

Purpose

The purpose of school syndromic surveillance is to support the monitoring of the burden of diseases on the population, and to help in timely detection of any unusual occurrence or increase in selected symptoms of diseases mostly common in school-aged children. Large proportions of health problems are subclinical, unreported, or not known, therefore it becomes important for public health to use multiple methods in keeping track of disease occurrence in different groups. Information from the system is used to supplement other information available to the local health system and to implement immediate control measures when necessary to contain and prevent further spread of the disease/condition and possible outbreak. Surveillance helps achieve several public health functions including case/outbreak detection, public health interventions, assessing the distribution and spread of illness, hypothesis generation, and planning guidance.¹

Overview of the 2014-2015 School Year

Process

- During the 2014-2015 school year, five of the six public school districts in Clay County participated in surveillance (See map on page 4 of this document).² The participating districts for the 2014-2015 school year were Excelsior Springs School District, Kearney School District, Liberty School District, North Kansas City School District, and Smithville School District. This includes 64 schools and approximately 39,965 students that were monitored.
- During this school year 34 reports were released for the school year beginning with Epi Week 37 (September 7-13, 2014) and ending with Epi Week 19 (May 10-16, 2015). A report was not released for the week all schools districts were closed during winter break (Weeks 52 and 53). Though classes resume mid-August, participating school districts consistently request that reporting not begin until after Labor Day. Because of this, data are not collected and reports are not released for the first few weeks of school (for this year, the first full three weeks of school).

Symptom trends and outbreak detection

- No outbreaks were detected early from the school surveillance system. No outbreaks were reported to Clay County Public Health Center throughout the 2014-2015 school year in Clay County Schools. We received a small number of calls from one concerned

¹ Buehler J.W., Hopkins R.S., Overhage J.M., Sosin D.M., Tong, V. (2004). Framework for evaluating public health surveillance systems for early detection of outbreaks. Centers for Disease Control and Prevention. MMWR. Retrieved from <http://www.cdc.gov/mmwr/PDF/RR/RR5305.pdf>

² Missouri City School District does not participate in surveillance due to its small enrollment (typically fewer than 20 students in the District).

parent of a school district of “sick building syndrome.” (Sick building syndrome is a circumstance where people who occupy a building have acute health issues that seem to be associated with time spent in the building, but no specific cause or illness can be determined.)³The data from this system was useful in addressing those concerns in collaboration with that school district.

- Most symptom rates followed trends of previous reporting years.
- Asthma rates were consistently higher in North Kansas City Schools compared to other Districts, especially in the last part of the school year. During the 2012-2013 school year the Epidemiologist and Epidemiology Specialist met with Dr. Paul Fregeau, Assistant Superintendent and Dana Fifer, District Nurse Manager of North Kansas City School District to discuss the trends. The rates may be due to better case-finding through the partnership with Children’s Hospital in Columbia and the Greater Kansas City Asthma and COPD Coalition on Asthma Control through the Asthma Ready Communities (ARC) program. <http://asthmaready.org/> Dana Fifer collected environmental information about the schools with the highest rates, but the epidemiologist and the epidemiology specialist did not find any trends. No additional efforts were taken in the 2014-2015 school year. However, the asthma rate trends throughout the district remained high. This is a topic that needs to be explored in the upcoming school year by the CCPHC Epidemiology Program, CCPHC Environmental Health Section, and North Kansas City School District officials.

Goals and Objectives

- The specific goals and objectives of our practice are as follows:
 - Achieve a minimum of a 70% response rate (percentages of schools who submit a reporting form) each week of school syndromic surveillance.
 - Conduct and complete reports for all weeks that school is in session. We aim for 90% of reports to be released on or before each Friday that school is in session.
 - Twice per school year (near the end of each semester) conduct a qualitative assessment of all users who participate in the system and/or read the weekly reports.
- Outcomes of goals and objectives for the 2014-2015 school year:
 - 87% of forms were received with districts ranging from a 63% overall reporting rate to a 100% reporting rate. The first objective was achieved.
 - School districts request that school surveillance does not commence until after Labor Day in order to give their staff time to prepare for the year. The first week of reporting for the school year was Week 37 (Sep 7-13). All (100%) of the reports were released on or before each Friday that school was in session. The second objective was achieved.

³ United States Environmental Protection Agency. (1991). Indoor Air Facts No. 4. Sick Building Syndrome. Retrieved from http://www.epa.gov/iaq/pdfs/sick_building_factsheet.pdf

- Two qualitative assessments were conducted during the school year (December 2014 and April 2015). The third objective was achieved.

Customer Feedback

- Per the SOP, Clay County Public Health Center evaluates the practice through a user survey twice per year. A link to an online survey is emailed to all people who are sent the reports.
- According to the results from this survey, a majority of stakeholders are highly satisfied with the current surveillance system. There were no pressing issues revealed through the results from this survey, but efforts will continue to be made to improve the system and the quality and usefulness of the data/reports.
- The two surveys this year were conducted in December 2014 and April 2015.
- Please refer to the Survey Result Reports for complete results from the surveys.

Cross-training

For multiple school years, only one CCPHC staff member has been trained in the development and maintained of the Clay County School Syndromic Surveillance System (though there has been a written SOP in place). Beginning in February 2015, the Epidemiology Section of CCPHC began cross-training in receiving reports, communicating with school districts, weekly analysis, and weekly report writing. At the time of this report, all three Epidemiology staff members are trained in school surveillance form acceptance, data analysis, and report development for the system. The Administrative Assistant for the Health Planning and Policy Section has been trained in form acceptance and basic correspondence to improve reporting rates. More training needs to take place on form development and document updates for the entire school year, but this could be done in collaboration with the IT department.

