Addressing high priority issues in cancer care

Ontario Institute for Cancer Research - Cancer Care Ontario
Health Services Research Network
About the Health Services Research Network

The Health Services Research Network is a collaboration between the Ontario Institute for Cancer Research (OICR) and Cancer Care Ontario (CCO) to provide the knowledge needed to optimize the delivery of cancer services and to ensure appropriate dissemination of health service innovations and well-evaluated technologies. The Network's vision is to contribute to a future where fewer people develop cancer, those who do are diagnosed promptly and at earlier stages, treatment is safer, more equitable and of higher quality and the cancer system is economically sustainable.
About the Synthesis Report

Optimal cancer care across Ontario cannot be solely provided by a clinician or implemented by a researcher, enacted by a policy maker or attained by a patient. To improve the delivery of cancer services, we need to work together with stakeholders from across our rich cancer care ecosystem and involve them in prioritizing concerns, designing interventions and implementing solutions. For these reasons, OICR and CCO teamed up to co-create the OICR-CCO Health Services Research Network.

Now, a decade later, we present our second Synthesis Report with an additional 14 studies that have emerged from this network. These studies have addressed high priority issues in cancer care including the gap in follow up after a positive colorectal cancer screening test, and the challenges that cancer patients face with co-existing chronic conditions like diabetes. The studies have led to the development of new methods to determine the burden of cancer in Ontario, and new resources to facilitate health services research across the province. This report provides summaries of these studies and others and their impact to date. We look forward to further disseminating the resulting resources and knowledge over the coming years.

This report is intended for researchers and those involved with the delivery of cancer care, but anyone with an interest in cancer care could find the report valuable.

Sincerely,

Christine Williams, PhD
Deputy Director & Head of Clinical Translation, OICR
Program Director, Health Services Research Network

Eva Grunfeld, MD, DPhil, FCFP
Vice-Chair, Research, Department of Family and Community Medicine, University of Toronto
Director, Knowledge Translation Research Network, Health Services Research Network
Health Services Research Network studies

The following 14 studies addressed high-priority issues in cancer care. These studies used innovative approaches to enhance the organization and delivery of care in Ontario and to accelerate the translation of research into policy and practice.

Administrative databases for oncology case costing in Ontario

Improving the management of pain in cancer patients in Ontario

Ambulatory toxicity management (AToM)

cd-link: Reducing barriers to health research across the province

Improving chronic disease outcomes in cancer survivors

Improving follow-up of abnormal stool tests in Ontario

Increasing use of contralateral prophylactic mastectomy: A concern for over-aggressive treatment of early stage breast cancer patients

Building capacity for provincial reflex Lynch syndrome testing in Ontario

Are patient educational materials on cancer screening more effective when co-created with patients? A qualitative interview study and randomized controlled trial

Cancer symptom management by radiation therapists: Evaluating implementation of evidence-informed practice guides

CEASE: A novel electronic patient-directed knowledge translation tool to improve smoking cessation in cancer patients

A partnered approach to create a peer support strategy and promote shared decision-making with Inuit in their cancer care

Promoting the adoption of knowledge translation advancements to improve outcomes for people affected by cancer and cancer system performance

Testing a behavioural approach to improving cancer screening through increased use of the Cancer Care Ontario Screening Activity Report
Administrative databases for oncology case costing in Ontario

Studying the cost of cancer is a complex, but understanding these costs helps inform health care policy decision-making, resource allocation and prioritization.

Dr. Nicole Mittmann et al. created two oncology-specific costing methodologies: one for cancer-related medications (Cancer Medication Costing Algorithm, CMCA) and one for radiation treatment (Cancer Radiation Costing Algorithm) for more specific, comprehensive cancer costing evaluations.

They used a bottom-up approach to determine the cost of treatment at the individual patient encounter level. Where individual health sector costs were not available, they used a top-down approach to allocate aggregated costs to each patient encounter. Direct treatment costs were calculated from the perspective of the Ontario public healthcare payer, so costs incurred by the individual patient or private insurers are not addressed. Person-level utilization data on treatment encounters are available in province-wide administrative databases maintained by the Ministry of Health and Long-Term Care (MOHLTC), the Canadian Institute for Health Information (CIHI) and Cancer Care Ontario (CCO).

