knowledge translation for cancer control in canada: a casebook

september 2010
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CASEBOOK OF KT FIELD INITIATIVES FOR CANCER CONTROL: PROFILING KT PRACTICE IN CANADA

September 2010

The “Knowledge Translation for Cancer Control in Canada: A Casebook” is a product of the umbrella research project titled, Knowledge Translation to Improve Quality of Cancer Control in Canada: What We Know and What is Next. The overall objective of the Casebook was to profile Canadian initiatives ‘in-the-field’ that demonstrate knowledge translation in action for cancer control. Research knowledge can only achieve the intended benefits of improving patient outcomes and of improving the efficiencies of health care systems if that knowledge is applied successfully.

In the process of seeking practical knowledge translation projects from across Canada, we sought to capture projects that covered the continuum of cancer care from screening to end of life and the span of cancer diagnoses. A total of 30 nominations were received from various cancer care leaders across Canada that presented excellent projects of knowledge translation activities. Of the 30 nominations we received, 19 were selected for further profile. Each profile includes a “Lessons Learned” section, which serves to highlight important aspects discovered by the project team that contributed to the success of the project or ought to be considered when planning projects in future.

This Casebook also includes a summary of knowledge translation-related research studies complete or in progress with a focus on cancer care. From the search of the Canadian Institutes of Health Research (CIHR) and Canadian Cancer Society Research Institute (CCSRI) databases, a total of 11 abstracts of completed research studies are included in this Casebook and an additional 33 listed as in progress. The studies in progress will be monitored ongoing for their completion dates and results. We hope these will provide results of interest and will serve as another useful information resource tool of knowledge translation activities.

Lastly, but not of least importance, we would like to extend our thanks and appreciation to our partners who offered nominations and to the project leads who contributed graciously their time and effort to assist us in reaching the final case profiles of their respective projects.

Best wishes,

Melissa C. Brouwers, PhD
Principal Investigator, Knowledge Translation to Improve Quality of Cancer Control in Canada: What We Know and What is Next
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Knowledge Translation for Cancer Control in Canada: A Casebook

INTRODUCTION

I. OVERVIEW & OBJECTIVES
The core objective of the Casebook module of the KT for Cancer Control in Canada project was to identify Canadian KT practices in use, being tested or abandoned that are targeted to improve cancer control. The intent was to supplement the research literature with “in-the-field” initiatives that demonstrate the application of research knowledge in practice to address an identified problem within the cancer system. Members of the Best Practices Expert Panel (BPEP), comprised of CPAC members, provincial and regional cancer agency representatives, and clinical and KT experts, lead this component of the project. Key partners of this collaboration and leadership to accomplish this module included CPAC action group leads, provincial leaders of practice guideline development and quality (e.g., CAPCA membership), cancer control leaders across Canada, leads within Cancer Care Ontario, representatives within the Canadian Cancer Society and the Canadian Cancer Action Network. The results of this module would be compiled in a Casebook as an information sharing resource of KT activity in cancer control across Canada. This final Casebook would be publicly available and posted on the Capacity Enhancement Program (CEP), CPAC website portal. The objective for this module also included undertaking a review of published and in-progress research projects of studies with a focus on KT for cancer control. The databases of the Canadian Institutes of Health Research (CIHR) and the Canadian Cancer Society Research Institute (CCSRI) were the sources of interest.

II. METHODS
i) Practical KT Field Initiatives
Between February 2010 and April 2010, letters requesting nominations of Canadian KT “in-the-field” projects were emailed to the various partners across Canada. The letter outlined the objective of the project and the three criteria to be met for a nomination to be considered: i) a specific problem was identified; ii) a deliberate and organized effort was developed and implemented to address the problem identified; and iii) an evaluation (formal, informal) was undertaken to assess this effort. A nomination form was included with the letter (both are located in APPENDIX A) and a maximum of two nominations were requested. The key partners contacted were requested to respond within two weeks of receiving the letter and if a response was not received, subsequent reminder emails were sent.

Upon receiving the nominations, the research team (BPEP) reviewed the nominations and selected them for further profile and data collection. All nominations were considered together by the team and criteria for selecting nominations for further profile included the coverage of the continuum of care, province/territory, and range of diagnoses. For the selected projects (or “field initiatives”), the research coordinators completed a project profile as complete as possible, using the information provided in the nomination form and by researching the project
using electronic databases and the Internet. The objective was to facilitate the review of the profile by the project’s lead(s). When a draft of the profile was complete, the profile was sent to the project lead(s), accompanied by a covering letter with information about the project and a legend of the profile’s data fields; the project lead was asked to review the profile and to provide any additional information to complete the profile. An iterative process was employed to reach the final project profile. The profile form and legend are included in APPENDIX B & C.

ii) Search of KT Research Studies Published or In-Progress
The databases of CIHR and CCSRI were searched for research grants awarded to studies relating to KT for cancer control. The years searched included 2005-2009 for CIHR and 2005-2010 for CCSRI, with a total of 13,581 and 849, respectively, titles screened for eligibility. A total of 44 research projects were found to be eligible; 11 of those have been published and the remaining 33 are ongoing. Abstracts of the 11 published studies have been prepared and are included in Part II of this Casebook. The CEP will continue to monitor the 33 studies in progress for completion and will compile summary for each completed project once available.

III. RESULTS
A total of 30 nominations were received of KT projects or “in-the-field” initiatives (Table 1). Of those, 19 were selected for further profile within the Casebook. Appendix D includes matrices that display the coverage of geography, continuum of care, and diagnoses represented by the 30 nominations received. Each of the project profiles includes a “lessons learned” section, which serve to highlight important aspects discovered by the project team that contributed to the success of the project or ought to be considered when planning projects in future. The Casebook, titled “Knowledge Translation for Cancer Control in Canada: A Casebook” is freely available and is available at the CEP website of the CPAC online portal, www.cancerguidelines.ca/casebook/home.

The section that follows Table 1 is comprised of the 19 project profiles. Each project profile includes the name and contact information for the project’s respective lead.

Table 1. Canadian KT Cases Nominated for the KT for Cancer Control Casebook

<table>
<thead>
<tr>
<th>#</th>
<th>Province</th>
<th>Title of the Project</th>
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<tbody>
<tr>
<td>1</td>
<td>ON</td>
<td>Regional Aboriginal Cancer Strategy – Northwestern Ontario</td>
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<tr>
<td>2</td>
<td>NS</td>
<td>One Stop Cancer Screening for Women</td>
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<td>3</td>
<td>ON</td>
<td>Champlain Regional Cancer Surgery Program and the Ottawa Hospital Cancer Assessment Clinic</td>
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<td>4</td>
<td>ON</td>
<td>Family Physician Model (FPM) Recruitment Strategy for the Ontario Breast Screening Program</td>
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<td>ON</td>
<td>Triple Assessment Model for Screen Detected Abnormalities in the OBSP</td>
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<td>6</td>
<td>ON</td>
<td>Moving Evidence into Practice through Online Discussion for Physicians</td>
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<td>7</td>
<td>ON</td>
<td>Pathology Synoptic Reporting Project</td>
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<tr>
<td>8</td>
<td>AB</td>
<td>Synoptic Reporting Tools Project (SRTP)</td>
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<td>BC</td>
<td>Effects of Change in Rectal Cancer Management to TME Surgery and Preoperative Short Course Radiation in Outcomes in a North American Population</td>
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<td>ON</td>
<td>Rapid Response Radiotherapy Program (RRRP)</td>
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<td>11</td>
<td>ON</td>
<td>Radiation Wait Time Improvement Project</td>
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<td>12</td>
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<td>AB</td>
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<td>QC</td>
<td>Implementation of the Oncology Pivot Nurse Program in Quebec</td>
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<td>ON</td>
<td>Maximizing your Patient Education Skills (MPES), MPES Train-the-Trainer Program</td>
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<td>19</td>
<td>ON</td>
<td>The Coordinated Approach of the Interdisciplinary Thyroid Oncology Clinic to Patient Care</td>
</tr>
<tr>
<td>20</td>
<td>ON</td>
<td>Helical Tomotherapy: Ontario’s First Implementation of a Novel Radiotherapy Technology</td>
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<td>21</td>
<td>ON</td>
<td>Nurse Led Patient Care Rounds</td>
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<tr>
<td>22</td>
<td>ON</td>
<td>Waterloo Wellington LHIN Wait Time Data Alignment Committee</td>
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<tr>
<td>23</td>
<td>ON</td>
<td>Real Time Monitoring of Radiation Treatment Wait Times</td>
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<td>24</td>
<td>ON</td>
<td>Optimization of Referral to Consult Wait Times</td>
</tr>
<tr>
<td>25</td>
<td>ON</td>
<td>Quality in Family Practice Program</td>
</tr>
<tr>
<td>26</td>
<td>NS</td>
<td>Sun-Safe Policies for Outside Workers and Participants in Outdoor Rec Programs and also Policies on Sun-Safety for Day Cares</td>
</tr>
<tr>
<td>27</td>
<td>ON</td>
<td>Ambulatory Care Redesign</td>
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<tr>
<td>28</td>
<td>ON</td>
<td>REACH (Reducing Emergency and Acute Care Hospitalization Initiative) Clinic</td>
</tr>
<tr>
<td>29</td>
<td>BC</td>
<td>Provincial Tumour Groups and the Provincial Systemic Program developing evidence-based guidelines</td>
</tr>
<tr>
<td>30</td>
<td>BC</td>
<td>Improving the interval from abnormal screen to diagnosis</td>
</tr>
</tbody>
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Part I. KT Projects:
Field Initiative Profiles
LESSONS LEARNED

Committee membership:

- Despite the challenges to include members from region, their participation is essential to the success of the committee, providing significant contributions to initiative planning and supporting relevance for implementation and disseminating information to target groups. Although complex and time consuming to coordinate, the use of videoconferencing is ideal for meeting with regional participants across our large region.

- Committee membership is based on organizational representation so that when members move on to new portfolios or new organizations, there is a commitment to replace them with a new delegate or representative – this ensures continuity.

- Success in maintaining and expanding committee membership, building relationships with funders and the ability to resource initiatives with external funding increased when a staff person was hired whose role (in part) is to support the committee and be accountable for outcomes.

- Cancer patient input is essential to the development of cancer education and awareness tools. The committee has been able to – through its member organizations – invite cancer patients and family members to participate in the planning and evaluation of these resources.

- However, more information and research is required in order to develop a clearer understanding of how Aboriginal communities feel about health behaviours.

PROJECT OVERVIEW

Evidence suggests that cancer control priorities require early detection and cancer screening, which in turn entails tailored interventions to reach out specific populations such as the Aboriginals and First Nations communities of northwestern Ontario. A collaborative effort between Regional Cancer Care and First Nations chiefs is making this task possible. An action plan has been developed and been carried out over the past 10 years. Thus far, significant progress has been made in the project and plans to further this initiative are being realized every step of the way.

In addition to the Ottawa Charter for Health Promotion, organizational and consumer interventions were employed in order to undertake the cancer control project in Aboriginal and First Nations’ communities of northwestern Ontario. The Regional Aboriginal Cancer Committee has been formed to accomplish the task. Every effort is being made to make cancer control a reality.
**Problem**
In Northwestern Ontario, significant barriers and challenges to Aboriginal participation in early detection and cancer screening efforts are experienced at the patient, provider, and health system levels.

**Barriers**
The barriers are complex, ranging from personal, cultural, practical, and systemic factors.

**Solution**
In 2000, Regional Cancer Care recognized that partnerships were necessary to respond to Aboriginal and First Nations cancer control priorities and to adjust existing programs effectively so that modes of delivery and services were culturally competent and regionally relevant.

Regional Cancer Care’s Aboriginal Cancer Committee meets regularly to recommend strategies to improve the health status of Aboriginal people in Northwestern Ontario and improve the quality of and access to the cancer care they receive. Now in its 10th year, this regional strategy aims to:

- Increase awareness and knowledge of cancer risk factors and the benefits and risks for screening;
- Increase access to and promotion/recruitment for organized cancer screening and assessment programs (breast, cervical, colorectal);
- Build regional capacity to support First Nations communities and providers and build partnerships to augment resources for implementation of initiatives.

These partnerships have developed a variety of approaches, recently culminating in the establishment of an Aboriginal Health Promotion Planner position at the regional cancer centre. Some highlights include:

- Development of clinical pathways to improve access, timely test processing, result provision and follow-up for breast and colorectal cancer screening and assessment for remote northern communities in consultation with Health Canada First Nations Inuit Health, local physicians, hospitals and organized provincial screening programs
- Utilization of innovative technology including videoconferencing for outreach to community based community health workers and monthly Northern Cancer Question and Answer series for education and sharing of survivor stories
- Participation in regional and provincial research to determine barriers to participation and surveillance
- Development of culturally relevant cancer prevention and screening related health promotion, education and social marketing resources such as the Cancer Word Book, the Early Warning Signs Teaching Wheel, and the colorectal cancer/FOBT awareness Stick Around campaign
- Outreach, presentations and meetings with First Nations chiefs and health directors to improve awareness of and transportation to cancer programs and services including the mobile screening program
Implementation of drop-in screening clinics (Screen for a Day) for urban and rural Aboriginal adults 50 years of age and older in Thunder Bay and region

The Honouring our Health program recognized four regional women for their leadership and mentorship in their communities for cancer risk awareness, prevention and early detection. The Ottawa Charter for Health Promotion supports the committee’s planning for regional population-based activities; social learning theory, health beliefs and stages of change models.

EVALUATION
A variety of evaluation methods have included focus group testing of education and information materials and social marketing campaigns, and tracking of community participation rates for breast and colorectal cancer screening.

RESOURCE IMPLICATIONS
• Improved and new partnerships resulting in sharing of current resources, identification of new resources
• Increased awareness of cancer prevention and screening, treatment, regional programs and services for aboriginal health care workers, community members

HOW THE PROJECT ADVANCES THE QUALITY OF CANCER CONTROL
Organizational interventions: Quality improvement; changes to settings/site of delivery service
Consumer interventions: supporting behavior change; Patient education

REFERENCES
No references reported.

RESOURCES

CONTACT INFORMATION:
Name: Ms. Alison McMullen Email address: mcmullea@tbh.net
LESSONS LEARNED

- Stakeholders recognized the need to promote the pilot project. They want to ensure the One Stop becomes a permanent primary health service in Nova Scotia as it increased screening rates by 38%. No other single cervical screening program in Nova Scotia was able to achieve that target.
- Cultural competency training improved awareness and motivated staff to modify the provider-patient encounters. It also enabled providers to align programs to meet cultural needs.
- Sustainability of the program requires a long-term commitment to relationship building with key partners, coupled with recruiting hard-to-reach women, with the provision of accessible and consistent screening services.
- Empowering women to take charge of their own health through education and integration of services was key in getting women out to be screened. Integrating the services was suggested by the women themselves.
- Having a dietician on staff educating women around the importance of healthy eating and lifestyle was paramount in increasing our screening rates and helped women to understand the food and cancer connection. The majority of women had never seen a dietician before except for specific health concerns.
- For many women, this was the first time they had heard of the importance of colorectal cancer screening and most planned to follow up with their doctor.
- Booking and scheduling - One Stop was unable to recruit women through the Nova Scotia Breast Screening Program (NSBSP), resulting in significant spending on marketing and recruitment, a duplication of recruitment strategies, and confusion for women being targeted by both programs. Involving the NS Breast Screening program early on in our development stage would have facilitated the acceptance of the change.
- Location and timing - the One Stop could not be planned until the mobile screening service determined its exact schedule as they were the gatekeepers of the scheduling (i.e., we did not have access to their data bases). All screening services need to be under one provincial program, with one central contact phone number.
- Allocated Space - finding rooms plus a waiting area in a primary healthcare setting close to the mobile unit during peak daytime hours was a challenge. The mobile unit needed to plug into a special outlet that cost 10,000.00 and that outlet was only located at acute care facilities, this posed many challenges around finding space and hours for service delivery. Having access to a community health centre would have made it much easier to offer our services to specific communities.
- Data collection and reporting - during the pilot it became apparent that many computer programs and system processes around data collection and utilization were very different.
making it challenging for us to access provincial data as well as local data. **Having a single data base or repository that housed all screening data would have been very useful in targeting hard to reach women and for programming purposes.**

**PROJECT OVERVIEW**

This pilot project was designed to study the effectiveness of a “one stop team based” approach to cancer prevention and screening to reach underserved women in the Cape Breton District Health Authority (CBDHA); this included mammography, wellness visit (including a Pap smear, if indicated), a clinical breast exam, skin assessment and information regarding colorectal cancer risk and screening) and nutrition education for cancer prevention with a registered dietitian. In conjunction with the mobile mammography unit, the whole team moves into a community at the same time. Along with the mammogram, women could have a pap test, clinical breast exam, skin assessment, and information on colon cancer risk.

