ABSTRACT
The multidisciplinary pan-Canadian CanIMPACT (Canadian Team to Improve Community-Based Cancer Care Along the Continuum) group is studying how to improve cancer care for patients in the primary care setting. A consultative workshop hosted by the team took place on 31 March and 1 April 2016 in Toronto, Ontario. The workshop included 74 participants from 9 provinces, with representation from primary care, cancer specialties, international liaisons, knowledge users, researchers, and patients. On the agenda were presentations from CanIMPACT phase 1 projects including:

- qualitative studies on the perspectives of survivors and health care providers about continuity and coordination of care;
- an environmental scan and systematic review of existing initiatives designed to improve care integration;
- population-based administrative health database analyses related to breast cancer diagnosis, treatment, and survivorship; and
- a qualitative study on the experiences, desired roles, and needs of primary health care providers with respect to personalized medicine.

In addition, there were presentations on two possible intervention approaches, including nurse navigation and the eConsult system. Based on the information presented, participants worked in small groups to develop recommendations for phase 2, which will involve development and evaluation of an intervention to improve the integration of care between primary care providers and cancer specialists. After a process of deliberation and voting, workshop participants recommended testing the implementation of eConsult in the oncology setting to determine whether it improves relationships, communication, knowledge sharing, and connections between family doctors and cancer specialists; and, to improve system navigation, evaluating eConsult in existing nurse navigator programs, if feasible.

Key Words  Primary health care, oncology care, coordination of patient care, cancer care delivery, models of care, cancer care continuum

INTRODUCTION
Primary care is the first and most frequent point of contact for cancer patients within the health care system during most phases of cancer care. Cancer patients rely on good integration of care between their family physician and their cancer specialist throughout the cancer journey. However, problems of communication, integration, and coordination of care are well documented. Those problems can lead to suboptimal care and anxiety for patients and their families, as well as inefficiencies within the health care system. From the perspective of primary care, cancer is of critical importance because of the complexity and urgency of care needs. The expanding role of primary care in cancer care is increasingly recognized, and better integration between primary care and cancer specialist care is considered essential.

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a A full list of the CanIMPACT investigators appears in the Acknowledgments.
CanIMPACT: CANADIAN TEAM TO IMPROVE COMMUNITY-BASED CANCER CARE ALONG THE CONTINUUM

The multidisciplinary pan-Canadian canIMPACT group (http://canimpact.utoronto.ca) is studying how to improve cancer care to patients in the primary care setting. The Canadian Institutes of Health Research provided funding to canIMPACT for 5 years (2013–2018, http://www.cihr-irsc.gc.ca/e/47154.html).

The canIMPACT group comprises primary care and cancer specialist health professionals; researchers with expertise in epidemiology, biostatistics, knowledge translation, and qualitative and quantitative methods (including population-based administrative health database analysis and community-based pragmatic trials); patients; policymakers; and knowledge users spanning seven provinces, plus international liaisons in Denmark, Australia, England, and the United States.

With guidance from a Patient Advisory Committee, a Scientific Advisory Committee, and a Scientific, Common Methods and Management Committee (organizational structure presented in Figure 1), canIMPACT’s activities were divided into two phases:

Phase 1 (complete)

- This phase involved foundational descriptive research consisting of 4 streams of inquiry:
  - Qualitative studies of stakeholder perspectives and contextual factors related to the coordination of care between primary care and cancer specialist care6–8.
  - A pan-Canadian environmental scan and systematic review to identify and understand the implementation of care models designed to improve integration between primary care and cancer specialist care9–11.
  - Quantitative analyses that are using population-based administrative health databases in 5 provinces to make inter- and intra-provincial comparisons of the breast cancer diagnosis, treatment, and survivorship phases of care8,10,11.
  - A study of the experiences, desired roles, and needs of family physicians with respect to personalized cancer medicine12,13.

Phase 2 (in progress)

- This phase was initiated with a consultative workshop at which a synthesis of findings from phase 1 was presented to the multi-stakeholder workshop participants, and during which recommendations were made for approaches to improve integration of care.