Mittmann et al. used a similar methodology as those published by Wodchis et al. (2013), which pulled resources from a number administrative database sources and used provincial-level costing applied to those resources to generate a cost per patient. All datasets were linked using unique encoded identifiers and analyzed at ICES.

Mittmann’s algorithms are now available for approved use by other researchers through ICES. Several analyses have already been conducted using these two novel algorithms, 15 of which have been published in peer-reviewed journals.

With the Health Services Research Network’s support and the support of the Canadian Centre for Applied Research in Cancer Control (ARCC), Mittmann has led and published an eight-piece supplement on cancer costing in the journal Current Oncology, and established partnerships and collaborations with CCO, ARCC and other researchers.

PUBLICATIONS (SINCE 2015)


Improving the management of pain in cancer patients in Ontario

Dr. Lisa Barbera and collaborators linked and analyzed various provincial healthcare datasets at ICES to:

Explore the use of opioids in cancer survivors in Ontario
Barbera et al. found that opioid prescribing for cancer pain has decreased over time and that patients who use opioids continuously for five years following their diagnosis are more likely to continue using opioids after five years. While safe and appropriate pain management is an important survivorship issue, Barbera expects that accessing opioids will become more difficult, which may impact pain management for cancer patients.

Examine the impact of implementation of the Improving Patient Experience and Health Outcomes (iPEHOC) Patient Reported Outcome Measures (PROMs) on healthcare use, such as emergency department (ED) visits, hospitalizations, psychosocial oncology, palliative care visits, and opioid and anti-depression prescriptions
The group also discovered that among patients who received the iPEHOC intervention, there was a small reduction in ED, psychosocial oncology and palliative care visits, and a small increase in the rates of opioid and anti-depressant prescriptions relative to patients with no intervention. Implementation of PROMs in the everyday practices of clinicians is a major organizational change that requires the use of knowledge translation and facilitated change management approaches, which Barbera has continued to investigate.

Develop an algorithm to identify cancer patients who can benefit from early referral to palliative care
Barbera et al. also operationalized six major criteria, originally proposed by an international Delphi panel, to identify lung cancer patients who could benefit from early referral to palliative care. They propose that using this model for other common cancers may be a valuable tool to estimate the number of patients who might benefit from a palliative approach to care.

Barbera expects that these findings will help clinicians to ensure that cancer patients receive adequate pain management, and will also help in timely identification and referral of cancer patients who need multidisciplinary specialized supportive cancer care.

Cancer adversely impacts the physical, psychosocial, and existential health of patients and addressing these issues is a critical component of their overall cancer care. Previous studies suggest that cancer patients tend to receive suboptimal treatment for many of their symptoms, including their pain. Previous research in Ontario has shown that up to 33% of cancer patients with severe pain do not receive opioids at the time of their pain assessment.

The main aim of this study was to explore the issue of undertreatment of pain in cancer patients, with intent to improve pain management of this patient population.

LED BY
Lisa Barbera
University of Calgary
Tom Baker Cancer Centre

COLLABORATORS
Rinku Sutradhar
ICES
Mary Ann O’Brien
University of Toronto
Hsien Seow
McMaster University
Deb Dudgeon
Queen's University
Clare Atzema
ICES
Craig Earle
Canadian Partnership Against Cancer
Doris Howell
University Health Network
Carlo DeAngelis
Sunnybrook Health Sciences Centre
Jonathan Sussman
McMaster University

PUBLICATIONS
Barbera L et al.

Barbera L et al.

Barbera L et al.

Barbera L et al.

Sutradhar R et al.
Ambulatory Toxicity Management (AToM)

Acute care visits are very common among patients receiving chemotherapy, and the widespread need for these visits suggests suboptimal management of chemotherapy-related toxicities among the cancer patient population. This can result in significant stress on cancer patients, their caregivers and the healthcare system.

To address this concern, Drs. Monika Krzyzanowska and Eva Grunfeld explored both web-based apps and proactive telephone interventions for patients undergoing chemotherapy. They developed an app, called ‘Bridges’, to help patients navigate their symptoms. The team refined their design through two rounds of usability testing, incorporating toxicity tracking, self-management advice and health care provider communication functionalities.

