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Building meaningful use reporting infrastructure in NH through partnerships

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Objective

To describe steps used to build the required infrastructure to meet Public Health Meaningful Use (MU) reporting requirements for electronic syndromic surveillance, Electronic Lab Reporting (ELR) and immunization data in NH Division of Public Health Services (NH DPHS).

Introduction

Under the Electronic Health Record (EHR) Incentive Program Rule, hospitals are eligible to receive incentive payments from the Centers of Medicare and Medicaid Services (CMS) provided they meet certain requirements including MU. Demonstrating MU requires meeting a core and menu set of objectives including the capability to submit electronic syndromic surveillance, ELR and immunization data in accordance with state law and practice. NH is building a NH Heath Information Exchange (HIE) to serve all NH's MU needs including those of public health. This not only represents a huge opportunity for public health to collect more data to enhance disease detection and control, improve safety, and reduce health disparities, but also presents an integration challenge.

Methods

In 2011, NH DPHS initiated a project with Orion Health to build a Rhapsody integration engine (1) portal to receive the three types of Public Health data. A Syndromic surveillance pilot was chosen since 25 of 26 hospitals were already sending real-time data in HL7 format to the statewide syndromic surveillance system. NH DPHS collaborated with the NH Regional Extension Center (REC) to host MU guidance and brokered with Orion Health, the Office of the National Coordinator (ONC), and CMS to offer hospitals the option to use a modular certification for MU public health measures by selecting the Orion Health module (2). Selecting this module allows hospitals to send data to the NH DPHS Rhapsody portal in whatever format they choose; then, the NH DPHS Rhapsody system converts these messages to the approved ONC standards for public health reporting.

Orion Health contractors set up the Rhapsody server, configured data routes and built validation, filtering, and mapping logic. Mapping to HL7 2.5.1 was performed, but additional mapping to 2.3.1 was done before sending data to the syndromic surveillance application. Hospitals were directed to reroute data transmissions to the new Rhapsody VPN IP address and port, and Rhapsody was configured to pass traffic to the original surveillance application address and port. Additionally, data was sent through the normal VPN connection to compare the accuracy and performance of the new path.

Results

This MU project generated more hospital participation than was realized prior to initiating the Rhapsody integration. Negligible syndromic surveillance processing time degradation was realized with the added Rhapsody processing. This processing allowed NH DPHS to implement its last acute care hospital into the existing syndromic surveillance application (using Rhapsody mapping), filter existing hospital syndromic surveillance transmissions on specific patient types (preventing unwanted types), receive MU ELR and immunization data prior to expected timelines, increase hospital MU certification reimbursement without additional MU expenditure and decrease the hospital laboratory staff reporting burden, which previously was manual.

Conclusions

NH DPHS was able to take advantage of opportunities and resources beyond the State of NH. The brokered Orion Health Rhapsody MU certification solution provided a lower cost certification solution to hospitals (as compared to purchasing Rhapsody or certifying their EHR). NH DPHS was able to build an expandable public health MU infrastructure easily integrated with the NH HIE. The MU REC website provided guidance, FAQs, state rules and allowed NH DPHS to communicate effectively with hospital partners and the NH REC, to take advantage of REC expertise, and keep all partners informed.

Keywords

Informatics; disease surveillance; Meaningful Use

Acknowledgments

I would like to acknowledge the NH Bureau of Public Health Informatics personnel Chris Taylor, Brook Dupee and Jerry Bardsley; and Orion Health contractors Trico Hightower, Art Ramos, Jeff Proulx and Drew Ivan for their hard work on this project.

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Citation: Emerging Health Threats Journal 2011, **4**: 11020 - DOI: 10.3402/ehtj.v4i0.11020