



CLAY COUNTY

# PUBLIC HEALTH CENTER



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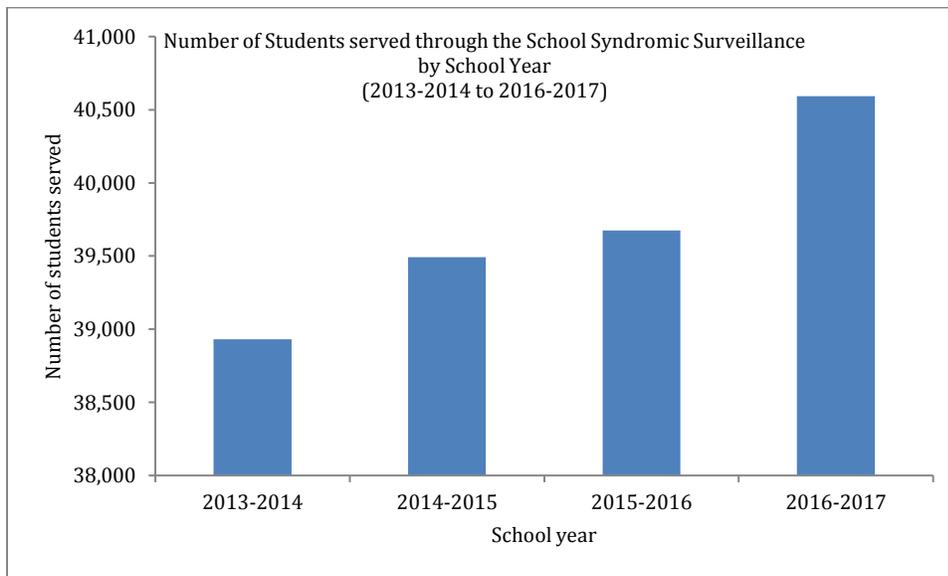
## 2016-2017 School Syndromic Surveillance Annual Summary

During the 2016-2017 elementary and secondary school year, the Clay County Public Health Center conducted the School Syndromic Surveillance from Sept. 11, 2016 through May 6, 2017 (Week 37, 2016 – Week 18, 2017). A total of 30 reports were released during the 37-week span of the school year. No reports were released weeks 51, 52 and 1, when all school districts were closed for winter break, for the first three weeks of the school year prior to Labor Day Holiday, and for Week 12 when all school districts were on spring break. For these reasons, all percentages were calculated based on 30 weeks.

The first report of the school year is released after the Labor Day holiday. District nurses provided feedback that this allows enough time to trouble shoot any problems early in the school year.

The School Syndromic Surveillance System supports the general disease surveillance in the county through monitoring of the burden of disease symptoms in Clay County school-aged population. This is done through timely reporting and detection of any unusual occurrence or increase in selected symptoms or syndromes of diseases among school-aged children.

In 2016-2017, five out of six school districts continued to participate: Excelsior Springs School District, Kearney School District, Liberty School District, North Kansas City School District, and Smithville School District. The sixth school district (Missouri City) enrolls about twenty three student per school year in grades kindergarten through eighth and continues to opt out due to its low population. A total of 65 schools and approximately 40,592 students were monitored in the five major school districts.