Krzyzanowska et al. also conducted a pragmatic, cluster-randomized controlled trial (pcRCT) evaluating the impact of proactive telephone toxicity management on acute care visits, patient reported outcomes and cost in patients receiving chemotherapy for early stage breast cancer. They undertook end-of-study interviews to understand implementation, sustainability and scalability issues. During the pilot testing, the intervention was well received by clinicians and patients. Fewer emergency department visits occurred in intervention patients relative to controls but no difference in hospitalization rate was observed; results of the pcRCT are pending.

Lastly, they used administrative data to develop a prediction model to identify patients at high risk of having an acute care visit within 30 days of initiating systemic therapy for common cancers. Four characteristics that were found to be predictive were: cancer type-regimen, age, emergency department visit in the prior year and palliative-intent radiation in the prior 60 days. This prediction score could be incorporated at the point of care to select patients to target for future preventative interventions.

This project has the potential to impact both patient- and system-level outcomes. Given the prevalence of acute care visits in cancer patients receiving chemotherapy, these findings will be of interest in Ontario, as well as across Canada and internationally.

PUBLICATIONS


cd-link: Reducing barriers to health research across the province

Ontario has some of the most comprehensive health information databases in the world. But for years these data have been accessible to only a select handful of researchers, and only under strictly controlled conditions. These conditions ensured the data were secure, but also limited researchers’ ability to study Ontario’s healthcare system to improve it and provide better treatment strategies for patients.

Dr. Craig Earle led the development of a data-release program at ICES that for the first time allowed researchers at academic institutions in Ontario direct access to de-identified cancer data from anywhere in the province. This project, known as cd-link, is designed to link administrative datasets relevant to cancer health services research and provide privacy legislation-compliant data to researchers for the betterment of Ontario’s health services.

“cd-link brings the creativity of the wider research community to bear on the data as opposed to just a few people. The more we are able to study our health care system the more transparent it becomes, and ultimately the better health care system we’ll have.”

With cd-link access, researchers from across Ontario have leveraged these rich datasets to perform numerous analyses for many unique projects that have resulted in publications, theses, and other scholarly products. The approach has been expanded by ICES’ Data and Analytic Services platform to include all disease types and to accommodate researchers outside of Ontario.

Sample cd-link projects

- Exploring the impact of regionalization activities on patients undergoing high-risk, resource-intensive cancer surgery in Canada
- The profile and trajectory of persons with brain tumours and other acquired brain injury across the continuum of health care
- End-of-life cancer care and the impact of a palliative clinic for residents of Sudbury-Manitoulin district who died from cancer
- Melanoma - stage at presentation and differential survival: An urban versus rural population comparison using the ICES Database in Ontario
- Effectiveness and tolerability of systemic therapies in elderly cancer patients
- Anticholinergic prescriptions following treatment of localized prostate cancer
- Rates of hospital readmission following esophagostomy
- Effects of cancer patients in emergency rooms

LED BY
Craig Earle
Canadian Partnership Against Cancer

COLLABORATORS
Sola Dokun
OICR
Refik Saskin
ICES

CD-LINK PUBLICATIONS
Conlon et al.

Thein HH et al.

Richard PO et al.

Thein HH et al.

Chan V et al.

Stock D et al.

Conlon M et al.
Improving chronic disease outcomes in cancer survivors

Research shows that cancer patients with co-existing chronic conditions like diabetes have lower survival and worse outcomes, both for the cancer and their chronic condition. Dr. Lorraine Lipscombe set out to identify potential healthcare gaps in patients with diabetes and cancer as possible reasons for their poorer outcomes.

Lipscombe et al. used Ontario healthcare databases to identify patients with diabetes and cancer. They compared cancer treatments and outcomes between cancer patients with and without diabetes, as well as diabetes outcomes between diabetes patients with and without cancer.

They found that women with diabetes receive comparable cancer treatments and have similar chemotoxicity rates as women without diabetes. Despite this, women with diabetes present with a more advanced stage of breast cancer and have a lower cancer-specific and all-cause survival, despite following screening guidelines. This indicates a need to modify breast cancer screening guidelines for women with diabetes.

In contrast, patients with colorectal cancer and diabetes had similar cancer stage and cancer-specific survival but lower all-cause survival as those without diabetes, suggesting that a greater focus on diabetes care for colorectal cancer patients is needed.

