Linking Patients to Providers for Quality Reporting in an EHR

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Abstract

We have designed and implemented a flexible approach to linking patients to providers to support quality reporting in an ambulatory electronic health record. This approach has been implemented within Report Central, a reporting module that allows users of the ambulatory electronic health record to view descriptive and quality reports about their patients.

Introduction

At Partners Healthcare, we have developed and implemented Report Central, a reporting module that is available to every user of the ambulatory electronic health record (LMR). Each user may view descriptive and quality reports about his/her patients. In order to provide this feedback to clinicians, it is necessary to define the set of patients for whom they are accountable. Because LMR users are a diverse and heterogeneous population, this presented a number of challenges.

Approach for linking patients to providers

We developed a solution that was intended to ensure that all LMR users (not just PCPs) could view reports about patients for whom they are clinically responsible. Our approach needed to satisfy the following requirements/constraints:

- Work for an array of users, including PCPs, specialists, physicians, non-physicians, adult medicine providers, and pediatricians.
- Make panel assignments at the clinic level, i.e. provider may have different panels for different practice locations
- Allow different PCP definitions at different sites
- Allow new panel definitions to be added
- Use administrative data sources defining PCP status where available, as well as transaction data

Solution

A table was created in the Quality Data Warehouse, a relational database that underlies Report Central. Each row in the table defines a relation between a patient, provider, and clinic. A “grouptype” column indicates the panel type. Current panel types include:

- PCPMap - provider is the PCP according to the Enterprise Master Patient Index AND has seen the patient at least once in the last two years.
- 2YRNOTES – provider has written two or more notes for the patient in the last two years. Used for non-PCPs and many community practices.
- 1YRNOTES – provider has written at least one note for the patient in the last year. Used for practices that have recently implemented the LMR.
- ROLLUP – provider has entered any transaction for the patient.

Figure 1 illustrates the counts of patients identified using the various panel types for two clinicians. The preferred method for each provider is highlighted.

<table>
<thead>
<tr>
<th>Grouptype</th>
<th>Provider A (BWH)</th>
<th>Provider B (MGH)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1YRNOTES</td>
<td>472</td>
<td>627</td>
</tr>
<tr>
<td>2YRNOTES</td>
<td>537</td>
<td>583</td>
</tr>
<tr>
<td>BWH</td>
<td>646</td>
<td>N/A</td>
</tr>
<tr>
<td>PCPMap</td>
<td>N/A</td>
<td>521</td>
</tr>
<tr>
<td>ROLLUP</td>
<td>2881</td>
<td>1561</td>
</tr>
</tbody>
</table>

Figure 1. Counts of patients in panels for two physicians, using different panel types.

Evaluation

During development of the panel definitions, users from each practice site were enlisted to validate the definitions. Lists of patient panels were generated according to each definition and provided to the users for manual validation. This was an iterative process over the course of a month.

Conclusion and next steps

We have designed and implemented a flexible approach to linking patients to providers to support quality reporting in an ambulatory electronic health record. Future development efforts will include allowing providers to choose one or more panel types depending on their roles (e.g. specialist, PCP, Medicine-Pediatrics), editing a patient panel, and allowing assignment of practice-loyal patients not linked to a specific provider. We will continue to refine and validate new panel definitions.