The National Syndromic Surveillance Program

The National Syndromic Surveillance Program (NSSP) promotes and advances development of a syndromic surveillance (SyS) system for the timely exchange of syndromic data. SyS data is used to improve situational awareness and enhance responsiveness to hazardous events and disease outbreaks to protect the community’s health, safety, and security. See more updates from NSSP

Connect, Engage, and Explore with us - NSSP Colorado North Central Region (NSSP CO-NCR)

Local public health agencies, Boulder County Public Health, Denver Public Health, Jefferson County Public Health, and Tri-County Health Department (Adams, Arapahoe, and Douglas counties), are currently receiving and reviewing syndromic surveillance data from eligible hospitals with an emergency department (ED).

Eligible hospital EDs are currently submitting syndromic surveillance data to NSSP CO-NCR; in addition, Children’s Hospital of Colorado is considering joining in the future.

Figure 1. Colorado North Central Region (CO-NCR) Hospitals contributing data for Syndromic Surveillance through NSSP, 2017
Syndromic Surveillance in Action

Syndromic surveillance in action tells stories about how the NSSP CO-NCR community can use the data and highlight seasonal or timely topics that may impact or be of interest to the communities we serve.

Heat-related illness

Heat-related illness (HRI) includes symptoms such as dehydration, vomiting, difficulty breathing, and dizziness. From June to the end of August 2017, there were 104 HRI ED visits in the CO-NCR. There were more HRI ED patients in June than any other month this summer, with maximum ambient temperatures ranging 66-100 degrees Fahrenheit.

On June 10, 2017, there were significantly more HRI ED visits in the CO-NCR compared to the rest of the month. The ambient temperature on June 10, 2017, was 94 degrees, and 13 patients (13% of the 104 HRI ED visits between June and August) presented in the ED with HRI symptoms (Figure 2). While there were more HRI ED visits on June 10, 2017, this

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<th>Adams County</th>
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<td>North Suburban Medical Center</td>
<td>The Medical Center Of Aurora</td>
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<td>University Of Colorado Hospital</td>
<td>Littleton Parent Hospital</td>
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<td>St. Anthony North Parent Hospital</td>
<td>SCL Health Community Hospital - Aurora</td>
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<td>Boulder County</td>
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<td>Avista Parent Hospital</td>
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<td>Castle Rock Parent Hospital</td>
<td>SCL Health Community Hospital - South West</td>
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date did not correspond with the highest documented ambient temperature of the summer. In July and August of 2017, there was not a significant increase in HRI ED visits in the CO-NCR.

**Prevention Tip:** During hot weather, it is important to remember to always drink water (hydrate), find shade while outside and wear a hat to prevent HRI symptoms during higher summer temperatures. Of note, the highest number of HRI ED visits did not necessarily occur on the day with the highest documented temperatures.

*Figure 2. Heat-Related Illness ED visits and maximum temperature*

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### Drowning or Submersion

There were a total of 29 drowning/submersion ED cases in CO-NCR syndromic surveillance data from May to August, 2017, and there was no fatal drowning case identified in the CO-NCR syndromic surveillance data. This number does not include patients who died before reaching the ED. Among 29 drowning/submersion ED cases, 28% (8/29) of visits mentioned difficulty breathing or nearly drowning.

**Prevention Tip:** Drowning/submersion can happen in a pool, ocean/lake/pond, or bathtub, therefore we recommend everyone pay close attention to family and community members when engaged in water activity.

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### Mass Gathering- 2017 Total Solar Eclipse

Before the eclipse on August 21, 2017, several indicators were set up in SyS to monitor people's health conditions from August 19 to August 24, 2017. In the short time period, ED visits were monitored related to: eye injury, asthma-like symptoms, snake bites, mammal bites, insect bites, motor vehicle crashes, alcohol use, and gastrointestinal symptoms. There were no significant increases for the chief complaints monitored, but this was a great opportunity for local public health agencies to capture health information from the community during a special event. Additionally, it is likely that prevention efforts provided across the country related to protective eye wear reduced eye injury impacts from the Solar Eclipse.
West Nile Virus (WNV)

In coordination with environmental health partners, local public health epidemiologists reviewed the relationship between numbers of probable WNV cases, positive mosquito pools, and lab-confirmed cases. This allows for enhanced WNV surveillance and facilitates, if appropriate, environmental health control measures in the impacted jurisdictions.

