



CLAY COUNTY

# PUBLIC HEALTH CENTER



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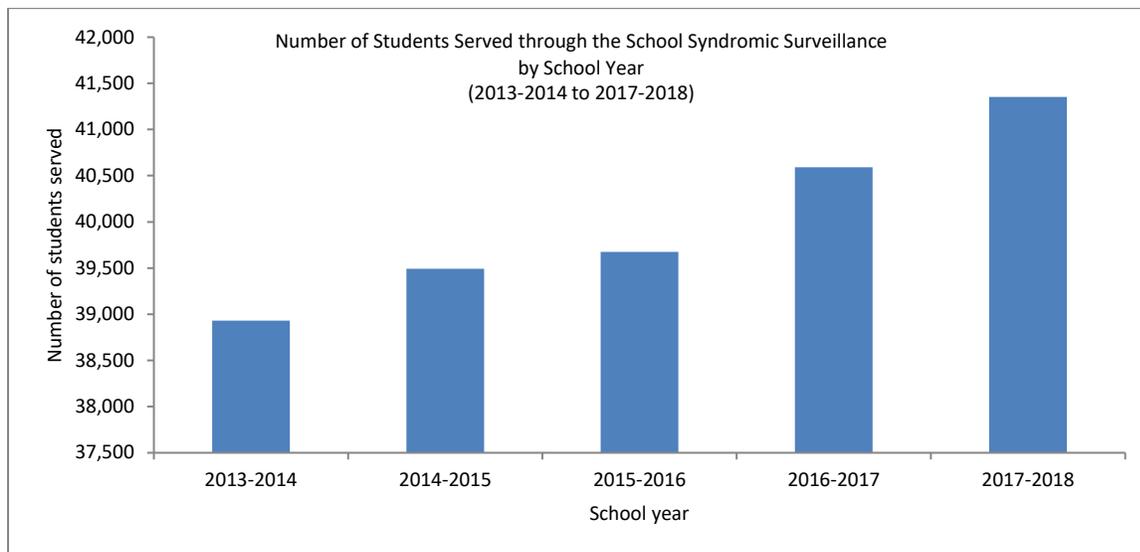
## 2017-2018 School Syndromic Surveillance Annual Summary

During the 2017-2018 elementary and secondary school year, the Clay County Public Health Center (CCPHC) conducted the School Syndromic Surveillance from Sept. 10, 2018 through May 5, 2018 (Week 37, 2017 – Week 18, 2018). A total of 30 reports were released during the 34-week span of the school year. No reports were released weeks 51, 52 of 2017 and week 1 of 2018, when all school districts were closed for winter break, and for week 8 of 2018, 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 was released after the Labor Day holiday, a practice implemented in the last few years, based on feedback from the district nurses that it 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 the 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 2017-2018, five out of six school districts continued to participate: Excelsior Springs School District, Kearney School District, Liberty Public Schools, 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 41,351 students were monitored in the five major school districts.



### Symptom trends and outbreak detection

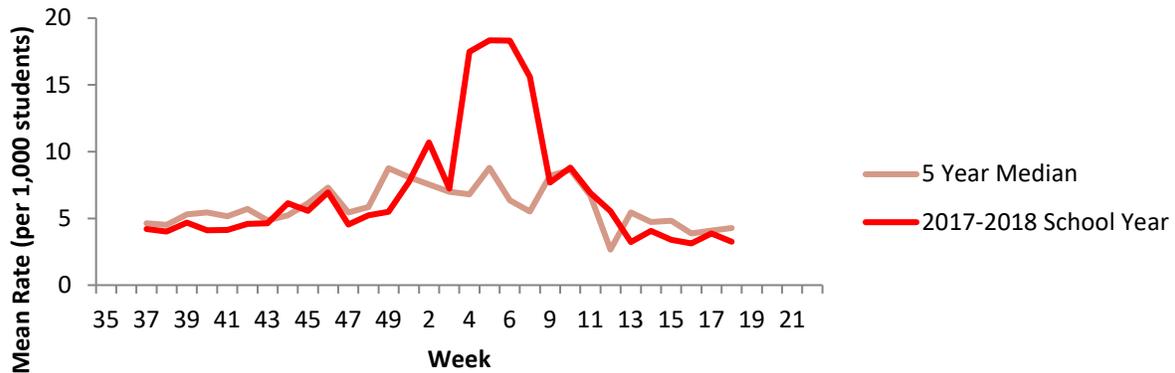
The School Syndromic Surveillance System helps keep school nurses engaged and aware of health issues in their schools and Clay County as a whole. While using this system a school nurse at an elementary school in the Liberty School District noticed an increase in students ill with gastrointestinal symptoms such as vomiting and diarrhea. The nurse then reported this unusual activity to the Epidemiology (Epi) Program, which led to an outbreak investigation. A total of 88 cases of illness among students, staff, and