Results from the pilot project indicated that One Stop was effective at increasing screening rates by 38% among un-screened and under-screened women; furthermore, there is support at the district and provincial levels to ensure that the One Stop cancer screening program becomes a permanent primary health care service.

**Program implementation steps:**

- A literature review of team based approaches to screening, education and health services in rural areas was conducted
- A “one Stop team-based approach” was selected in response to repeated suggestions by women and the need to streamline primary health and screening services
- A Pilot Coordinator, nurse, dietician and part-time administrative assistant were hired
- An Advisory Committee comprised of health providers, agency partners and community representatives was established
- One Stop clinics were set up to coincide with the Nova Scotia Breast Screening Program’s (NSBSP) mobile screening service
- Partnerships were established with health facilities and community partners to secure space close to the mobile unit, and to recruit and market the One Stop screening service
- The Pilot Coordinator worked with the local district mammography team and the NSBSP to schedule and coordinate mammography appointments
- A central booking process was later developed, i.e., one toll-free phone number to book one appointment for all three services
- One Stop screening included three, key components: mammography through the mobile breast screening unit; a Well Woman visit with a specially trained registered nurse; and nutrition education for cancer prevention provided by a registered dietician
- ‘Well Woman’ visits included: a cervical smear (if indicated), a clinical breast exam, skin assessment, information regarding colorectal cancer risk and screening, and nutrition and healthy lifestyle counselling; additional screening and health information, and referrals were based on client need and assessment findings
• A Nutrition Working Group was formed to develop an approach with an assessment and education tool, that targeted healthy eating for cancer prevention
• Staff were trained in cultural competency
• Marketing and recruitment strategies included: newspaper and radio ads; interviews with One Stop health providers; clinic posters; and mail-outs to every household in selected rural areas

PROBLEM
Cancer screening for women was fragmented and opportunistic at best. Women had repeatedly identified their interest in having screening services offered together rather than having to seek the services from different providers through different appointments, which imposed lost time from work and home. Further, the pre-existing cancer care system involved the following issues and limitations:

• Cancer screening for women in Nova Scotia was fragmented; also, the provincial databases did not link to each other, further contributing to a fragmented system
• Patient information on colon cancer risk and screening was inconsistent (although the province’s new Colon Cancer Screening Program is making inroads in this area)
• Nutrition education and counseling had not yet become a formal component of cancer prevention
• Nova Scotia has higher rates of most cancers as compared to the provincial and national averages” (Cancer Care Nova Scotia Newsletter)

Bearing these issues in mind and considering the need to develop a new approach to reach women who face time constraints and other the challenges in the run of a day that may prevent them from taking a proactive approach to their own health by participating in cancer prevention and screening activities, the One Stop program was initiated. A one stop team based approach was the model of choice based on the literature that pointed to the benefits of team-based approaches to screening and health services, particularly in rural areas (e.g., Swaddiwudhipong et al in Research Power, 2008).

BARRIERS
Among the challenges faced in implementing this program were clinic locations and timing, which were linked to the mobile breast screening service, and determining clinic schedules far enough in advance to raise awareness about the availability of the service. Finding clinic space was also a challenge as was data collection and reporting and the recruitment of participants. To expand upon the challenges further, below is a summary of the barriers encountered:

• Location and timing; the One Stop could not be planned until the mobile screening service determined its exact schedule
• Booking and scheduling; One Stop was unable to recruit women through the NSBSP, resulting in significant spending on marketing and recruitment, a duplication of recruitment strategies, and confusion for women being targeted by both programs
• Space, i.e., finding rooms plus a waiting area in a primary healthcare setting close to the mobile unit during peak daytime hours
• Data collection and reporting
• Reaching the under-screened

SOLUTION
In working towards a solution to the identified problem and needs, the first step undertaken was approaching the Department of Health to present a business case, which included a needs assessment, for researching the issue and developing and testing a new way of reaching women to provide cancer prevention education and screening. The Department agreed with the value of developing, implementing and evaluating a well woman program for cancer prevention education and screening. They provided $250,000 to plan, implement and evaluate a new approach to cancer prevention and screening for women in the Cape Breton District Health Authority.

The subsequent steps included research of team-based approaches to screening, education and health services in other rural areas and the pilot project. After hearing from women that a one-stop approach would be beneficial, the pilot project was designed. The pilot’s purpose was to study the effectiveness of a one-stop team based approach to cancer prevention and screening to reach under-served women in the Cape Breton District. As part of the pilot, a coordinator, nurse, dietician and part-time administrative assistant were hired. An advisory committee including health providers, agency partners and community representatives was established, and one-stop clinics were organized to coincide with the Nova Scotia Breast Screening Program’s mobile screening service.

In an effort to reach out to all women, staff were trained in cultural competency so they had a clearer understanding of the barriers and challenges that women in minority groups face. During operation of the pilot from October 2008 to November 2009 more than one thousand women attended one of 135 one stop clinics in nine communities across Cape Breton.

EVALUATION
The program has been formally evaluated using the services of an external evaluator. Through feedback solicited via feedback forms and telephone interviews, the response to and satisfaction with the program was very favourable. Women found the one stop clinics very beneficial and they also suggested the added value of including fecal occult blood screening tests as part of the program and if the program could include a mechanism for sharing Pap test results directly with the women through the mail. Other notable strengths included an all female heath care provider team, varied clinic hours with availability for walk-ins, and the nutrition education for cancer prevention component. Additional notes from the evaluation include:
• 817 women (73%) accessed the three components of the One Stop pilot; 268 women (24%) accessed two services
• 87% of women were aged 40 to 74 years
• 79% of women had a mammogram; 25% of which were first-time screens (a 10% increase from rates of the mobile unit)
• 77% of women had a Pap test; 4% of which had their first Pap and 34% were under-screened, i.e., three or more years since last Pap
• For 57% of women, this was their first one-to-one session with a dietitian focused on health promotion and cancer prevention
• Women appreciated being able to call one telephone number to access all services in or close to their communities, at convenient times and locations, by the most appropriate provider
• Suggestions to further streamline services included providing FOBT screening kits and mailing out PAP smear results to women

RESOURCE IMPLICATIONS
The pilot costs were in excess of $275,000.00 dollars. The funds were the result of a onetime funding opportunity. The need to use existing resources within the screening program is being explored although there is no sustainable funding for marketing and travel, which are two key components of the program.

HOW THE PROJECT ADVANCES THE QUALITY OF CANCER CONTROL
Despite the challenges, the pilot project was a success and the goal of increasing screening rates was achieved. While there remains work to be done in order to refine the model, including how to secure sustainable funding, the program personnel believe there is value in moving forward. Doing so will provide all women with what they want and what they need to make cancer prevention and screening convenient and easy to access.

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Champlain Regional Cancer Surgery Program and the Ottawa Hospital Cancer Assessment Clinic
University of Ottawa / Department of Obstetrics & Gynecology / Department of Surgery
The Ottawa Hospital, Ottawa, QC
Dr. Michael Fung-Kee-Fung

LESSONS LEARNED

1. The importance of leadership – surgeon and division leads, administration
   • Leaders who understand the dynamics of Communities of Practice (CoP), the disease site teams and regional politics are invaluable to the CoP development
   • Multidisciplinary practitioners came together around a shared interest, common practice or quality issues
   • Shared interests of the practitioners and administrative leaders leads to leveraging the resources of both groups towards common goals
   • Use of face-to-face meetings to foster relationship development among members

2. Role of a coordinator and facilitators in each organization
   • Need to have commitment of a person who can lead initiatives, ensure each group is moving forward using same principles, utilize shared learning opportunities, provide a liaison between and among the CoP members
   • Facilitators in each hospital helped in marketing the CoP to their internal cancer surgery teams and were instrumental in move forward the specific disease site CoP initiatives

3. Access to data
   • Data drives the quality initiatives. Benchmarking data shared through the CoP leads to identification of gaps/barriers to quality care—process improvement initiatives are developed from these identified gaps and barriers
   • Lack of access to standardized regional data has been a gap in the ability to provide ready feedback on quality initiatives
   • Practitioner-driven initiatives (i.e. own drivers) have higher priority and impetus for action over provincial or hospital based initiatives

4. Linking quality initiatives to individual and group professional development
   • Need for ongoing professional development provides impetus to foster engagement in CoP networks, initiatives
   • Drives change and provides forum for shared learning
   • Clear line of sight between the quality initiative and the individual’s professional development is key

PROJECT OVERVIEW

An integrated regional model to address the multidisciplinary care delivery of cancer surgery including addressing issues of practice variation and quality variability between 9 regional hospitals. Intervention included 5 core elements: development of a Communities of Practice
(CoP) platform for knowledge translation; development of cancer surgery standards and clinical pathways; implementation of regional multidisciplinary cancer conferences; explicit use of group performance data to enable individual professional development and the hub-spoke model of a regional cancer assessment clinic including a diagnostic assessment program.

The Champlain Cancer Surgery Program, provides an innovative approach to system transformation in regional cancer surgery. We have improved the patient experience of accessing quality cancer surgery care by transforming the cancer system from a silo-based, fragmented system to one that is coordinated and integrated. The unique aspects of our program include:

• Sustainable multidisciplinary community of practice platform for quality improvement (provincial initiatives) and knowledge transfer;
• The engagement of CoPs in developing their quality initiatives including performance indicators;
• Linking of group performance data review to individual professional development;
• Interdisciplinary clinic assessment prior to primary therapy;
• Interprofessional teams (administrators, nursing, physicians, etc):
  o Within the regional CoPs including screening and treatment groups
  o Within regional hospitals for specific cancer surgery infrastructure
  o Early demonstration of region wide quality improvements

**Problem**

Cancer patients, in particular those requiring assessment for cancer surgery, face a complex journey with many steps to follow and hurdles to climb along the way. Over recent years, there have been several challenges:

• Increasing wait times for cancer assessment and surgery;
• Inconsistent quality of surgical care;
• Disjointed and inefficient cancer care services;
• Lack of evidence regarding quality;
• Varying patient outcomes

It became evident that a new model of improving access to quality cancer surgery, while reducing wait times, was essential.

**Barriers**

1. Funding especially for a regional coordinator and CoP facilitators
2. The silo mentality of individual hospitals, individual surgeons and departments
3. Access to data felt to be relevant by the practitioners themselves
4. The need to develop solutions to the identified gaps as recognized in the system by the CoP groups
**SOLUTION**

To realize a new model of care, the following strategies were required:

- Coordination through The Ottawa Hospital Ages Cancer Assessment Clinic (TOHCAC) with an integrated diagnostic assessment program (DAP);
- Standardization of regional procedures and processes for cancer assessment by disease site;
- Leveraging of resources within participating hospitals to create capacity and structures for implementation and coordination;
- Creation of an interdisciplinary clinic assessment prior to primary therapy (surgery);
- Significant improvements in interdisciplinary coordination at the assessment level and across the continuum, e.g. screening, treatment;
- Formation of a platform for systematic engagement of health practitioners in quality initiatives across the region - Communities of Practice (CoP);
- Creation of role of Cancer Care Facilitator in each participating hospital, responsible for leading cancer surgical initiatives within their own teams.

**Figure 1: Champlain Regional Cancer Surgery Model**

![Champlain Model for Improving Access to Quality Cancer Surgery](image)

The model consists of several key elements including: regional infrastructure; Comprehensive CAC with an integrated DAP; regional cancer surgery satellite programs; availability of performance data; multidisciplinary cancer conferences; standards for cancer surgery; regional networks -CoPs; education; and key human resources. The model formally links the key elements in contrast to implementing each as separate quality improvement initiative.

A Communities of Practice model based on a knowledge spiral. The knowledge spiral was based on the work of I. Nonaka (1995). We have incorporated Communities of Practice concepts into this (Fung Kee Fung et al., 2008).
EVALUATION

1. Quantitative outputs including wait times, volumes, quality indicators as determined by Cancer Care Ontario, including quantitative outputs defined by the Communities of Practice and their individual quality projects.

2. Qualitative assessment of the 4 outputs of the Communities of Practice as defined by previous publications including the development of social capital, knowledge transfer, organizational development and innovations in care.

Achievement of Program Objectives
The overall goal of the initiative was to improve the patient experience of accessing quality cancer surgery care. We have achieved several objectives including:

- Reduced thoracic, colorectal and prostate cancer surgery wait times by 65%, 40% and 35% respectively;
- Achieved targeted CAC referral volumes for thoracic, colorectal and prostate cancer;
- Improved institutional compliance with cancer surgery pathways- colorectal and prostate pathways adopted in 9/9 and 4/4 regional hospitals respectively;
- Increased % of regional cancer surgery patients in CAC to 100% thoracic, 60% colorectal and 69% prostate;
- Increased volumes of CAC total visits from 3857 to 6890 for all disease sites from 2007/08-2009/10;
- Improved patient satisfaction. One family stated:

  “although the news about the cancer was one they had hoped, prayed and wished to avoid, for the first time they left the hospital feeling positive about the future...they felt like they are a part of the team, like they have some control over what is about to happen... many, many thanks to your team”

Overarching System Enhancements
In addition to achieving the objectives detailed above, significant overarching system enhancements have also been realized. These achievements include improved access to effective diagnosis and high quality care, patient experience along the cancer journey; and the performance of the cancer system.

Access to effective diagnosis and high quality care. Ensuring access to effective diagnosis and high quality care has been a principle driver for the activities and process redesign led by the CAC. Multidisciplinary teams have successfully implemented regional and organizational changes to create a coordinated and integrated system of standardized care for thoracic, colorectal and prostate cancer patients. Wait time improvements have occurred through the development of mutually agreed upon and measured performance targets across the region and within other TOH departments, such as Diagnostic Imaging. Efforts have also focused on creating seamless transitions between care providers and programs; for example, linking with the Colorectal Cancer Screening Program and regional satellites. In addition, integrated multidisciplinary care has been fostered through combined medical, radiation, and surgical oncology clinics all within the CAC.
Key accomplishments include:

- consistent improvement in wait time from referral to decision to treat and decision to treat to surgery for thoracic, colorectal, and prostate cancer;
- improved access to standardized assessment, education and treatment modalities coordinated through the CAC - regional evidence-based colorectal standards of care (disease management tools) have been developed and implemented;
- improved access to TOH diagnostic testing e.g. reduced prostate biopsies wait times;
- reduced TOH hospital admissions, e.g. lung cancer patients no longer admitted for diagnostic testing and pre-op assessment;
- formalized forums for clinical decision making, gap analysis and process redesign within TOH and across the region through newly developed committee structures, CoPs and video-conferenced Multidisciplinary Cancer Conferences;
- regional collaboration through CoPs, leading to the implementation of Cancer Care Ontario guidelines for thoracic surgical oncology, colorectal lymph node retrieval, prostate surgical margins and Sentinel Lymph Node Biopsy processes;
- patient access to psychosocial support as the new standard of care

Patient experience along the cancer journey. The CAC has been successful in creating an environment of patient-centered care within TOH and across the region. Important factors for success have been including patients groups in planning and communicating the improved patient experiences to the multidisciplinary team. Key accomplishments include:

- improved access to nurses who assist in navigation and provide support for patients/families, pre-operative education sessions, psychosocial support including access to social workers, ongoing telephone support etc.
- standardized regional patient education and resources (classes, resource materials, clinical pathways etc.);
- high patient satisfaction with care provided. Satisfaction survey results for thoracic patients are:
  - 100% positive score for family and friends involved in care and treatment
  - 84 % positive score for involved in outpatient care decisions

Improve performance of the cancer system (regional alignment, measuring performance and knowledge exchange). The CAC has led the Champlain region in standardizing best practices for both clinical and administrative functions in order to improve cancer patient flow and efficiency. Champlain residents now have access to standardized assessment, education and treatment modalities all streamlined through the CAC. Mutually determined evidence-based standards with linked performance indicators have been implemented and are now monitored. Access to performance data is vital to quality care, process improvement and ongoing learning across the region. Through the CAC, there is now the ability to capture data and monitor performance of a number of quality indicators essential to outlining gaps and achievements within the region. Data is shared with clinicians and administrators internally within TOH and regionally through the Regional Cancer Surgery Committee and disease-specific CoPs to drive and measure impacts of ongoing quality initiatives.
The regional relationships developed through the CAC and its communities of practice have led to priority setting, shared learning and explicit knowledge transfer. These relationships are crucial to the successful implementation of regional quality standards. The uniqueness of the explicit linking of administrators and practitioners in this manner has lead to the sharing of group performance data for individual professional development all leading to improvements in quality care processes. In addition, many provincial centers have visited the CAC and benefited from strategic developments, tools and lessons learned within the Champlain LHIN.

