

Assessing the Feasibility of Using Electronic Health Records for Community Health Assessments

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Abstract

Assessment is a core function of public health. Comprehensive clinical data may enhance community health assessment activities by providing up-to-date, representative information used in the development or application of public health programs and policies. Greater access to clinical data is possible with electronic health record (EHR) systems. Yet public health stakeholders often question the reliability, timeliness, and accuracy of EHR data. We developed a matrix to support assessment of EHR data quality across a range of common community health assessment indicators. The matrix was found to be useful and helped identify target indicators for a single assessment project. We hope the matrix can be used and improved by others to support greater use of EHR data for community health assessment activities within provider organizations as well as health departments.

Introduction

Community health assessments (CHAs) provide information for population health problem and asset identification as well as public health policy and program formulation, implementation, and evaluation. Comprehensive healthcare encounter data may enhance CHAs with up-to-date, representative information for improved development and application of effective public health programs and policies. Traditionally CHAs have been performed using a limited set of information available through public data sets, behavioral surveys, and paper-based disease reporting. Given greater availability of electronic health record (EHR) systems, public health departments might leverage new, electronic data sources to support community assessment processes.

Methods

Through a series of meetings, we iteratively designed a multidimensional matrix to assess the feasibility of using routinely collected EHR data captured by clinical organizations for CHAs. The matrix rates aspects of EHR data quality, such as reliability, timeliness, and accuracy, across a number of common CHA indicators, including disease prevalence, health outcomes measures, and health service performance measures. The matrix is designed to be used by a group of public health stakeholders when defining information needs for a specific use case as outlined in (1). We employed the matrix with and gathered feedback from a group of public health informatics researchers and stakeholders in a metropolitan area to define indicators for a project involving a health information exchange.

Results

Prevalence of chronic diseases as well as several “high-profile” quality and health service performance measures were believed to be feasible to incorporate into CHAs in a “Most Wired” area of the country. However, comprehensive assessment must include integration across currently fragmented clinical and public health data silos. For example, colorectal cancer screening data are available electronically, but only a few providers make these data available to the regional health information exchange restricting analysis to localized areas.

Conclusion

As health departments plan and implement electronic data feeds from clinical organizations, they should consider how to aggregate data across silos for more effective CHA. In addition, health departments should consider how other EHR data sources might be leveraged to improve health planning and policy activities. The matrix was useful in choosing CHA measures which local stakeholder perceived as available through EHRs.

References

1. Dixon BE, Rosenman M, Xia Y, Grannis SJ. A vision for the systematic monitoring and improvement of the quality of electronic health data. *Studies in health technology and informatics*. 2013;192:884-8.