Primary Care Data Sharing Project

Digital Health Week: Clinical Value of Standardizing Primary Care Information Through the Use of EMR Tools

November 15, 2018

Funded by eHealth Ontario

Overview: PCDS Proof-of-Concept

- The project will demonstrate the ability for electronic medical records (EMRs) to contribute primary care data to the Electronic Health Record.
- Four family health teams in south west Ontario (SWO) participated in a **"Proof of Concept" (POC) to help identify the value, challenges and feasibility** of sharing primary care data. An additional eight primary care sites have been engaged to participate in **data quality activities.**
- Lessons learned and preliminary recommendations have been compiled to **inform the provincial primary care data sharing strategy.**
- This is a **regional and provincial priority project** that is being supported by the Ministry of Health and Long-Term Care, eHealth Ontario, OntarioMD, the cSWO Program and the Waterloo Wellington, cSWO Change Management and Adoption Delivery Partner, eHealth Centre of Excellence.

Key Outcomes

1. **Better understand how to manage the sharing of primary care data** (identifying the clinically driven data set, when to share, who to share with, etc.).
2. Better understand how to improve **EMR data quality** and **present data consistently** (for the purposes of improving patient care).
3. '**Test' the processes** that need to be in place to support primary care data sharing (resources/capacity, change management, data sharing agreements etc.).
4. '**Test' the technology and integration points**: Primary Care Clinical Data Repository (pcCDR), EMR integration, integration with the cSWO Program's Regional Clinical Viewer, ClinicalConnect™.
5. Assess the **clinical value of sharing primary care data** (benefits realization).

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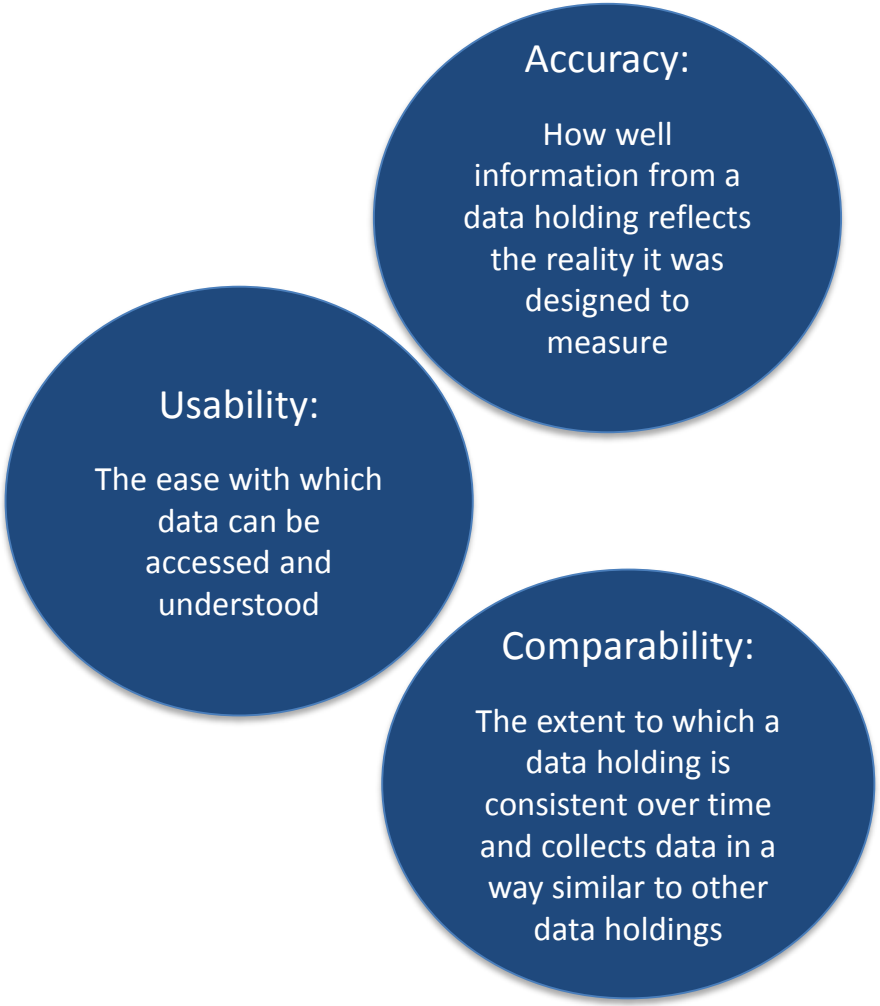
Data Quality Approach

- Key objective: “better understand how to improve EMR data quality and present data consistently for the purposes of improving patient care.”
- The PCDS project team works with primary care organizations to improve the quality of their EMR data for sharing by:
  - Improving data capture (e.g. helping them code their chronic conditions, identifying areas of the CPP that need to be updated, etc.).
  - Linking data quality efforts to their organizational priorities (e.g. identifying complex patients).
  - Determining how good quality EMR data can support these priorities (e.g. using coded chronic conditions to identify complex patients, resource planning, etc.).



