

Leveraging the Master Patient Index in Public Health Surveillance through Collaboration between Illinois Department of Public Health and the Illinois Health Information Exchange

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Objective

This presentation will describe public health efforts to improve data collection by utilizing technology that supports record linkage through the implementation of the Master Patient Index (MPI). The initial use case will be applied to ambulatory syndromic surveillance at Illinois Department of Public Health (IDPH). It will include applications for incorporating the MPI into currently existing public health surveillance data and benefits to data integration and bidirectional information exchange.

Introduction

Meaningful Use (MU) Stage 2 public health reporting for Eligible Professionals (EPs) included a menu option for ambulatory syndromic surveillance. Review of currently existing models lead to a collaboration between the Illinois Health Information Exchange (ILHIE) and IDPH to build services that would support the use of the MPI, a database that can uniquely match records across systems. The MPI provides a mechanism for public health to manage multiple data streams, while maintaining confidentiality of health information and supporting the mission of public health to identify patterns of illness, apply effective interventions and conduct program evaluation. This initiative will allow IDPH to extend the use of the MPI to other surveillance domains, including hospital discharge, communicable disease, cancer and extensively drug resistance organism reporting.

Methods

To fully support the national goals of MU and providers' needs in our community to achieve MU, IDPH declared it would accept ambulatory syndromic surveillance on October 1, 2013. The process for implementing the use of the MPI in the health department will be described within the context of specific domains and required services. The exchange of data between providers and the health department, accepted formats, certification message translation services, required data elements to support MPI and the state implementation guidance for syndromic surveillance will be demonstrated with the ambulatory use case. The extension of the MPI to applications within existing surveillance systems will be delineated along with relevant public health applications.

Results

The ILHIE services for providers to facilitate exchange of electronic health records across health systems have generated 7.9 million unique MPI identifiers. The sources that will contribute data to the ambulatory surveillance system represent a diverse range of providers and patient populations from large health systems to federally qualified health centers, and is actively under expansion. For Meaningful Use, over 4,500 EPs registered their intent to submit data to IDPH for ambulatory syndromic surveillance as of September,

2014. By the end of the year, data from at least 1400 providers will be on-boarded by IDPH and evaluated for completeness and quality of data elements.

Conclusions

There are many advantages to a standardized patient identifier incorporated into public health surveillance that will intergrade independent data collection systems and improve population health analysis. This is important for turning large data sets into actionable information. Utilizing the ILHIE's MPI services allows IDPH to continue to expand its support for public health reporting through the ILHIE to Eligible Providers. This approach will position IDPH to better implement specialized registries and prepare for Stage 3 MU.

Keywords

Syndromic Surveillance; HIE; Meaningful Use; public health; MPI

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