Cancer Care Ontario
Action Cancer Ontario

Collecting and Sharing Colorectal Cancer Screening Data with Primary Care Providers

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SAR Screening Activity Report

Purpose

It has been well established that it is easier to decrease cancer mortalities through early detection and treatment, with primary care providers (PCPs) playing a central role in cancer screening. To assist PCPs in this work, Cancer Care Ontario (CCO) developed a Colorectal Screening Activity Report (CCC SAR) to complement existing cancer screening tools, facilitate efforts to increase cancer screening rates and appropriate follow-up, and encourage efficient coordination of cancer screening for screen-eligible patients.

The CCC SAR was developed for PCPs who practiced as part of a patient enrolment model (PEM) in Ontario. The CCC SAR was the first online report delivered to PCPs and their office managers via eHealth Ontario's ONE ID which allows physicians and delegates to access their patients' comprehensive colorectal cancer screening data in a safe and secure manner. By equipping PCPs with patient-level screening data that is grounded in CCO's evidence-based guidelines, the CCC SAR demonstrated an innovative and dynamic approach to increasing screening rates for colorectal cancer, and appropriate follow-up of abnormal results

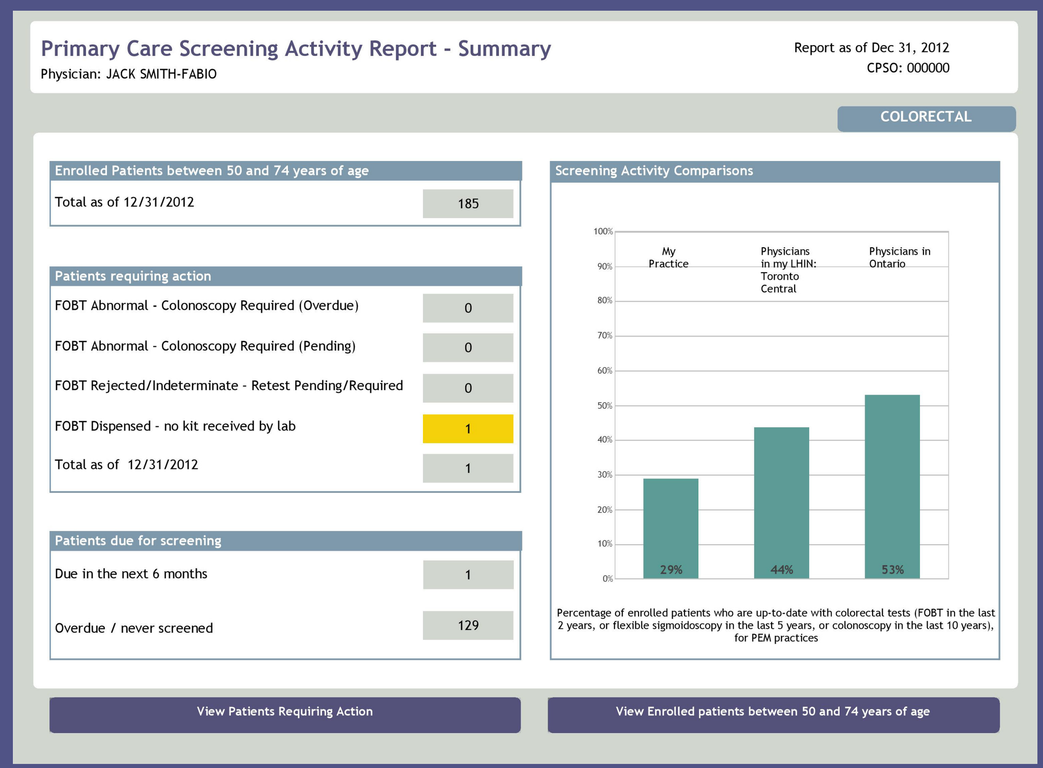

Fig.1: The SAR Dashboard

The Dashboard summarizes the screening statuses of a physician's patients and provides them with a comparison of their colorectal screening rates to those of peer physicians in their Local Health Integration Network (LHIN) and the province.