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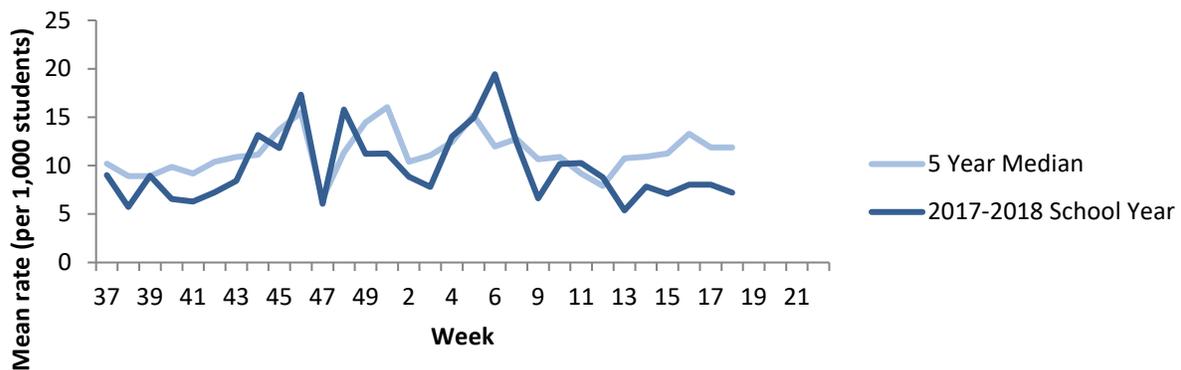
family members were identified during the outbreak investigation. The cause of the illnesses associated with the outbreak was not identified neither was any organism because samples were not submitted for laboratory testing. However, available epidemiological information suggests that it was likely a viral illness such as norovirus. Early notification from the school nurse through the surveillance system allowed prompt follow-up and containment recommendations from CCPHC.

For the second year in a row, Clay County had an exceptionally active influenza season and the school-aged groups were particularly impacted. Of the influenza cases reported to CCPHC, the 5-14-year-old age group accounted for 24% and the 15-24-year-old age group for 10%. Influenza activity peaked during Epi Weeks 2, 3, and 4 (January 7-January 27). The School Surveillance System also showed an increase in influenza symptoms such as fever, respiratory illness, and headache during those weeks. All the flu-like symptoms were above the 5-year median during the peak period. The Epi Program provided recommendations on preventing influenza transmission to school nurse coordinators during the flu season and many schools elevated their regular cleaning and sanitation protocols to help contain the spread of flu and other respiratory illnesses.

