



STARK COUNTY INFLUENZA SNAPSHOT, WEEK 09

Week ending March 5, 2011. With updates through 03/13/2011.

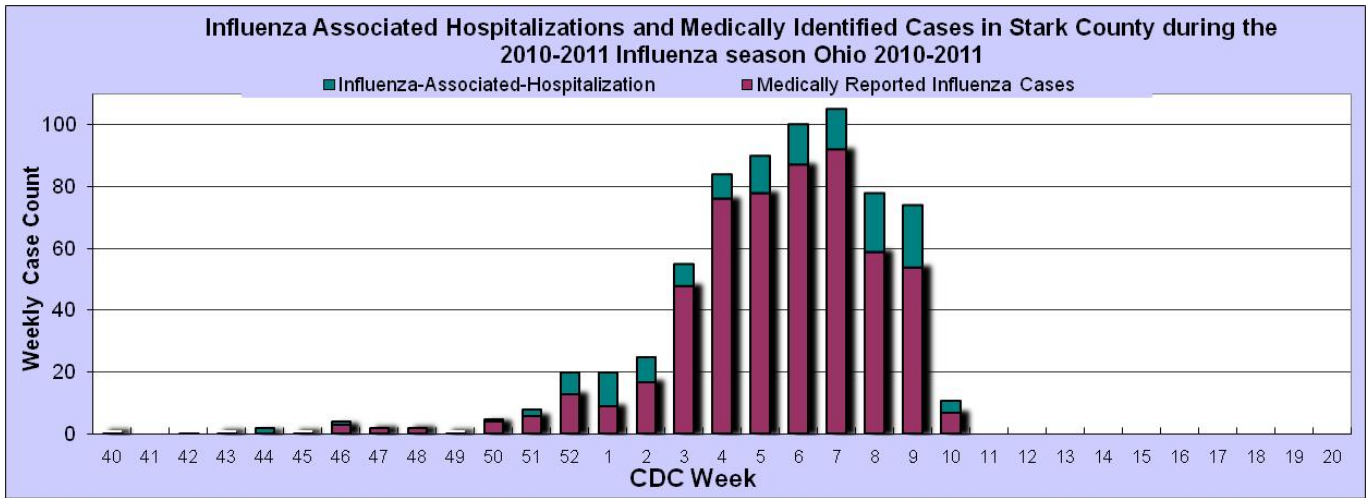
All data are preliminary and may change as additional information is received.

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

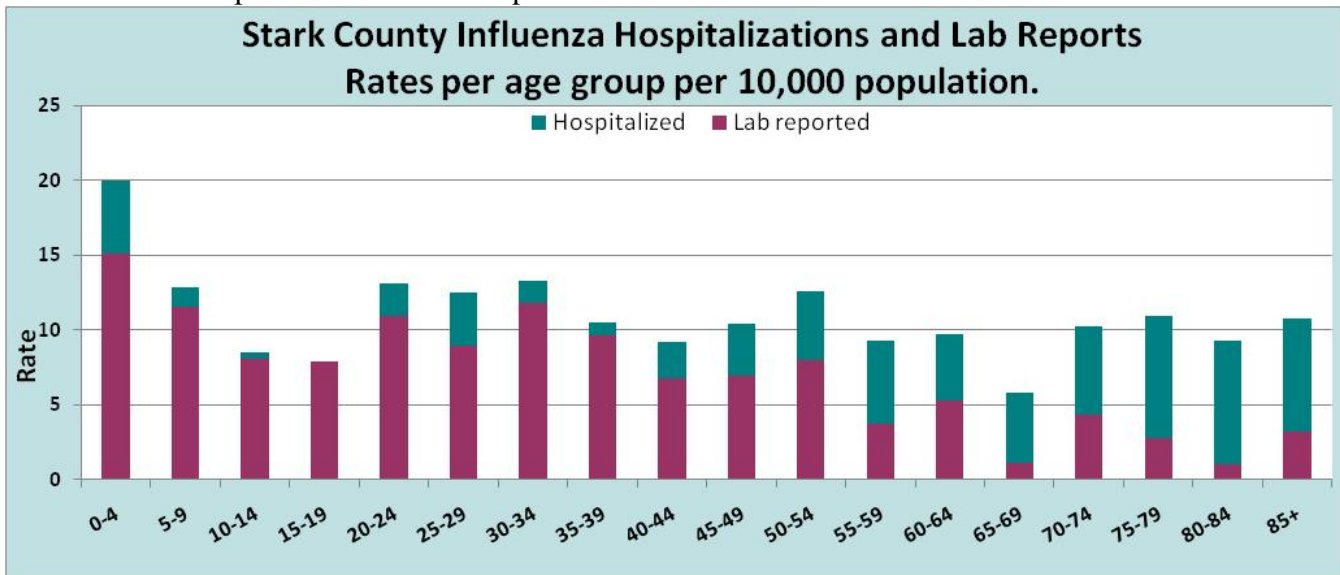
During week 09, (February 27, 2010 – March 05, 2011) the severe consequences of influenza continued at elevated levels, however other indicators appear to have stabilized or declined. Locally, week 9 brought the highest level of hospitalizations to Stark County. However, emergency department visits, lab reported influenza cases and school absenteeism all saw decreasing activity.