In 2017, the CO-NCR had fewer positive mosquito pools, lower number of WNV cases seen in the ED, and a reduced number of people diagnosed with WNV compared to previous years. Ongoing monitoring of WNV in future years, especially in SyS, may inform prevention strategies including spraying for mosquitos and public health messaging.

Prevention Tip:
As there are numerous outdoor activities available in Colorado during the summer months, below are a few tips to help prevent mosquito bites and WNV:
- Avoid mosquitoes at dawn and dusk when they are more active
- Wear long-sleeved shirts and long pants while outdoors
- Apply insect repellent that contains DEET by following instructions carefully
- Install or repair window and door screens to keep mosquitoes out

Syndromic Surveillance Is Here For You!

Local public health agencies monitor seasonal health conditions (e.g. flu), chronic health conditions (e.g. asthma), symptoms of communicable diseases (e.g. fever and diarrhea), and are exploring methods to report on substance use related overdoses by utilizing syndromic surveillance information.

As flu season is upon us, local public health agencies are monitoring influenza-like illness and other health conditions. Below are recommendations and a couple prevention reminders as kids go back to school:

Flu Shots

Flu season is around the corner - get a flu vaccine today!

Protect yourself and your family this season with an annual flu vaccine for everyone in your family who is 6 months of age and older. While the timing of flu season is unpredictable, seasonal flu activity can begin as early as September and last as late as May. For example, Colorado appears to be experiencing an early influenza season this year. The Centers for Disease Control and Prevention (CDC) recommends that people get vaccinated at least by the end of October, if possible. It takes approximately two weeks after vaccination for the antibodies that protect against influenza virus infection to develop in the body.

Please visit the [CDC](https://www.cdc.gov) and [Colorado Department of Public Health and Environment (CDPHE)](https://www.colorado.gov) websites for more information about flu.
Marijuana

Now is a good time to talk to kids about the impacts of marijuana!

Colorado has legal dispensaries for both medical marijuana and recreational marijuana. Although the products are regulated, there are a number of public health concerns surrounding the use of marijuana. According to CDPHE, youth who use marijuana regularly are more likely to have a hard time learning and problems memorizing as marijuana impacts brain development, and kids who start using marijuana or other substances may continue using substances later in their life. The CDPHE Good-To-Know campaign provides more information about marijuana and its health effects.

Find tips and information here.

Thank you for reading the syndromic surveillance newsletter. We hope the newsletter provided helpful background information on syndromic surveillance and detail to understand who is participating in this initiative in Colorado. We would like your feedback and suggestions on newsletter content, as our goal is to not only utilize the data your facility provides for timely response, but to also present partners with a regional and national picture of current emergency department (ED) visit trends. Please click here.

Other information

- Local Syndromic Surveillance Information:
  http://www.tchd.org/syndromicsurveillance

- Data Submission Guide:
  http://www.cdc.gov/phin/resources/phinguides.html

- BioSense and the National Syndromic Surveillance Program (NSSP):
  http://www.cdc.gov/nssp/overview.html

- Council of State and Territorial Epidemiologists (CSTE):
  http://www.cste.org/group/biosense

- International Society for Disease Surveillance (ISDS):
  http://www.healthsurveillance.org/
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This newsletter is designed to provide public health messages in syndromic surveillance data to partners in public health (Communication experts, communicable disease staff and epidemiologists, nurse managers, emergency preparedness and response staff, informatics staff, and executive management team members), hospitals (CEOs, infection control preventionist, ED doctors, charge nurses), health information exchange (CORHIO and hospital ITs), health coalition, and schools.