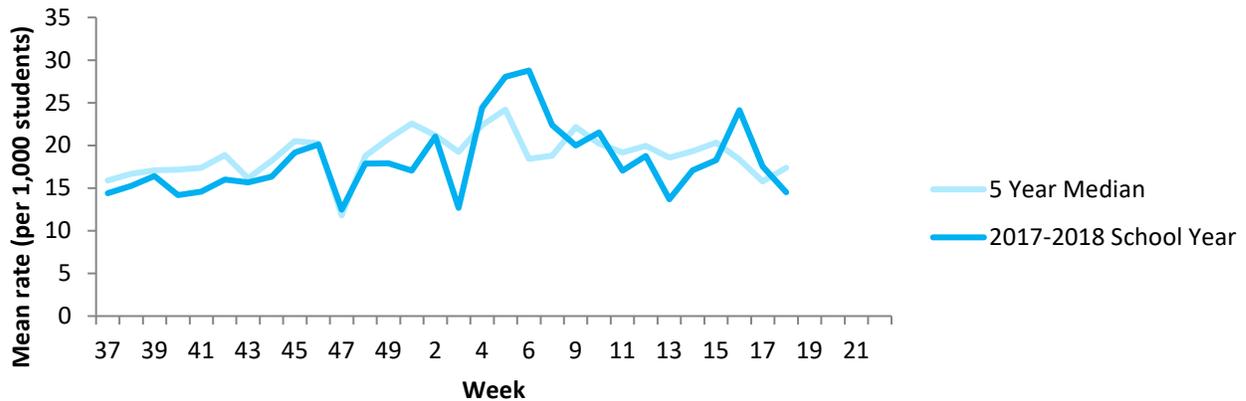
### Fever Rates



### Respiratory Rates



## Headache Rates

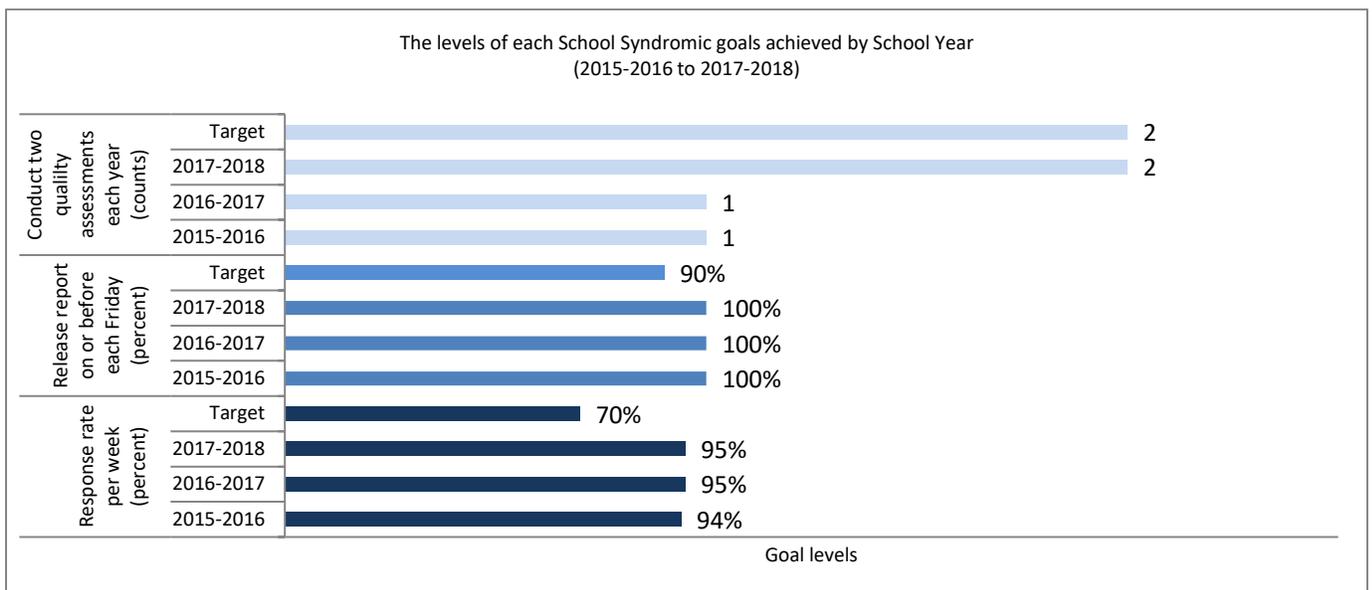


### Goals and Objectives

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 response rate for the 2017-2018 school year was 88%. This excludes those weeks around major holidays when some school 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 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 each Friday of each week that reports were generated.

The School Surveillance Program conducted two qualitative assessment of all users who participated in the system and/or read the weekly reports, meeting the program goal. The first assessment was conducted after the first semester of the school year and the second assessment was done at the end of the school year. The response rate for the second assessment was very low, therefore the program will be re-evaluating the frequency of surveys for next school year to avoid survey fatigue.



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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 works in collaboration with the School Nurse Coordinator and the School Nurses to identify any concerns and solutions. 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. CCPHC during the 2017-2018 school year initiated a new Daycare Syndromic Surveillance System. The addition of the Daycare Surveillance is an excellent boost to disease surveillance in the county, because increased in symptoms noticed in the daycare population could act as an earlier warning for initiation of preventive measures among the school aged population.

The School Surveillance System has also helped to foster a strong relationship between Clay County Public Health Center and the school nurses in the participating districts. The system facilitates regular communication with the school nurses and demonstrates to them that CCPHC shares a common goal of keeping children healthy and in school. CCPHC also hosts regular meetings with the School Nurse Coordinators to maintain partnership. These collaborative efforts have resulted in a stronger relationship, with the school partners being more comfortable and confident reaching out for support from CCPHC staff.

### **Future needs/plans for the program**

- In 2020, the software used to run the surveillance system will no longer be available. The Epi Program is working to find a solution that will allow for an easy transition.
- Continue to seek ways to improve the surveillance system for ease of operation.
- Continue to work on the weekly reporting format to ensure it is useful for the end users.
- Continue to build the daycare syndromic surveillance system in Clay County to compliment the use of the school syndromic surveillance system. Recruitment of additional daycares to create a more robust system is key.