**RESOURCE IMPLICATIONS**

Funding was obtained from Cancer Care Ontario, the Change Foundation and in kind from The Ottawa Hospital. Issues included funding for the human resource positions including facilitators, data managers and coordinator.

**HOW THE PROJECT ADVANCES THE QUALITY OF CANCER CONTROL**

The development of regional site-specific teams that transcend both hospital and departmental structures have facilitated the development of broad-based Communities of Practice who have gone on to take control of the quality agenda and actually improve care both at the local and regional levels. The improved standardization, lack of variation and improved quality has resulted in a change in referral pattern, a standardization of clinical pathways and an increased access of patients to clinical trials and appropriate neoadjuvant therapy.

**REFERENCES**


**RESOURCES**


**CONTACT INFORMATION:**

Name: Dr. Michael Fung-Kee-Fung Email address: mfung@ottawahospital.on.ca
Family Physician Model (FPM) Recruitment Strategy for the Ontario Breast Screening Program

Juravinski Cancer Centre, Hamilton, ON
Ms. Carol Rand, Dr. Ron AcAuley, Dr. William Hryniuk, Ms. Jean Matone, Ms. Teresa McPhil, Dr. Mark Levine

LESSONS LEARNED

• The value of the Family Physician/Patient relationship.
• The value of an annual report to physicians (facilitated receiving prevention bonus).
• The value of opinion leaders/early adopters to “sell” the model to their colleagues using their data.

PROJECT OVERVIEW

Family physicians are recruited to submit their rosters of eligible women for breast screening. The Ontario Breast Screening Program (OBSP) acts as the ‘back office’ preparing letters of invitation for patients on the family physician’s letterhead signed by the family physician. Strategies embedded in the letter generation system were based on the Dillman Method to increase uptake. Unlike other regional cancer centers, this region chose to recruit physicians directly rather than women. This was based on data from the UK showing that the single most important factor for women attending breast screening was the advice of their family physician.

The Family Physician Model (FPM) Recruitment Strategy continues to be the most effective strategy in recruiting women for breast screening. Subsequently the methodology was used in recruitment for cervical screening, flexsigmoidoscopy, and FOBT colorectal screening.

When the OBSP recruited women in collaboration with family physicians, 67% of physicians initially approached agreed to participate. Significantly more participating physicians than non-participating physicians were in group practice and had certification in family medicine. In response to letters from their family physicians, 54% of women 50 years and older obtained screening mammograms. When combined with the average number of women screened in the year before the program (12%), 66% of women were screened over a 2-year period. Collaboration with family physicians has resulted in a successful recruitment strategy for screening mammography within the OBSP. The FPM has been recommended as a recruitment strategy for the province.

PROBLEM

When the OBSP began, it was the first time in the province that women could refer themselves for a clinical breast exam and a mammogram. The Provincial Program developed public awareness campaigns, including TV ads and bus shelter posters. In spite of the media blitz aimed at women, very few women booked appointments at the OBSP sites. While family
physicians supported breast screening for women 50 years and older, they lacked systems for recruitment and follow-up to recall.

**BARRIERS**
The literature showed that women relied on their family physician’s opinion for referral for breast screening. However, family physicians lacked the computer system to invite and recall women for cancer screening.

**Attitudes and beliefs about mammography:** Some women did not think they needed a mammogram given their family history of breast cancer. Other reasons included the fear of pain, and the notion that mammography caused breast cancer.

**SOLUTION**
Previous site visits to the UK, and a review of the literature on recruitment strategies, led the Hamilton team to develop the Family Physician Model Recruitment Strategy. This strategy became the single most effective recruitment strategy in the province and was later adopted by other sites who continue to use the model.

A pilot group of family physicians was selected (strategically a group of ‘early adopters’ that were able to influence the opinion of their peers) to conduct a baseline study of current screening, and then implement the letter of invitation recruitment strategy. An evaluation was conducted to look at the uptake in screening by practice and make any recommendations about the process itself.

Data from this pilot project was used to influence other physician groups. A map was developed using postal codes such that the groups of physicians were selected in sequence covering call groups. For example, all of Dundas was completed first before moving on to the next area. This was also strategic as distance and social class were variables in the literature predicting screening uptake. The intention was to demonstrate that the model could work in more ideal circumstances, and then move out to the harder to reach areas such as the north end of Hamilton where other strategies needed to be employed (i.e. van shuttle service in collaboration with the family practice).

The OBSP provides reports back to family physicians outlining the number of eligible women, women who attended, women who refused, women whose letters were returned (and no other address was available at the practice), number of women diagnosed and number of women in follow up. Physicians are asked on an annual basis to update the OBSP roster with new women to their practice and eligible women turning 50.

**SETTING:** Family practices in Dundas, Ancaster, and Hamilton, Ont.
MAIN OUTCOME MEASURES Percentage of family physicians agreeing to participate in the FPM, characteristics of participating and non-participating physicians, and percentage of eligible women who scheduled mammograms.

To implement the FPM successfully, three components are essential: a collaborative model upon which family physicians agree and in which they are equal partners, competent staff at the screening centre, and agreement on a system for implementation and evaluation.

Dillman Method was applied for increasing the participation.

EVALUATION
The FPM has proven to be an effective recruitment strategy for the province. Evaluation of the project shows that 67% of the physicians initially approached participated in the project. The FPM recruited an additional 54% of women 50 years and older. As a result of this initiative, the total percentage of women being screened over a two-year period reached 66%, which includes the 12% of the average number of women screened in the previous year.

With increasing the capacity of screening at all the sites we were recruiting, we were able to exceed the 70% target.

RESOURCE IMPLICATIONS
Funding was provided through the Ontario Breast Screening Program. Specifically, it was a part of the budget for staffing.

HOW THE PROJECT ADVANCES THE QUALITY OF CANCER CONTROL
Technical assistance provided by OBSP hub site staff enabled family physicians to send letter of invitation to women for breast screening. This increased uptake.

The FPM also can help ensure that the screening centre operates close to capacity rather than sporadically based on self- and physician referrals.

REFERENCES

RESOURCES
Poster presentation: Symposium Mamographicum. Cambridge, England. (poster available upon request.)

CONTACT INFORMATION:
Name: Ms. Carol Rand  Email address: carol.rand@jcc.hhsc.ca
**Triple Assessment Model for Screen Detected Abnormalities in the OBSP**

**Juravinski Cancer Centre, Hamilton, ON**  
*Ms. Carol Rand, Dr. Terry Minuk, Dr. Margaret Sebine, Dr. S Edward O’Brien, Dr. Terry DeSouza, Dr. Ron McAuley, Dr. William Hryniuk*

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**LESSONS LEARNED**

- The **value of a team approach** from the beginning.
- The **value of sharing early findings** with physician groups to increase uptake to the model.
- The **value of the family physician/patient relationship**.
- The **value of opinion leaders/early adopters** to “sell” the model to their colleagues using their data.

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**PROJECT OVERVIEW**

This was the development and implementation of a pilot project for the rapid diagnostic assessment unit (DAU) to expedite the diagnosis of screen-detected abnormalities (clinical and/or mammographic) in the Hamilton hub site of the Ontario Breast Screening Program. It was a model for the future development of the OBSP Breast Assessment Program. Quantitative and Qualitative data continue to show evidence of the value of the OBSP DAU.

**PROBLEM**

Two problems were identified: (1) The need to address patient anxiety by facilitating for an expedited diagnosis of screen-detected abnormalities (clinical and/or mammographic); (2) the unorganized system of care (multiple referrals to specialists) that impeded physicians from providing high quality care in a timely fashion.

**BARRIERS**

1. A practical challenge of organizing clinical services in one location one day per week.
2. Billing issues for specialists.
3. Physicians had to travel to the Hub site to see patients. Developing a rota of radiologists and surgeons to attend the Breast DAU at an off-site location.

**SOLUTION**

The triple assessment model includes consultation by surgery, radiology and pathology. A process was set up to run an assessment clinic one day per week in the screening facility (OBSP hub site). Radiologists and surgeons were nominated by the Chiefs at each hospital to participate in a rota. This gave the program instant credibility as these individuals were the experts at each of the hospitals. It also resonated with family physicians with respect to referral patterns as they could still refer to the surgeon of their choice once the diagnostic process was completed.
The OBSP DAU continues to operate every Wednesday at the screening facility. All women with screen detected abnormalities (clinical and/or mammographic) are invited back to the Wednesday clinic. The family physician’s office is notified by fax and a signature is required for the referral. The women are seen by the radiologist and/or surgeon depending on the abnormality. The radiologist and the surgeon consult on cases where there are clinical and mammographic findings. All specimens are sent to the lab on Wednesday, with results available on Monday for Pathology/Radiology Correlation Rounds. The latter are attended by radiologists, surgeons, pathologists, the senior tech and the nurse navigator. A decision is reached for each patient and this decision is communicated verbally to the family physician’s office by the nurse navigator followed by formal consultation notes.

Wait time targets were developed to expedite the diagnostic process.

**EVALUATION**
A database was developed to collect key indicators including timeliness indicators (turn around time to a definitive diagnosis) and benign to malignant ratios. Data showed that the triple assessment model was effective in reducing the time to a definitive diagnosis, and reducing the number of women going to surgery with a benign outcome. This data was used to create the case for the OBSP Breast Assessment model for the Province. There are now 6 other breast assessment clinics following the same model affiliated with other OBSP sites in the LHIN. Publication will be reported upon completion.

**RESOURCE IMPLICATIONS**
The project was funded through the Ontario Breast Screening Program.

**HOW THE PROJECT ADVANCES THE QUALITY OF CANCER CONTROL**
It resulted in a rapid diagnostic assessment process which allowed for the consolidation of expertise in ‘one-stop shopping’ facilitating decreased wait times.

**REFERENCES**
No references reported.

**RESOURCES**
Presentation information available upon request.

**CONTACT INFORMATION:**
Name: Ms. Carol Rand  
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LESSONS LEARNED
The List Serv is an effective knowledge transfer and exchange tool for multidisciplinary stakeholder engagement, though careful consideration during the planning process is needed to ensure its success.

1. Clinical Engagement:
   - The planning committee should consist of appropriate target participant representatives to ensure commitment and buy-in to the initiative. For example, a leader in the radiation oncology community was enlisted in the Prostate List Serv planning process to increase participation from that particular group.
   - Clinical experts representing the appropriate disciplines should be engaged early in the process. List Serv participants noted that perceived clinical expertise was an important component of the discussion.

2. Planning Process:
   - Careful planning is needed for a successful List Serv initiative. The planning committee should also allot sufficient time to plan, develop and launch the initiative.
   - A complete strategy should be planned prior to the launch of the List Serv, and should include: (i) learning objectives, (ii) case studies for discussion, (iii) questions to prompt participant response, and (iv) program evaluation.
   - In particular, program evaluation should be addressed in greater detail during the planning stage to ensure an appropriate evaluation strategy is chosen.

3. List Serv format:
   - Each case scenario should be clinically unique, with its own set of learning objectives. This should be done to ensure that there no repetition in the discussion of cases.
   - In some instances, participants raised concern over the quantity of emails. The concern was alleviated with summaries of the clinical scenario, and the option for participants to receive one consolidated email a day.

4. Continuing Education:
   - The opportunity for participants to earn Main Cert credits was an attractive draw for physicians, and adequate time should be allotted for the accreditation process.

PROJECT OVERVIEW
Clinical practice guidelines (CPGs) are developed by Cancer Care Ontario (CCO) to help guide practice and improve the quality and safety of cancer care. Facilitating awareness and implementation of CPGs is challenging and CCO’s Surgical Oncology Program (SOP) looked for creative strategies to engage busy physicians. The Colorectal Cancer (CRC) List Serv was launched as a knowledge exchange strategy when the CPG to optimize quality surgery and
pathology for CRC was released. Following the success of the CRC List Serv, this education strategy was adopted by the prostate and breast cancer (sentinel lymph node biopsy; SLNB) disease sites. The List Serv provided an online multidisciplinary platform for physicians to improve their knowledge and management of cancer by discussion of quality issues related to the CPG.

The List Serv was used as part of a multifaceted approach by the SOP to facilitate guideline release and implementation. It prompted development of a community of practice through partnership development, communication, and cross regional interaction. The List Serv is a feasible and adaptable knowledge exchange strategy that has facilitated CPG implementation, heightened physician awareness and increased knowledge.

**PROBLEM**
Cancer care is complex and continuously evolving; CPGs are released frequently and implementation is an important, yet difficult undertaking. Development and dissemination of provincial standards and clinical guidelines for cancer care is a priority of Cancer Care Ontario.

To facilitate awareness and implementation of CPGs the SOP looked for creative strategies to engage busy physicians.

**BARRIERS**
1. Large population of health professionals across the province & multiple disciplines to reach
2. Minimal financial resources
3. Busy physicians

**SOLUTION**
The List Serv provided an online multidisciplinary platform for physicians to improve their knowledge and management of CRC by discussing quality issues related to the CPG. To highlight key recommendations for the CPG, several clinical scenarios of relevance were developed. With each scenario, questions are posed to stimulate discussion facilitated by experts. After a two week discussion period, the key recommendations are posted plus the supporting evidence. Evaluations can be completed by participants to obtain MainCert Credits. The success of the CRC List Serv led the program to develop similar List Servs for the launch of subsequent guidelines focused on prostate cancer management and the role of sentinel node biopsy (SLNB) in early-stage breast cancer.

**The Technology:** A List Serv is an email distribution list, which provides subscribers with the ability to send an email and have it reach a variety of people simultaneously. Specific scenarios based upon the guideline recommendations are posted at three-week intervals, with accompanying questions to prompt discussion. Participants engage in the online discussion by sharing knowledge, asking questions and discussing quality issues related to the CPG. Evidence from the relevant CPG is disseminated to reinforce quality approaches to cancer management. Physicians acquire continuing professional development credits for their participation.
The List Serv is simple to use, allows for real-time engagement, and can be accessed at the physicians’ convenience at any time over the three-week cycle.

Guideline production, identify key health professionals, disseminate recommendations interactively via listserv, provide educational credits (RCPSC).

**EVALUATION**

Qualitative Analysis: Each scenario discussion was evaluated by participants and the evaluations were qualitatively analyzed to determine if learning objectives were met.

Summary Evaluation: A web-based survey was conducted on the entire initiative after the last scenario to assess the initiative as a whole, with an email reminder sent to participants after two weeks.

Over 600 subscribers representing all 14 regions across Ontario participated in the List Serv initiative, including clinicians from multiple disciplines, physician trainees and administrators. A program evaluation revealed that participants were very satisfied with the overall initiative (colorectal 79%, prostate 69%). 65% of participants were very satisfied with the List Serv format, which provided the opportunity for real-time engagement, allowing the registrants to actively follow and participate in the discussion. The List Serv also acted as an agent of change, with 79% of CRC and 59% of prostate participants reporting that the List Serv increased their knowledge of either the surgery or pathology guideline recommendations. A higher proportion of pathologists (89%) found the colorectal List Serv increased their knowledge of surgery guideline recommendations, as opposed to surgeons (68%). Similarly, 94% of surgeons found the colorectal List Serv increased their knowledge of pathology guideline recommendations, as opposed to pathologists (67%). 37% of colorectal and 37.5% of prostate List Serv participants reported incorporating CCO’s respective guideline recommendations into their practice following the List Serv initiative.