Sharing What Works

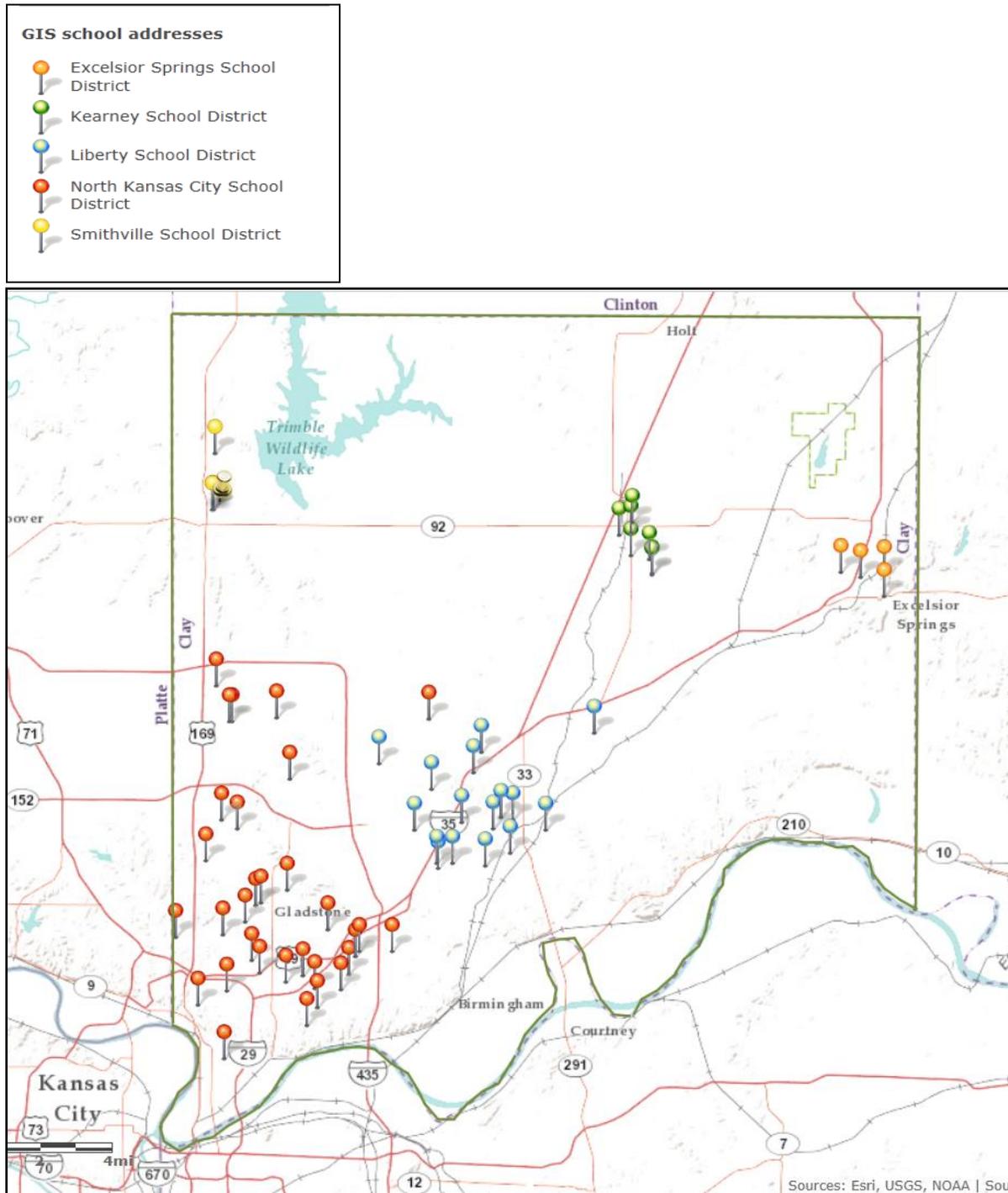
In October 2013, the Epidemiology Program Submitted a NACCHO Model Practice application for the School Syndromic Surveillance program. In March 2014, we received word that the program had been selected as a Model Practice. The CCPHC Director of Public Health and Epidemiology Specialist accepted the award at the NACCHO Annual Conference in Atlanta Georgia July 8-10, 2014. The Epidemiology Specialist also presented a poster at the NACCHO Grand Awards Ceremony on July 9, 2014. As winners of the Model Practice awards, we were offered the opportunity to provide a 20 minute national webinar presentation and Q&A on our school syndromic surveillance program. The Epidemiology Specialist presented on the program for the “NACCHO Lunch and Learn Webinar” on October 2, 2014.

Information on the program was shared at the Public Health Partnership Meeting on March 6, 2015. Attendees were given a brief overview of the purpose of the system and

participants were invited to provide feedback. A sign-in sheet was made available to partners who wished to be added to the mailing list to receive the weekly reports.

Future needs/plans for the program

- Resume efforts for reviewing high asthma rate trends in North Kansas City School District.
- Explore software that will make the system more streamlined and easy to use for our partners.
- Continue to seek ways to improve the system and the quality and usefulness of the data/reports.
- Develop at least one actionable goal for the program such as how the data and/or reports will be used.



Above is a map of the geographic distribution of schools that participated in syndromic surveillance for the 2014-2015 school year, color-coded by district.

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