

Report on the Expert Forum on Using Information Technology to Facilitate Uptake and Impact of Colorectal Cancer Screening Guidelines

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The present report summarizes the proceedings of the pan-Canadian Expert Forum on Using Information Technology to Facilitate Uptake and Impact of Colorectal Cancer Screening Guidelines, which was held in Montreal, Quebec, November 18 to 19, 2011. The meeting assembled a multidisciplinary group of family physicians, gastroenterologists, nurses, patients, foundation representatives, screening program administrators and researchers to discuss the development of a mechanism or strategy that would permit the collection of comparable data by all colorectal cancer (CRC) screening programs, which would not only support the needs of each program but also provide a national perspective. The overarching theme of the meeting was 'designing a national approach to computerized electronic data collection and dissemination for CRC screening that would improve knowledge transfer across the continuum of preventive health care'. The forum encouraged presentations on clinical, research and technical topics. The meeting fostered valuable cross-disciplinary communication and delivered the message that it is essential to develop a national health informatics approach for CRC screening data collection and dissemination to support provincial CRC screening programs.

Key Words: *Colorectal cancer; Information technology; National registry; Report; Screening*

Effective transmission of screening information is essential to the successful implementation of colorectal cancer (CRC) screening guidelines and to the evaluation of their uptake and impact on patient health outcomes. Increasingly, information technology (IT) is playing an important role in facilitating health care and health information management. Because most provinces in Canada have already begun (or will soon begin) CRC screening programs (1), there is an urgent need for IT solutions to support these programs. A pan-Canadian meeting was held in Montreal, Quebec, November 18 to 19, 2011, aimed at discussing the development of a national strategy for CRC screening data collection and dissemination throughout the continuum of care. The three major accomplishments of the meeting were that: it brought together stakeholders from across the nation to share expertise and 'brainstorm' this initiative; it encouraged stakeholder groups to identify their needs; and it created a steering committee to advance the development of a national health informatics strategy for CRC screening.

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Un rapport sur le forum d'experts sur l'utilisation de la technologie de l'information pour faciliter l'adoption et les répercussions des lignes directrices sur le dépistage du cancer colorectal

Le présent rapport résume les débats du forum pan-canadien d'experts sur l'utilisation de la technologie de l'information pour faciliter l'adoption et les répercussions des lignes directrices sur le dépistage du cancer colorectal, qui a eu lieu à Montréal, au Québec, les 18 et 19 novembre 2011. Ce forum a rassemblé un groupe multidisciplinaire de médecins de famille, de gastroentérologues, d'infirmières, de patients, de représentants de fondations, d'administrateurs de programmes de dépistage et de chercheurs pour discuter de l'élaboration d'un mécanisme ou d'une stratégie qui permettrait de colliger des données comparables dans tous les programmes de dépistage du cancer colorectal (CCR), lesquelles appuieraient non seulement les besoins de chaque programme, mais fourniraient également un point de vue canadien sur le sujet. Le forum visait à élaborer une approche nationale de la collecte et de la diffusion de données informatisées sur le dépistage du CCR qui améliorerait le transfert du savoir dans le continuum des soins de santé préventifs. Le forum favorisait des présentations sur des sujets cliniques, techniques et de recherche, de même que des communications interdisciplinaires précieuses. Il a fait ressortir toute l'importance d'adopter une approche nationale de l'informatique en santé pour la collecte et la diffusion de données sur le dépistage du CCR afin d'en soutenir les programmes.

MEETING ATTENDEES

The meeting was attended by 21 researchers, family physicians, gastroenterologists, nurses, patients, foundation representatives and screening program administrators (mean age 48 years, 52% female) (Table 1). Results of a premeeting survey of 18 invitees' (excluding meeting organizers) background, experience with health informatics systems and beliefs are presented in Table 2. All invitees agreed that there is a need for health informatics solutions to support CRC screening.

Fifteen attendees shared their knowledge of the current CRC screening landscape and health informatics through formal presentations. The Canadian Partnership Against Cancer representative described the pan-Canadian approach to standardizing pathology data capture through synoptic reporting and to developing electronic tools, which illustrated a collaborative model and the steps required to integrate IT systems into clinical practice. Initiatives in colonoscopy synoptic reporting are under discussion. Researchers presented on important aspects of colonoscopy quality assessment, such as poor data

TABLE 1
Characteristics of meeting attendees (n=21)

Characteristic	
Age, years, mean \pm SD	47.6 \pm 11.6
Female sex	11 (52.4)
Province/state of residence	
Quebec	7 (33.3)
Alberta	4 (19.0)
Ontario	3 (14.3)
Manitoba	3 (14.3)
British Columbia	2 (9.5)
Nova Scotia	1 (4.8)
Oregon (USA)	1 (4.8)

Data presented as n (%) unless otherwise indicated

quality and lack of linkage between databases, and discussed the challenges of integrating quality assurance into existing data collection systems. Issues regarding guideline implementation at the point of care were reviewed, including quality assurance for gastroenterologists, and determination of screening eligibility and completeness of endoscopy reporting for family physicians. Screening program leads and health IT experts discussed the existing screening processes and electronic systems used in Canada and the United States, some of which have difficulties with database access and linkages. The Canadian Cancer Society representative presented results from a survey that was conducted specifically for the purposes of the meeting, in which patients indicated that IT can improve their screening experience by providing access to information on colonoscopy scheduling (eg, update on wait time to colonoscopy) and screening test results, and by sending screening invitations and reminders.

