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Agenda

I. Introduction

II. Background/Overall Aim

III. Site selection, PDDQ, Intervention

IV. Findings

V. Conclusion

VI. Limitations

VII. Recommendations

VIII. Resources
Background

- Nationwide, the healthcare industry is grappling with how best to manage patient duplicate records in Electronic Health Records (EHRs).
- A duplicate patient record occurs when a single patient is associated with more than one patient record.
- The existence of duplicate patient records has safety, quality of care, increased healthcare costs, privacy, security and billing implications.
Pilot Overall Aim

- The overall aim of the pilot was to improve the quality of patient demographic information by implementing a data management framework intended to improve patient matching by decreasing the number of duplicate patient records.
Pilot Sites

- Pilot sites were recruited through OCHIN
  - Three sites (located on the West Coast) were recruited and agreed to participate
  - One site opted not to continue due to competing priorities and resource limitations
  - Two sites completed the full Pilot project
    - Site A comprised of 3 primary care clinics and 2 mental health clinics
    - Site B comprised of 9 primary care clinics and 1 mobile clinic
Site Assessment Questionnaire Content
The Patient Demographic Data Quality (PDDQ) Framework module is intended to support health systems, large practices, health information exchanges, and payers in improving their patient demographic data quality. The framework allows organizations to evaluate themselves against key questions designed to foster collaborative discussion and consensus among all involved stakeholders. The PDDQ Framework evaluation produces a numeric score that can increase as advancements in demographic data quality documentation, practices, and management occur.
PDDQ KEY ALIGNMENT FACTORS

Implementing governance functions
Planning data quality
Implementing quality improvements and assurance
Managing operational components
Defining and mapping data dependencies
Supporting access to shared data interoperability
Ensuring that data is understood and trusted across the organization
Demographic Data Quality Improvement Intervention Design

- Data Quality Teams included representatives from different departments within the participating clinics

- The intervention was delivered to the Data Quality Teams via web-enabled teleconferences
  - Deployment of training materials and tools for process improvement
  - Guidance regarding implementation of PDDQ practices

- Measures were collected pre- and post- intervention
Data Quality Improvement Training

- Documents and templates were created for the training materials:
  - Business Glossary Template – asked sites to create their own
  - A Training Inventory Template – a single location for documenting all trainings
  - A Data Quality Plan – assist sites with developing their own data quality plans

- Individual pilot site training calls occurred monthly to address specific elements of the PDDQ and provide next steps for implementation
## Sample Business Glossary

<table>
<thead>
<tr>
<th>Data Element</th>
<th>Definition</th>
<th>Notes</th>
<th>Data Format</th>
<th>Activity</th>
<th>Flag/ Req/ Optional</th>
</tr>
</thead>
<tbody>
<tr>
<td>PATIENT NAME</td>
<td>All names bestowed to patient when they are born, including all first given names, middle names (where applicable), and surnames or married names (where applicable).</td>
<td>When creating a patient in your EHR, please enter all last names (comma) all first names (space) all middle names (where applicable) (space) suffix (where applicable). In your EHR, anything that is entered after the comma is considered a first or middle name.</td>
<td>Reg</td>
<td>Stop</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>When creating or updating a patient in your EHR, please enter the patient's full middle name (if they have one), not just their middle initial.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Please do not enter hyphens or apostrophes in a patient's name, unless these symbols are reflected on their insurance card.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>If a patient's name is spelled differently than what is listed on their insurance card, add the correct spelling in the alias field and ask the patient to contact their insurance company to correct the spelling on their card and update their record once their card accurately reflects the spelling of their name.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>When searching for a patient by their last name, search by all possible last names individually.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Findings

- Key variables influencing the creation of duplicate records included:
  - Unknown or imprecise date of birth
  - Variation in the recording of last names
  - Missing social security numbers

- Procedures for collecting demographic information varied by each clinic

- Clinics participating in the intervention experienced moderate increases in their PDDQ scoring from baseline to follow-up. Out of 22 possible points:
  - Pilot Site A’s PDDQ score increased by 7 points
  - Pilot Site B’s score increased by 3.5 points
There were modest to moderate relative decreases in duplicate creation rates.

Pilot Site A saw a relative decrease of 7.7% and Pilot Site B saw a relative decrease of 31.3%.
Conclusion

Accurate patient matching is important for patient safety, quality of care, privacy and security, interoperability, care coordination, billing, and population health analytics.

High quality analytics, reporting, and research may be realized through accurate patient matching.

Results from the pilot suggest that for a modest investment, impactful improvements can be made using a standardized data quality framework.
Limitations

- Short timeline for implementation of pilot
- Limited time and resources for site/staff participation
- Restricted staffing participation
- New tracking and reporting procedures at site level was not completed
Recommendations

ENCOURAGE HEALTHCARE SYSTEMS TO RECOGNIZE DEMOGRAPHIC DATA QUALITY IMPROVEMENT AS AN INTEGRAL PART OF A LEARNING HEALTH SYSTEM

AID CLINICS TO IDENTIFY ADDITIONAL RESOURCES FOR QUALITY IMPROVEMENT WORK AS PART OF THEIR SAFETY INITIATIVES

SUPPORT COMMUNITY HEALTH CENTERS TO IDENTIFY STAFF RESPONSIBLE FOR DEMOGRAPHIC DATA QUALITY IMPROVEMENT

INCREASE THE VISIBILITY OF PATIENT MATCHING TO RECOGNIZE THE SERIOUS RISKS DUPLICATE PATIENT RECORDS CAN POSE FOR PATIENT SAFETY, CONFLICTING DATA ABOUT THE PATIENT, AND POTENTIAL MALPRACTICE CLAIMS
Resources

- Patient Demographic Data Quality Framework
- The Office of the National Coordinator for Health Information Technology
- The CMMI Institute
- OCHIN
- The Kaiser Permanente Center for Health Research
QUESTIONS/COMMENTS?