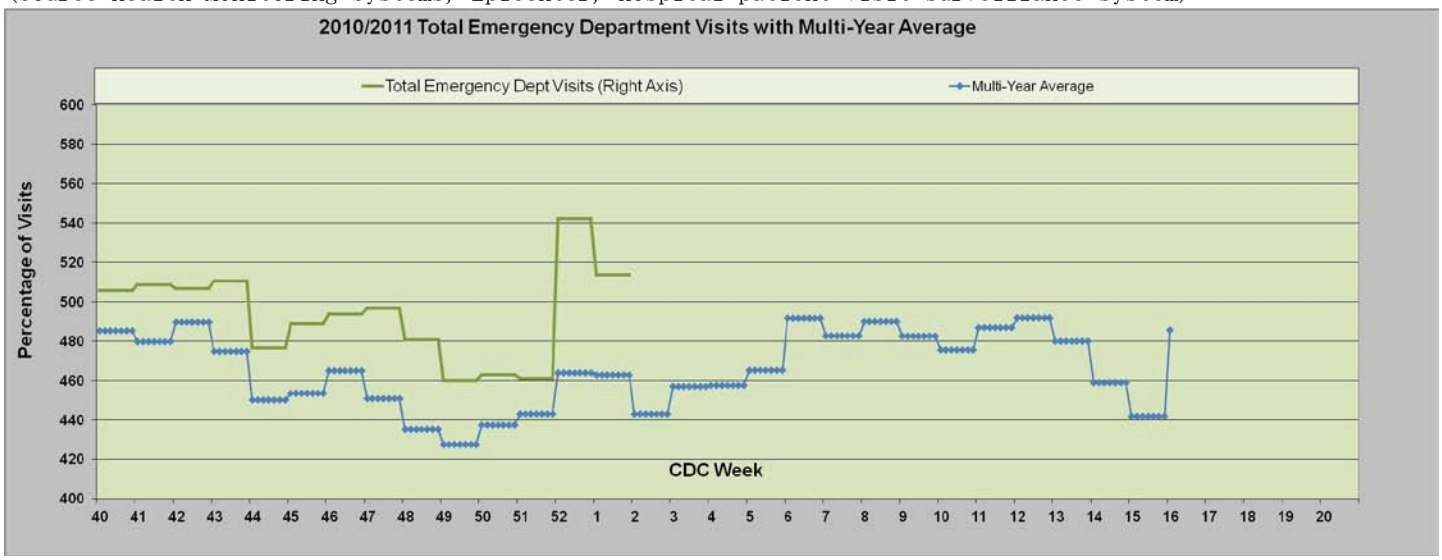
Graph 3: Emergency Department Visits for combined Respiratory and Constitutional Syndromes