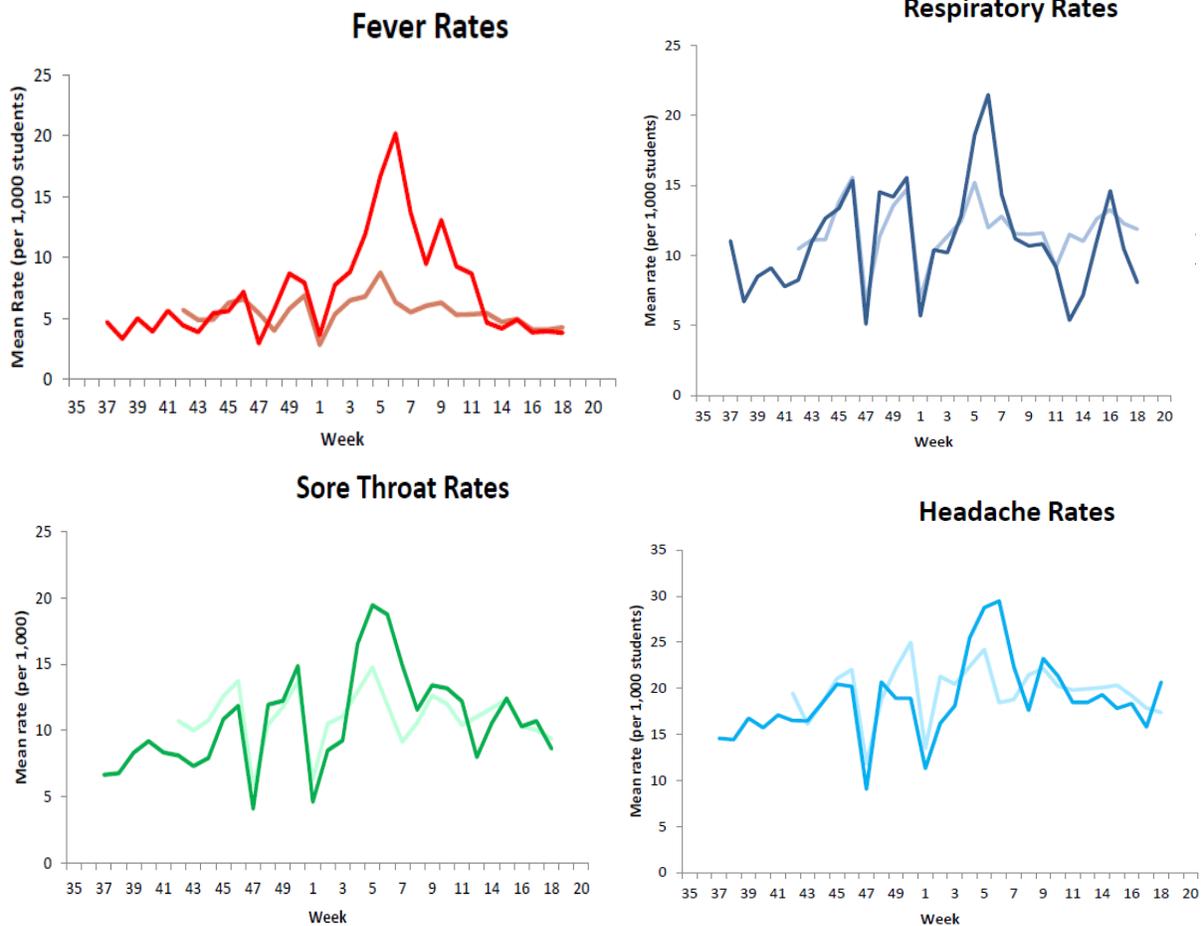
### Symptom trends and outbreak detection

The School Syndromic Surveillance System helps keep school nurses engaged and aware of health issues in their schools and Clay County as a whole. While using this system a school nurse at an elementary school in the Liberty School District noticed an increase in students ill with gastrointestinal symptoms such as vomiting and diarrhea. The nurse then reported this unusual activity to the Clay County Public Health Epidemiology (Epi) Program, which led to an outbreak investigation. A total of 48 cases of illness

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among students, staff, and family members were identified during the outbreak investigation. Specific etiology was not identified for this outbreak because there were no samples available for laboratory testing, although based on the outbreak characteristics it is suspected that it was some kind of viral illness such as norovirus. Early notification from the school nurse through the surveillance system as well as midterm break helped to minimize further transmission of the illness.

Clay County had an exceptionally active influenza season and the school-aged groups were particularly impacted. The 5-14-year-old age group accounted for 35% of influenza cases and the 15-24-year-old age group for 17%. Influenza activity peaked during epi weeks 5, 6, and 7 (January 29-February 18) and during these peak weeks, the School Surveillance System also showed an increase in influenza symptoms such as fever, respiratory illness, sore throat, and headache. All of these symptoms were well above the 5 year median for those weeks. During this heightened influenza period, the Epi Program provided recommendations on preventing influenza transmission to school nurse coordinators in weekly surveillance reports and many schools increased cleaning and sanitation during this period.



Asthma reports for the North Kansas City School District (NKCS) remained high when compared to other school districts in Clay County. The rate of emergency room (ER) visits due to asthma among African American children age 5-9 years was 7.87 per 1000.

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Investigation into asthma in Clay County indicates that more collaboration with families and guardians of those children and others in the district could help to further reduce asthma rates in the NKCS and in turn, reduce ER visits due to asthma. The Kansas City Teams Up for Asthma Control (KC TUAC) Program is available in the district. The program focuses on encouraging the use of daily inhaled corticosteroid medications, measuring of airflow, supporting students to practice using their medications correctly, and avoiding asthma triggers.

Analysis of the asthma data showed reporting inconsistencies. Some schools count each time a child visits the nurse's office for inhaler use, while some schools report only once per day for each child regardless of the number of visits to the nurse's office for inhaler use.