Fig.2: Evaluation Comparison Groups

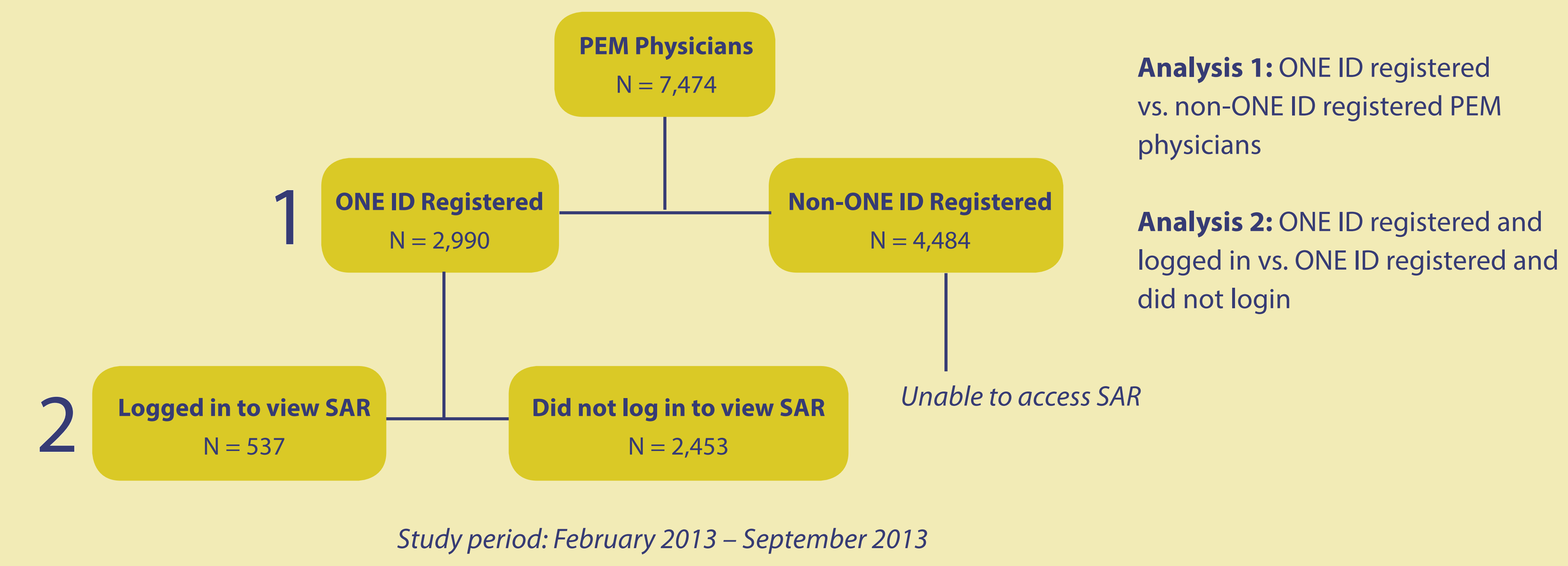

Fig.3: Patients Requiring Follow-up Report

HSP: JILL JONES-FABIO
CPSO: 030154
Report as of: 01-Dec-2010

Surname, Given Name		Date of Birth	Age	Sex	Health Card Number	Enrolled	1: FOBT Abnormal - Colonoscopy Required (Overdue) Date	2: FOBT Abnormal - Colonoscopy Required (Pending) Date	3: FOBT Rejected/Indeterminate - Retest Pending/Required Date	4: FOBT Dispensed - no kit received by Lab Date
ANDREWS	RHONDA		65	F	1111111111	Yes	16-Apr-2009			
ARMSTRONG	EVA		61	F	1111111111	Yes	24-Mar-2009			
BANKS	VERONICA		67	F	1111111111	Yes	21-Jul-2010			
BERRY	LEO		52	M	1111111111	Yes	27-Apr-2009			
CARROLL	ESTHER		67	F	1111111111	Yes	14-Apr-2009			
CASTILLO	SUZANNE		67	F	1111111111	Yes	30-Jul-2010			
CUNNINGHAM	JUANITA		71	F	1111111111	Yes	12-Mar-2009			

Approach

The CCC SAR provided PCPs with a summary of rostered patients' colorectal cancer screening-related history and status, as well as the screening status of any non-enrolled patients who required follow-up. The report was designed to support population-based and opportunistic screening by leveraging provincial administrative and clinical datasets. The screening data was refreshed twice annually, on a spring/fall cycle.