- Hospitalizations for influenza continued to **increase** to a new season high, while the medically/laboratory reported cases (herein after referred to as lab reports) **decreased**. Twenty (20) hospitalizations and an additional 54 lab reports of influenza were received in Stark County. (Graph 1)
- Demographics for 128 influenza-associated hospitalized cases during the 2010-2011 season in Stark County: the age range is 4 months to 90+ years with a **median of 55 years** and 8% self reported as African American. (Graph 2)
- Demographics for the 562 lab reported influenza cases in Stark County: the age range is 1 month to 90+ years with a **median of 29 years** and 14.3% self- identified as African American. (Graph 2)
- Nationally, sixty influenza-associated pediatric deaths were reported to the Centers for Disease Control and Prevention (CDC) this season, one from NW Ohio. Twenty-three (38%) of the 60 deaths reported were associated with influenza B viruses, 12 (20%) deaths reported were associated with influenza A (H3) viruses, 13 (21%) were associated with 2009 influenza A (H1N1) viruses, and 12 were associated with an influenza A virus for which the subtype was not determined.
- Circulating strains of influenza, confirmed in Stark County, include influenza A (H3), influenza A (H1N1) and influenza B/Brisbane-like (Victoria). Currently in Stark County, the incidence of type B influenza is increasing and type A is decreasing. The 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 and Victoria). All influenza A's were represented in the 2010-11 influenza vaccine, however the influenza B, Yamagata lineage, is **not a component** of the 2010-2011 influenza vaccine.
- Hospitalization in seniors continues at disproportionately high levels, and overall disease burden is highest in those 0-4 years of age. As seen in the graph, the 4 highest rates of influenza-associated hospitalization are in those age groupings 70 and over, with hospitalization rates as high as 7 per 10,000 population.(Graph 2)
- Week 9 National indicators of outpatient activity of influenza-like-illness (ILI), as reported by Sentinel Providers, continued at a level **above** the baseline of 2.5% The National ILI level is 3.1%, and with three reporters in the county, the local level **increased slightly** to 2.01%.(Graph 3)
- Total emergency department patient visits and visits specifically for symptoms consistent with Constitutional and Respiratory (C & R) syndrome and ILI + Fever, **decreased** in CDC Week 9.C & R visits fell **below** expected and ILI + Fever matches baseline levels. (Graph 4)
- Over-the-counter sales of both Cough/Cold items and Thermometers remained relatively constant during CDC week 9. Both types of product sales remain well below baseline levels. (Graph 5)
- With 58 schools reporting, school absenteeism **decreased**. The median percentage of school absenteeism decreased to 4.3% and specific reports of ILI remained steady at 0.4%. (Graph 6)
- For the first time this season a **decrease** in the number of states reporting Widespread geographical activity was noted. Thirty-nine (39) states, **including** Ohio, continue to report **Widespread** geographical influenza activity. This is a decrease from 44 in CDC week 8.(See Map)
- During CDC Week 9 , National Pneumonia and Influenza (P & I) Mortality Surveillance of all deaths reported through the 122 Cities Mortality Reporting System as due to P & I, **increased** to 8.5%. This is the sixth consecutive week that the P & I has exceeded the epidemic threshold.

