

ABSTRACT

How did specific specialties and new sentinel providers affect ILINet data post 2009 A/H1N1 recognition

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Objective

The objective of this study is to describe changes in influenza-like illness (ILI) surveillance, eight weeks before and after the 2009 A/H1N1 pandemic influenza outbreak. We examined changes in provider recruitment, composition, reporting of ILI, and we characterize ILI data in terms of timeliness, and ILI baselines by type of sentinel provider.

Introduction

The United States outpatient Influenza-like Illness Surveillance Network (ILINet) is one of the five systems used for influenza surveillance in the United States. In Pennsylvania, ILINet providers are asked to report, every Monday, the total number of patients seen for any cause, and the number of patients with influenza-like illness (ILI) by age group. In order to encourage timely reporting, weekly reminders along with a data summary were sent to all sentinel providers post-outbreak recognition. Through the study period, recruitment of new sentinel sites was done through local health departments, health alerts, and training sessions. Sentinel providers were not restricted from submitting specimens to the state lab before and after the outbreak, whereas non sentinel providers had strict restrictions.

Methods

We examined ILINet data pre-outbreak recognition (January to March 2009) and post-outbreak recognition (April to June 2009) changes in provider recruitment, composition, reporting of ILI, and we characterized ILI data in terms of timeliness, and computed ILI baselines by type of sentinel provider. In this study, we defined timeliness as the number of providers reporting by Close of Business every Monday.

Results

In multivariate analyses of preliminary data, and after controlling for observed covariates, we noted a two-fold increase in number of sentinel providers (60–136, $P > 0.05$). Whereas before the outbreak the composition of sentinel providers was limited to pediatricians and family practices physicians, a variety of practices including Obstetricians and Gynecologists, colleges, and emergency rooms joined the sentinel providers post-outbreak recognition. Sentinel colleges reported significantly higher levels of ILI, pediatricians, emergency rooms, and family practice offices (8 versus 3 versus 2%). There was a significant increase in the proportion of sentinel providers reporting ILI every week post-outbreak recognition (50 versus 20%, $P > 0.5$). There was a weak correlation between the numbers of sentinel providers reporting every week and the proportion of ILI visits reported ($r = 0.05$). We also noted a significant difference between the levels of ILI reported every Monday compared with what is reported by Thursday of each week ($P > 0.5$).

Conclusion

Our study highlights several changes in ILI surveillance post A/H1N1 recognition. The number and composition of sentinel providers increased significantly post-outbreak recognition. Timely reporting of ILI should be encouraged in order to allow for near-real time use of ILINet data. An ILINet data should be analyzed at provider level in order to establish provider-specific and region-specific ILI baselines.

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