The CCC SAR is comprised of three distinct reports:

- **Dashboard** – One-page cancer screening status summary (Fig.1)
- **Enrolled and Eligible Patients** – Lists all enrolled patients in target age range and corresponding screening related history
- **Patients Requiring Follow-up** – Identifies patients who may require follow-up according to CCO's clinical guidelines (Fig.3)

Using a detailed methodology, the data was used to categorize patients by distinct cancer screening needs allowing for patients to be flagged if they required particular attention. Examples of such screening statuses included:

- **FOBT Abnormal; Colonoscopy Required (overdue):** patients who had a positive Fecal Occult Blood Test (FOBT) with no known follow-up colonoscopy beyond 120 days
- **FOBT Abnormal; Colonoscopy Required (pending):** patients who had a positive FOBT with no known follow-up colonoscopy within 120 days
- **FOBT Rejected/Indeterminate; Retest Pending/Required:** patients whose most recent FOBT was rejected/ indeterminate and who did not have a repeat FOBT
- **FOBT Dispensed; no kit received by lab:** For patients whom a Q150A claim had been made to the Ontario Health Insurance Plan (OHIP) but the FOBT kit had not been processed by a lab

The first launch of an online CCC SAR was in February 2013 and resulted in variable feedback from the primary care community; particularly on difficulties obtaining access to the report and the format of the data. As a result, improvements were made to the process of accessing the report and the data was also made available in a flexible Excel-based format to allow for enhanced filtering and sorting capabilities.

Results: Impact on Colorectal Cancer Screening Participation

A Generalized Estimating Equation model was used to evaluate the impact of the CCC SAR on screening participation rates. The primary outcome measures of interest included the completion of a FOBT and/or evidence of a colonoscopy following an abnormal FOBT result within six months of an eligible physician receiving access to their SAR.

Preliminary results of the report's impact on colorectal cancer screening participation rates from the first online release of the CCC SAR in February 2013 are promising. By communicating to providers which patients were overdue for screening, the SAR demonstrated a modest and statistically significant 6% increased likelihood of patients being screened using an FOBT if their physician was registered with ONE ID and eligible to access the report, compared to patients of unregistered physicians who were not able to access their SAR (fig.2). The impact on colorectal screening participation increased to 25% when comparing ONE ID registered physicians who logged in and viewed their SAR to registered physicians who did not login; however, this analysis is at a greater risk of a volunteer bias. Such physicians may be more likely to screen their patients for colorectal cancer independent of viewing their SAR.

Since this evaluation, as of September 2014, ONE ID registration has increased to nearly 5,100 PCPs having access to their SAR with adoption rates of 32%.

CCO will continue to evaluate the impact of the report on provincial cancer screening rates along with investigating the report's impact on follow-up of abnormal results.

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Conclusion

The CCC SAR was the first report of its kind for PCPs. The SAR can enhance practice level screening work through the provision of patient data in the form of clear, actionable groupings. The reports reduce the administrative time spent collating lists of patients who are overdue for screening or require follow-up of an abnormal result. The SAR has also been seen to provide supplementary cancer screening data that can be used to enhance EMR data within practices specifically rostering and colonoscopy data. Further qualitative investigation is underway to better understand how the CCC SAR was used in practice to support the increase in colorectal cancer screening participation.

By demonstrating the sharing of meaningful screening information to PCPs through the successful launch of two online CCC SARs, the report was expanded in April 2014 to include breast and cervical data. With the provision of a comprehensive report that provides meaningful information for PCPs that support their clinical and office management, better data can translate into better care for patients.

References: An Evaluation of Screening Activity Reports for the ColonCancerCheck Program. Lee A., Tinmouth J., Sutradhar R., Carr D., Hader J., Garay J. Cancer Care Ontario, 2014.

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