

# Using Syndromic Surveillance Alert Protocols for Epidemiologic Response in Georgia

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## Objective

Describe how the Georgia Department of Public Health (DPH) uses syndromic surveillance to initiate review by District Epidemiologists (DEs) to events that may warrant a public health response (1).

## Introduction

DPH uses its State Electronic Notifiable Disease Surveillance System (SendSS) Syndromic Surveillance (SS) Module to collect, analyze and display results of emergency department patient chief complaint data from hospitals throughout Georgia.

## Methods

DPH prepares a daily SS report, based upon the analysis of daily visits to 112 Emergency Department (EDs). The visits are classified in 33 syndromes. Queries of chief complaint and discharge diagnosis are done using the internal query capability of SendSS-SS and programming in SAS/BASE. Charting of the absolute counts or percentage of ED visits by syndromes is done using the internal charting capability of SendSS-SS. A daily SS report includes the following sections: **Statewide Emergency Department Visits by Priority Syndromes** (*Bioterrorism, BloodyRespiratory, FeverRespiratory, FeverChest, FeverFluAdmit, FeverFluDeaths, VeryIll, and PoxRashFever, Botulism, Poison, BloodyDiarrhea, BloodyVomit, FeverGI, ILL, FeverFlu, RashFever, Diarrhea, Vomit*). **Statewide Flag Analysis**: Is intended to detect statewide flags, by using the **Charts** capability in SendSS SS. **Possible cases with presumptive diagnosis of potentially notifiable diseases**: Is intended to provide early-warning to the DEs of possible cases that are reportable to public health immediately or within 7 days using queries in the Chief Complaint and Preliminary Diagnosis fields of SendSS-SS. **Possible clusters of illness**: Since any cluster of illness must be reported immediately to DPH, this analysis is aimed at querying and identifying possible clusters of patients with similar symptoms (2). **Possible travel-related illness**: Is intended to identify patients with symptoms and recent travel history. **Other events of interest**: Exposures to ill patients in institutional settings (e.g. chief complaint indicates that other children in the daycare have similar symptoms). **Trend Analysis**: Weekly analysis of seasonality and trends of 14 syndromes. Finally, specific events are notified to and reviewed by the 18 DEs, who follow up by contacting the Infection Preventionists of the hospitals to identify the patients using medical records or other hospital-specific identification numbers and follow up on the laboratory test results.

## Results

Since 05/15/2016, 12 travel-related illnesses, 29 vaccine-preventable diseases, 14 clusters, and 3 chemical exposures have been notified to DEs. For instance, a cluster of chickenpox in children was identified after the DE contacted the Infection Preventionist of a hospital, who provided the DE with the laboratory results and the physician notes about the symptoms of the patients. These actions have resulted in earlier awareness of single cases or cluster of illness, prompt reporting of notifiable diseases, and successful interaction

between DEs and health care providers. In addition, SS continues to track the onset, peak, and decline of seasonal illnesses.

## Conclusions

The implementation of SS in the State of Georgia is helping with the timely detection and early responses to disease events and could prove useful in reducing the disease burden caused by a bioterrorist attack.

## Keywords

syndromic; reports; queries; charts

## References

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