For patients with diabetes who have been newly diagnosed with cancer, Lipscombe et al. found a higher risk of preventable diabetic complications in the first year after cancer diagnosis but comparable outcomes and diabetes quality of care thereafter. These findings show that the first year after cancer diagnosis represents a healthcare period in which the needs of diabetes patients are not being adequately met, supporting the need for interventions to improve diabetes care in patients undergoing acute cancer treatment.

“We know that control of other chronic diseases like diabetes can be disrupted while patients are undergoing cancer treatment regimens, which can lead to serious complications for both conditions. These complications can be avoided with dedicated support and close management of concurrent conditions during this period.”

Dr. Lorraine Lipscombe
Improving follow-up of abnormal stool tests in Ontario

Colorectal cancer (CRC) is the second leading cause of cancer-related death in Canada. CRC is amenable to early detection, and diagnosis at an earlier stage portends an improved prognosis. Fecal occult blood testing (FOBT) is an easy, at home stool test and is the preferred initial CRC screening test in Canada and in other jurisdictions. FOBT has been shown to reduce CRC-related mortality. However, only colonoscopy can provide a definitive diagnosis of CRC, thus it is critical that persons with abnormal FOBT have a follow-up colonoscopy. Currently in Ontario, primary care providers (PCPs) are responsible for organizing the follow-up colonoscopy. In Ontario, the proportion of persons with abnormal FOBT who have follow-up colonoscopy falls below levels in comparable programs around the world. Ontario urgently needs to implement strategies to improve colonoscopy follow-up after abnormal FOBT.

In the first phase of this project, Dr. Jill Tinmouth et al. evaluated possible ways to improve follow-up using a literature review and interviews with patients, PCPs, staff from screening and follow-up programs and other key informants. Based on these data, they worked with Cancer Care Ontario to develop a pilot to assess the feasibility of follow-up using four possible interventions: Full patient navigation including booking of colonoscopy by an RN at a Diagnostic Assessment Program, partial (lite) navigation involving a supportive conversation with the navigator (PCP organizes colonoscopy), physician reminders of patients lacking follow-up at four months post abnormal result, and physician reminders plus a request for patient status update at four months.

The benefits and challenges of each intervention were described using qualitative and quantitative methods. The Medical Research Council process evaluation framework was used to guide interpretation. The collaborative group convened two knowledge translation stakeholder meetings where findings were reviewed and the interventions were ranked and discussed. Participants felt that full patient navigation was the best approach for Ontario. The key challenges, the timeline for and the iterative steps necessary to implement full navigation were identified.

“This project integrated rigorous evaluation and policy development, where researchers and policy-makers collaborated to design and conduct work that has the potential to improve the delivery of colorectal cancer screening for Ontarians.”

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**LED BY**

Jill Tinmouth  
Sunnybrook Research Institute  
University of Toronto  
Cancer Care Ontario

**COLLABORATORS**

Linda Rabeneck  
Cancer Care Ontario  
Lawrence Paszat  
ICES  
Nancy Baxter  
St. Michael’s Hospital  
Cancer Care Ontario  
Diego Llovet  
Cancer Care Ontario  
Rinku Sutradhar  
ICES  
Nicole Mittmann  
Sunnybrook Research Institute  
Catherine Dube  
Cancer Care Ontario  
Gillian Bromfield  
Cancer Care Ontario  
Bronwen McCurdy  
Cancer Care Ontario  
Aimee Langan  
Cancer Care Ontario  
Melissa Coulson  
Cancer Care Ontario  
Leah Bennett  
Cancer Care Ontario  
Shazia Hassan  
Sunnybrook Research Institute  
Mardie Serenity  
Cancer Care Ontario

**PUBLICATIONS**

Llovet D et al.  
Increasing use of contralateral prophylactic mastectomy: A concern for over-aggressive treatment of early stage breast cancer patients

Contralateral prophylactic mastectomy (CPM), the removal of the opposite healthy breast in women undergoing surgery for early stage unilateral breast cancer, has been increasing in Canada and internationally despite lack of supportive evidence.

Drs. Janet Squires and Angel Arnaout set out to identify why women with unilateral breast cancer opt for CPM and to develop a knowledge translation intervention to ensure CPM is only used when necessary.

They conducted interviews with 74 key informants across Canada, including oncology surgeons, plastic surgeons, medical and radiation oncologists, nurses and women diagnosed with a low-risk, unilateral breast cancer. To address the identified barriers to CPM, they developed a consultation decision aid and assessed its feasibility in future clinical practice through consultations with 39 healthcare professionals and 12 breast cancer survivors across Canada.