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.

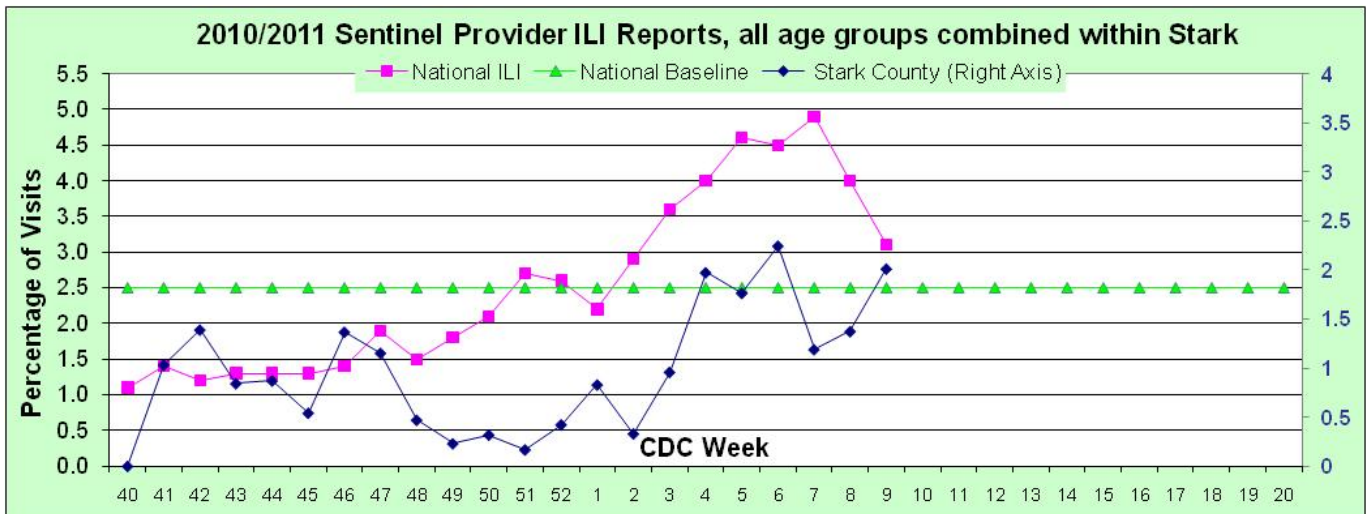


Graph 2: Stark County Rates per 10,000 population Influenza-Associated Hospitalizations and Lab Reported cases. The graph shows the age population category rate for the number of influenza-associated cases stacked with lab reports that have been reported in the 2010-2011 influenza season.



