Applying the Patient Demographic Data Quality (PDDQ) Framework to Reduce Duplicate Patient Records: Findings From A Pilot Study.

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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

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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

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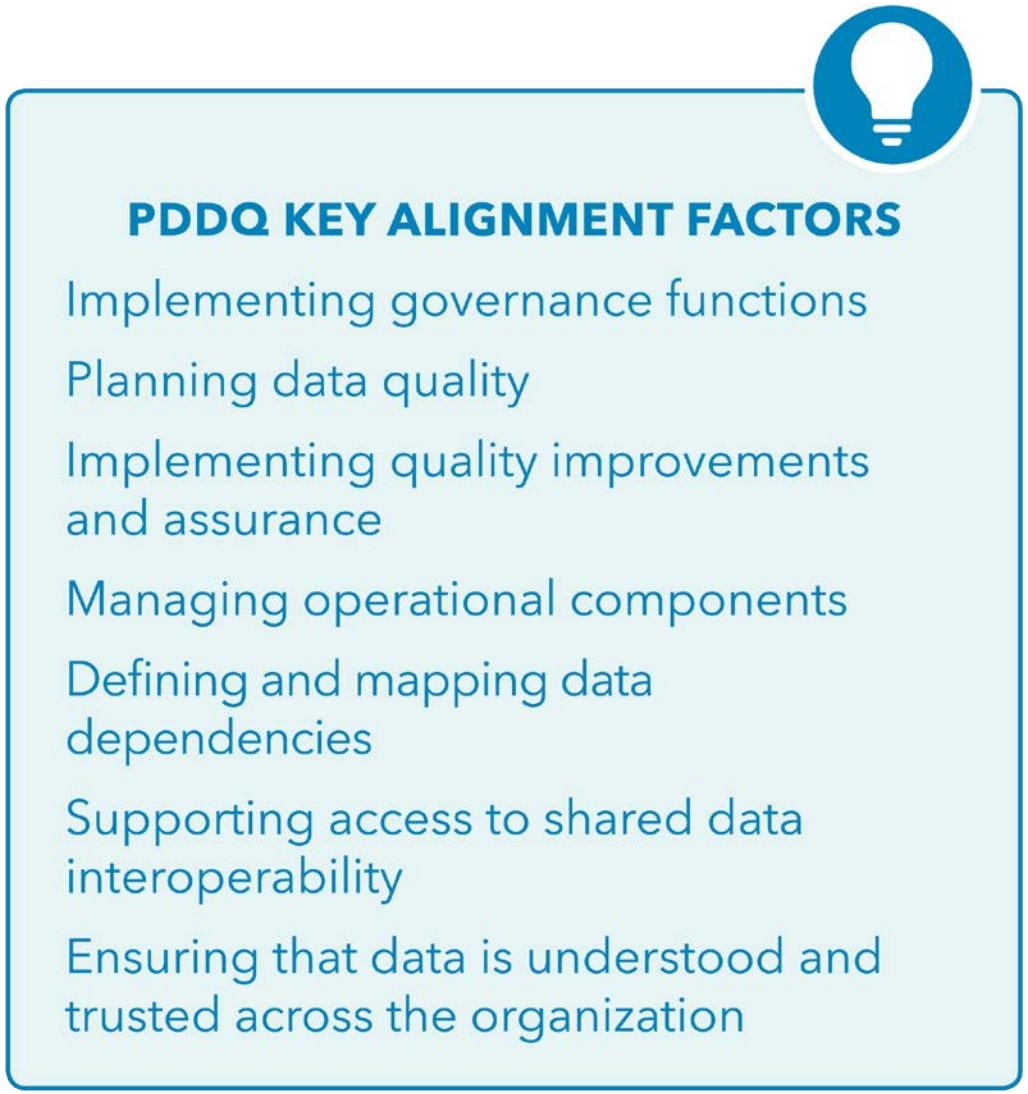
Patient Demographic Data Quality(PDDQ) Framework

- The 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

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

Data Element	Definition	Notes	Data Format	Activity	Flag/ Req/ Optional
PATIENT NAME	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).	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.		Reg	Stop
		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.			
		Please do not enter hyphens or apostrophes in a patient's name, unless these symbols are reflected on their insurance card.			
		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.			
		When searching for a patient by their last name, search by all possible last names individually.			