In this study, they identified 58 factors influencing the use of CPM. Healthcare professionals identified more factors discouraging the use of CPM than encouraging its use while women with breast cancer identified more factors encouraging CPM use than discouraging its use. The most common factor encouraging CPM identified by healthcare professionals was lack of awareness of existing evidence/guidelines for the appropriate use of CPM, while for women with breast cancer, the factor most likely influencing their decision for CPM was wanting better aesthetic outcomes. Both healthcare professionals and women with breast cancer discussed the importance of, and need for support in the decision-making process. Almost all participants (98%) felt the decision aid developed by Squires and Arnaout would prepare women to make better decisions with respect to whether or not to have a CPM. The decision aid was also ranked as highly usable, with 73% of participants stating they would be willing to share or use the tool.

“This tool holds promise as a strategy for identifying when CPM is unnecessary and reducing this burden on the healthcare system.”

The research group developed an acceptable, usable and clear evidence-based knowledge translation tool to support shared decision-making for clinicians and women with low-risk unilateral breast cancer who are deciding whether to undergo CPM. Squires and Arnaout will be rolling out this decision-making tool across The Ottawa Hospital and further evaluating its impact.

LED BY

Janet Squires
University of Ottawa
The Ottawa Hospital Research Institute (OHRI)

Angel Arnaout
University of Ottawa, OHRI

COLLABORATORS

Dawn Stacey
University of Ottawa, OHRI

Ian Graham
University of Ottawa, OHRI

Mark Clemons
University of Ottawa, OHRI

Jeremy Grimshaw
University of Ottawa, OHRI

Jing Zhang
University of Ottawa, OHRI

Jean-Michel Caudrelier
University of Ottawa, OHRI

PUBLICATIONS

Squires JE et al.

Squires JE et al.

“...”

Drs. Angel Arnaout and Janet Squires
Building capacity for provincial reflex Lynch syndrome testing in Ontario

Lynch cancer family syndrome (LS) is a common hereditary syndrome that is associated with a genetic predisposition to different cancer types but there is no routine program for identifying patients with LS in Ontario who may benefit from genetic counselling and genetic testing.

Dr. Nancy Baxter and collaborators set out to develop a plan to implement an LS screening program across the province that would include genetic testing. To inform the development of this plan, they first reviewed existing LS screening programs by interviewing 26 stakeholders including program directors, genetic counsellors and medical oncologists. To understand the current resources for LS screening in Ontario, Baxter et al. also interviewed more than two dozen experts from different areas, including genetics, pathology and surgery, as well as stakeholders from Cancer Care Ontario, the Ministry of Health and Long-term Care, the Canadian Partnership Against Cancer, and the High-Risk Ontario Breast Screening Program. They then conducted a stakeholder meeting with more than 40 representatives from across Ontario to devise strategies for successful implementation and to present their study findings.

Baxter found that stakeholders anticipate a new plan would face challenges with funding, resources, training, education and consistency of reporting. To help navigate patients through a potential testing pathway, stakeholders recommend including standardized templates for communicating results to patients and dedicating central coordinators to facilitate patient flow through the pathway. They also recommend increasing the level of administrative support, educating leads, providing resources to remote areas and utilizing standardized reports. Stakeholders were supportive of Baxter’s proposed pathway and provided key recommendations at the system, provider and patient level. Alongside key stakeholders, Baxter will continue working to move this plan into action across Ontario to help identify patients with LS and better manage their disease.

“...A coordinated approach to system-level identification and management of patients with Lynch syndrome is needed to have an impact on risk for patients and their families in Ontario.”

Dr. Nancy Baxter

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LED BY
Nancy Baxter
St. Michael’s Hospital
Cancer Care Ontario

COLLABORATORS
Linda Rabeneck
Cancer Care Ontario
Anna Gagliardi
University Health Network
Erin Kennedy
University of Toronto
Jill Timmounth
University of Toronto
Sunnybrook Research Institute
Cancer Care Ontario
Aaron Pollett
University of Toronto
Steven Gallinger
University Health Network
Mount Sinai Hospital
June Carroll
University of Toronto
Yvonne Bombard
St. Michael’s Hospital

PUBLICATIONS
Palter VN et al.