NOTE: Key principles from CIHI’s Data Quality Framework were used as a foundation

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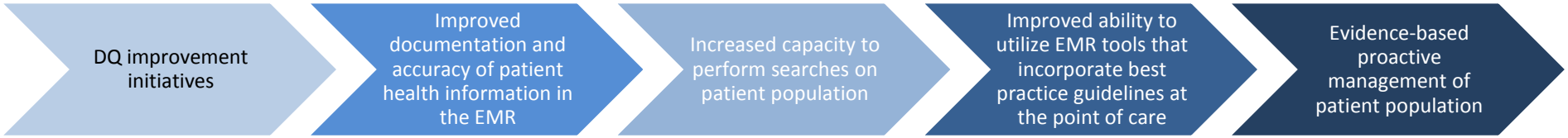
Linking Data Quality to Internal Value

- Clinicians are able to rely on the data because it has been coded, search results are more accurate, and data is more reliable.
- Examples include:
  1. *Generating lists for most complex patients for high value proactive care interventions, such as medication reconciliation or referral to Health Links.*
  2. *Generating patient lists with certain conditions for appropriate chronic disease care.*
  3. *Determining the distribution of chronic conditions to better understand the patient population and direct resources to where they will have the most impact.*



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Two Approaches to Standardizing the Problem List

1) Use EMR searches to back code free texted diseases and/or conditions that are listed in the Problem List.
2) Use established algorithms inside the EMR to identify patients who have certain diseases and/or conditions but have not been diagnosed (i.e. not listed in the Problem List).

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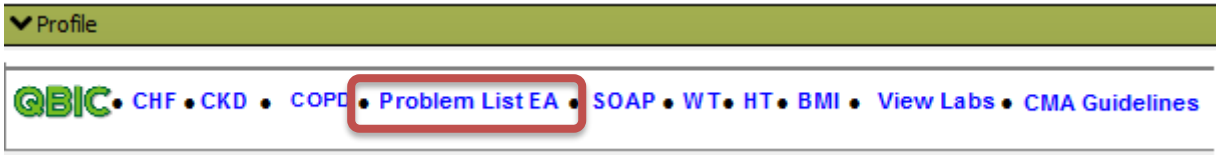
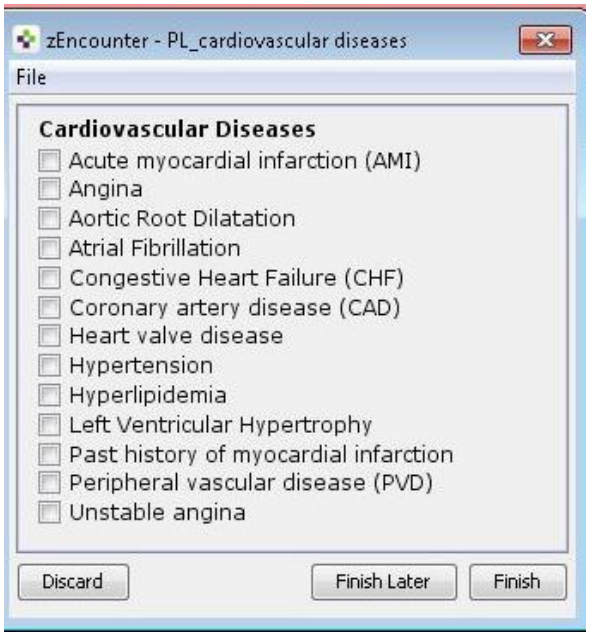
Tool: How to Standardize the Problem List in PSS





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Example: Identifying Complex Patients for Proactive Care

Identification process

Primary Care Sites can run an algorithm on their EMR coded data to pull a list of their most complex patients.

Who made the list?

Patients who are ≥55 years of age, with 4+ chronic conditions, and 5+ active medications.

Results

Primary care can generate a list of patient for high value proactive care interventions, such as medication reconciliation

Importance of data quality

Coded chronic conditions in the EMR increase the accuracy of the search and make it easier to modify.

- There is the option to include risk factors as part of the algorithm: current smoker and/or has 5 or more alcoholic drinks per week

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Identifying Complex Patients for Proactive Care – Sample Output

	A	B	C	D	E	F	G
1	Patient #	Age	num_chronic_conditions	num_active_treatments	_smoking_	_alcohol_risk	
2	#	85	4	25	FALSE	FALSE	
3	#	60	7	23	TRUE	FALSE	
4	#	61	4	25	FALSE	FALSE	
5	#	64	4	22	FALSE	FALSE	
6	#	85	4	21	FALSE	FALSE	
7	#	56	4	22	FALSE	FALSE	
8	#	82	6	21	FALSE	FALSE	
9	#	85	6	22	FALSE	FALSE	
10	#	71	6	23	FALSE	FALSE	
11	#	75	4	22	FALSE	FALSE	
12	#	66	5	21	FALSE	TRUE	
13	#	69	4	27	FALSE	FALSE	
14	#	87	4	22	FALSE	FALSE	
15	#	60	4	23	TRUE	FALSE	
16	#	91	4	21	FALSE	FALSE	
17	#	78	5	28	FALSE	FALSE	
18	#	80	7	22	FALSE	FALSE	
19	#	73	4	27	FALSE	FALSE	
20	#	87	5	22	FALSE	FALSE	
21	#	80	5	23	FALSE	FALSE	
22							
23							
24							
25							
26							
27							
28							