The List Serv discussion highlighted proper practices and identified areas for future improvement. Improved culture of collaboration between disciplines, accessing expert opinion, and awareness of provincial best practices were main benefits noted by participants.

**RESOURCE IMPLICATIONS**

Costs were minimal; required administrative coordination & input from clinical experts on case scenarios and their participation to encourage discussion.

**HOW THE PROJECT ADVANCES THE QUALITY OF CANCER CONTROL**

Improved culture of collaboration between disciplines, accessing expert opinion for physicians across the province, and awareness of provincial best practices/recommendations.
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http://www.cancercare.on.ca/toolbox/qualityguidelines/clin-program/surgery-ebs/

CONTACT INFORMATION:
Name: Ms. Amber Hunter  Email address: amber.hunter@cancercare.on.ca
LESSONS LEARNED

1. Implementation and utilization of a synoptic reporting format was overall, a positive experience for the Pathology Department. **Entry of microscopic finding into the standardized electronic format was efficient to use and required completion of data fields ensured report completeness.** With expertise in usage of the electronic report format, pathology report turnaround time improved from 22 to 7 days. **Option for additional narrative description enabled the reporting Pathologist to provide data not included in the synoptic report.**

2. Surgeons and Oncologists accustomed to lengthy narrative reports found the standardized synoptic report, which included required diagnostic and prognostic factors listed under appropriate headers, comprehensive and uncomplicated to interpret. Follow up communications with the reporting Pathologist has been minimized.

3. **Project success is dependent on the commitment of the Pathology and Project Leads.** The recognition and commitment to quality improvement initiatives is the driver for the energy to secure funds and implement the resources required to move forward.

4. **Education of the Pathology team, Surgeons and Oncologists on project initiative and patient care benefits will ensure support of key users and enable efficient implementation.**

5. **Knowledgeable Information Systems support is required** to install, test and implement synoptic reporting into an existing Information System. **Ongoing Information Technology support by the program supplier is imperative to ensure continuous reporting.**

PROJECT OVERVIEW

The mTuitive Pathology module is a synoptic report built on CAP guidelines. It was implemented for the reporting of solid tumors from prostate, lung, breast, colorectal, and endometrium surgical specimens. The synoptic report is completed by the reporting pathologist and filed electronically. The synoptic report is included in the microscopic examination of the pathology report and also crosses over to Cancer Care Ontario (CCO). This comprehensive reporting system provides information on all required parameters for patient management and provides statistical data for CCO.

- Improved turnaround time of pathology reporting (not sent for transcription, pathologists complete synoptic independently)
- Consistent format for pathology reporting
- Complete reporting decreases personal communications between the pathologist/surgeons/oncologists
- Fewer opportunities for clerical transcription errors
Problem
The reporting of patient solid tumor biopsy results was sometimes fulsome, sometimes incomplete. Completed reports did not consistently include all the necessary data elements needed to properly stage and develop treatment plans. This lack of timely, consistent, and complete reporting led to further consultation between physicians and frequently contributed to a delay in access to care for cancer patients.

Barriers
Each reporting pathologist was accustomed to their personal reporting style resulting in inconsistent reporting. The pathologist was not aware of all pathology reporting required by the surgeon/oncologist for optimal patient management.

Solution
An organized and deliberate effort under the guidance of Dr. Joseph Wasielewski, Chief of Pathology & Medical Director of the Laboratory at Thunder Bay Regional Health Sciences Centre was developed and implemented to address this problem. With the goal of improving the quality and timely reporting of solid tumors, the mTuitive Pathology Module was implemented. The plan was to begin with the five most common solid tumor checklists but as the project progressed the benefits of synoptic reporting were evident. These realizations led to the implementation of all available checklists. Pathologists were supportive and found that pathology results were quickly and easily entered into the standard electronic checklists.

The project also includes the implementation of specialized pathology requisitions specific to endometrium, colon, breast, lung and prostate solid tumors. These requisitions are completed by the surgeon in the Operating Room and contain information that assists the pathologist in providing a more complete synoptic pathology report. This project utilized the model of Computer Decision Support Systems.

Evaluation
Prior to live implementation, data transfer comparison was done between Thunder Bay Regional and CCO. Objective identified indicators specific to synoptic reporting are available monthly from CCO and the Cancer Program’s scorecard provided by our Decision Support Department. Dr. Wasielewski reviews these results with pathologists and when needed any necessary adjustments are made to ensure each metric remains on target. The monthly performance indicators provide comparisons with all hospitals who have implemented synoptic reporting. Subjective feedback from surgeons and oncologists has been reviewed.

A sole evaluation of the Thunder Bay Regional Health Sciences Centre has shown that Dr. Wasielewski’s vision has led to a decrease in cancer diagnosis wait times from 22 to 7 days while improving the quality of the pathology report that is used to guide treatment/clinical care.
Comments from surgeons and other physicians regarding decreased turn-around-times for pathology reports are now positive.

**RESOURCE IMPLICATIONS**
IT support, clerical supervisor support, Chief of Pathology and Associate Pathologist support, as well as Project Lead support.

**HOW THE PROJECT ADVANCES THE QUALITY OF CANCER CONTROL**
Standardizes pathology reporting
- Improves overall report completeness
- Easier to decipher than narrative or paragraphs
- All important diagnostic and prognostic factors are laid out in a structured list or table with headers and responses rather than being buried in text fields
- Improves communication among healthcare providers
- Facilitates decision-making for treatment
- Can improve pathology report turnaround time when paired with voice-recognition software
- Facilitates secondary uses of pathology data for purposes such as tumour registries; quality reporting; stage capture; quality management and evaluation; patterns of care and outcome analysis; system planning; population research*

**REFERENCES**
No references reported.

**RESOURCES**
mTuitive Pathology Module. Accessed online:

*For more information visit:
http://www.cancercare.on.ca/cms/One.aspx?portalId=1377&pagId=48158

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LESSONS LEARNED

Project Initiation (Planning)
- Spend sufficient time to create an accurate and complete project plan; it is the basis for controlling the project and ensuring success
- Key personnel, technologies and management reserves for high risk elements of the plan should be identified
- Important to identify a single project leader who has control and decision authority over all the resources to ensure satisfied stakeholders and a successful project.
- Dedicate a project team that is involved in task review and decision making; this ensures involvement and commitment, encourages peer review of project detail and produces ownership of the project

Implementation
- Prior to surgeon training, ensure all IT and administrative requirements are in place (delays in deployment after surgeon training can have a major impact on user uptake).
- Scheduling training with surgeons can often be a lengthy process; trainer requires flexible schedule
- Communicate with OR staff and Health Records when new surgeons begin using WebSMR
- Advanced technical solutions are not always possible within the structure of certain organizations. Regardless of the benefits to the organization and the involvement of key leaders, current workflow processes may stay the same; it is important to plan acceptable alternatives but incorporate a transition for when the organization is ready to advance

Change Management Strategies
- Working with new standards and technology invariably leads to research and development not previously done in order to implement.
- Allow enough time for research, development and networking in order to create a valid mapping process
- It was critical to have very specialized staff to complete this deliverable including a programmer who can develop the required architecture and a terminologist with considerable clinical background.
- Timelines set by other organizations may affect deliverables in your project that you have no control over. A risk mitigation plan to account for these occurrences should allow for completion of other project deliverables.
**PROJECT OVERVIEW**

Synoptic Reporting Tools Project (SRTP) is a Canadian Partnership Against Cancer project that builds upon the pioneering work undertaken in Alberta with the Web Synoptic Medical Record (WebSMR) supported by an investment by Canada Health Infoway. The project has two main high level objectives:

1) To test the success of pilot implementations of synoptic surgery reporting in new jurisdictions. The evaluation including lessons learned will provide a guide for future implementations.

2) To lay the foundation for pan-Canadian standards (content and informatics) for synoptic cancer surgical reporting which includes developing a business case for data warehousing with the potential for pan-Canadian outcomes reporting.

From breast cancer surgery to thyroidectomy, computerized synoptic reporting has come a long way and has made a difference in the way reports are generated. Synoptic reporting is a great educational tool. It has improved the accuracy of reporting and contributed to both clinical and patient outcome. This revolutionary change in the medical record system is being used to facilitate information flow among professionals. As Computer Decision Support Systems, synoptic surgical reporting has proven to be a successful tool for generating quality surgical data, which paves the way for better clinical outcomes.

**PROBLEM**

Variation in style, content and comprehensiveness of healthcare reports, including those in cancer surgery substantiated a need for a systemized method and to capture data on a real-time basis. Evidence has shown the impact of the quality of surgery on morbidity, mortality, long-term survival and function (Temple et al., 2010).

Synoptic reporting refers to a systematized method for structuring healthcare reports to include important data that has demonstrated to influence health outcomes through decision making. A synoptic report is a structured checklist or template capturing key elements of a medical interaction. Traditional narrative reports for cancer surgery have been shown to capture as little as 25% of essential operative data. A synoptic report has the potential to capture all information relevant to the surgery and important for down-the-line care. Synoptic surgery reporting, therefore, can improve the completeness and quality of reporting, and better decision making for health care provider and patient.

The synoptic report is an alternative to the narrative report, traditionally used by those reporting, with variation in style, content and comprehensiveness. Evidence has demonstrated the success of the syntoptic surgical reporting tool for generating quality surgical data (Temple et al., 2010).
SOLUTION
Pilot implementation of two synoptic reporting tools in five provinces under the Canadian Partnership Against Cancer for five tumor sites: breast, colon, rectal, ovarian, head and neck and endometrium.

Objectives:
1) To improve clinical decision making and patient outcomes through more effective reporting in cancer, pathology, surgery and selected clinical disciplines, e.g. use of guidelines embedded in templates
2) To achieve common pan-Canadian synoptic reporting tools based on evidence that will improve the efficiency of reporting and contribute to better clinical decisions and patient outcomes through the evaluation of the benefits of synoptic reporting tools implemented
3) To create a relational database for the capability of monitoring and comparing reporting practices interprovincially over time

• National consensus statement: “Synoptic reporting of surgery and pathology should be the standard method of data capture to optimize cancer outcomes”
• Pilots are currently nearing the end of implementation and planning for sustainability
• Proposal for evaluation in progress
• Work in progress: standards development, piloting template development methodology

EVALUATION
Evaluation work in progress. This will be reported upon completion.

RESOURCE IMPLICATIONS
• Funded by the Canadian Partnership Against Cancer
• Significant IT resources for interfaces, upgrades and linking different IT platforms/applications
• Human resources (central and regional coordinating team), travel, meetings, honorariums

HOW THE PROJECT ADVANCES THE QUALITY OF CANCER CONTROL
• Efficient and consistent capture of key information that informs clinical decisions
• Fosters evolution of clinical databases useful for outcomes research and quality improvement
• Synoptic reporting is a powerful educational tool (essential steps in a surgery outlined; implicit & explicit guidelines embedded)
• Reduction in transcription costs, accelerate completion of health records

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Effects of Change in Rectal Cancer Management to TME Surgery and Preoperative Short Course Radiation in Outcomes in a North American Population

B.C. Cancer Agency, B.C.
Dr. Terry Phang, Ms. Colleen E. McGahan, Dr. Greg McGregor, Dr. John K. MacFarlene, Dr. Carl J. Brown, Dr. Manoj J. Raval, Dr. Rona Cheifetz, Mr. John H. Hay

LESSONS LEARNED

1) Knowledge translation is an effective strategy to implement evidence-based guidelines designed to improve cancer outcomes in a population setting.
2) There is little research, outside of teaching technical skills, about continuing medical education specifically for surgeons and about what exactly works. Our project combined a number of modalities, conferences, the inclusion of opinion leaders, reinforcement through retesting, and presentations about outcomes at serial meetings, to achieve its goals.

Lessons on Technical Matters:
3) The use of short-course treatment requires considerable coordination between surgeons’ offices and radiation therapy departments to ensure that surgery occurs within 7-8 days of radiation. This may necessitate delaying radiation until operating time is available or vice versa. Therefore, the coordination of the treatments becomes a vital issue.

PROJECT OVERVIEW

In a province-wide audit conducted by the Surgical Oncology Network (SON), BC Cancer Agency (BCCA), the 4-year pelvic recurrence for stage 3 rectal cancer was 27% in patients treated for rectal cancer in British Columbia in 1996. By comparison, best evidence-based practice from the Dutch population study established a goal of local recurrence of less than 10%. To achieve this goal, rectal cancer management guideline was changed to include new advancements in the medical field and especially in cancer control. Both radical resection of the rectal cancer and adjuvant short-term preoperative radiation were introduced and standardized through educational workshops. The implementation of the new guidelines resulted in an improvement in the rates of pelvic recurrence.

PROBLEM

Difficult surgical anatomy in the pelvis, lack of standardized techniques for surgical resection of the rectum, inconsistency of the operative reports and poor adherence to the provision of adjuvant radiation were among the factors that contributed to the high rates of colorectal cancer recurrence.

The colorectal cancer site committee of the SON at the BCCA recognized the problem of high rates of local rectal cancer recurrence in an audit of outcomes among patients who received treatment for rectal cancer in 1996. In order to reduce the recurrence rates and to incorporate
several new techniques into the practice, development of a new rectal cancer management guideline became inevitable. Furthermore, they realized that standardizing the new surgery techniques and implementation of the adjuvant short-term preoperative radiation, necessitate educational workshops.

BARRIERS
1. The need to recognize the identified gap by the stakeholders such as surgeons, pathologists, and medical and radiation oncologists.
2. Skilled staff – Radiation oncologists required training in the use of short course preoperative radiation; surgeons required training in the surgical technique of mesorectal excision and indications for preoperative radiation; pathologists required training in assessment of the mesorectal excision specimen.
3. Funding was not a barrier – To the contrary, use of short course preoperative radiation is cost-saving relative to standard long course chemoradiation.
4. Time was not a barrier – To the contrary, patients prefer less delay to surgery with short course compared to long course preoperative radiation.

SOLUTION
SON and BCCA recommended a change in management guidelines after the Dutch protocol to include adjuvant short course preoperative radiation and total mesorectal excision (TME) surgical technique. Preoperative clinical staging using computed tomography, magnetic resonance imaging and endorectal ultrasonography were also included in the guideline. Long-course preoperative chemoradiation was still recommended for clinically fixed tumours and lesions with predicted close resection margins. Additional recommendations included the assessment of at least 12 lymph nodes in pathology reporting.

Education workshops for surgeons, pathologists, and medical and radiation oncologists were held to implement the protocol change in 2002 and 2003. The workshops included detailed practical demonstrations of the TME surgical technique including a hands-on anatomy lab and live surgery demonstrations with interactive discussions. These sessions also established purpose and buy-in from participants. The protocol change was published for community awareness in the BCMJ.

EVALUATION
A provincial audit of rectal cancer cases was repeated for patients treated in the year after the protocol change and pelvic recurrence rates were compared to the previous audit of the 1996 cohort. Based on registration for the education sessions relative to the number of surgeons performing rectal cancer surgery in our 1996 audit, we estimated that 80% of surgeons in B.C. who performed rectal cancer surgery attended these sessions. In the post education workshops cohort, 367 patients had radical resection of rectal cancer with curative intent. Use of adjuvant radiation was increased from 37% in 1996 to 65%, significantly more in keeping with recommendation for adjuvant radiation for stage 2 and 3 cancers. Adjuvant radiotherapy in the latter cohort was given preoperatively in the majority of patients as per the revised protocol.
Negative surgical radial margins were achieved in 319/367 (87%) of cases in keeping with the TME technique for rectal cancer surgical excision. Of note, the Dutch population study reported a negative radial margin rate of 83%.

Median follow-up at this report is 34.5 months with 91% of patients followed for at least 2 years. There was a trend in lower 2-year overall pelvic recurrence rates in the 2003-04 cohort (9.6% to 6.9%) and a significant decrease for stage 3 cancers, from 18.2 to 9.2% (p=0.0198), relative to the 1996 cohort.