Palter VN et al.

Bombard Y et al.
Are patient educational materials on cancer screening more effective when co-created with patients? A qualitative interview study and randomized controlled trial

Patient education materials (PEMs) are central to many cancer screening guidelines and shared decision-making practices. It is thought that involving patients in PEM development may generate materials that better address key patient barriers to the uptake of cancer screening recommendations. Because co-creation may require more time and resources than traditional approaches, it is important to determine whether co-creation of PEMs with patients adds value. Dr. Sharon Straus and collaborators compared a prostate cancer screening PEM that was co-created by patients and one that was developed by experts for their effectiveness with respect to patient decisional conflict and intention to be screened. They also compared the two PEMs with respect to screening knowledge and screening preferences, PEM usability and PEM preferences on the part of patients.

Straus’ study had three phases. First, English-speaking men aged 40 years and older from Ontario with no prior diagnosis of prostate cancer were interviewed to understand patient barriers to prostate cancer screening. Second, a PEM development committee of patients, researchers, and clinicians co-created a new PEM on prostate cancer screening based on these findings. Third, a different group of patients completed a survey and viewed either the co-created PEM (intervention) or an expert-created PEM (control). The study team compared patients’ prostate cancer screening decisional conflict and intention to undergo screening after viewing the PEM.

Results from the study showed no differences between the co-created and expert-created PEMs when measuring conflict about screening decisions, knowledge about prostate cancer, and patients’ plans to be screened. However, results also showed that the co-created PEM was rated as being more usable and was preferred by patients. Thus, the study group recommends that PEM developers choose the method that best fits their goals and resources.
Cancer symptom management by radiation therapists: Evaluating implementation of evidence-informed practice guides

Adults undergoing radiation treatment often experience treatment-related symptoms that can pose safety concerns and lead to unnecessary treatment delays. As the first line of contact for these patients, Medical Radiation Therapists (MRTs) play a key role in managing these symptoms, yet little is known about the use of evidence-based tools by MRTs to guide symptom management. In this study, Dr. Dawn Stacey and collaborators explored current symptom management practices by MRTs, potential factors influencing the use of the COSTaRS (pan-Canadian Oncology Symptom Triage and Remote Support) practice guides, and adaptations or strategies required to facilitate their routine use.

Since 2008, Dr. Stacey has led a group of researchers and nurses in the development and implementation of the COSTaRS practice guides for nurses in varying cancer care settings. Recently, MRTs and radiation-specialized nurses identified the potential to integrate these user-friendly evidence-based tools to guide symptom management practice in the radiation therapy setting.

Guided by the Knowledge to Action Framework (K2A), Stacey et al. conducted interviews and a barriers survey in the radiation therapy department of a large cancer centre in eastern Ontario to determine current symptom management practices and perceived factors influencing use of the practice guides.

The team interviewed 14 MRTs and surveyed 58 MRTs, finding that only 53% MRTs reported using provincial practice guidelines and patient pamphlets. The MRTs agreed that the COSTaRS practice guides are a high quality resource that can support symptom management, but they identified potential barriers to properly implementing them that are specific to the radiation therapy setting including: a lack of time given stringent 15-minute treatment scheduling, unclear fit with scope of practice, disparate focus on site-specific symptoms relevant to the anatomic area receiving radiation treatment, and lack of medication knowledge. In response, the study group created a simpler version of the practice guides and integrated this version into the electronic health record.

Further work is needed to identify adaptations to the symptom practice guides and to the MRT workflow that will allow successful uptake of the symptom practice guides into routine practice. Additionally, there is a need to clarify the MRT role in symptom management within the interprofessional team context.

The team is continuing this work at this centre to address these barriers so that the hundreds of patients undergoing radiation treatment there every day get the best care they need.
CEASE: A novel electronic patient-directed knowledge translation tool to improve smoking cessation in cancer patients

Continued smoking in cancer patients after diagnosis results in decreased treatment efficacy and reduced survival, yet routine tobacco use screening and referral to smoking cessation treatment have not been widely implemented in the cancer setting. At the Princess Margaret Cancer Centre, a paper-based tobacco use screening program for new cancer patients was started in 2013 resulting in moderate screen rates but low referral rates. In response, Jones and Giuliani developed a patient directed electronic smoking cessation platform (Smoking Cessation e-referral System or CEASE) to promote smoking screening and referral.

