

HealthSIS: a solution for Local Public Health Reporting and Surveillance in KY

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Objective

To describe a real-time reportable disease and surveillance solution focused on local public health department needs and compatible with state health departments, regardless of meaningful use certification status of health care providers.

Introduction

Multiple options (1, 2) are available for health care provider organizations to receive assistance in demonstrating compliance with meaningful use requirements for public health reporting (3). A certified EHR solution is a requirement for participation in these programs; vast majority of health care providers do not yet have such a solution. No funding programs are currently available to assist public health agencies, especially local public health departments (4). As a result, most providers and local public health agencies are seemingly left without viable options except spending significantly in a tight budget environment.

Methods

Prior to ARRA 2009/Meaningful Use, KHA, KY CHFS and ETI created an electronic disease-reporting solution for hospitals and associated local public health. The Community Surveillance project operates in 3 population centers within Kentucky and provides real-time surveillance and disease reporting for up to 18 prevalent disease conditions across more than 20 provider locations and 6 provider organizations within the Northern Kentucky, Lexington/Fayette County and Louisville Metro communities. The software solution, ETI's HealthSIS, is able to accept meaningful use certified messaging, uncertified messaging formats and custom data streams for both reportable disease and syndromic surveillance information from a single stream within each provider location. The messaging stream used for identifying reportable or syndromic conditions is a copy of the content generated by normal hospital operations; specialized or additional data input is not required from health care provider staff. HealthSIS is configured to submit only data relevant to surveillance goals of the community from source systems; this configurable filtering capability allows for reduced resource requirements, reduced data management resources, and a manageable data set for analysis.

Results

Since mid-2008, NKIDHD receives electronic disease reports and surveillance support for what is now the 18 most prevalent disease conditions in the community. SEMC (6 facilities) has realized 75%–90% reduction in public health reporting effort as a result of the capabilities provided by HealthSIS. Since mid-2009, LFCHD receives syndromic surveillance data from ambulance runs, initially to support preparations for the 2010 Alltech-FEI World Equestrian Games; LFCHD began receiving

electronic disease reports for 9 prevalent disease conditions in mid-2010 from CBH and UKMC. Since late 2009, LMPHW receives electronic disease reports for 5 prevalent disease conditions from BHE and notifications of same from JHSMH; in 2011, NHC began participating in the disease-reporting process.

Conclusions

Installing and maintaining electronic disease and syndromic surveillance to support public health agencies is possible without large budgets and without massive systems upgrades within health care provider organizations; benefits are clearly measurable – independent study in Washington state in 2010 confirms benefit of the concept (5). Emergint's HealthSIS software and the Community Surveillance solution implemented in Kentucky presents a systems approach that can be replicated across the country, whether fed by providers or HIEs and regardless of meaningful use certification status.

Keywords

Disease reporting; clinical systems; data integration

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