COACTION PUBLISHING

A demonstration of meaningfully using the ISDS-recommended data elements

Joseph Lombardo[1], William Stephens[2], Taha Kass-Hout[3], Wayne Loschen[1]* and Richard Wojcik[1]

[1]Johns Hopkins University Applied Physics Laboratory, Laurel, MD, USA; [2]Tarrant County Public Health, Fort Worth, TX, USA; [3]Centers for Disease Control and Prevention, Atlanta, GA, USA

Objective

This project represents collaboration among the CDC BioSense Program, Tarrant County Public Health and the ESSENCE Team at the Johns Hopkins University APL. The objectives of the project are to: develop reusable meaningful use messaging software for ingestion of health information exchange data available in Tarrant County, demonstrate the use of this data for supporting surveillance, demonstrate the ability to share data for regional and national surveillance using the messaging guide model and demonstrate how this model can be proliferated among health departments that use ESSENCE by investigating the potential use of cloud technology. The presentation will outline the steps for achieving this goal.

Introduction

National Health IT Initiatives are helping to advance the state of automated disease surveillance through incentives to health-care facilities to implement electronic medical records and provide data to health departments and use collaborative systems to enhance quality of care and patient safety. While the emergence of a standard for the transfer of surveillance data is urgently needed, migrating from the current practice to a future standard can be a source of frustration.

Methods

This project will investigate tools that can be used to support ingestion and translation of public health meaningful use data in the HL7 formats. Open source tools, such as Mirth, have been identified as early candidates to support this function. After the necessary translations have been made, this project will investigate transfer methods to move the meaningful use data from a public health department to a cloud environment. With data available in the cloud, the project will then investigate methods for putting the ESSENCE system in a cloud environment as well. This will provide the collaborative team a platform to evaluate the utility of both the meaningful use data and potentially the value of having regional and national data sharing aspects available to the public health users. Finally, the team will determine the scalability and performance of a cloud environment for disseminating these tools to other jurisdictions across the country.

Results

Early research for this project has already shown the need to redesign aspects of the ESSENCE system to support the additional meaningful use data fields. These changes involved modifications to the database design and the utilization of a more flexible configuration system. We fully expect additional modifications to be made to better support the cloud environment. These findings and the results of the public health evaluation of the system will be presented.

Conclusions

Public health departments will soon be flooded with mountains of new data. Having tools that can translate, transfer and utilize these new data sets effectively will be necessary. This collaborative team will research and put into practice solutions that can be used throughout the country.

Keywords

Electronic medical records for public health; meaningful use; interoperability; cloud

***Wayne Loschen**
E-mail: wayne.loschen@jhuapl.edu

Emerging Health Threats Journal 2011. © 2011 J. Lombardo et al. This is an Open Access article distributed under the terms of the Creative Commons Attribution-Noncommercial 3.0 Unported License (http://creativecommons.org/licenses/by-nc/3.0/), permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Citation: Emerging Health Threats Journal 2011, **4**: 11182 - DOI: 10.3402/ehtj.v4i0.11182