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Public Health Impact of Syndromic Surveillance Data—A Literature Survey

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Objective

To assess evidence for public health impact of syndromic surveillance.

Introduction

Systematic syndromic surveillance is undergoing a transition. Building on traditional roots in bioterrorism and situational awareness, proponents are demonstrating the timeliness and informative power of syndromic surveillance data to supplement other surveillance data.

Methods

We used PubMed and Google Scholar to identify articles published since 2007 using key words of interest (e.g., syndromic surveillance in combinations with emergency, evaluation, quality assurance, alerting). The following guiding questions were used to abstract impact measures of syndromic surveillance: 1) what was the public health impact; what decisions or actions occurred because of use of syndromic surveillance data?, 2) were there specific interventions or performance measures for this impact?, and 3) how, and by whom, was this information used?

Results

Thirty-five papers were included. Almost all articles (n=33) remarked on the ability of syndromic surveillance to improve public health because of timeliness and/or accuracy of data. Thirty-four articles mentioned that syndromic surveillance data was used or could be useful. However, evidence of health impact directly attributable to syndromic surveillance efforts were lacking. Two articles described how syndromic data were used for decision-making. One article measured the effect of data utilization.

Conclusions

Within the syndromic surveillance literature instances of a conceptual shift from detection to practical response are plentiful. As the field of syndromic surveillance continues to evolve and is used by public health institutions, further evaluation of data utility and impact is needed.

Keywords

impact; utility; evaluation; literature

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