What is RHINO?

RHINO is the Rapid Health Information NetwOrk of the Washington State Department of Health, a program in Communicable Disease Epidemiology which collects, analyzes, and distributes syndromic surveillance and other real-time health information data to public health officials, authorized state and federal agencies, Tribal Organizations, and approved researchers.

What is Syndromic Surveillance (SyS)?

Syndromic surveillance is a real-time, population-based, all-hazards surveillance system that was designed for bioterrorism and early outbreak detection and is used to identify, investigate, and design data-driven, rapid responses to emerging public health threats.

This data can also provide a comprehensive portrait of chronic disease burden, injury trends, and environmental threats, which makes it a critical tool in the work and research of many partners. Because this data is so versatile, syndromic surveillance is rapidly evolving into a basic tool for the public health epidemiologist.

How can I use syndromic surveillance data?

Syndromic surveillance at the Washington State Department of Health is similar to CHARS, with data from emergency departments and hospital settings, as well as a variety of outpatient clinics (primary, specialty, and urgent care settings). In addition to the wide variety of facilities, RHINO data is near real-time, with messages coming directly from electronic health records coming at least once every 24 hours.

RHINO gathers 152 data elements, including patient demographic information, chief complaint, diagnosis, and triage notes. This robust system is the only source of outpatient data for Washington State and one of only two sources of emergency department data in Washington State.

Current RHINO use cases include:

**Communicable Disease Epidemiology, DCHS:** Conduct surveillance of influenza, varicella, and other diseases; identify underreported notifiable conditions; track outbreaks and emerging conditions

**Clark County Department of Health:** Monitor the health effects of the Eagle Creek Wildfire using a dashboard of respiratory condition queries developed by RHINO specifically for their jurisdiction

**Injury & Violence Prevention Program, HSQA:** Monitor opioid overdoses; conduct surveillance for sexual assaults

**Asthma Program, Office of Healthy Communities, PCH:** Monitor asthma-related ED visits

**Pesticide and Zoonotics, EPH:** Conduct surveillance for Valley Fever (Coccidioidomycosis) cases

**Emergency Preparedness & Response, OS:** Implement situation-specific surveillance during large events and emerging conditions to reduce reporting burden on local partners
Who uses syndromic surveillance?

Syndromic surveillance data is also used by our partners in LHJs, including Benton-Franklin, King, Kitsap, Pierce, Clark, and Whatcom counties, for influenza surveillance, tracking notifiable conditions and opioid overdose incidents, and evaluating health policy impacts on their populations.

Some examples from other states demonstrate the great variety of usage cases syndromic surveillance supports:

- **Emergency preparedness:** Illinois used SyS data to enhance situational awareness during the NATO Summit
- **Mental health:** Boston monitored SyS for mental health syndromes following the Boston Marathon bombing; NYC monitors SyS for suicidal ideation on the anniversary of 9/11
- **Environmental hazards:** Maine used SyS data to improve accuracy of carbon monoxide poisoning case reporting
- **Mass Gatherings:** Oregon monitors syndromic data during mass gatherings like Olympic trials and the 2017 solar eclipse for changes in incidence of motor vehicle collision injuries, eye injuries, drownings, and other issues
- **Climate change:** Michigan tracks ED visits related to extreme heat events; Connecticut and Louisiana use the data for situational awareness during increasingly frequent extreme weather events
- **Health care utilization:** Arkansas uses SyS data to monitor health care utilization practices for infectious and non-infectious conditions, environmental exposures, and emergencies
- **Chronic conditions:** Nebraska uses SyS data to measure chronic vascular disease outcomes and severity and develop responsive, targeted prevention programs

How can I get involved?

“Communities of Practice are groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly” (Wenger-Trayner, 2015).

RHINO facilitates a Community of Practice for users of syndromic surveillance data in Washington State. The Community connects data users with each other so they can crowdsource issues which may arise, share best practices, and leverage resources related to data usage. As co-practitioners with a variety of usage case experiences, users benefit from open online forums to communicate in real-time with one another, resource databases, newsletters, meetings, and contact with other users who are Subject Matter Experts (SMEs) on data usage topics.

The Community’s format is both online and in-person, allowing for varying levels of user participation. The goal of the Community is to coordinate RHINO data expertise and usage in ways that enhance our collective ability to assess, evaluate, and respond to public health needs.

How can I get involved?

Contact Amanda Dylina Morse, Syndromic Surveillance Outreach and Policy Coordinator, to register.