**RESOURCE IMPLICATIONS**
1. The project was funded by the British Columbia Surgical Oncology Network as a quality improvement initiative.
2. Administrative coordination & input from experts – expert surgeons, pathologists participated in education workshops

**HOW THE PROJECT ADVANCES THE QUALITY OF CANCER CONTROL**
The new rectal cancer management guideline and the accompanying knowledge translation techniques have improved population outcomes among patients with rectal cancer. This is the first report of an education strategy to improve rectal cancer outcomes for a population-based cohort in North America.

**REFERENCES**

**RESOURCES**
No resources reported.

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LESSONS LEARNED

Some Lessons Learned and Followed while implementing a new RRRP at the Odette Cancer Centre:

1. Importance of identifying the real problem.
   This was critical. We spent time identifying the real problem (difficulty with referral and multiple trips for single palliative treatment) versus what was perceived as the problem (long wait & poor access for palliative radiotherapy). Understanding the real problem saved time in solving the wrong problem; and implementing an innovative program to provide radiotherapy for a specific patient population allowed us to move to the next step.

2. Set clear objectives.
   By identifying the real problem, we were able to set clear objectives:
   a. Provide timely radiotherapy for palliative patients at the end of their life.
   b. Need for all relevant information and imaging to allow for a decision on the day of consultation.
   c. Follow-up of patients by the referring physician.

3. Success depends on collaboration and working as a TEAM.
   We identified that it would be crucial to have participation by our radiation therapists (RTs), nurse practitioners (RNs) and radiation oncologist (RO) colleagues. Therefore, we needed to create a workable, innovative solution that was attractive to all. By having the RTs and RNs become leaders in an innovative program, it ensured their support of this program. This formed the basis for the subsequent academic focus with ROs, RTs and RNs becoming producers and not just consumers of scientific knowledge.

4. Role of communication – advertising and “selling” the program.
   We did not want this program to simply be a restructuring of our internal structure, so we went to the “outside community” to introduce a new and innovative program that would benefit their patients. We held Grand Rounds in as many hospitals as possible to educate everyone on what the program was, how it would work, whether it would meet their needs and what we needed from the referring physicians to make this work (ie. pathology results, imaging reports etc). We provided educational handouts and ONE number to call (our new patient booking office) to keep it simple and avoid confusion and frustration.

To improve communication, we also created HOTSPOT, which began as a short newsletter to inform referring doctors of what was happening in the RRRP. This evolved to be a major educational quarterly publication to educate the readership on various aspects of palliative care. An educational insert acts a quick reference guide to our palliative care colleagues which is mailed as hard copy and posted on the OCC web site.

So in very general terms, the lessons we learned and used were: “Evaluate, Innovate, Collaborate, Communicate, Educate and Re-evaluate.”
**PROJECT OVERVIEW**

The RRRP clinic acts as a one-stop shop, allowing patients to be seen in consultation by a radiation oncologist, simulated and planned by radiation therapists, and start treatment that same day.

Furthermore, patients are provided access to other appropriate services besides radiotherapy including same-day referral to any outpatient clinic in the centre, as well as home care and social services.

Upon completion of treatment, patients are returned to the care of their referring physician. We fax a follow up letter to the referring physicians on the same day that patients are seen in our clinic, providing them with immediate information on any care or treatment that a patient will receive at our facility. The set up of the program has improved the total quality of care for each patient.

The RRRP was developed in response to a growing need for our palliative patient population. Patients are able to be seen in consultation, planned and treated, all within one clinic visit, thus improving resource utilization and patient care. Research has become and remains a priority within the RRRP as well, as evidenced by the numerous annual publications produced by members of this group. Our program continues to serve as a model to other centres worldwide and hopefully they will benefit from seeing our program by being able to develop one in their own department.

**PROBLEM**

Waiting times for radiation therapy (XRT) in Ontario have been a major problem in spite of an increase in resources. The median waiting time from referral to start of XRT treatment increased from 5.1 weeks in 1993 to 7 weeks in 2002. In 2009 only 70% met the wait time targets of CCO. The majority of Ontario patients wait longer for XRT than is recommended by the consensus-based targets established by the Canadian Association of Radiation Oncologists (2 weeks from referral to consultation; 2 weeks from consultation to treatment).

Symptomatic palliative patients were also waiting long periods of time to get their XRT treatment. This was identified as a specific problem, as these patients are suffering from their symptomatic metastatic disease, and have a limited lifespan. Symptomatic patients with limited life expectancy often find it difficult to make multiple trips for consultation, simulation and planning of XRT before starting treatment. These barriers to care often discourage referral for palliative XRT, resulting in poor quality of life for patients with metastatic cancer.

**BARRIERS**

The major barrier identified was the resource limitations in both the simulator and treatment machines to accommodate the patients that were to be treated the same day.
SOLUTION
To meet the challenge of providing timely palliative XRT, we initiated the Rapid Response Radiotherapy Program. The goal of this program is to provide rapid access to palliative XRT for patients with symptomatic metastatic cancer. When appropriate, consultation, treatment planning and initiation of treatment occur on the same day. This was recognized as a priority within the department and subsequently, time and space on both the simulator and treatment units were reserved for RRRP patients.

The referral process itself was reorganized to minimize the number of clinic visits required by the patient. Efficiency is a top priority, as patients are screened upon referral for appropriateness and availability of imaging and reports to make an accurate diagnosis. In this way, the RRRP clinic acts as a one-stop shop, allowing patients to be seen in consultation by a radiation oncologist, simulated and planned by radiation therapists, and start treatment that same day.

Furthermore, patients are provided access to other appropriate services besides XRT including same-day referral to any outpatient clinic in the centre, as well as home care and social services.

Upon completion of treatment, patients are returned to the care of their referring physician. We fax a follow up letter to the referring physicians on the same day that patients are seen in our clinic, providing them with immediate information on any care or treatment that a patient will receive at our facility. The set up of the program has improved the total quality of care for each patient.

Our primary objective in the RRRP program is to provide quality end of life care to patients with metastatic cancer through improved access to palliative XRT in an academic environment. This ensures patients are provided with quick and rapid access to care, with the ultimate goal being to improve patient quality of life (QOL). In addition to clinical service, the RRRP program has an active educational and research component. RRRP research aims to examine the effects of palliative XRT on QOL. Consequently, this serves to provide the highest quality of care through evidence based medicine to all patients who may benefit from palliative XRT.

Evidence of knowledge transfer in the RRRP is through on-going publications of RRRP studies in oncology journals and across Canada monthly via videoconferences. We publish a newsletter quarterly to inform referring doctors of the latest clinic news. The RRRP has hosted many oncologists, professors and co-coordinators from centres who wish to launch similar programs. We provide an elective half day course for those interested, which includes a tour of facilities and overview of procedures. We have hosted radiation oncologists for rotations, where they learned about the inner workings of the RRRP. Many centres have modeled programs after the RRRP, which was the first of its kind and continues to provide an excellent example of rapid access to palliative XRT.
No KT model was used initially; however, the program has served as a model to many other centres interested in setting up a palliative program. Visitors from centres worldwide come to our centre to gain and increase their knowledge of the program in the hopes to develop a similar one in their host centre.

**Evaluation**

The Cancer System Quality Index (CSQI) is a tool that is used by the RRRP to assess quality and delivery of care, and provide guidelines for current goals. For example, from 2003-2006 median wait times for radiation treatment in Ontario was 4-6 weeks. The benchmark in the CSQI is listed as 28 days. However, in the RRRP the median time to radiotherapy treatment was 8 days, almost a quarter of the time. The most recent QA shows the wait median time in the RRRP was 4 days.

This tool is used to help determine that we are meeting our goal of providing rapid access to palliative XRT for symptomatic patients, and exceeding provincial expectations. Prompt appointment following a referral combined with excellent service prompted community doctors and palliative physicians to praise the RRRP for timely and convenient patient care in our survey satisfaction.

The RRRP program has successfully streamlined the referral process at the Odette Cancer Centre to be more efficient. Our program stands as an excellent example of improving access to care. Other, Canadian centres have followed our model and set up their own clinics. They include the Princess Margaret Hospital, Tom Baker Cancer Centre, centres in Hamilton and Ottawa, British Columbia and Nova Scotia. A radiation oncologist from Brisbane, Australia has also developed a program modelled after ours. The program has readily provided the education and leadership needed for improved total quality care and access to palliative XRT. We regularly receive inquiries from interested visitors, and invitations to share our experience. RRRP is recognized as an innovative academic palliative radiotherapy program.

**Resource Implications**

The major resource implication was that of simulator and treatment unit time. The fear was that these reserved spaces could potentially remain unused, however, with the triaging and organizing of referrals prior to a patient’s appointment, these spaces seldom remain empty.

**How the Project Advances the Quality of Cancer Control**

This program enables patients to be seen and treated on the same day, thus minimizing the number of clinic visits required. Referrals to other supportive care services are also made on that same day, and if possible, patients are seen by these services on their initial visit day as well. The program has advanced research and evidence based medicine and has been a leader in the development of QOL instrument tools for the palliative population.
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Radiation Wait Time Improvement Project

Grand River Hospital, Kitchener, ON

Mr. Mark Berry and the members of the Radiation Treatment Program of Grand River Hospital

LESSONS LEARNED

- Focusing everyone on the problem, getting everyone in the room focused on the problem rather than blaming each other.
- Training everyone in the methodology you are going to use helps distance them from the problem and become more objective.
- Allow conflict; by allowing people to openly argue things out then solutions can appear. This is hard to do but a trained facilitator can help this or rules established by the group.
- Stick to the agreed on methodology; in this case Simplex as it is a validated tool, trying to rush through is hard.
- Ensure you are working on the right problem before leaping to solution and then validate the problem by measuring. Stick to the facts as much as possible.
- We developed a process map of the treatment planning process; not the ideal process but what was actually happening. This was refined many times until all agreed (took 6 versions).
- As the program manager it was hard to not jump in hard to “fix”; I needed to challenge, listen and adapt.
- Implementation of solutions is the hardest thing—be prepared to have “roadblock” sessions to keep things on track.
- Technology is not always the answer; one problem we thought was remote access to our treatment planning system, that was not the problem—the problem was the Radiation IT specialist needed his password resetting by the IT department and he had trouble communicating so we arranged a meeting to discuss and his password was reset the same day.
- Assembling the right team; ensure the team has representation from all areas that can influence the outcome. In our project we included:
  - Radiation therapists from multiple areas (treatment planning, treatment delivery)
  - Radiation oncologists
  - Nurses
  - Medical physicists
  - Radiation IT specialists
  - Clerical staff

In addition the right mix of personalities is key, include people who are known:
- To get things done: they will have enthusiasm in the team
- Have lots of ideas: these people generally have lots of good ideas that never get heard
- To try and maintain the status quo: by being on the team they are committed to solving the problem
- Who think they have the answer: they may have the answer but it may not be right for the problem
o **Who are saboteurs:** this puts them in an uncomfortable place as they sometimes work behind the scenes to sabotage things
  – Mainly the focussing on the problem, rather than the solution. The solution was not always what first came to mind but a culmination of detective work into all aspects of the problem.
  – It allowed people to “brainstorm” without fear of being “wrong”. The focus was on quantity and from that it was easy to draw from the quality
  – It allowed us to map out where we were, which was extremely beneficial in easily identifying the “gaps”
  – I agree, technology is most often not the problem, but the processes within. It showed us to not necessarily rely on the technology but to use it to our advantage – it’s not always the instant “fix” that people would like it to be.
  – It showed us that more staff is not always the answer but using the resources available to identify the problems that lead to the solutions
  – Making people aware of personality differences is key to productive brainstorming and conflict resolution (I agree that healthy conflict is a good thing as long as it is kept reigned in).

**PROJECT OVERVIEW**

In December 2005, the Provincial and Territorial (PT) health ministers established common wait time benchmarks for various procedures and services including radiation treatment. The PT benchmark is for the waiting time period from when a patient is ready for radiation treatment until the patient receives his or her first treatment – also called "ready to treat to treatment." The PT benchmark for radiation treatment is that a patient will receive the first treatment within four weeks (28 days) of being ready to treat.

The Canadian Association of Radiation Oncologists had recommended a wait time of 4 weeks from referral to treatment. Since 2005 Cancer Care Ontario (CCO) has been publically reporting wait times by individual cancer centre.

In 2005-6, CCO further developed wait time interval definitions and established wait time standards for patients. They were:
- 14 days for referral to consultation with the radiation oncologist
- 1, 7 or 14 Days for “ready to treat to start of treatment” (1, 7 or 14 is relative to clinical urgency)

Once developed CCO worked with the individual cancer centres to negotiate local targets. For 2006-2007 the target 4 weeks (in weeks due to data collection fields being established), in 2007-2008 the target for Grand River was 70%.

In February 2006, radiation oncology wait times at GRRCC were at close to 7 weeks referral to treatment, amongst the worst in the province. The project team was struck in April 2006 to learn process improvement methodology and reduce wait times. Wait times improved to 4
weeks by June 2006 and stayed at or below this level into 2007 when the way wait times were measured was changed.

**PROBLEM**
In early 2006, radiation wait times for patients at Grand River Hospital were amongst the worst in the province.

**BARRIERS**
- There was more focus on “blame” than resolving the problem. The team would infer it was other team members who were causing the problem. The processes in place were not working for all team members.
- Team selection was critical and instead of bringing in a consulting firm to fix the problem we developed a plan that would train the team how to fix the problem and then use our own problem as the teaching case.
- Technology was felt to be one of the barriers, as well as a lack of understanding of other team members needs.

**SOLUTION**
To reduce wait times in April 2006 a project team was formed with the help of an outside company to lead GRRCC staff through a process improvement exercise and at the same time train staff in the improvement methodology (Simplex©) to ensure long term sustainability and the ability to use these skills for future process improvement. The team consisted of radiation therapists, radiation oncologists, medical physicists, clerical staff and nurses. The project team worked together over the next 6 months to develop strategies and solutions that would reduce wait times.

The team came up with the following potential areas of improvement:
1. How might we get the patient referral package to the Radiation Oncologist for triage and back to New Patient Referral in a timely manner?
2. How might we create consult flexibility to handle the variability of patient referral?
3. How might we make it easier for a Radiation Oncologist to approve a plan?
4. How might we ensure a complete package of information is available 48 hours before consults by Radiation Oncologist without rushing around?
5. How might we have off-site remote access to Radiation Oncology planning software (P3MD and Varis) using remote desktop?

Once identified, solution sessions for each potential area of improvement were run. The steering committee for the project then evaluated all the solutions and chose which ones to implement. The solutions chosen were:

**Solution #1**: Enable remote computer access to the patient’s treatment plan
A key part of the process in getting patients onto treatment is development and approval of the radiation treatment plan. One barrier to a radiation oncologist completing key steps in the
process is access to the software. The software was not web-based and so 3 computers were housed in a secure location with the required software. We then worked with our IT department to set-up remote computer access for the radiation oncologists. This improved their access to the system and enabled access from anywhere a secure connection could be made. In one instance, the Head of Radiation Oncology was viewing a treatment plan whilst on vacation in Mexico.

Solution #2: Use Varis Tasking for the Radiation Oncologists
At the planning stage of the process, certain steps require a radiation oncologist approval before the next piece can begin. Radiation oncologists had no way of knowing when the step was ready for them to do and no way to measure it. Using the radiation software used for the electronic record, “tasks” were created similar to those used in Outlook. These tasks were created when the Radiation Oncologist had to do their piece. Once complete the tasks were signed off. The tasks were time sensitive; in the initial stage before implementing this solution only 82% of simple plans and 38% of complex plans were approved within 24 hours of completion. After implementation this number went up to 80-90% for complex plans.

Solution #3: Develop Booking Guidelines for Enabling Consult Flexibility
A working group worked on how best to ensure the consult was booked within 2 weeks of referral. The end result was that for all patients who would not make the 2 weeks the chart would be reviewed by the Head of Radiation Oncology.

Having to wait for treatment is reasonable given the limited resources and increasing demands. Sometimes it is necessary to allow appropriate time for the care givers to plan and deliver treatment.