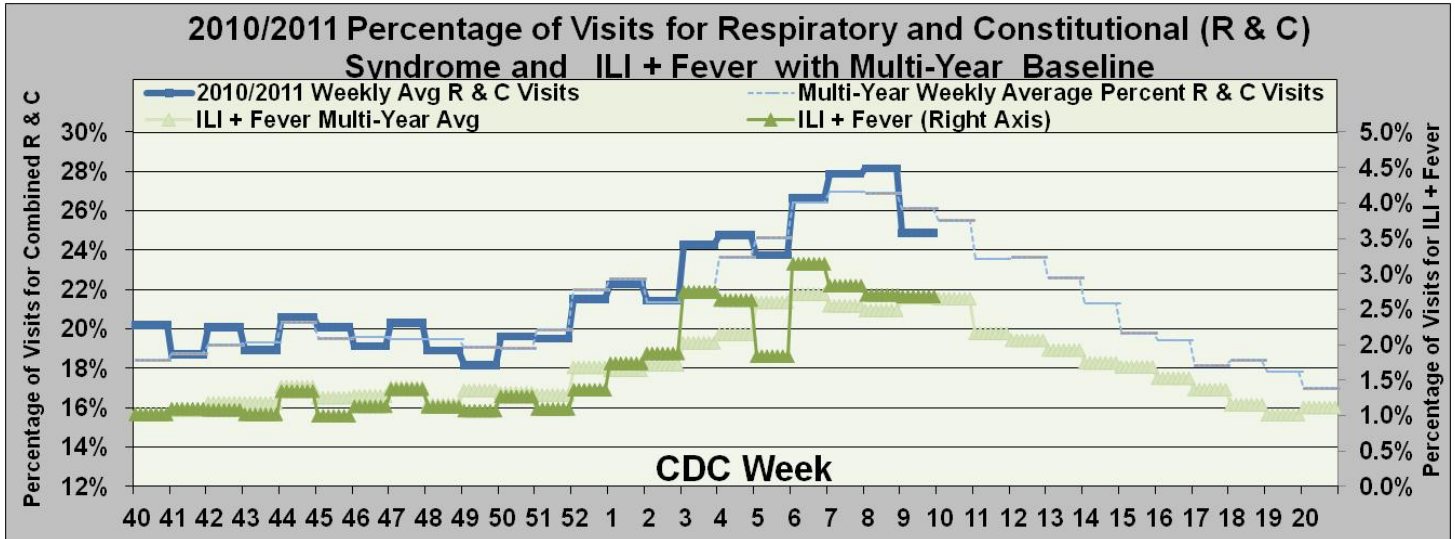
Graph 3: Sentinel Provider Reported Influenza-Like-Illness in Stark County

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.



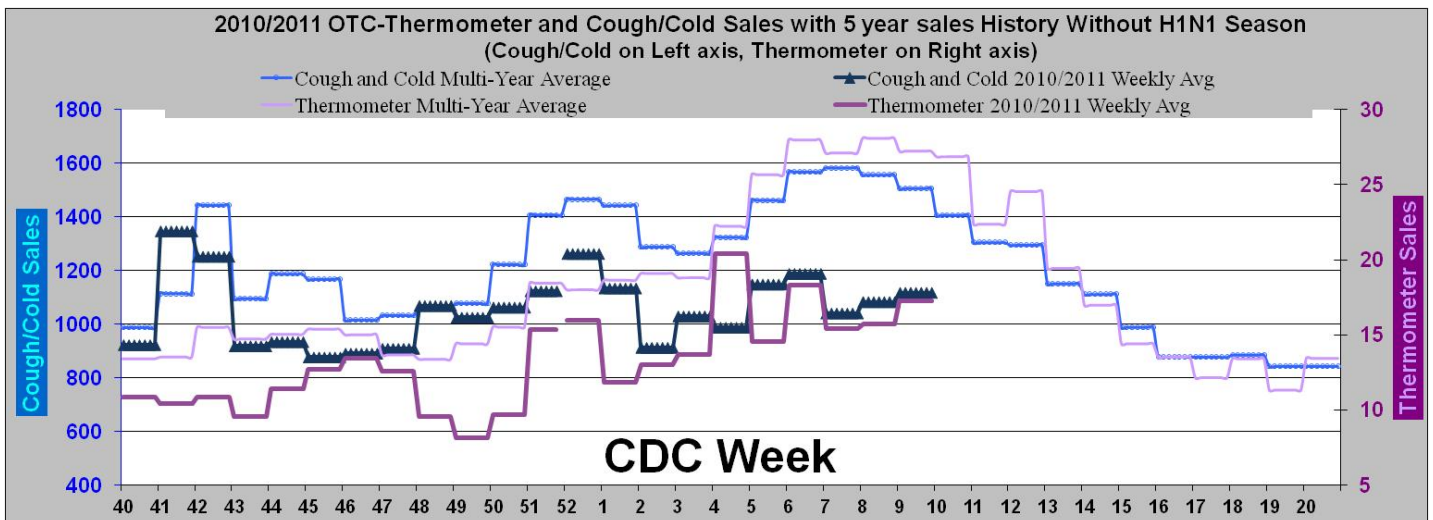
Graph 4: Emergency Department Visits for combined Respiratory and Constitutional Syndromes