Findings

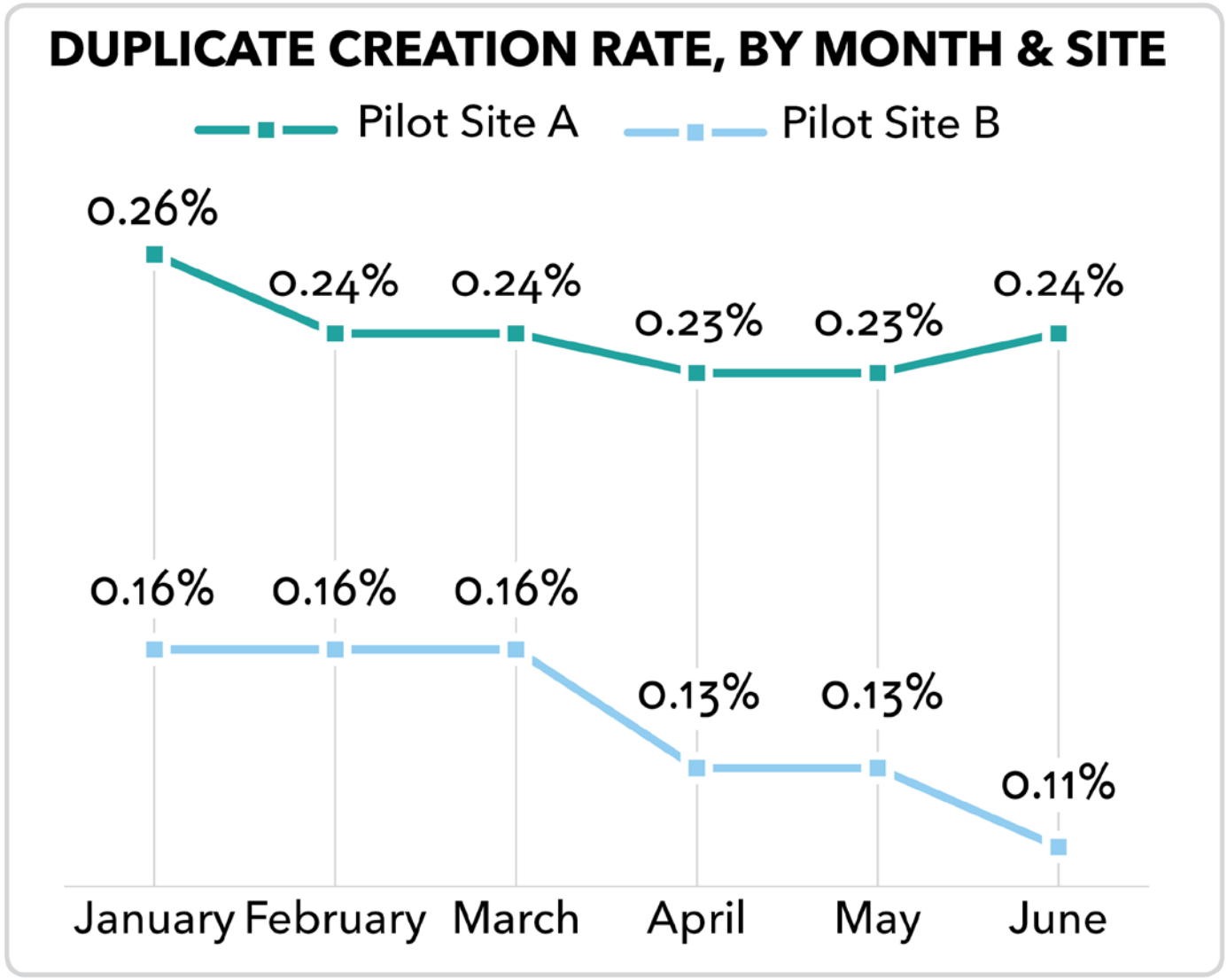
- Key variables influencing the creation of duplicate records included:
  - Unknown or imprecise date of birth
  - Variation in the recording of last names
  - Missing social security numbers

- 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?