The conference proceedings, including participants, processes, and conclusions are presented here.

Consultative Workshop Process

The purpose of the consultative workshop was to establish and prioritize recommendations for an intervention to improve integration of care between primary care providers and cancer specialists. A deliberative process was established to prioritize recommendations for an intervention to improve integration of care. The approach recommended at the workshop will determine the research to be conducted in phase 2.

Participants

The 74 participants in the workshop were determined through a snowball sampling approach that identified individuals representing these stakeholder groups: 9 Canadian provinces; patients, primary care clinicians, and cancer specialist clinicians; policymakers from cancer agencies; managers and knowledge users from cancer care delivery organizations; and cancer researchers. Core members of the canIMPACT team were asked to nominate individuals from their jurisdiction who represented one of the stakeholder groups. Individuals were invited to participate or to nominate another individual from their jurisdiction. In this way, a cross-section of stakeholders from across Canada, plus members of the Patient Advisory Committee and canIMPACT’s international liaisons participated in the workshop. Table 1 lists the stakeholder groups represented by the workshop participants.

Process

Presentations on the first morning of the workshop provided background and context:

- A keynote address by Dr. Stephen Taplin, Deputy Associate Director, Healthcare Delivery Research Program, Division of Cancer Control and Population Sciences, U.S. National Cancer Institute, provided an international perspective.
- The foundational research conducted during phase 1 of canIMPACT (published in this issue of Current Oncology6,9–11 and elsewhere6,8,10,13,14) was reviewed in detail.
- Two examples of potential interventions—one involving a nurse navigator based in a family health team (presented by Sarah Givens)15, and the other involving eConsult, an innovative electronic approach to primary care–specialist communication (http://www.champlainbaseconsult.com)—were detailed.
- In-depth visual representations of the cancer continuum from the health system and patient perspectives in the form of “gigamaps“16 were presented.

Potential Scenarios for Phase 2 Evaluation

Four potential scenarios for evaluation in phase 2 were presented as a springboard for discussion.

Scenario 1

Develop and pilot-test an evaluation framework for models of care designed to improve integration between primary care and cancer specialist care.

Summary: To develop and pilot-test an evaluation framework that can be applied to a model of care (such as navigation). The framework could be pilot-tested on selected initiatives—for example, 1 of the 13 initiatives described in the casebook (downloadable from http://canimpact.utoronto.ca/streams-and-themes/knowledge-translation/) that include navigation. This choice would advance the science from a measurement and quality
indicator perspective and increase the likelihood that more definitive conclusions can be made about the effectiveness of any intervention.

**Benefits:** Specific challenges to integration of care vary depending on local circumstances. For example, travel is an important issue for rural patients and telemedicine has been viewed as a possible alternative. In some regions, receipt of transcription from oncology to family medicine is a problem; it is not a problem in other areas, or when oncology and family medicine are part of the same institution. The framework would allow for the development of approaches tailored to local circumstances. It could be built around a theoretical framework such as the Consolidated Framework for Research Implementation.17

**Limitations:** This scenario would not directly implement and test an innovative model of care. The extent to which the scenario would be valuable for jurisdictions, organizations, or professional groups aiming to improve coordination of care is unclear.

**Scenario 2**

Conduct a pilot or feasibility trial of a navigation model based in primary care.

**Summary:** A feasibility study would provide the necessary information and data required to develop a full-scale trial. The research question could be “Is navigation based in primary care an effective way to improve integration between primary care and cancer specialist care along the cancer continuum?” Primary outcomes could be metrics of integration or coordination, and secondary outcomes could include satisfaction (patient and provider), costs, quality of life, and emergency room avoidance. The feasibility study could explore issues of recruitment, successful randomization, preliminary estimates of effect, and assessment of required sample size for a full-scale trial.