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

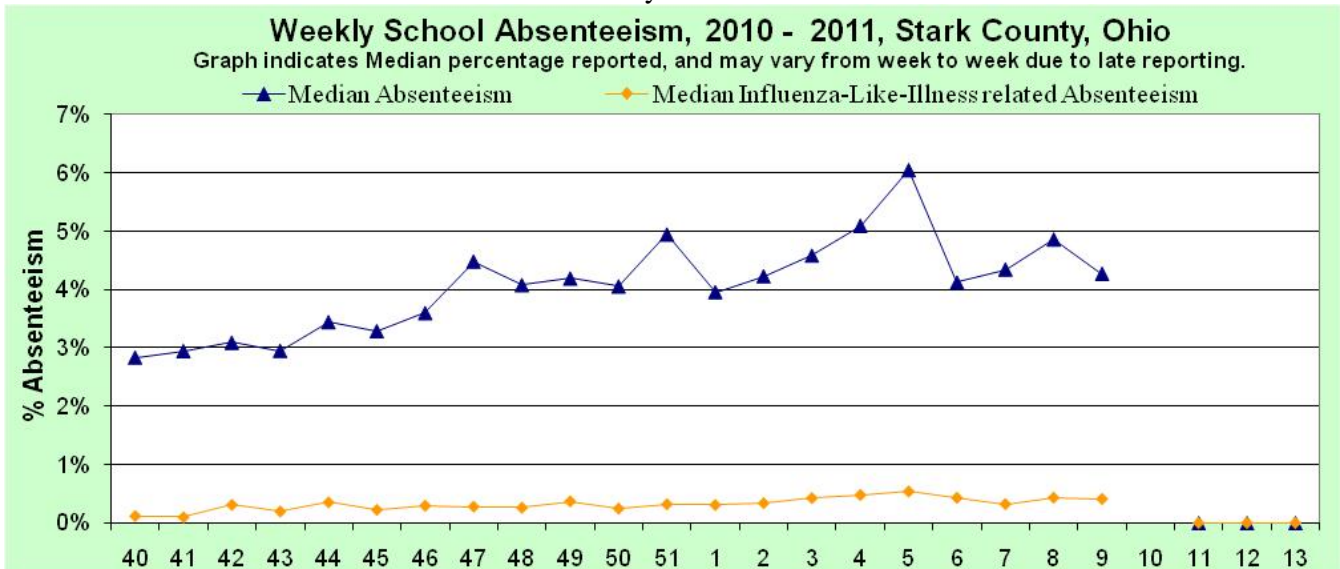


Graph 5: Over-The-Counter Sales of Cough/Cold Product Sales in Stark County Over-The-Counter Sales of Thermometers in Stark County