Physician A | Physician B

READY

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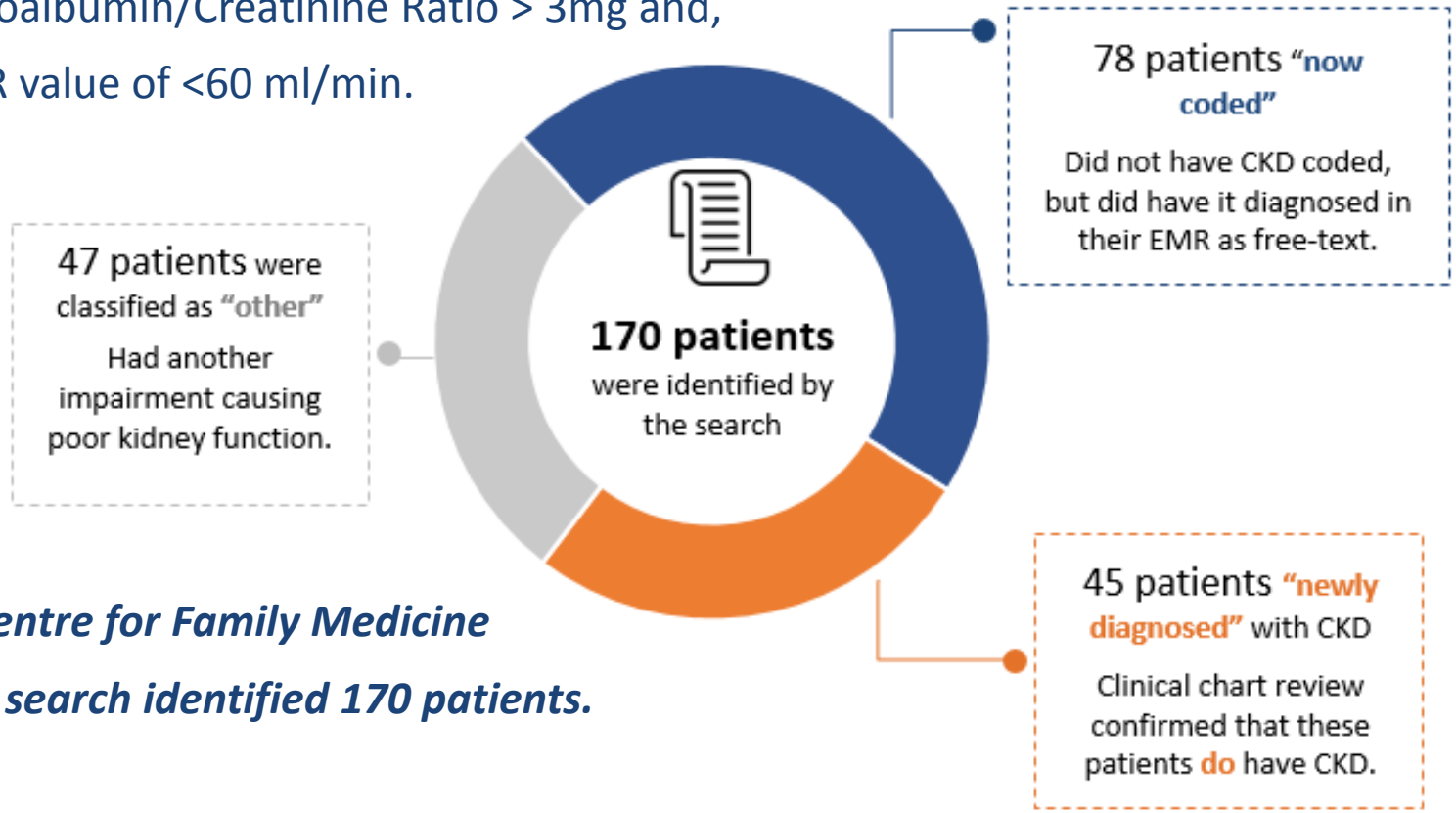
Example: An EMR search that identifies undiagnosed CKD patients

In order to identify patients who may have CKD but have not been diagnosed or coded in the EMR, an EMR search was developed based on:

- Microalbumin/Creatinine Ratio > 3mg and,
- eGFR value of <60 ml/min.



At the Centre for Family Medicine

FHT, the search identified 170 patients.

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Questions

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