Stakeholder needs

To promote 'buy-in' for a national health informatics strategy, stakeholder needs should be addressed from inception. Participants were divided into stakeholder groups to address the endoscopist (n=9), family physician (n=6) and patient (n=6) perspectives. Each group was tasked with brainstorming the necessary components and functions of electronic solutions to support screening programs, and describing the steps to be taken for their actualization.

Patients

Patients and patient representatives believed that an online portal capable of scheduling appointments, sending reminders and providing test results, interpretations and recommendations promotes active patient involvement in screening and follow-up care activities. In addition, providing access to the portal delivers patient-centred care and facilitates dissemination of screening information, thereby improving the quality of the screening experience. Implementation of the portal must consider privacy laws in each province. The group believed that standardization of colonoscopy reporting would facilitate quality assurance, and that published institutional quality reports would assist patients with decision making regarding their screening and care activities.

Family physicians

Electronic solutions that support provincial screening policies would facilitate the identification of individuals eligible for screening and the timely distribution of invitations, reminders and notifications to patients and family physicians. Access to primary screening and diagnostic test results would increase family physicians' awareness of patients' screening and follow-up activities, allowing them to promote timely/appropriate follow-up and adherence to screening guidelines. Test results should be disseminated to family physicians in a standardized format with complete information. Implementation should start regionally and subsequently spread throughout Canada.

TABLE 2
Premeeting survey results for invitees (n=18)

Survey item	n (%)
Primary profession	
Physician who sees patients	7 (38.9)
Researcher	3 (16.7)
Health informatics specialist	1 (5.6)
Nurse	1 (5.6)
Endoscopist	7 (38.9)
Other	6 (33.3)
Had a colonoscopy	5 (27.8)
Previously involved in health informatics projects	14 (77.8)
Believe there is need for colorectal cancer screening health informatics solutions	18 (100)
Believe there should be one colonoscopy data collection form for Canada	12 (66.7)
Believe some of the data should be made available to the public at large	16 (88.9)
Who should have access to at least part of this information?	
Primary care physicians	18 (100)
Endoscopists	16 (88.9)
Patients	13 (72.2)
Other health professionals	12 (66.7)
Patient's family members	4 (22.2)

Endoscopists

From the service perspective, electronic systems can support provincial screening programs through enhanced data collection, clinical decision support and resource management. Endoscopy is an essential component of all provincial CRC screening programs and the IT endoscopy reporting module is necessary for assessing service access, quality and safety. Synoptic (standardized) reporting would facilitate the linkage of endoscopic reporting with pathology findings to further support quality analysis and follow-up recommendations. Existing electronic endoscopy reporting systems are limited in both customizability and interoperability. Establishing a national consensus on the development and maintenance of an endoscopic reporting data model based on terminology standards would encourage the availability of effective and affordable solutions in the marketplace.

NEXT STEPS

A six-member Steering Committee (DA, ANB, DM, PR, BS and MJS) was created to push the agenda forward. We have identified additional stakeholders that need to be included: patients, physicians, researchers, ethicists, provincial screening programs, laboratories, informatics consultants, hardware/software companies, professional associations, government, patient representatives and foundations. Given that standardized data collection and service quality assessment in colonoscopy were concerns raised by all three stakeholder groups, one of our next steps is to focus on the colonoscopy data model. The specific aims are to establish thresholds for colonoscopy quality indicators and to develop an electronic colonoscopy reporting model to support standardized data collection. A project for national colonoscopy synoptic reporting has recently received funding from the Canada Health Infoway Innovation Fund. Direct patient access to screening information and provider communication was emphasized as key to success, quality and sustainability. We plan to engage patients by developing questionnaires to solicit their feedback on patient-derived indicators of colonoscopy quality.

REFERENCE

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CONCLUSIONS

The meeting provided the opportunity for experts to begin addressing the major challenges associated with the development and implementation of a national strategy for data collection and dissemination to support CRC screening. The meeting was well received and several individuals provided positive feedback such as:

...[it was] very successful in establishing some strategic priorities to improve quality, access and communication related to colon cancer screening and follow-up; and

...it was a good start to a difficult problem

All attendees endorsed the national approach to the development of health informatics solutions for CRC screening as a priority for Canada because it ensures the delivery of high-quality care. The momentum gathered from the meeting, the spirit of collaboration fostered among participants and the expertise of collaborators will help to push this initiative forward.

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