On the other hand, unnecessary delays can be minimized and this project proved this.

Few of the key changes required to support sustainability of this project included collaboration between multiple teams in order for changes to happen and take effect. A constant awareness of patient volumes, projected future demand, and wait time performance is also required. It is absolutely essential for GRRCC to be in front of the demand curve to ensure we have enough staff and treatment spaces to meet the increasing demands.

Awareness that we had a problem was the first step in reducing the wait times. This momentum gathered more impact once the team realized we could reduce wait times.

Developing a culture where wait times are important to everyone in that they realize they can help reduce wait times.

The overall result has seen consistency in wait time performance since 2006, there have been challenges during this time but any dip in performance has been rapidly addressed with ongoing monitoring and refinement of the solutions.
One example of this is the implementation of an automated e-mail tailored to the tasks mentioned in solution #2. Any task that is due or overdue is sent to the relevant healthcare professional and copied to the relevant medical or program director.

No formal KT model was used, but we have used the fundamental principles of KT, which is educating and enabling the healthcare team via evidence-based synthesized knowledge. We have created a self-sufficient team that does not need an external consultant to function.

The team was trained in level 1 Simplex, further staff were trained to level 2 and the team lead to level 3. Having the team all trained before the problem was fully tackled resulted in faster work and increased collaboration.

In designing the team, attention to team structure was critical and all professions involved in the program were members of the team. In addition the team comprised both enablers and potential detractors.

In the solution generation the team was expanded to include other team members outside of the core team. This allowed for widespread engagement.

**EVALUATION**

There is an ongoing evaluation conducted on a monthly basis.

The median wait times for “referral to treatment” in the radiation treatment process was tracked monthly to assess our progress. When the changes in reporting were in place we then were tracked by % of patients meeting the “referral to consult” and “ready to treat to start of treatment.” Both methods of measurement were consistent with that of the CCO reporting.

“Referral to consult” refers to the time between a patient’s referral to a radiation oncologist and the actual visit with the oncologist. “Ready to treat to start of treatment” refers to the time from which the radiation oncologist deems the patient ready to start treatment, to when the patient actually receives treatment. Our progress is monitored through the public wait time reporting on CCO’s website. GRH data is submitted to CCO on a monthly basis and the wait times are derived from this.