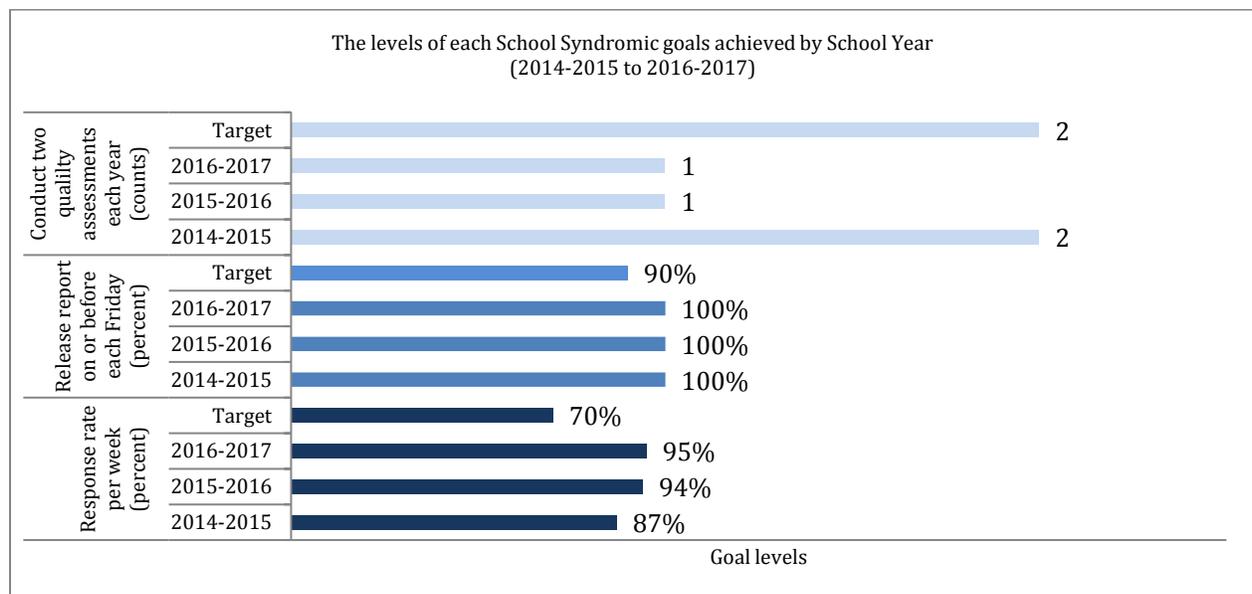
**Goals and Objectives**

The School Syndromic Program consistently met and exceeded its goal of achieving a minimum of a 70% response rate (percentages of schools who submit a reporting form) each week. Our minimum for the 2016-2017 school year was at 86%. This excludes those weeks around major holidays when some schools within districts chose not to participate. The average response rate for the school year was 95% for the 30 weeks when reports were released.

The program also met and exceeded its goal to conduct and complete reports for all weeks that schools were in session. The first week to report out was week 37 for the week of Sept. 11-17, 2016, following school districts' request that school surveillance does not commence until after Labor Day.

The program aimed for 90% of reports to be released on or before each Friday. We exceeded that goal by releasing 100% of the reports on or before Friday of each week that reports were generated.

The School Surveillance Program only conducted one qualitative assessment of all users who participated in the system and/or read the weekly reports at the end of the first semester. Since our goal was to conduct two of these reports, one at the end of the first semester and another at the end of the second semester, the goal was not met. The Epi Program was short staffed towards the end of the second semester and needed to focus on monitoring and investigating infectious disease occurring in the county.



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**How the School Syndromic Surveillance information is used**

Following any indication of an increase in cases or symptoms through the School Syndromic Surveillance System, the Epi Program worked in collaboration with the School Nurse Coordinator and the School Nurses. For example, the Epi program may recommend an emphasis on hand washing when an increase in symptoms occurs. Another example would be whenever a case is identified among the daycare population. If they have a sibling in school, especially in the grade school, the school nurse of that school is notified. This encourages active surveillance and monitoring of their school aged siblings for early signs and symptoms.

**Future needs/plans for the program**

- The new Chronic Disease Epidemiologist will continue to monitor and develop recommendations to reduce the high asthma rate trends in North Kansas City School District. In addition, to work with interns to further assess asthma in the North Kansas City School District.
- Continue to seek ways to improve the surveillance system for ease of operation.
- To continue to work on the weekly reporting format to ensure it is useful for the end users.
- The new Chronic Disease Epidemiologist will complete training in School Syndromic System activities to provide for operational continuity when needed.
- Develop a daycare syndromic surveillance system in Clay County to compliment the use of the school syndromic surveillance system.