

ABSTRACT

Evaluating a standard influenza-like illness syndrome definition across multiple sites in the distribute project: The 'ILI-s' Pilot

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Objective

To describe the initial phase of the ISDS Distribute project influenza-like illness (ILI) syndrome standardization ('ILI-s') pilot.

Introduction

The Distribute project began in 2006 as a distributed, syndromic surveillance demonstration project that networked state and local health departments to share aggregate emergency department-based ILI syndrome data.¹ Preliminary work found that local systems often applied syndrome definitions specific to their regions; these definitions were sometimes trusted and understood better than standardized ones because they allowed for regional variations in idiom and coding and were tailored by departments for their own surveillance needs.^{2,3} Originally, sites were asked to send whatever syndrome definition they had found most useful for monitoring ILI. Places using multiple definitions were

asked to send their broader, higher count syndrome.⁴ In 2008, sites were asked to send both a broad syndrome (ILI-broad), and a narrow syndrome (ILI-narrow) specific to ILI.⁵

Methods

Selected Distribute health department sites were sent an email inviting them to participate in the pilot. Sites were told that the pilot was intended to assess their ability to respond to a query in the event of a public health emergency; to evaluate syndrome component characteristics across sites; and obtain objective evidence regarding whether and how to standardize syndromes. Sites were asked to submit historical ILI data using a standardized syndrome definition (ILI-s) made-up of three component sub-syndromes: 'fever and cough', 'fever and sore throat' and 'flu'. SAS code was provided. A table with inclusion and exclusion terms was included for sites to create the syndromes in code other than

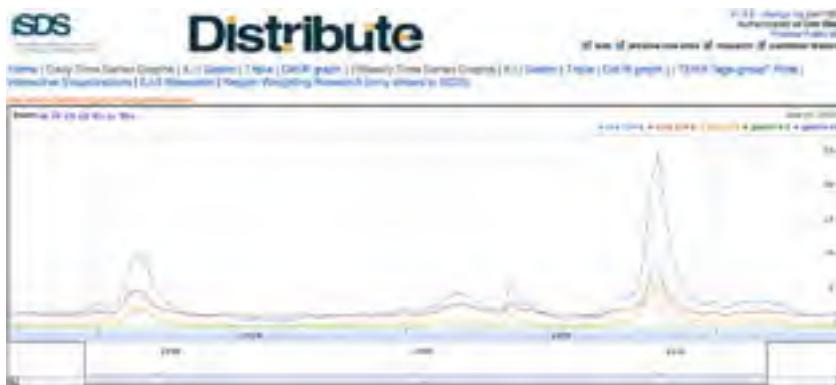


Figure 1 Sample region dataset of locally applied ILI and ILI-s time-series visualized on the Distribute restricted website.

SAS if preferred. Sites were asked to follow the ILI-s concepts and coding as closely as possible, and to document and share local ILI-narrow and ILI-broad code already in use. ILI-s pilot data were collected through the same upload procedure used for routine data submission. After ILI-s submission, data could be visualized through the Distribute restricted website. Comparison of local ILI-narrow, ILI-broad and ILI-s by sub-syndrome was conducted by age group and region (Figure 1).

Results

Of the 12 invited sites, six participated in the ILI-s exercise (several expressed interest but were unable to dedicate the necessary time). Comparison of ILI-s and regionally defined syndromes found considerable variation within and between sites in the relative proportion of each one, the level of signal-to-noise and the age-specific trends. However, inter-regional comparisons were clearer using the standardized syndromes, which had less noise compared with the regionally defined syndromes.

Conclusions

Response to the initial phase of the Distribute query and standardization ILI-s pilot suggests the exercise can be

expanded to the larger Distribute project, and evaluation of local ILI and ILI-s can be conducted collaboratively with participating sites. This work will be ongoing within the Distribute community over the coming year.

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References

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