**Results**

The result was improved wait times within 6 months and the wait times have remained at or above provincial target since then. The team continues to monitor and respond to wait time fluctuations and implement solutions to address system issues. Wait times since the measure changed have remained at or better than target since the project started. Since 2004, CCO have been publicly reporting the wait times in Ontario on their website. Our current results are available on CCO’s website.
Overall the wait times have been sustained with increasing volumes. This is shown below. The first chart reflects the original metric of referral to consult. Other charts reflect the current measures.
Radiation Oncology Wait Times 07-08

```
<table>
<thead>
<tr>
<th>Period</th>
<th>Referral to Consult</th>
<th>Ready to Treat to Trmnt</th>
<th>Benchmark</th>
</tr>
</thead>
</table>
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Grand River Regional Cancer Centre / ALL SITES - Radiation Wait Times
Percent Seen/Treated Within Target (1, 7 and 14 Days) vs Valid Case Volume
October 2008 to March 2010

Prepared by: Cancer Informatics
Data Source: ALR/Data Book
May 19, 2010
**RESOURCE IMPLICATIONS**
Staff was freed up to participate. The consulting coast was allocated to the program by the regional vice president.

**HOW THE PROJECT ADVANCES THE QUALITY OF CANCER CONTROL**
Our project contributes to the quality of cancer care by the following means:
1. Improved access to services
2. Increased in patient satisfaction at being in a centre with low wait times
3. Increased healthcare team satisfaction
4. Greater understanding of the impact everyone has on wait times which sustains the efforts of the staff
5. Enhanced collaboration between team members.

**REFERENCES**
No references reported.

**RESOURCES**
To view more information on Simplex Training:
http://www.basadur.com/company/center.htm

To view the Radiation Wait Time Trend in Ontario:
http://www.cancercare.on.ca/ocs/wait-times/radiationwt/
http://www.cancercare.on.ca/cms/One.aspx?portalId=1377&pageId=8851#trend
http://www.cancercare.on.ca/cms/one.aspx?pageId=37439

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LESSONS LEARNED

- **Mentorship takes time and structure helps to facilitate.** This was accomplished through setting designated times for activities such as videoconferences, shadowing a colleague or designated learning sessions.
- Palliative care education was the prime focus to support primary care providers (family physicians and nurse practitioners) to enhance their knowledge and skill in managing patients requiring palliative care. But mentors and mentees wanted to spend more time on learning mentorship; and although it was a module in the education program (added to LEAP), they wanted more time spent on understanding and applying mentorship concepts. **In future initiatives we recommend that time be built into the curriculum and experience to fully understand and apply the mentorship concepts.**
- **Technology is useful to support mentorship.** What worked well was the use of videoconferences to connect mentors and mentees; in some instances, newsletters and case studies were available electronically as well and these were worthwhile resources. Nonetheless, **more use of technology might have been useful to support ongoing mentor-mentee relationships.**

PROJECT OVERVIEW

The **Collaborative Palliative Care Practice Project** was aimed at building regional supportive relationships between interprofessional primary health care teams (i.e., family physicians and primary health care nurse practitioners - mentees) and palliative care experts (palliative care physicians and advanced practice nurses as well as registered nurses with palliative care training/experience - mentors). The intended outcome was increased palliative care knowledge and skills, and enhanced collaborative practice for both the mentees and the mentors. Mentors and mentees participated in an intensive 14 hour palliative care/collaborative practice educational session. This was followed by a period of mentorship activities to enhance competence and comfort with managing the problems of symptomatic patients.

The **Collaborative Palliative Care Practice Project** was highly successful as it improved the knowledge and skills of family physicians and nurse practitioners in the care of cancer patients with palliative and end-of-life care needs. The project also improved the collaboration between primary health care teams and palliative care expert teams.

PROBLEM

The need to enhance primary care providers’ knowledge and skills in P/EOLC has been well-documented. This need is particularly acute for primary care nurse practitioners, as most
report virtually no formal training in caring for this challenging patient population (as per local needs assessment). While most family physicians acknowledge the need for more training in P/EOLC, some confess that is not a high priority for their personal continuing professional development (CPD) because it is perceived as a small and infrequent component of their practice.

**Barriers**
The literature describes many educational initiatives in P/EOLC which target practicing physicians\(^i\) or nurses\(^ii\), with some designed to be multiprofessional \(^iii\,iv\). However, programs that target primary care teams (i.e. an interprofessional group who work together regularly, as opposed to a collection of individuals of various professions who may or may not have any regular clinical connection) are very rare. All P/EOLC education programs emphasize the importance of teamwork, but usually through general statements rather than a practical approach grounded in an explicit theoretical framework. Well-developed CPD programs regarding interprofessional collaborative practice (IPCP) exist, but are not linked to clinical palliative care content\(^v\).

**Solution**
Palliative and end-of-life care is increasingly being delivered by interprofessional primary healthcare teams. In Ontario, interprofessional primary healthcare has been formalized in recent years with the development of structured Family Health Teams consisting of family physicians, primary care nurse practitioners, and other allied health professionals who assume joint responsibility for their patients’ care\(^vi\). The degree of interprofessional collaboration required for optimal functioning of these teams is beyond that which most healthcare professionals experienced in their training\(^vii,viii\). The growth of team-based care has spurred demand for CPD programs that address collaborative practice.

The *Collaborative Palliative Care Practice Project* is the first CPD program (to our knowledge) intended for interprofessional primary healthcare teams designed to explicitly address both collaborative practice and clinical palliative care learning objectives. Addressing both P/EOLC and IPCP within the same educational initiative holds potential advantages from the perspectives of both primary care participant teams and palliative care faculty. Participant teams can address two areas of learning need simultaneously, benefit from the team-building inherent in shared educational experiences, and network with both similar primary healthcare teams and their local palliative care consultant team. Palliative care mentor teams have the reciprocal opportunity to foster connections with local primary care providers while reaching two groups previously underserved by P/EOLC educational initiatives: primary care nurse practitioners, and family physicians who would not be interested in a typical intensive palliative care CPD program, but who are interested in developing skills in IPCP.

The aim of the *Collaborative Palliative Care Practice Project* was to build regional supportive relationships between primary health care teams and local palliative care experts that would result in increased competencies in both P/EOLC and IPCP. Interprofessional teams of palliative
care experts (palliative care physician and nurse consultants) functioned as program facilitators (mentors) for participant teams (mentees) in their local region. Following an intensive educational intervention, Learning Essential Approaches to Palliative and End-of Life Care (LEAP) and a module on Collaborative Practice designed specifically for this project the program incorporated a follow-up mentorship period intended to build on the new relationships and knowledge**. The Project was implemented in phases, each consisting of planning-implementation-evaluation cycles occurring over the span of approximately one year. Each phase received independent ethics approval from each participating institution’s research ethics board. Phase 1 and 2 are complete; we have received funding for Phase 3, which is underway. In each phase, there was expansion of sites into LHINs across Ontario. The project is a great example of knowledge translation (KT) between palliative care and primary health care teams. The project used an interactive KT model oriented to meeting the assessed knowledge needs of primary care practitioners, supported through case studies (raised by the primary care groups), clinical shadowing and ongoing mentorship.

**EVALUATION**

**Measures & Data Collection:** A mixed methods strategy was utilized to assess both process (e.g., Did the program proceed as planned?) and outcomes (e.g., Did the program have the desired effect on participants?). Process data collected included the number of mentors and mentees participating by region and the number of CPCP education courses. Outcome data were obtained from three instruments: the LEAP Knowledge Quiz, the Collaborative Palliative Care Practice Program Inventory and the Interprofessional Collaboration Survey.

In addition to the above quantitative measures, qualitative data were collected from both mentees and mentors through focus groups conducted after the completion of the mentoring phase. Mentees and mentors participated in separate focus groups. The focus group question guide centred on the mentorship aspect of the program and was primarily intended to offer insights into how this facet of the program contributed to the outcomes observed. The first two phases of this pilot project involved a combined total of 23 mentors (17 physician and 15 palliative care nurse specialists) and 129 mentees (51 physicians, 30 nurse practitioners, 39 other nurses and 9 other health care professionals) in six regions of the province.

**Results:** The results from the evaluation of the initial two phases are preliminary and a manuscript is in preparation, therefore, the results cannot be disseminated or shared until after the publication has been released.

**RESOURCE IMPLICATIONS**

All phases of the project were funded by the Ministry of Health and Long-Term Care of Ontario. The first phase from the Interprofessional, Mentorship, Preceptorship, Leadership and Coaching Fund and the second and third phases from HealthForceOntario’s Interprofessional Care/Education Fund. Funding covered costs of travel and accommodation and replacement costs for mentors, venue and food, supplies, accreditation and videoconferencing, facilitators in each region and a research associate.
**HOW THE PROJECT ADVANCES THE QUALITY OF CANCER CONTROL**

Patients with cancer experience problems with symptoms throughout the course of their illness. This project is designed to improve the ability of nurse practitioners and family physicians to manage cancer patients’ symptoms. The model serves to improve the collaboration between the expert palliative care teams and the primary healthcare teams so if cancer patients have symptoms that are difficult to control, the primary teams can receive expert mentorship/consultation to help resolve the problem. Overall, working together between primary care and acute specialized care improves the quality and safety of care delivered to cancer patients and support for their family caregivers.

**REFERENCES**


 ix* The members of this initiative include the following: Lakehead University

- Mary Lou Kelley, MSW, PhD, Director, Centre for Education & Research & Aging & Health (CERAH), Professor, School of Social Work & Northern Ontario School of Medicine, Lakehead University, Thunder Bay
• Linda Pisco, BA, MA, Education Planner, Center for Research and Education in Ageing and Health, Lakehead University, Thunder Bay

Queen’s University
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• Dr. Cori Schroder MD MEd CCFP FCFP, Queen’s Palliative Medicine
• Dr. Joshua Shadd MD CCFP, Queen’s Palliative Medicine
• Kathy Coulson RN MScN ACNP CHPCN(C) Queen’s Palliative Medicine
• Janice P. Van Dijk RN MHSc BEd, Project Manager, Queen’s Palliative Medicine
• Dr. Lewis Tomalty PhD Continuing Professional Development, Queen’s University

McMaster University, Hamilton Ontario
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Grand River Regional Cancer Program:
• Dr. Donna Ward, MD CCFP Acting Medical Director of Supportive Care, Regional Palliative Care Physician Leader, Regional Clinical Lead in the Waterloo Wellington Regional Cancer Program

South West LHIN: The University of Western Ontario - Palliative Care Program - London Health Sciences Centre
• Dr Ingrid Harle, MD, FRCSC, CCFP, FCFP, ABHPM (formerly Adjunct Professor, Dept Family Med, UWO; Clinical Associate, Dept Obstetrics and Gynecology, UWO & Head of Palliative Care Program at London Regional Cancer Centre) currently, Palliative Care Physician, Queen’s Palliative Medicine

Nurse Practitioners’ Association of Ontario
• Jane Sanders, MHSc, Executive Director of the Nurse Practitioners’ Association of Ontario

Cancer Care Ontario
• Esther Green, RN, MSc (T), Chief Nursing Officer, Provincial Head Nursing & Psychosocial Oncology Cancer Care Ontario
• Raquel Shaw Moxam, MSc, Program Manager Nursing, Psychosocial Oncology and Palliative Care, Cancer Care Ontario
• Dr. Patrick Critchley, MD CCFP, Timmins District General, Hospital

RESOURCES
Learning Essential Approaches to Palliative and End-of-Life Care (LEAP) and a module on Collaborative Practice designed specifically for this project
‘Conversations on Caring’ and ‘Developing Spiritual Care’, 99 Common Questions (palliative care handbook for nurses)
http://www.cancercare.on.ca/cms/one.aspx?pageId=9373

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An Integrated Approach to a Knowledge Management Framework for Cancer Care
Alberta Health Services Cancer Care, Provincial Clinical Teams, Alberta
Dr. Neil Hagen, Ms. Leanne Ross

LESSONS LEARNED
1. Provincial standards of cancer care are widely supported, but how to assure their uptake is complex and requires substantial investment.
2. Implementing a knowledge management framework results in substantial improvement in integration of cancer care across the province. It triggers a need to explicitly delineate provincial technical policy and provincial clinical policy, for example.
3. It is challenging to find indicators for clinical practice guidelines without constructing a whole new data gathering program; instead focusing on specific measurable areas can suffice to bring about change.

PROJECT OVERVIEW
The Integrated Approach to Knowledge Management Framework for Cancer Care is a provincial strategy to support the uptake of cancer care practice guidelines. The intended outcomes are to promote the local use of provincial guidelines through the explicit promotion of clinical care pathways harmonized across the province; the use of targeted knowledge transfer projects; and to prospectively measure the uptake of the practice guidelines and to provide feedback to the system on a range of preselected indicators.

PROBLEM
Practice guidelines are essential to promote use of best practice cancer care guidelines. But they are insufficient in and of themselves to assure they are routinely and consistently used. A framework is needed to support their use and to give feedback to the system on the adherence and also clinical outcomes of the care they describe. We identified a need to develop and implement a new framework for an integrated approach to knowledge management in the province of Alberta.

BARRIERS
Variable language is used to characterize the elements of knowledge management and knowledge transfer; the development and implementation of clinical care pathways; development of standard indicators, a means to collect data and a means to provide feedback to the system through the data.
**SOLUTION**

We created and implemented a framework for an integrated approach to knowledge management. The framework included the development and execution of an action plan for clinical care pathways for the major cancers. An integrated approach to a knowledge management framework for cancer care has been developed by Alberta Health Services. The elements of the framework were developed first. The framework included:

- Provincial practice guidelines (evidence-based when sufficient evidence exists, constructed in partnership with knowledge management specialists);
- Linking guidelines with provincial funding decisions;
- Establishing harmonized clinical care pathways;
- Establishing targeted knowledge transfer initiatives to support the uptake of specific new guidelines amongst specific providers;
- Establishing indicators, embedded within clinical care pathways;
- Using the indicators to measure the application of the guidelines and their clinical outcomes, and then providing feedback to the system on how it is doing.

More recently we have developed an action plan around the format, template and functionality of the harmonized "clinical care pathways".

The process is being implemented under the leadership of Dr. Neil Hagen and the Provincial Clinical Teams of Alberta Health Services Cancer Care. The construction of the clinical care pathways for major disease sites has commenced (mostly complete for the five major cancers). We are now in the process of identifying indicators to embed within the pathways, based on conversations between the Provincial Clinical Teams of Alberta Health Services Cancer Care and the Alberta Health Services owners of medical databases, in order to generate periodic reports on the indicators. The overall framework and project drew from quality improvement principles and organizational interventions.

**EVALUATION**

We have developed an extensive evaluation plan of the framework. The extensively planned evaluation will be conducted once the indicators for the uptake of practice guidelines, and the system to support reporting of indicators, are in place.

**RESOURCE IMPLICATIONS**

Initial investment in infrastructure support for knowledge management was a necessity, as was identifying collaborations elsewhere in the health care system (e.g., information management, support for and expertise in the development of clinical care pathways, and so on). About 1.5 FTE new resources were needed, plus the realignment of existing resources in related areas.

**HOW THE PROJECT ADVANCES THE QUALITY OF CANCER CONTROL**

Well-developed practice guidelines are essential to promote best care, however, concerted efforts are required to assure they are routinely and consistently used. A system-wide framework to facilitate application of practice guidelines and to monitor practice and outcomes
ongoing was developed and implemented in Alberta. This may serve as a model for other cancer care systems.

REFERENCES

RESOURCES:
Resources will be added as they become available.

CONTACT INFORMATION:
Name: Dr. Neil Hagen Email address: neil.hagen@albertahealthservices.ca
LESSONS LEARNED
1. The long-term vision for Healing Beyond the Body (HBB) is to be of a program that offers basic supportive care to all patients. **There is unique value to the support provided by trained volunteers, many of whom have been touched directly or indirectly by cancer.**
2. The overwhelmingly positive experience of patients with HBB and the fact many of the concerns about the potential adverse effects that could come from well-meaning volunteers interacting with patients were not realized. Findings suggest that **volunteers can effectively serve an enhanced supportive role in a hospital setting without adverse effects, and that their services are positively received by patients.** The perceived benefits of the HBB volunteer support service include a sense of humanization and normalization; a sense of security; support for non-medical needs; and support for unaccompanied patients (Nissim et al., 2009).
3. **Insufficient education of patients on both the program and the potential roles of volunteers may limit the effectiveness of the volunteers.** While no negative experiences with the HBB volunteers were reported in the research, the following themes were identified in relation to potential weaknesses of the HBB volunteer service including a limited awareness by patients of the HBB volunteers’ roles and responsibilities as well as the lack of a structured role definition for the HBB volunteers at the pre-treatment phase (Nissim et al., 2009).
4. Although it is important that all HBB volunteers have a common knowledge base and a set of generic skills, we have learned that differentiation of their roles is necessary based on the preferences and abilities of the volunteers. We have discovered that **clinic-based engagement of volunteers, assisting with distress screening and navigator functions may be best accomplished by specialization amongst the volunteers in their roles.**
5. The findings add to the literature on the contribution of volunteer support services and may serve decision-makers concerned with best practices in utilizing volunteer resources within a cancer hospital structure (Nissim et al., 2009).

PROJECT OVERVIEW
Healing beyond the body (HBB) is a hospital–based psychosocial support program provided to patients/caregivers through specially trained volunteers. Developed by Volunteer Resources and the Department of Psychosocial Oncology and Palliative Care at Princess Margaret Hospital, it was first piloted in 2007 in the Chemotherapy Day Care Unit as a way of providing emotional support to patients. After a highly positive evaluation of the pilot, the program was further developed and expanded to other clinics in the hospital. The program is inspired by “The Hope and Cope Program” at Sir Mortimer B. Davis Jewish Hospital (Montreal, Quebec).

The specially trained HBB volunteers listen to concerns, provide emotional support and help patients/caregivers to feel more informed about their treatment. Help is offered to navigate
the medical system and find information about practical resources and supports available to assist people dealing with cancer. HBB Volunteers help to decrease stress felt by families through listening, offering warm conversation, validating feelings and experiences, and sharing information.

HBB volunteers make the hospital experience less confusing and overwhelming, reduce barriers to patient participation in their own care, and increase self-management of the psychosocial impacts of this illness.

HBB volunteers help enhance the delivery of patient-centered care. The program recognizes the need to address and reduce the social-emotional consequences of cancer. HBB helps to ensure that cancer care addresses social and emotional concerns along with medical issues.

Services from HBB Volunteers have been well received by both staff and patients. Patients appreciate the care, support, and attention that they receive from the volunteers. Findings from the research suggest that volunteers can effectively serve an enhanced supportive role in a hospital setting without adverse effects, and that their services are positively received by patients. The perceived benefits of the HBB volunteer support service include a sense of humanization and normalization; a sense of security; a support for non-medical needs; and a support for unaccompanied patients.

**Problem**
Distress is common in patients with cancer and is increasingly detected through hospital-based distress screening tools. However, existing hospital resources did not allow an adequate response to this distress. Further, there is evidence that there may be unique value to support provided by trained lay volunteers, many of whom have been touched directly or indirectly by cancer. The long-term vision for Healing Beyond the Body is to be a program that offers basic supportive care to all patients. It will improve the use of professional psychosocial oncology services by identifying people in need of this specialized care and directing them to the appropriate service. Additionally, the program has the potential to reduce staff stress related to the lack of capacity to fully meet patient’s psychosocial needs. The combination of psychosocial support and practical assistance comprising the volunteer role is seen as having the potential to reduce the stresses and discomforts patients experience day to day as they negotiate their way through unprecedented experiences in an unfamiliar environment.

**Barriers**
The challenge, therefore, was to find ways of providing adequate levels of supportive care to every hospital patient with a limited number of professional psychosocial staff and a finite set of resources. The use of specially trained volunteers to provide psychosocial support offers a possible solution to this challenge (Nissim et al., 2009).
SOLUTION
Healing Beyond the Body (HBB) is an innovative program of volunteer support developed to respond to the needs of cancer patients for information and support. HBB volunteers are integrated with our professional support programs and receive training and ongoing support to fulfill their roles and function. HBB has been implemented in the following areas at Princess Margaret Hospital: the Chemotherapy Clinic, Head and Neck Clinic, Gynecology Clinic, Breast Cancer Survivorship Program, Gastro Intestinal Clinic, the Diversional Cart in Inpatient Units, Palliative Unit, Library, Magic Castle, the Pencer Brain Tumour Centre, Palliative Radiation Outpatient Clinic, Prostate Centre, Man to Man, Skin Clinic, Genitourinary Clinic, Wig Salon, Transfusion, Outpatient Hematology, Radiation Clinic, and most recently with the Distress Assessment and Response Tool (DART) in the Psychosocial Oncology and Palliative Care Program. HBB is actively recruiting and training volunteers for DART as it moves to clinics throughout the hospital. Other new initiatives include a partnership between Interpretation Services and HBB in which interpreters are working with HBB radiation volunteers to provide support, information and help with navigation to Limited English Proficiency patients in the radiation waiting rooms. Volunteers are also undergoing training in the use of the Language Line phone interpretation services. In addition, there are plans for a PMH/Kensington Gardens Hospice in which volunteers will play a vital role. Plans for a Volunteer Hospice Program are underway.

EVALUATION
A qualitative research method, based on semi-structured interviews with 15 patients recruited in the Chemotherapy Daycare Unit, was used. The interviews were transcribed and thematically analyzed.

Findings from the research suggest that volunteers can effectively serve an enhanced supportive role in a hospital setting without adverse effects, and that their services are positively received by patients. The knowledge generated from the research during the pilot phase allowed for the HBB program to expand to many clinics and treatment areas of the hospital. Furthermore, the program has been well received and continues to expand.

RESOURCE IMPLICATIONS
- HBB staff consists of 2 full-time social workers and a dedicated group of approximately 150 volunteers.
- HBB is funded by the Princess Margaret Hospital Foundation.

HOW THE PROJECT ADVANCES THE QUALITY OF CANCER CONTROL
The primary activity of volunteers under this model is to invite patients/supporters into conversation about their current psychosocial challenges. The goal of each contact is to facilitate the patient/supporter’s development of an increased sense of control and ability to cope, and to ease the stress of facing cancer. Volunteers offer support, information, and navigation of the health system or simply provide company or distraction for patients in the
waiting rooms. Volunteers also help to identify and refer patients to psychosocial health professionals when needed.

REFERENCES

RESOURCES
http://www.uhn.ca/Careers_at_UHN/volunteering_at_uhn/HBB/index.asp
http://www.uhn.ca/media/releases/2005/dec/pmh_FDN_PMHF_chemoblanket_release_dec06.pdf

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LESSONS LEARNED

1. The engagement of clinical ‘champions’ was an effective strategy at the local level
   The champions were often self-selected; might be key opinion leaders within specialties, such as radiation oncology or psychology; and stated their philosophy of care was to improve the patient experience.

2. Need to address the learning needs of clinicians
   The literature identifies that a key to change management is not only engagement of clinicians but also the need to address their learning needs. Although we had provided regions with common tools for symptom screening and guides for symptom management, we had not provided guidance on symptom assessment. We have since developed symptom assessment Algorithms to support clinicians in responding to patient’s reported symptom severity. These algorithms should have been developed early in the process to support clinical change.

3. Balance need for QI Measurement versus Performance Reporting