In this study, the research group used multiple enabling and reinforcing strategies to facilitate the implementation of CEASE and evaluate its impact. They compared the impact of CEASE on screening rates, referrals offered, and referrals accepted relative to the previous paper-based screening program. They also assessed a sub-sample of smokers and recent quitters to compare the effect of CEASE on subsequent contact with smoking cessation programs and quit attempts.

The CEASE platform was successfully implemented across all 14 ambulatory clinics at the Princess Margaret Cancer Centre. Screening rates increased from 44.3% using the paper-based approach to 65.7% using CEASE, and referrals offered to smokers who indicated interest in quitting increased from 18.6% to 98.8%. Accepted referrals decreased from 41% to 20%, though the overall proportion of referrals generated from total current/recent tobacco users increased from 7.7% to 20.2%. At one month post-screening, there was no significant difference in the proportion of participants that was currently using tobacco and had not changed use in the past four weeks (28.6% pre, 28.9% post). However, patient contact with the referral program increased from 0% to 78% in the post-CEASE cohort.
A partnered approach to create a peer support strategy and promote shared decision-making with Inuit in their cancer care

Inuit face high cancer risks and may not find the current health care system easy to use. Inuit have asked for support in making health care decisions to help them get the best health care possible. A way to help people make difficult health decisions is through a practice called shared decision-making. Ian Graham, Alethea Kewayosh, Janet Jull and partners have created a peer support strategy to promote shared decision-making with Inuit to ensure their voices are heard in their cancer care.

The study team used a partnered approach called integrated knowledge translation and worked with stakeholder partners in the cancer care system to ensure what was learned would be useful. The study partners were: Inuit community members and organizations, health care providers, university researchers and other stakeholders including advisory support from the Joint Ontario Indigenous Cancer Committee, the Cancer Care Ontario Indigenous Navigator team, the Regional Indigenous Cancer Leads, the Indigenous Cancer Control Unit staff, The Ottawa Hospital Aboriginal Program team, Tungasuvvingat Inuit and community members at Larga Baffin. The team interviewed peer-support workers and community members with a cancer diagnosis who had used the peer support strategy.

Together, the research group created a shared decision-making strategy, a way to help people prepare to talk with their health care providers about what is important to them in their cancer care. The shared decision-making strategy is for both peer-support workers and community members.

The strategy involves training about shared decision-making for Inuit peer-support workers, and a booklet with questions that peer-support workers and community members can use together to talk about what matters to community members in their cancer care and to prepare for discussions with healthcare providers. Through interviews about the strategy, the study team identified six key themes:

- Inuit with cancer face challenges in the system
- It is good to talk about what is important to me
- The booklet makes it easy to talk about what is important
- The booklet needs to be used by Inuit early in the cancer care journey
- The booklet helps peer support workers to engage with a client
- The booklet helps peer support workers to talk about what is important

The interviewed study partners found the strategy to be useful and feasible to implement and the study partners look forward to implementing these strategies.

“An integrated knowledge translation approach among partners was key to developing a shared decision-making strategy for use by Inuit in cancer care.”

Dr. Ian Graham

LED BY
Ian Graham
The Ottawa Hospital
University of Ottawa
Alethea Kewayosh
Cancer Care Ontario

COLLABORATORS
Janet Jull
Queen’s University
The Ottawa Hospital
Alexandra Hizaka
Tungasuvvingat Inuit
Amanda Sheppard
Cancer Care Ontario
Paula Doering
The Ottawa Hospital
G Joudain
Ottawa Health Services Network
Judy Plourde
Ottawa Health Services Network
Danielle Dorschner
Ottawa Health Services Network
Inuit Medical Interpreter Team
Ottawa Health Services Network
Michelle Rand
Cancer Care Ontario
Mara Habash
Cancer Care Ontario

PUBLICATIONS
Jull J et al.

Jull J et al.
Promoting the adoption of knowledge translation advancements to improve outcomes for people affected by cancer and cancer system performance

Cancer Care Ontario’s (CCO) Program in Evidence-based Care has developed evidence-based practice guidelines (PEBC PGs) to help ensure that patients across Ontario are receiving the best cancer care. These guidelines, however, are not always applied in practice. Dr. Melissa Brouwers and collaborators set out to address this concern and find new ways to engage healthcare stakeholders in proper guideline use through knowledge translation interventions (KTIs).

