

# Implementation Of The BioDefend® Syndromic Surveillance System: Electronic Format Versus Web-Base Data Entry

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## OBJECTIVE

The purpose of this study was to evaluate the implementation of the BioDefend® syndromic surveillance system for its use.

## BACKGROUND

Bioterrorism surveillance is an integral component of DCHD's Comprehensive Emergency Management Plan. This study was a collaborative effort between Duval County Health Department, University of South Florida's Center for Biological Defense (CBD), and DataSphere, LLC. DCHD's role in the project was to identify surveillance sites, involve community partners, share data/info with surrounding agencies, counties and the state department of health, and secure funding for the system. CBD's role in the project was facilitating the operational and technical implementation of the system and serving as a liaison between hospitals, health departments, and DataSphere, LLC. DataSphere, LLC owns and operates BioDefend® and was responsible for the technical setup and maintenance of the system. The study addressed the feasibility of automated data collection by healthcare facilities and issues related to implementation of a syndromic surveillance system.

## Methods

Duval County Health Department (DCHD) selected the BioDefend® syndromic surveillance system for use in developing a local surveillance system to be used for short term and for long-term continuous use. Ten hospitals were invited to participate in a one year pilot project by their health department and eight hospitals agreed to participate (Hospitals A-H). Once a data collection method had been established and tested at each facility and health care providers were trained, the surveillance site started data collection. The participating surveillance sites collected information on 9 syndromes. Healthcare professionals were trained to correctly identify each syndrome. The BioDefend® system has two types of data collection methods; manual and automated.

## Results

Duval County Health Department chooses the BioDefend system for many reasons. BioDefend® operates in near real-time, provides the needed

security, allows for the appropriate data granularity, and is cost efficient.

## Participation

There were ten hospitals approached to participate in this project and eight accepted. Hospitals A-C were originally approached for automated data collection and declined.

## Timeliness of Implementation

The time required for implementing automated data collection is greater than for manual data collection.

## Timeliness of Reporting

It was found that automated data entry systems were timelier than manual sites.

## Data Granularity and HIPAA Issues

Public health, emergency operations, and medical personnel considered this flexible data security model critical to the success of any regional surveillance effort. The Florida DOH allows for syndromic surveillance in Rule 64D-3.002 Section j. An agreement was created between parties to protect patient confidentiality and maintain HIPAA compliance.

## Conclusions and Implications for Use

Previous studies have shown that health events can be identified by BioDefend® earlier than routine surveillance methodologies through the use of advanced information technology. Timeliness is an important component of surveillance and 'real-time' surveillance is possible. Automated data collection is timelier than manual data collection and should be considered for long term, continuous use.

## References

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