Integrating EMR and Claims Data for Outcome Research and HealthCare Quality Improvement

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Abstract

It has been realized that adoption and meaningful use of electronic medical records (EMR) can help clinicians diagnose and treat patients and researchers conduct clinical trials of new diagnostic methods and treatments. However, to improve the quality of but yet reduce the total cost of care, financial incentives must also be in place, such as payment mechanisms that reward health care providers for more cost-effective care.

To achieve that, evidence of clinical effectiveness alone based on EMR data is not enough. Financial cost data, typically from administrative or insurance claims data, must be linked to clinical outcomes to enable health economics and outcome research, as well as outcome-based payment mechanisms (e.g. episode-based bundles). On the other hand, payment mechanisms relying solely on administrative or claims data may not be truly outcome-based or risk adjusted. The clinical information in EMR offers insight about the true course of treatment and outlines the patient-level unique risk factors and co-morbidities that must be considered when developing episode-based payment. Therefore, integration of EMR and claims data is necessary for health economics and outcome research, as well as outcome-based payment.

The panel aims to: 1) increase awareness of the need to integrate clinical and financial data for improving healthcare quality and reducing cost, 2) learn from different integration efforts for outcome research and outcome-based payment, and 3) promote more cross-industry collaboration between the AMIA community and healthcare payer industry.

Panel description

This proposal is being submitted for consideration in the industry track. This panel will focus on cross-industry collaborations using healthcare data as real world evidence for comparative effectiveness research and healthcare quality improvement. The speakers, as collaboration leaders will share their first-hand experience with the audience, such as how they are assessing data (e.g. EHR and claims data) integration needs for research, addressing data integration issues from legal, cultural, and technical aspect, and deriving from integrated data new insight on comparative effectiveness and new payment mechanisms to improve care quality and reduce costs. The audience of this panel will learn the potential impact of such integration to healthcare. This panel will consist of the following sections:

Introduction: Zhaohui Cai, MD, PhD, will introduce the topic and moderate the session.

Presentation 1: The AstraZeneca-HealthCore Partnership for Real World Evidence (RWE). This co-presentation by Dr. Labkoff from AstraZeneca and Mr. Momin from HealthCore will make a business case for Real World Evidence initiative from a pharma, payer, patient and provider perspective, and outline a need for development of enriched research environment, which could help answer research questions as well as provide decision support to various stakeholders. The presenters will also provide examples of Real World Evidence research, address issues associated with data integration and challenges for the two large companies to work toward the common goal.

Presentation 2: Anolinx-VA Salt Lake City Collaboration on Health Economics and Outcome Research. Dr Kamauu will share recent and current examples of collaborative projects with VA SLC research teams where they utilized both EHR and healthcare cost data to study a variety of patient populations, focusing specifically on the evaluation of disease outcomes, resource utilization and cost of care in the context of the clinical characteristics.
Presentation 3: Geisinger EHR and Health Plan Data Integration for Health Economic Analyses
MedMining, a Geisinger Health System business, creates linked electronic health records and claims data for external commercial use. One available data element is the actual encounter-level cost from the provider’s perspective rather than charges and/or reimbursed amounts. Dr. Meadows will present that incorporating this "true cost" data presents a tremendous opportunity for health economic analyses.

Presentation 4: Research Usage of Electronic Medical Records Data and Administrative Claims Data in Kaiser Permanente. The integrated health care delivery system in Kaiser Permanente (KP) provides a rich EMR data. The Research and Evaluation department of KP Southern California has integrated the EMR data with claims data for a broad range of research such as etiology, outcomes, safety, effectiveness and translational research. We worked closely with internal, federal and industry partners to pursue unanswered questions. Dr. Zhang will use his own past pharmaceutical company experiences to highlight the differences between the claims and EMR data and why it is important to conduct research using an integrated system.

Discussion: Panelists will answer more questions from the audience, and discuss pros and cons of different integration and analysis approaches in different settings, as well as potential impact on healthcare quality and cost overall.

Panel organizer and participants
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Statement of the Panel organizer
All participants have agreed to take part on the panel. This proposal is being submitted for consideration in the industry track.