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**TABLE 1** CanIMPACT consultative workshop stakeholder groups and participants

<table>
<thead>
<tr>
<th>Stakeholder group</th>
<th>Participants (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surgical oncology</td>
<td>1</td>
</tr>
<tr>
<td>Radiation oncology</td>
<td>2</td>
</tr>
<tr>
<td>Medical oncology</td>
<td>6</td>
</tr>
<tr>
<td>Primary care</td>
<td>19</td>
</tr>
<tr>
<td>Nursing</td>
<td>5</td>
</tr>
<tr>
<td>Knowledge user</td>
<td>19</td>
</tr>
<tr>
<td>Researcher</td>
<td>13</td>
</tr>
<tr>
<td>International liaison</td>
<td>5</td>
</tr>
<tr>
<td>Trainee</td>
<td>8</td>
</tr>
<tr>
<td>Patient advisory committee</td>
<td>7</td>
</tr>
</tbody>
</table>

*Some participants are double-counted because they represent two different stakeholder groups (for example, primary care and research).*

**FIGURE 1** Organizational structure of CanIMPACT (Canadian Team to Improve Community-Based Cancer Care Along the Continuum). KTE = knowledge translation and exchange.
Benefits: A feasibility study would provide essential information for moving to a full-scale trial. Although strong evidence supports the role of navigators in cancer screening and other aspects of cancer care, having the navigator based in a primary care team practice is novel and innovative. A navigator based in a primary care team practice could support all cancer patients of the team practice from the peri-diagnostic process through to survivorship, thus supporting continuity of care and, potentially, coordination of care. This intervention would be based on the model introduced at the North Perth Family Health Team (presented by Sara Givens).

Limitations: It might be that this model would be feasible to implement only in a limited number of primary care practices, such as team practices, potentially limiting its scalability and generalizability.

Scenario 3
Development of an online repository of cancer-specific guidelines and tools tailored for family physicians. Develop and test a rigorous strategy to disseminate the tools and assess their value for supporting family physicians and improving quality of care.

Summary: Create an online space containing tools and resources to support primary care provision of quality care to cancer patients. Development would involve determining the type of tools and resources to include (for example, clinical practice guidelines on survivorship care; tools for management of chemotherapy-related toxicity; decision support tools for assessing genetic predisposition); the larger implementation strategy would disseminate the online tools.

Benefits: This scenario would provide a resource accessible to providers across Canada and beyond. We have been in discussion with the College of Family Physicians of Canada who would potentially host the resource.

Limitations: Issues related to access to just-in-time information for several cancer types and various phases of care would be addressed. Issues of integration or coordination and communication between primary care and oncology would not directly be addressed. This initiative could be coupled with another online resource such as eConsult (see scenario 4).

Scenario 4
Test eConsult in the oncology setting alone or in combination with another scenario.

Summary: eConsult is a secure Web-based tool that provides primary care with quick access to specialty care. The family physician can submit a non-urgent patient-specific question to a participating specialist. The tool has been tested for many specialties, but has never been applied or tested in the oncology setting. Applications to oncology could potentially occur during diagnosis, active treatment, and survivorship transitions. The system is in place in Ontario (Champlain and Mississauga Halton local health integration networks) and is being introduced in Newfoundland and Labrador. We would therefore have to work within those jurisdictions to engage oncology participation.

Benefits: eConsult uses secure Web-based technology to facilitate simple, effective, and timely (but not real-time) communication between primary and specialist care providers. It is a growing, low-cost service in Ontario, with good feedback from primary care providers. Current goals include avoidance of referrals and increased confidence for cancer care within primary care settings; ultimate goals include a low-cost service delivery model that provides primary care providers with specialist advice within days, improved quality of care delivery, and reduction of face-to-face referrals\(^{18,19}\).

Limitations: This scenario is not as patient-centred as the scenario involving patient navigation.

Small-Group Deliberations and Voting
During the afternoon of day 1 and the morning of day 2, workshop participants met in small groups, during which they made a “case” for adoption of the specific scenario they supported. In addition to the 4 scenarios described in Potential Scenarios for Phase 2 Evaluation, “hybrid” or alternative scenarios were proposed by the groups. In the end, the small-group deliberations involved a total of 8 scenarios. Each small group built a “case” for their scenario and argued the case at plenary, which allowed for further refinement of the scenarios with all workshop participants involved.

