

Switching to FIT: Strengthening partnerships and relationships to improve a population based screening program in Ontario

C. DAVEY, J. TINMOUTH, B. MCCURDY, K. HARTMAN, C. JANSSEN, S. UMAR, N. CUNNINGHAM, C. DUBE

Background

- Colorectal cancer (CRC) is the second most common cause of cancer death in Ontario¹.
- The ColonCancerCheck (CCC) program is Ontario's organized, CRC screening program.
- CCC currently recommends screening with the guaiac fecal occult blood test (gFOBT) every 2 years for persons at average risk for CRC (see CCC Recommendations Summary handout).
- The CCC program will be switching to the fecal immunochemical test (FIT) in 2018.



Figure 1

About FIT

- FIT is a safe and painless stool-based test used for CRC screening.
- FIT checks for the presence of occult blood in the stool, which can be an early sign of CRC and/or pre-cancerous lesions (advanced adenomas).

Figure 2 Benefits of FIT vs. gFOBT^{2,3}

	gFOBT	FIT
# of samples required	3	1
Blood detection	300-600µg Hb/g*	10-20µg Hb/g
Sensitivity: One Time Test	47%	82%
Specificity: One time Test	96%	94%
Interference	Vitamin C, other sources of Hb	None
Lab process	Manual	Automated
Results	Qualitative	Quali- or quantitative

* Hb = Hemoglobin

There are no dietary or medication restrictions for patients using FIT.

FIT detects a lower quantity of blood in a stool sample than gFOBT.

Evidence for FIT Implementation

There is strong evidence to support the use of FIT in Ontario:

- Systematic reviews published by Cancer Care Ontario in 2012 and 2016 evaluated the evidence for screening adults at average risk of CRC with FIT.^{5, 6}
- A FIT pilot study conducted by CCO assessed the stability of FIT kits and evaluated methods of kit distribution and return in the Ontario setting.
- Some of the important advantages of FIT over gFOBT shown in the 2016 systematic review are outlined in figure 3.

Figure 3 FIT vs. gFOBT: Detection of Important Lesions⁶

	Relative risk (RR) (95% CI*)	# of person-years (# of RCTs*)
CRC/advanced adenoma detection	RR 2.15 (1.58 to 2.94)	51,634 (5 RCTs)
Participation rate	RR 1.16 (1.05 to 1.28)	52,038 (6 RCTs)

* CI = confidence interval, RCTs = randomized controlled trials

FIT vs. Colonoscopy

- There are several large, RCTs currently underway to compare FIT to colonoscopy for screening people at average risk of CRC.
- To date, results from the first round of screening are available from one study, a large Spanish RCT⁴ that is comparing one-time colonoscopy with four rounds of FIT screening (see figure 4).

Figure 4 FIT vs. Colonoscopy⁴

	Colonoscopy (n=26,703)	FIT (n=26,599)	P value
CRC detection	30	33	Not Significant
Advanced adenoma detection *	514	231	<0.001
# needed to scope to find 1 CRC	191	18	
Complication rate	24	10	<0.001
Patient preference	1% switched to colonoscopy from FIT arm	23% switched to FIT from colonoscopy arm	

* Note: in the study, we expect more advanced adenomas to be detected for participants randomized into the FIT arm as they have four more rounds of screening over the study period, whereas, participants in the colonoscopy arm will only ever have one during the study period.

When given the option, patients prefer FIT over colonoscopy for CRC screening.

Anticipated Partnerships

To ensure a successful transition to FIT in Ontario, primary care partnerships will need to be developed and strengthened. Partnerships will be needed between:

Patients and Providers

- to provide effective counselling on FIT so patients understand what FIT is and how to complete the test correctly
- to encourage patients to use FIT instead of colonoscopy for average risk screening
- to confirm the patient mailing address is correct to ensure receipt of the FIT kit

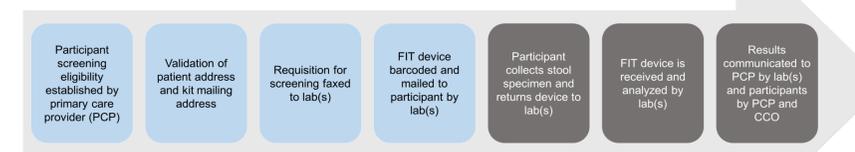
Endoscopists and PCPs

- to ensure that FIT+ persons have prompt access to high quality colonoscopy
- to support the transition from colonoscopy to FIT for primary screening of people at average risk for CRC
- to support adherence to CCC recommendations for surveillance after colonoscopy

Laboratory/Laboratories and PCPs

- to ensure timely and secure communication between the lab and PCPs when ordering FIT
- to ensure PCPs are aware of any practice customization required to ensure receipt of reports from the labs
- to communicate the recommended follow up steps along with a FIT+ result

Figure 5 New FIT Screening Process



Ordering and distribution

PCPs will continue patient counselling and recruitment
NEW PCPs will no longer provide the kit to their patients or maintain test kit inventory
NEW FIT requisition faxed directly to lab (central intake)
NEW Lab to validate participant eligibility and requisition completeness
NEW Centralized distribution of FIT kit by lab

Receiving, testing, and reporting

Completed kits returned to lab by mail
NEW Return within 7-14 days to return completed kit to lab
NEW Lab will contact participant if collection date requires clarification

Conclusions

- For primary care providers:**
 - FIT is more accurate than gFOBT.
 - FIT kits will be mailed to participants from a central location.
 - PCPs will need to validate patient mailing address for FIT kit mailing.
- For patients:**
 - FIT is a single sample, at home test, that is more accurate than gFOBT.
 - Does not require dietary or medication restrictions.
- FIT will be available for eligible persons in 2018**

References:

- Canadian Cancer Society's Advisory Committee on Cancer Statistics. Canadian Cancer Statistics 2017. Toronto, ON: Canadian Cancer Society; 2017.
- Lee JK, Liles EG, Bent S, Levin TR, Corley DA. Accuracy of Fecal Immunochemical Tests for Colorectal Cancer: Systematic Review and Meta-analysis. *Ann Intern Med.* 2014;160:171-181. doi: 10.7326/M13-1484.
- Canadian Task Force on Preventive Health Care. Screening for Colorectal Cancer. 2014
- Quintero E., et. al., Colonoscopy versus Fecal Immunochemical Testing in Colorectal-Cancer Screening *NEJM* 2012;366:697-706
- Rabeneck L, Rumble RB, Thompson F, Mills M, Oleschuk C, Whibley A, et al. Fecal immunochemical tests compared with guaiac fecal occult blood tests for population-based colorectal cancer screening. *Can J Gastroenterol.* 2012 Mar;26(3):131-47.
- Tinmouth J, Vella E, Baxter NN, Dubé C, Gould M, Hey A, et al. Colorectal cancer screening in average risk populations: Evidence summary. Toronto (ON): CCO; 2015 November 11. Program in Evidence-based Care Evidence Summary No.:15-14.