

A Survey of Usage and Response Protocols of Syndromic Surveillance Systems by State Public Health Departments in the United States

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OBJECTIVE

We aim to describe current syndromic surveillance systems in use throughout the U.S. and approaches to initiating an outbreak response as reported by survey participants.

BACKGROUND

Within the syndromic surveillance literature there are acknowledged gaps with respect to penetration of syndromic surveillance systems and standard or promising practices for response [1]. The lack of adequate data and evidence-based policy recommendations on response is especially concerning because syndromic surveillance systems are only as useful as the timely public health response launched after aberration detection [2]. We undertook the first step of a multi-phase study, with the global objectives of describing existing infrastructure in responding to alerts generated by syndromic surveillance systems and creating response guidance materials for public health practitioners. The preliminary findings contained here describe syndromic surveillance systems in use throughout the United States, future plans related to the use of such systems, and basic information regarding how outbreak response is initiated. This cataloging of systems complements work currently underway by the International Society for Disease Surveillance directed towards developing a comprehensive registry of syndromic surveillance systems [3].

METHODS

We conducted a cross-sectional survey (telephone and email) of state epidemiologists in all 50 states and the District of Columbia. The survey included a combination of multiple choice and short answer questions and was active from February 2008 to March 2008.

We generated descriptive statistics on the attributes of syndromic surveillance systems in use in each state and on state characteristics e.g. risk of terrorist attack as defined by Urban Areas Security Initiative eligibility and score on Trust for America's Health (TFAH) preparedness indicators. Furthermore, we coded short answer responses and participant comments to identify common themes related to experi-

ences with (and viewpoints on) syndromic surveillance.

RESULTS

Forty-one states participated in the survey with a response rate of 80%. Thirty-four states (83%) had at least one syndromic surveillance system operating within the state. Every state with an urban area at highest risk (per criteria described above) of a terrorist attack reported monitoring syndromic surveillance data. Both states with and without syndromic surveillance had the same mean preparedness score (mean=8, scale 1-10) according to TFAH's 2007 *Ready or Not* Report.

Among the 36 states with syndromic surveillance, eight (22%) received data from one system and nine (25%) from four or more systems. The most common systems included BioSense (n=20, 59%) and RODS (n=13, 38%). Seventy-four percent of states with syndromic surveillance initiated investigations at the state level, 62% at the county-level, and 44% at both the state and county-levels.

CONCLUSIONS

The majority of states reported using syndromic surveillance systems, with greatest penetration in those at highest risk for a terrorist attack. Most states used multiple systems and have varied methods (central and local) of responding to alerts. The fact that approximately half of states reported initiating investigations at both the state and local level indicates the need for detailed, written response protocols that outline the appropriate course of action and methods for coordinating response in different contexts.

REFERENCES

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