Workshop participants then used i-clicker technology (https://www1.iclicker.com) to rate their support on a scale from 1 (low) to 4 (high) for each scenario based on 5 key criteria (participants had been made aware of the criteria at the start of the meeting):

- Does the scenario have the potential to improve integration or coordination of care between primary care and cancer specialists?
- Is the scenario feasible to test within the constraints of CanIMPACT?
- Is the scenario patient-centred?
- Is the scenario generalizable or adaptable across settings?
- Is the scenario scalable and sustainable?

Participants rated their overall support for each scenario as it was presented, and they then rated their support for the entire set. Given that votes were spread over 8 scenarios, no single scenario emerged as the leader. A subsequent discussion consolidated the dominant scenarios into two sets (for example, all navigation scenarios, because they were very similar, were combined into one set). In the final round of voting, a modified form of eConsult, in settings with and without existing navigation programs, received a majority of votes as being the most feasible, generalizable, adaptable, scalable, and sustainable.

CONSULTATIVE WORKSHOP RECOMMENDATIONS

The intervention evaluated in phase 2 should be actionable, adaptable to various contexts, and easy to use. Although
no single solution will work in every context, factors that will facilitate success include effective engagement of stakeholders (an integrated knowledge transfer approach); good governance, with clear roles and responsibilities; use of champions; commitment to evaluation; and due consideration for the complexities of large-scale initiatives.

The intervention recommended to be tested in phase 2 is implementation of eConsult in the oncology setting to consider for the complexities of large-scale initiatives. The study should also explore various cost-effective models for the introduction of this innovative intervention.

SUMMARY AND CONCLUSIONS

Problems of communication, integration, and coordination between primary care and cancer specialist care have been reported for many years despite the recognized pivotal role of primary care in quality of care throughout the cancer control trajectory. Improving integration of care is complex and must consider the multilevel context of cancer care. Nevertheless, interventions to improve integration of care must be feasible, testable, scalable, sustainable, and adaptable to local contexts within the current cost-constrained environment of health care.

The goal of the consultative workshop held by CanIMPACT, which involved multidisciplinary stakeholders from across Canada, was to identify an intervention that meets the foregoing criteria. Through a deliberative process of small-group discussions, plenary discussions, and voting, support was given to the development of an intervention using the innovative eConsult technology, adapted to the oncology setting.

Phase 1 of CanIMPACT involved multi-method foundational research that informed the deliberations at the workshop. With the direction given at the workshop for the phase 2 intervention research, the CanIMPACT team will begin developing and testing the intervention in several contexts throughout Canada.

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CONFLICT OF INTEREST DISCLOSURES

We have read and understood Current Oncology’s policy on disclosing conflicts of interest, and we declare that we have none.

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REFERENCES


a Scientific, Common Methods and Management Committee (with Julie Easley, Sharon Matthias, Geof Porter, and Jennifer Tomason).
b Strategic Advisory Committee (with Craig Earle, Sharon Matthias, Jamie Meuser, Stephen Taplin, and Fiona Walks).
c Knowledge Translation Subgroup (with Jennifer Tomason, Margaret Tompsoon, Robin Urquhart, Richard Wassersug, and Fiona Webster).
d Qualitative Methods Subgroup (with Julie Easley, Mary Ann O’Brien, and Fiona Webster).
e Personalized Medicine Subgroup (with Fiona Miller, Sandhya Pruthi, Nancy Schneider, and Catarina Versaevel).
f Patient Advisory Committee (with Julie Easley, Sharon Matthias, Dawn Powell, Nancy Schneider, Margaret Tompsoon, Catarina Versaevel, Bonnie Vick, and Richard Wassersug).
g Quantitative Methods Subgroup (with Margaret Jorgensen, Cynthia Kendall, Nicole Mittmann, Dawn Powell, and Bonnie Vick).


