

# Standard Operation Procedures for Three Syndromic Surveillance Systems in Washoe County, Nevada – A Local Perspective

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## OBJECTIVE

The objective of this paper is to describe the standard operation procedures (SOP) for three existing syndromic surveillance systems in Washoe County District Health Department (WCDHD), Nevada.

## BACKGROUND

Washoe County District Health Department (WCDHD) is a local health district serving nearly 400,000 residents in Washoe County including cities of Reno and Sparks, the second largest urban area in Nevada. To enhance overall public health surveillance capacities in the agency, WCDHD officially implemented National Retail Data Monitor (NRDM) in September 2004, Real-time Outbreak & Disease Surveillance (RODS) in July 2005, and FirstWatch in August 2005. These three systems monitor over-the-counter (OTC) sales for medications and healthcare products, chief complaints at emergency room visits, and 911 calls, respectively. Preliminary evaluation of NRDM suggested the usefulness of system <sup>[1]</sup>. The addition of RODS and FirstWatch also demonstrated the utility in assisting outbreak investigation during the past few months. Unfortunately no written protocols are in place to guide program staff to manage alerts in a standardized fashion and make appropriate responses. Such guidelines from federal or state level are not yet available as we are aware, however, such protocol is highly needed.

## METHODS

The SOP was prepared by a team of syndromic surveillance program staff including managers of the systems and a staff in charge of signal monitoring. SOP is based on evaluation data <sup>[1]</sup>, daily practice experiences, and available resources. The protocol covers system overview, data dictionaries, monitoring a signal(s), documenting a signal(s), evaluating a signal(s), documenting evaluating results, communicating findings with response team, and reporting and documenting system problems.

## RESULTS

1) **System overview** includes developer and vendor's name, contact information, data provider, data monitored, coverage rate, starting date, current users, URL if web-based, default and back-up manager,

manager's responsibilities, and overview of general operating procedures. 2) **Data dictionaries** primarily focus on definitions of each data category being monitored, for example, chief complaints for "gastrointestinal" are defined as pain or cramps anywhere in the abdomen, nausea, vomiting, diarrhea, and abdominal distension or swelling <sup>[2]</sup>. 3) **Monitoring a signal(s)** covers definition of signal(s) and steps for monitoring. 4) **Documenting a signal(s)** is performed by the same staff who monitors signal(s) and documents in a spreadsheet. Staff reports signals to the manager if there is no automatic alerting feature for that system. 5) **Evaluating a signal(s)** is conducted by default managers. Evaluation includes assuring presence of signals, examining line-listing data, checking magnitude and validity of signals, and cross-checking multiple systems, and concluding results. 6) **Documenting evaluating results** are completed by managers in the same spreadsheet for documenting signals. 7) **Communicating findings with response team** is initiated when defined criteria is met. 8) **Reporting and documenting system problems** is needed for all users. Manager is the one to evaluate problems and/or questions prior to asking assistances from system developers. Step 3-8 also includes default and back-up responsible persons.

## CONCLUSIONS

Although this self-developed protocol is subject to modification as further evaluation data, new systems, and other resources become available, this protocol is now an internal guideline for operating syndromic surveillance systems in the WCDHD.

## REFERENCES

[1] Chen L. The Role of National Retail Data Monitor (NRDM) In Gastrointestinal Illness Outbreak Investigation, Washoe County, Nevada. The 4<sup>th</sup> National Syndromic Surveillance Conference. September 14-15, 2005. Seattle, WA. (Oral presentation).

[2] RODS Version 4.2 User Manual. <http://rods.health.pitt.edu/>

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*(This publication was supported by the Nevada State Health Division through Grant Number U50/CCU919685-05-2 from the Centers for Disease Control and Prevention (CDC). Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Nevada State Health Division nor the CDC.)*