Survey of Syndromic Surveillance Uses

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OBJECTIVE

The objective of this assessment is to research, develop and maintain a national syndromic surveillance registry that describes each system's configuration. By collecting current information on the leading systems we will gain a greater understanding of the syndromic surveillance landscape and capabilities.

BACKGROUND

Syndromic surveillance is the surveillance of health-related data that precedes diagnosis to detect a disease outbreak or other health related event that warrants a public health response. Though syndromic surveillance is typically utilized to detect infectious disease outbreaks, its utility to detect bioterrorism events is increasingly being explored by public health agencies. Many agencies believe that syndromic surveillance holds great promise in enhancing our ability to detect both planned and unplanned outbreaks of disease and have made significant investments to develop syndromic surveillance capabilities.

For instance, the Centers for Disease Control and Prevention (CDC) has invested in Biosense and the Department of Defense (DoD) has invested in the Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE) which it has deployed in partnership with the Department of Veterans Affairs (VA). The Department of Homeland Security (DHS) has invested heavily in the National Bio-surveillance Integration System (NBIS) which integrates a broad spectrum of bio-surveillance information including data from Biosense and ESSENCE. The University of Pittsburgh has also developed a prominent tool and is considered a thought leader in this space.

Despite the significant investments in the area of syndromic surveillance, the technology is young and the relatively small field remains fragmented. As a result, there is limited public information that addresses the field as a whole.

METHODS

To build insight and relationships in the national syndromic surveillance field, we propose a cross sectional analysis of the syndromic surveillance field. Criteria for inclusion include systems that:

- Focus on human health events or outcomes, including pre-diagnostic events or diagnoses
- Focus on early event detection with an emphasis on "real-time" surveillance
- Are ongoing, as opposed to surveillance systems established for specific high-profile events

Initial research has shown that there are numerous systems in use at the Federal, state, and local levels. Throughout the data collection process, we will continue identifying systems to include in our analysis.

The foundation for this effort is a 2003 Booz Allen report done for the Health Resources and Service Administration (HRSA) on the earliest syndromic surveillance tools that were then available. Though well done, the information collected is now outdated.

RESULTS

We anticipate that results will further research, development, and evaluation into biosurveillance policy and practice.

CONCLUSIONS

This research will provide a better understanding of the national syndromic surveillance application, landscape and the capabilities and weaknesses of individual tools. The resultant registry will enable syndromic surveillance users an opportunity to examine a vast collection of systems and their practices. The results will inform biosurveillance policy development, to enhance surveillance and situational awareness capacity based on development of a network of existing systems and users.

REFERENCES

[1]U.S. Centers for Disease Control and Prevention, web citation http://www.cdc.gov/ncphi/disss/nndss/syndromic.htm.

[2] **J Am Med Inform Assoc**. 2004;11:141-150: Implementing Syndromic Surveillance: A Practical Guide Informed by the Early Experience.

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