The study group first distributed an electronic survey to Ontario clinicians seeking their feedback on PEBC PGs. Results from 250 survey respondents showed that most clinicians agree that PEBC PGs are easy to apply and relevant to the Ontario cancer care context, and that they contribute to improved patient outcomes and a better cancer care system.

The group also performed a comprehensive search and analysis of KTIs in the Cochrane Effective Practice and Organisation of Care (EPOC) database, Health Systems Evidence database, and Implementation Science. The interventions that were both relevant and potentially effective in the Ontario cancer care context were curated in an online KTI resource for knowledge users. This resource now contains 17 evidence-based KTIs and relevant metadata, including evidence about their effectiveness, the contexts where they have been studied, and suggestions on how to put them into practice.

The study group then conducted provincial and regional focus group sessions to assess the usability, feasibility, and contextual relevance of the KTI resource contents.

Brouwers et al. identified new interventions that could improve guideline use for the betterment of care across Ontario and developed an online resource of KTIs that can be used as a basis for future knowledge translation initiatives.

**LED BY**

- **Melissa Brouwers**
  University of Ottawa
- **Robin McLeod**
  Cancer Care Ontario
- **Ralph Meyer**
  Hamilton Health Sciences

**COLLABORATORS**

- **Jeremy Grimshaw**
  The Ottawa Hospital
  University of Ottawa
- **Mark Levine**
  Escarpment Cancer Research Institute
- **Greg Pond**
  McMaster University
- **Hsien Seow**
  McMaster University
- **Jonathan Sussman**
  McMaster University

**PRESENTATIONS**

  Presenter: Karen Spithoff.

Dr. Melissa Brouwers
Testing a behavioural approach to improving cancer screening through increased use of the Cancer Care Ontario Screening Activity Report

Many Ontarians do not get all the screening tests they should for cervical, breast, and colon cancer. Family doctors can play a critical role in facilitating screening tests, especially if they know which patients are due for screening. Cancer Care Ontario’s Screening Activity Report provides exactly this information to family doctors, helping them identify their patients who are overdue for screening. Unfortunately, less than half of family doctors regularly use the report even though they get monthly email reminders. One possible reason is that the monthly email reminders are too easy for family doctors to miss or dismiss. This study used the science of behaviour change to create new, persuasive reminders to encourage family doctors to use their Screening Activity Report.

A research group, led by Dr. Noah Ivers, met with family doctors in Toronto and Kingston to co-create email content. This content incorporated one or more of three behaviour change techniques: anticipated regret, material incentive, and problem solving. A province-wide experiment compared eight different email versions to determine which approaches were the most successful at attracting family doctors to access the Screening Activity Report and to help patients who were overdue for cancer screening tests. After these changes were implemented, family doctors were interviewed again to gain further insights into identifying which patients are overdue for screening and taking appropriate action.

The group found that emails featuring anticipated regret led to slightly more report use compared to emails without this content, and emails with problem-solving content were associated with a 0.3% increase in cervical cancer screening, representing 7,568 more patients being screened if this association is true. The research group’s interview findings emphasized the important role of emails as reminders but also the potential for the Screening Activity Report to better integrate with other primary care practice management tools. Researchers worked collaboratively with Cancer Care Ontario team members throughout the project and the findings will inform the province’s strategy to support cancer screening in primary care.

This project shows the potential of implementation science laboratories in which health service organizations partner with scientists to improve health system performance while also conducting rigorous, generalizable research.”

LED BY
Noah Ivers
Women’s College Hospital

COLLABORATORS
Caroline Bravo
Cancer Care Ontario
Petra de Heer
Cancer Care Ontario
Diego Llovet
Cancer Care Ontario
Shama Umar
Cancer Care Ontario
Jeremy Grimshaw
The Ottawa Hospital
Justin Presseau
The Ottawa Hospital
Monica Taljaard
The Ottawa Hospital
Jill Tinmouth
Sunnybrook Research Institute
University of Toronto
Cancer Care Ontario
Selma Chipenda-Dansokho
Université Laval
Gratianne Vaisson
Université Laval
Holly Witteman
Université Laval
Zachary Bouck
Women’s College Research Institute
Laura Desveaux
Women’s College Research Institute
Marianne Saragosa
Women’s College Research Institute

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