Primary care data sharing (PCDS) is a time-limited, small-scale regional initiative as part of the cSWO Program to explore the value, challenges and feasibility of sharing a pre-defined dataset from primary care electronic medical records (EMRs) to be shared amongst health service providers within the patients’ circle of care through the electronic health record (EHR). This proof of concept will inform the evolving provincial primary care data sharing strategy.

The evaluation and realization of value is an important component of the cSWO Program that supports and delivers the adoption of the integrated EHR across south west Ontario (SWO). By pursuing the measurement of organizational value (i.e. reduction in health care professional time required to find information) and clinical value (i.e. reduction in potential adverse drug events, PADEs) we can learn about how patients benefit from better informed clinical decision-making.

The PCDS proof of concept project team works with primary care teams to improve the quality of EMR data in the Cumulative Patient Profile (CPP) and shares that data to a clinical data repository (CDR). Clinicians along the continuum of care will be able to view CPP data as part of the integrated EHR via the cSWO Regional Clinical Viewer, ClinicalConnect™.

Value statement

When EMR data is coded, primary care organizations can use this data to build searches that identify patients with complex needs. This in turn allows primary care clinicians to address the needs of these patients and focus on providing proactive care, with the end goal of preventing them from becoming high acute care users.

Using coded EMR data to identify complex patients

Five per cent of Ontarians account for 65 per cent of provincial health care costs, with the top one per cent accounting for one third of these costs overall. The Ontario Ministry of Health and Long-Term Care recognized the need to better coordinate care for these patients, and thus initiated the Health Links approach to care. The approach involves creating a coordinated care plan and providing the patient with an interprofessional care team to better coordinate their care. Health Links patients may be identified through health and social characteristics, or through their acute care usage.

Previous case studies have articulated the value of coded EMR data in understanding and providing quality care for patient populations. In particular, EMR searches can be developed that identify patients with complex needs, such as Health Links patients. The cSWO Change Management and Adoption Delivery Partner for the Waterloo Wellington region, the eHealth Centre of Excellence, developed an EMR search for primary care organizations participating in the PCDS project that uses coded EMR data to identify patients with complex needs who would benefit from proactive care interventions. The search’s ability to identify complex patients is dependent on the completeness and accuracy of EMR data.

Through their involvement in PCDS, Thamesview Family Health Team (FHT) participated in data quality improvement initiatives to code chronic conditions within their EMR. Thamesview FHT identifies potential Health Links patients based on acute care usage using the Hospital Admission Risk prediction (HARP) tool, which generates scores based on a patient’s risk for hospital readmission. The tool is incorporated into the FHT’s EMR and is run for every patient discharged from hospital. The FHT assesses patients at high risk for readmission to see if they would benefit from the Health Links approach to care. The results of the HARP tool are also dependent on the completeness and accuracy of EMR data. As Thamesview FHT’s referrals to Health Links were already at capacity, they decided to run the complex patient search for exploratory purposes and to compare the results to their list of already identified Health Links patients.
Taking a proactive approach to identifying complex patients

The complex patient search scanned Thamesview FHT’s EMR data and identified patients who were 55 years of age or older, on five or more medications, and had four or more chronic conditions (see Figure 1). A large number of patients were identified who were considerably older than 55 years of age and had a high number of active treatments on average. The FHT also compared the search results to their list of Health Links patients. There were 16 patients found on both lists, meaning that the majority of complex patients (94 per cent) had not been identified as Health Links patients through the previous means.

These results suggest several conclusions. Firstly, Thamesview FHT’s Health Links patients and the patients identified through the complex patient search overlap very little. The Health Links patients are those who use a lot of acute care, with only 16 having characteristics associated with the complex patient search, while the complex patients are those with complex characteristics, but who are not high acute care users. The lack of overlap between groups makes sense; in Ontario, an estimated 49 per cent of those with four or more chronic conditions are not high acute care users, while 40 per cent of high acute care users do not have four or more chronic conditions. In addition, other factors influence acute care usage. Socioeconomic status, a well-documented predictor of acute care usage, is not consistently documented in the EMR. As primary care organizations continue to improve documentation of EMR care elements, such searches can consider including other variables associated with acute care usage.

Finally, patients identified through the complex search are already being managed well by primary care; they are not currently high acute care users, but may become high acute care users in the future. This provides an opportunity for primary care providers to use preventative care methods to keep these patients from becoming high acute care users. The lists of complex patients have been provided to each Thamesview FHT physician to consider for proactive care interventions. Evidence suggests that a more proactive approach to identifying complex patients may be beneficial, rather than a reactive approach that identifies patients after they become high acute care users. In conclusion, the complex patient search may identify different patients at different primary care organizations. The data quality improvement initiatives at Thamesview FHT were crucial in the search’s ability to proactively identify complex patients.

Testimonial

“Data quality improvement initiatives have helped us to identify complex patients earlier, closely follow these patients, and ultimately keep them out of hospital. They have helped with improving the overall quality of care at the FHT because we can build out these patient lists. Our data wasn’t coded previously, so we weren’t able to easily do this.”

Dr. Ambreen Moazzam, Family Physician, Thamesview FHT

Questions

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Sources


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