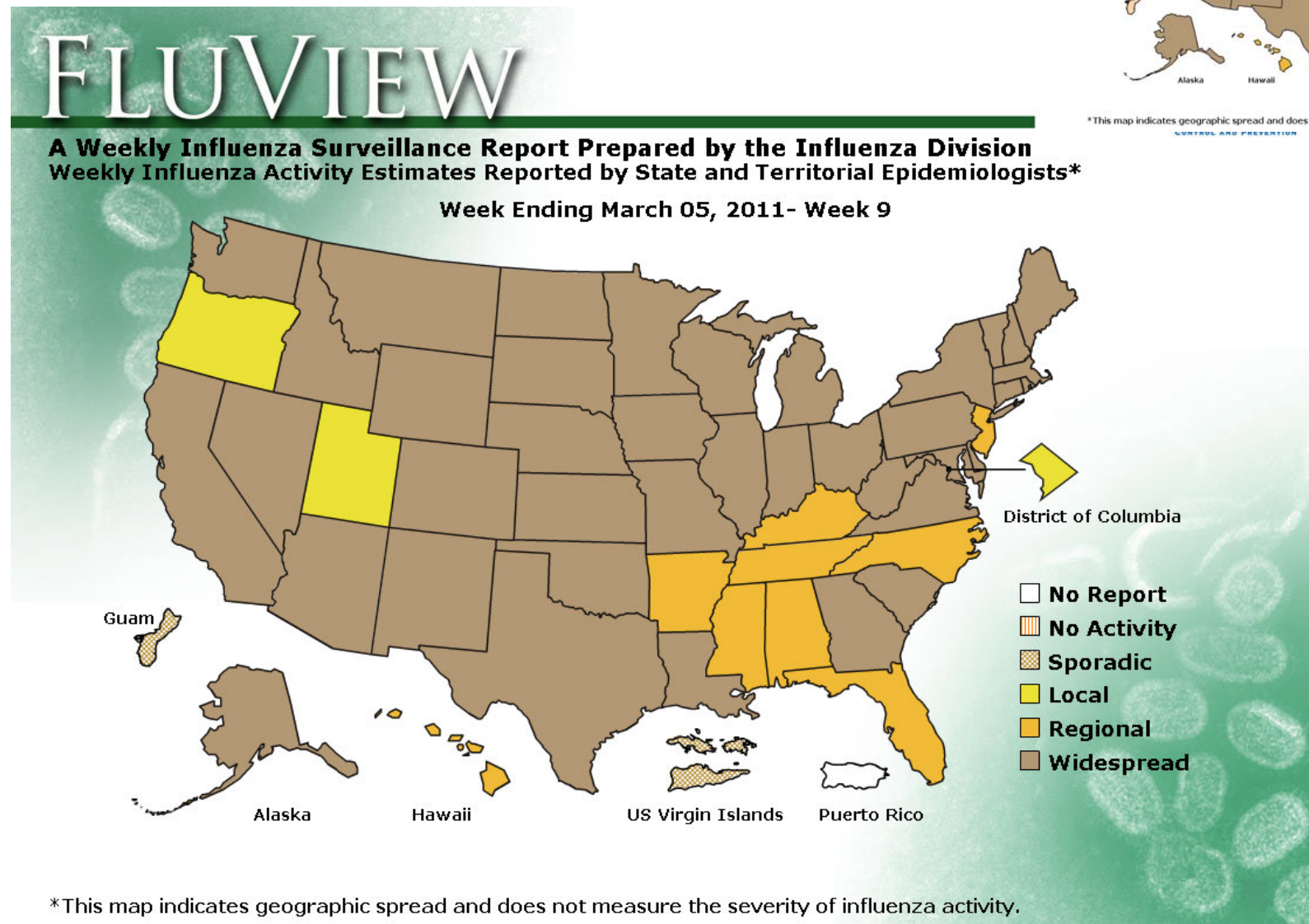
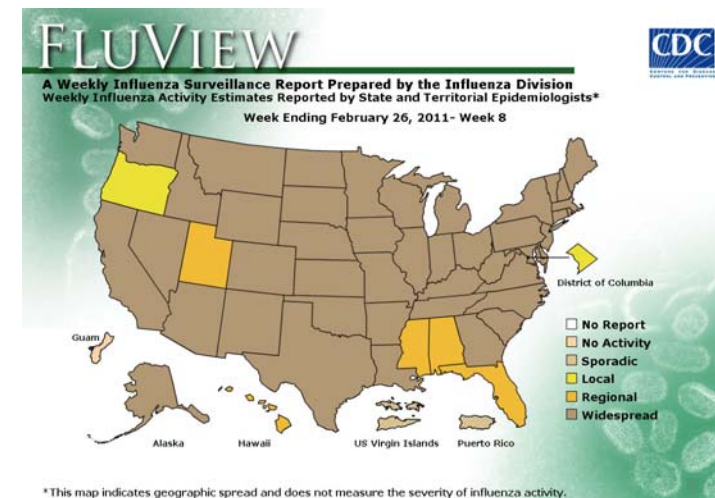
Source: RODS Real time Outbreak Disease Surveillance, Retail pharmaceutical sales.



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.