

The New York State Department of Health's Syndromic Surveillance System

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OBJECTIVE

This poster presentation provides an overview of the New York State Department of Health (NYSDOH) Syndromic Surveillance System, including data sources, analytic algorithms, and resulting reports that are posted on the NYSDOH Secure Health Commerce System for access by state, regional, county, and hospital users.

BACKGROUND

The NYSDOH Syndromic Surveillance System consists of five components:

1. Emergency Department (ED) Phone Call System monitors unusual events or clusters of illnesses in the EDs of participating hospitals;
2. Electronic ED Surveillance System monitors ED chief complaint (CC) data;
3. Medicaid data system monitors Medicaid-paid over-the-counter (OTC) and prescription medications;
4. National Retail Data Monitor (NRDM)/Real-time Outbreak and Disease Surveillance System (RODS) monitors OTC data;
5. CDC's BioSense application monitors Department of Defense (DOD) and Veterans Administration (VA) outpatient care clinical data (ICD-9-CM diagnoses and CPT procedure codes), and LabCorp test order data.

METHODS

Everyday ED CC data (free text) for the previous 24 hours are electronically submitted to NYSDOH by participating hospitals. The CC data are filtered into six syndromes: Respiratory, Gastrointestinal, Fever, Asthma, Neurological and Rash. Claims data for 18 categories of Medicaid-paid prescriptions filled in New York State are transmitted to NYSDOH daily (excluding bulk distributions at nursing homes, hospitals, etc.). RODS OTC data are retrieved from the NRDM on a daily basis and grouped into 13 OTC drug/health product categories.

For each data resource, syndrome/drug daily category counts and short- and long-term graphs are generated by hospital (ED data only), county, and region. CuSum analyses (modeled on the EARS method) are applied to the data, generating C1, C2, and C3 signals. For the RODS data, promotional sales counts and percentages are also calculated.

ED Phone Call reports and the CDC's BioSense website are monitored on weekdays for information re-

garding elevated syndrome counts and Sentinel Alerts.

RESULTS

NYSDOH's Electronic Syndromic Surveillance System is located on the NYSDOH Secure Health Commerce System. Data is accessed via the NYSDOH Syndromic Surveillance Home Page, where the user chooses the geographical unit for which they would like to view data; Region or County:



For all three data resources, summary counts, CuSum analysis results, and short- and long-term trend graphs are available for viewing by syndrome/drug category, hospital (ED data only), county and region. User-generated case listings are also available for the ED data. For the RODS data, a summary and percent promotional count report is available for viewing rather than the standard CuSum report table, and the short-term and long-term trend graphs include both daily health product category counts and promotional counts. Individual hospitals may view ED data for their hospital only, and Local Health Departments (LHDs) may view ED data for all hospitals in their county, as well as aggregated data for their county and region. LHDs may view aggregated Medicaid and RODS data for their county and region.

CONCLUSIONS

The NYSDOH Syndromic Surveillance System is a statewide system that collects, integrates, and analyzes secondary-use, health-related data for indicators of diseases due to natural causes, terrorist agents, and chemical, radiological, or other environmental exposures and shares this information with LHDs. The goal of the system is to enable detection prior to case ascertainment by traditional disease surveillance, and to provide the opportunity to mobilize public health investigation and response capabilities at the earliest possible moment to prevent or limit the spread of disease.

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