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



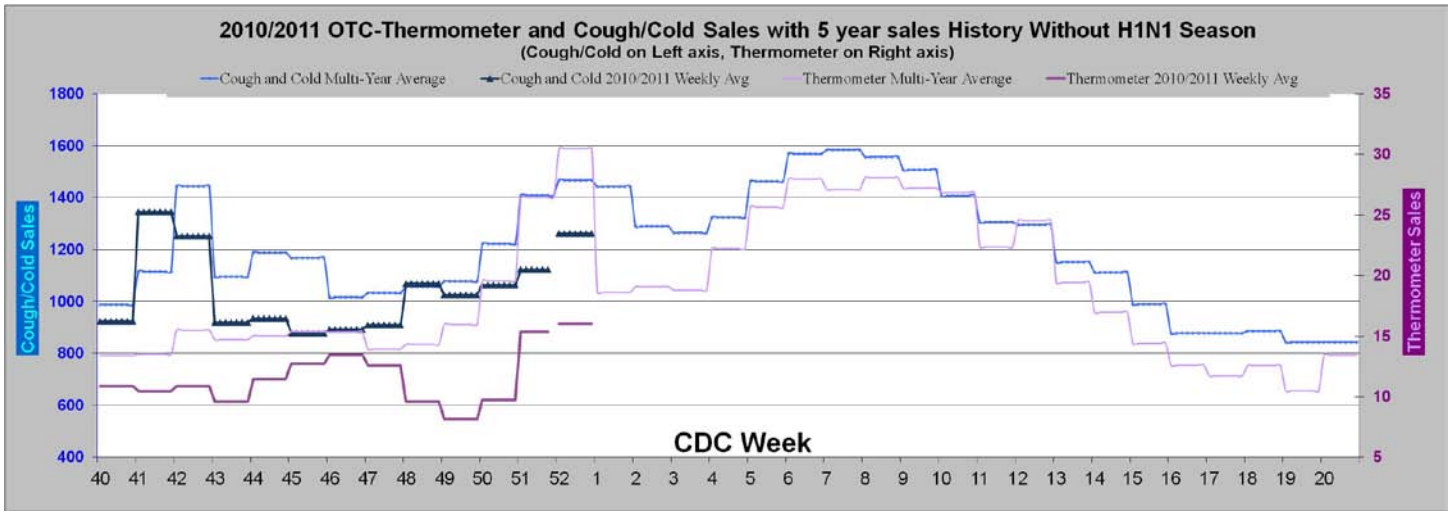
Graph 4: Total Emergency Department Visits

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

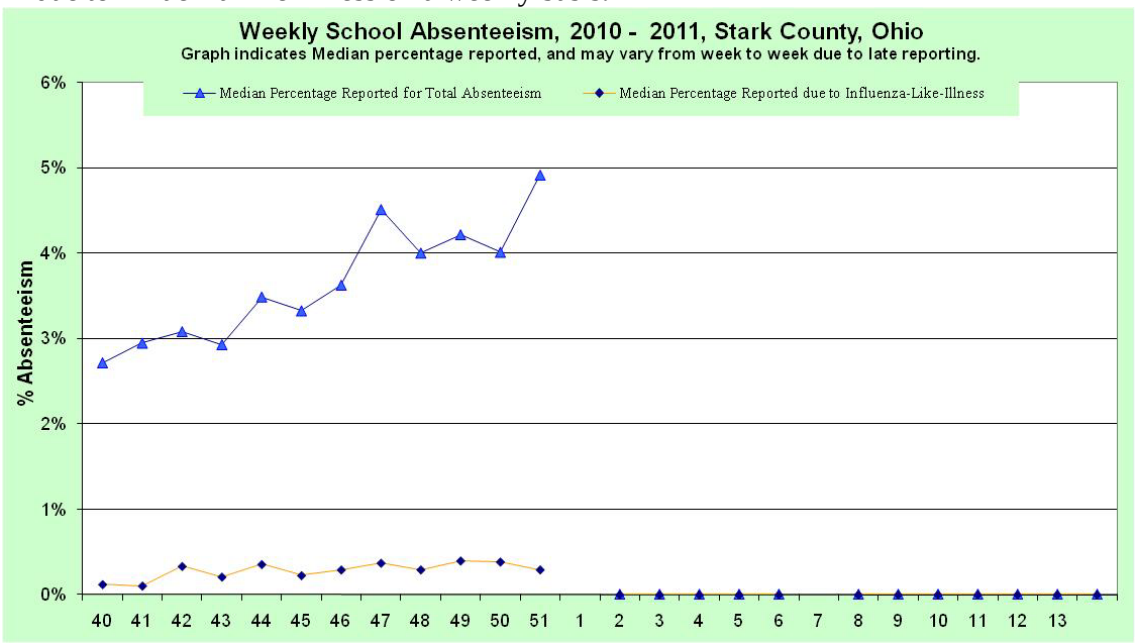


Graph 5: Over-The-Counter Sales of Cough/Cold Product Sales in Stark County Over-The-Counter Sales of Thermometers in Stark County

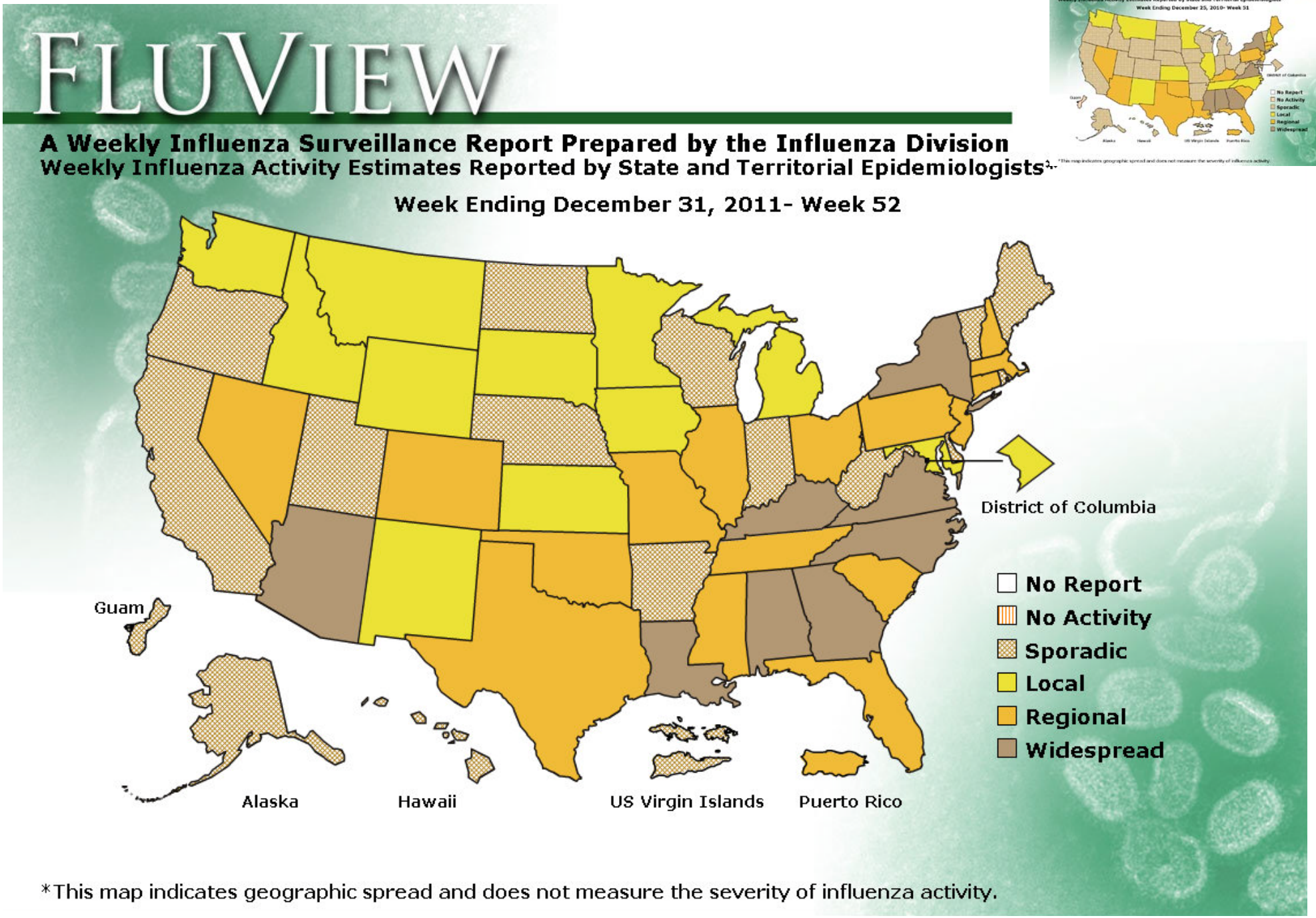
Source: RODS Real time Outbreak Disease Surveillance, Retail pharmaceutical sales.



Graph 6: 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.