   As part of the quality improvement approach regions were coached to start small, measure frequently and get data that is ‘good enough’. However, it was also important to be able to communicate results across the province and this required the development of performance indicators and a method of collecting and reporting the results. The centralized data collection, although necessary for provincial reporting, created delays in reporting back to the regions and this resulted in frustration for some. While some regions were waiting for the feedback in order to plan their next quality improvement steps, the ISAAC symptom severity database system was not able to generate local summary reports by organization or region, only by patient. Reporting has since been streamlined and is more responsive to regional needs. Regions can pull their own data from ISAAC as needed and data is collected centrally for performance management and public reporting.

PROJECT OVERVIEW

It is often said that change takes time, however through the use of a quality improvement collaborative approach you can in a short order make profound change that has the capacity for lasting results. Across Ontario cancer patients are now being routinely screened for common symptoms and data is being collected to help make decisions focused on improving patient care at both a clinical and system level. Cancer Care Ontario (CCO) is continuing to lead and facilitate further growth and sustainability over time and has been reporting publicly on the data on the use of ESAS across the province in the Cancer System Quality Index. In the future CCO will have the ability to assess the impact of the project on longer-term outcomes such as reduction of emergency room visits and reduction in acute care hospital stays by using the data sets
gathered as part of the OCSMC and this will provide a greater understanding of the impact of a quality improvement initiative on critical system outcomes.

The project included the implementation of a set of common tools to improve:
1. Symptom Screening and Assessment:
   - *Edmonton Symptom Assessment System (ESAS)*
2. Symptom Control:
   - *Symptom Management Guides to Practice (SMGs)*
3. Coordinated Palliative Support:
   - *Palliative Performance Scale (PPS)*
   - *Collaborative Care Plans (CCPs)*

Included in the objectives of the PPCIP was the implementation of technological tools for screening and monitoring of symptoms. CCO developed software known as the Interactive Symptom Assessment and Collection (ISAAC). ISAAC was built to allow patients to enter their ESAS scores directly at a touch-screen kiosk at the clinic or from home via the internet. The system maintains a database of demographic data, as well as the nine symptom scores contained in ESAS and the PPS score from each contact. Each patient record is associated with their Health Card Number, enabling symptom severity and functional status tracking over time and across health care settings. The system also provides the ability for clinicians to be notified by e-mail when a patient’s symptom score exceeds certain parameters, thus providing a mechanism for appropriate steps to be taken to improve symptom control or for referrals or consults.*

Sites that do not have the kiosk or internet version of ISAAC, patient symptom screening data is recorded on a paper version of the ESAS tool and then the scores are manually entered into ISAAC or onto an excel file and uploaded into ISAAC.*

**Problem**

People with cancer experience significant distress from uncontrolled physical and emotional symptoms throughout the course of their disease. Gaps exist in the quality of care, including how patients’ symptoms are assessed and managed, where care is accessed and the seamlessness with which care is delivered as patients move between hospital and home.

The rationale for The Ontario Cancer Symptom Management Collaborative (OCSMC) is:
- Inconsistency in cancer symptom management practices across province
- Lack of palliative care service integration
- Poor system outcomes– 40% visit Emergency Departments in last 2 weeks of life; acute care length of stay in last 6 months of life (14 days)

**Barriers**
- Limited use of standardized tools and lack of consensus on tools to be implemented
- Lack of guidance for assessment and management of symptoms
• Concern of inadequate time and resources to address issues identified by patients
• Resistance to changing traditional care model and having patient’s self report both physical and emotional symptoms.

**SOLUTION**
The Ontario Cancer Symptom Management Collaborative (OCSMC) is an initiative by Cancer Care Ontario (CCO) that builds on the previous work of the Provincial Palliative Care Integration Project (PPCIP). All of the Regional Cancer Programs in Ontario are involved in the initiative. The purpose of the OCSMC is:
- To improve the quality and consistency of patient’s physical and emotional symptom management across the patient journey through earlier identification and communication of symptoms; improved symptom management; and improved collaborative care planning for patients
- To improve the patient experience

The approach includes:
- Implementing and assisting in adoption of common tools: ESAS\(^1\), PPS\(^2\), symptom management guides, collaborative care plans through expert coaching and guidance
- Hosting and supporting ISAAC\(^3\) – web-based tool for capturing ESAS and PPS information; patients able to enter their symptom scores at a touch-screen kiosk at the cancer centre or at home through the internet
- Establishing and monitoring improvement aims and regional targets, e.g.
  - 90% lung cancer patients screened with ESAS
  - 60% all other cancer patients screened with ESAS (2009/10 target)
- Measuring patient satisfaction
  1. **ESAS** – *Edmonton Symptom Assessment System*
  2. **PPS** – *Palliative Performance Scale*
  3. **ISAAC** – *Interactive Symptom Assessment and Collection*

The initiative used the Model for Improvement (G. Langley et al.) and a hybrid approach of the Institute for Healthcare Improvement’s Breakthrough Series Collaborative Model. Expert coaching and guidance was available through improvement advisors at both the provincial and regional level. Regional steering committees were established and accountable for the overall planning and coordination within each region; regional improvement teams guided local process improvements and implementation of the common tools; provincial and regional physician leads provided clinical leadership and education.

In addition to the Model for Improvement, the initiative incorporated the Diffusion of Innovations model (Rogers). Improvement aims were set for the province and staff at the local level were engaged to implement small tests of change using the Plan-Do-Study-Act cycles.
**EVALUATION**

The PPCIP had a formal evaluation completed in October 2007 which guided the decision to both rename the initiative and continue to support and monitor the regional activities. Attached is a copy of the Executive Summary of the PPCIP Evaluation.*

In addition to using a quality improvement framework and approach (The Model for Improvement) the PPCIP included a formal evaluation of the impact of the project. The evaluation was designed to track performance in the achievement of improvement aims and the impact of the collaborative implementation strategies on improving care processes.*

Between December 2006 and March 2010, there has been a steady increase in number of ESAS completed per month. Provincially, the percentage of lung cancer patients in Regional Cancer Centres screened at least once per month with ESAS has increased from 3.5% to 60% with two regions reaching the aim of 90% of patients screened.

Between April 2008 and March 2010, the percentage of all other cancer patients screened has increased from 8% to 40% of the approximately 40,000 patients seen each month at the Regional Cancer Centres with nine regions reaching the aim of 60% of patients screened. In March 2010, approximately 25,000 ESAS screens were completed in the Regional Cancer Centres across Ontario.

Patient satisfaction survey of 884 patients across 8 regions in 2009 was completed:
- 89% of patients thought ESAS was important to complete
- 79% agreed that their health care team took their ESAS scores into account when deciding how to treat them (increase from 61% in 2007)
- 78% agreed that their pain and other symptoms have been controlled to a comfortable level (increase from 62% in 2007)

Chart Audits were conducted in 2007 and over 70% of the audited charts had a documented pain assessment and over 60% a completed dyspnea assessment when intensity scores were in the moderate to severe range.

**RESOURCE IMPLICATIONS**

Funding support was provided by the Ontario Ministry of Health and Long-Term Care and Cancer Care Ontario to support a central team at CCO, a regional improvement coordinator in each of the 14 regional cancer centres and the technical development and hosting of ISAAC. The central team supported regional project implementation through the creation of a provincial project plan, the development of tools, expert coaching and guidance, provincial data analysis, progress reporting and program evaluation. The regional improvement coordinators supported implementation regionally through coaching and leading the quality improvement methodology. Regional Steering Committees and Improvement Teams were accountable for planning, coordination and championing process improvements.
HOW THE PROJECT ADVANCES THE QUALITY OF CANCER CONTROL

The OCSMC is a key initiative under the Ontario Cancer Plan’s goal to “improve the patient experience across the continuum of care.” Routine symptom screening of patients ultimately contributes to improved patient care through:
- Better and earlier detection of both physical and emotional symptoms;
- Earlier treatment and referral;
- Better multi-disciplinary care;
- Avoidance of unnecessary emergency department visits and inpatient admissions; and
- Improved patient satisfaction.

REFERENCES
*Cancer Care Ontario - Provincial Palliative Care Integration Project (PPCIP) Executive Summary - April 2008)
http://csqi.cancercare.on.ca/cms/one.aspx?portalId=63405&pageId=68032

RESOURCES
http://www.chqi.ca/PastInitiatives/PerformanceImprovementFund/PerformanceImprovementFundOverview/ProvincialPalliativeCareIntegrationProject.aspx

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LESSONS LEARNED
The integration of a new function requires time, proactive leadership involvement and a good implementation plan that includes concurrent intervention on multiple fronts. The findings of this research work denoted variations in the start-up of the model. The researcher noted five significant conditions considered essential for an effective implementation of the Pivot Nurse in Oncology model:

a) the meaning assigned to the pivot nurse function;
b) the presence of legitimate long-term leadership;
c) the involvement of key players at all levels of the healthcare system;
d) interprofessional cooperation; and
d) institutional flexibility. (Tremblay, 2008)*

PROJECT OVERVIEW
The Pivot Nurse in Oncology model is a component of the provincial cancer care program "le programme de lutte contre le cancer" in Québec. The program has been implemented locally, regionally and supraregionally (i.e. at tertiary and quaternary levels of care) throughout the province.* The Oncology Pivot Nurse is the first point of contact between the health professionals and patients, therefore implementing the program and defining their role was a major step in patient-based approach to care in Quebec. The Oncology Pivot Nurse evaluates the physical and psychosocial needs of the patients and their families. Based on the evaluation, information/educational services and supportive care are offered to patients in every step of the cancer care continuum, thus providing coordination and continuity of care. The positive impact of the oncology pivot nurse and patient satisfaction has been documented.*

Support for the Pivot Nurse in Oncology was provided in many levels:
1. The Ministère de la Santé et des Services sociaux supported the Pivot Nurse in Oncology since its inception. By incorporating the model into their program called "La lutte contre le cancer" and financing the pilot project, the ministry accelerated the model's implementation and supported its sustainability. In addition to the Ministry, many physicians supported the model actively.

The key factor which facilitated the development of the Pivot Nurse in Oncology model in Québec was its support right from the start. The Ministry financed the pilot project and incorporated the model in its program "La lutte contre le cancer".
2. The leadership of the Advisory Group, which is chaired by the Co-Director of the program at the Ministry level was instrumental in the development of the Model and some standardized clinical tools used by the pivot nurse.

3. The guidance and clinical tools provided by the Provincial Oncology Advisory Group facilitated the implementation of the model in various regions. Having a standardized curriculum of orientation for the pivot nurse function ensured uniformity of approach.

4. Many physicians are very pleased with the introduction of the nurse pivot function and supported the start-up of the model and its on-going function.

5. The leadership approach used by the various management teams in directing the implementation process also played an important role in the implementation process of the Pivot Nurse in Oncology model and its integration with the interdisciplinary cancer teams.

Patients and families affected by cancer, requested an access to a resource person, such as an IPO, and since it inception have expressed their satisfaction with this new nursing role. Two independent cohorts of patients with head and neck cancers were compared according to the presence of the professional navigator (Exposed cohort n=83) or not (Historical cohort n=75). The Exposed cohort showed a better profile on several indicators of outcomes. The results clearly indicate an association between the presence of the professional navigator with continuity of care (higher satisfaction and shorter duration of hospitalization), and empowerment (fewer cancer-related problems, including body images concerns, and better emotional quality of life) (Fillion, 2009).

**Problem**
There was a need for a patient navigator in oncology to ensure the continuity of care and to assist patients with coordination between providers, overcoming service fragmentation, and delay in access as well as gaining timely access to much needed information. Also, the necessity to clarify the role of professional cancer navigation, models, implementation process and outcomes of patients and families dealing with cancers was evident.

Over the years, patients and their families have expressed through surveys a need for ongoing accessibility to a resource person who knows cancer care, could facilitate access to the different services, and could respond to their queries in a timely manner. Three other areas identified as important included a global approach to care, care and services on the person and quality of care.*

**Barriers**
The greatest barrier faced in the development of the Pivot Nurse in Oncology model was lack of funds. As well, in some regions it was not easy to put in place the various interdisciplinary cancer teams because of the shortage of some professionals.
In a study regarding the implementation of the Pivot Nurse in Oncology model, it was noted that "the findings show that the roll-out of new professional functions located at the interface of clinical practice and service organization is a complex intervention very highly dependent on its context" (Tremblay, 2008). In fact not every institution had functioning interdisciplinary cancer teams prior to the implementation of the "programme de lutte contre le cancer" and thus the different professionals had to learn how to function as teams and integrate the function of the pivot nurse into their ranks.*

SOLUTION

The pivot nurse in oncology position was developed and is ideally the “entrance/porte d’entree” for the patient and their family to cancer care. The model calls for the pivot nurse to link up with the patient at the time of diagnosis and follow/support the patient and their family throughout the trajectory of the illness. More specifically the objectives are to provide support and comfort to patients and their families; improve continuity and coordination of care, improve accessibility care, enhance psychosocial care and facilitate the development of a team.

The pivot nurse in oncology is hospital based and is an integral part of local, regional and supraregional interdisciplinary cancer team. Other models of nurse navigator are community based and the case manager can either be hospital (outpatient clinic) and community based. Moreover, the case manager’s intervention is primarily episodic in nature, whereas the pivot nurse in oncology acts as a resource to the patient and his/her family throughout the continuum of cancer care. The nurse navigator and case manager usually work with other disciplines but may not be part of an interdisciplinary team. The pivot nurse in oncology works with a number of professionals but does not provide direct/hand on care, in her/his role as a pivot nurse in oncology.

Patients are usually referred to a pivot nurse by a physician, nurse, other professional or patient and family either formally via a written consult or informally via a verbal request.

According to the Pivot Nurse in Oncology model, the main responsibilities of the pivot nurse, as a member of the oncology interdisciplinary team are to evaluate and manage patient and family needs (both physical and psychosocial); teach and provide information on diagnosis and treatment; provide support; and coordinate and ensure continuity of care.*

At the MUHC the key functions of the Pivot Nurse in Oncology were documented through an administrative database over 3 years. Over the three years, the 12 PNOs documented a total of 43,906 nursing interventions. Whether considered in total or by annual average according to the 10-category list, the majority of PNO specific interventions included those that related to promoting coordination and continuity of care (19.4% of interventions in year 3), and those that involved providing support to patients and their families (19.6% in year 3). The least frequently used interventions involved family assessment (2.1% in year 3), and advocacy (4.9% in year 3). When data was organized according to the PNO functions (as per MSSS 2008), by the third year coordination of care comprised 38.4% of interventions; while assessment comprised 32.4%, support 19.6% and teaching/information 9.6% (Skrutkowski et al., 2010).
Ideally, the "programme de lutte contre le cancer" calls for all cancer patients to be seen by a pivot nurse at diagnosis. Though present in all regions of Québec, the required number of pivot nurse positions is not available in all regions of Québec given that the Pivot Nurse in Oncology model is currently in the process of being rolled out and funding is limited. In its 2007-2012 priorities, the "Programme québécois de lutte contre le cancer" includes a strategy to guide institutions in obtaining the required number of pivot nurses in oncology.

To address current limitations, some organizations have put in place selection criteria for referral to a pivot nurse. For example, at the McGill University Health Center (MUHC), which is a supraregional oncology center, cancer patients with one or more of the following risk factors are referred to a pivot nurse:

a) Other health problems (co-morbidities);
b) Problems with understanding treatment;
c) Difficulty in coping with illness and treatment; or
d) Weak or absent social support.

An article entitled "Professional Patient Navigation in Head and Neck Cancer" presents development of professional cancer navigation roles and models that address the needs of patients and families dealing with head and neck cancers across the continuum of care. Key functions and outcomes related to professional navigation are discussed, as well as challenges and resources linked to implementation process and research evidences. One specific research example related to impact evaluation of head and neck patient navigation is presented as an illustration. Professional cancer navigators intend to ease and expedite patients’ access to services and resources, improve continuity and coordination of care throughout the cancer care continuum, and serve as a patient advocate where needed. Although the term “cancer patient navigation” is relatively new within the Canadian health care system, the concept is not. The following terms were used to describe, essentially, the professional navigator role: Case Manager, Clinical Coordinator, Cancer Support Nurses, Follow-up Nurses, Breast Specialist, Breast Cancer Coordinator, Patient navigator. Among them, case manager is sometimes labeled as a professional navigator (Fillion, 2009).

The Association Québécoise des infirmières en oncologie (AQIO) offers an annual seminar to IPO of the province to promote networking as well as to address ongoing educational needs.'**

**EVALUATION**

Four volume indicators developed by the Provincial Oncology Advisory Group at the request of "La Direction de lutte contre le cancer" were informally implemented in some regions in April 2007. These are:

a) number of patients;
b) number of telephone interventions with patients and/or family;
c) number of office visits by patients and/or family; and
d) number of new cases.*
As of April 2009, all institutions with a pivot nurse will be required to input data for these volume indicators on a monthly basis.*

"La Direction de lutte contre le cancer" is planning to carry out a major province-wide survey of the "programme de lutte contre le cancer" in 2009. As part of this evaluation, the Pivot Nurse in Oncology model will be assessed, but it will not be the primary focus of the evaluation.*

The Pivot Nurse in Oncology model pilot project was the object of a doctoral research study by Dominique Tremblay. The study was carried out in nine hospitals of the Montérégie region where the pivot nurse function was first implemented. The theory of the network player was used to collate the 2005-2006 data using a systematic matrix. According to this theory, the pivot nurse in oncology and the work setting adapt to each other as the different players involved start working together to support the roll-out of the model. Data was obtained from observation of 12 governance committee meetings, analysis of 121 literature reviews, and 37 semi-directed interviews. The findings of this research work denoted variations in the start-up of the model. The researcher noted five significant conditions considered essential for an effective implementation of the Pivot Nurse in Oncology model, including the meaning assigned to the pivot nurse function, the presence of legitimate long-term leadership, the involvement of key players at all levels of the healthcare system, interprofessional cooperation, and institutional flexibility (Tremblay, 2008).

The MUHC undertook a six month randomized trial in 2005 to look at the impact of ongoing care provided by a pivot nurse in oncology on the symptom relief and outcomes of patients with breast and lung cancer versus the care provided by the regular clinic nurses. The intervention group consisted of 93 patients and the control group consisted 97 patients, all from three outpatient ambulatory oncology clinics. The main research variables included symptom distress, level of fatigue, quality of life, and healthcare usage. No significant differences were found between the groups. Hence, in this study, the pivot nurse function had no impact on the outcomes under study. However, it is important to point out that the nurses in the control group, contrary to the pivot nurse, had on average 10 years of experience in oncology and 75% had oncology certification.

The Pivot Nurse in Oncology Model has had a positive impact on patients and their families. In most regions, it has also had a positive impact on other healthcare providers as well as on the coordination of health services in general.

Many physicians appreciate the role played by the pivot nurse as it has reduced part of their administrative workload and helped to improve the quality of healthcare services to the patient and his/her family. Nonetheless, the integration of a new function requires time, proactive leadership involvement and a good implementation plan that includes concurrent intervention on multiple fronts.

With time, the Model appears to have enhanced the teamwork of various interdisciplinary cancer teams. Professionals working on these teams have identified their respective roles and
the criteria for referrals from other members of the team. The patient and his/her family are seen from an interdisciplinary perspective. The introduction of the pivot nurse function means, in most cases, that there is less delay in the delivery of services and because of their coordination role, obtaining health services across organizations is done in a more integrated and timely manner. Complex cases are discussed at weekly interdisciplinary team meetings and follow-up by other professionals usually occurs promptly.

Pivot nurses in general find their work interesting and their level of satisfaction is high. They enjoy the autonomy of the position. Though they know their role makes a difference in the quality of service to the patients, they sometimes feel frustrated when they cannot do more because of the current limitations and challenges of the healthcare system. Given their heavy workload and the complexity of many of their cases, some are starting to show signs of fatigue. Nonetheless, the level of absenteeism is still less than for nurses in general.

For patients and their families, there is accessibility to information and to quality care in a timely manner. Cancer patients being followed by a pivot nurse are encouraging other cancer patients who are not linked to a pivot nurse to request to be so - an indication of the benefits of the role for the patients.

The skills of the pivot nurses have improved with the availability of various clinical tools developed for them by the Provincial Oncology Nursing Advisory Group. The three clinical tools developed to date are standardized initial assessment form, telephone practice guidelines, and patient passport in oncology.

As well, an orientation program has been developed and applied throughout the province. With time other practice guidelines will be developed.*

**RESOURCE IMPLICATIONS**

Since the Pivot Nurse in Oncology model is government-directed, it is basically funded by the Ministère de la Santé et des Services sociaux (i.e. Health Ministry). The 2001 pilot project was funded through a separate budget. At present, each region receives funding for some pivot nurse positions. However, since this special funding does not cover the costs for all the pivot nurse positions, each institution covers the additional costs within their annual hospital operating budget. Orientation and continuing education activities are also part of the institution's cancer care program operating budget.

The pivot nurse is a salaried employee of a health institution. The current average annual salary for an entrance level pivot nurse is $74,150 including benefits (i.e. employee’s and employer's contributions).

Patients do not have to assume any costs associated with the Pivot Nurse in Oncology model.*
HOW THE PROJECT ADVANCES THE QUALITY OF CANCER CONTROL
Implications for nursing practice: Oncology nurses can not only play an important role in continuity of care but also in supportive care by helping patients to cope better with cancer treatments, recovery or cancer progression and death issues (Fillion, 2009).

REFERENCES
Canadian Association of Nurses In Oncology/Association canadienne des infirmières en oncologie (CANO/ACIO). (no date ). Standards of Care/Roles in Oncology Nursing/Role Competencies. CANO Oncology Nursing Education Project (CONEP).
Skrutkowski, M., Saucier,A. (2007). Successful strategies to support the implementation of an innovative nursing role. Power Point presentation at CANO Symposium.
**RESOURCES**
The following resources are available upon request.
* A Review for CPAC - Model inventory repository – “Innovative and Promising Models of Service Delivery in Cancer Care and Control - Pivot Nurse in Oncology (Québec)”
** IPO Poster.pdf

The following journal article was also used as an additional source of information:

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LESSONS LEARNED

1) It is important to put time aside to develop communication tools, templates, and branding which you continue to improve and refine over time, so that you can maintain momentum; raise support and garner awareness; and to maximize the effectiveness of what you are doing. The momentum you get from a published article, a good website or a well-designed brochure can’t be measured.

2) A huge amount of effort and attention has to go into your relationships and linkages with your Regional Leads and partners in order to build trust; consolidate the working activities; reinforce confidence; and build the leadership and capacity to strengthen the positioning of your regional leads.

This has to be sustained on an ongoing basis; it takes a second to screw up and a millennium to fix it.

PROJECT OVERVIEW

In a collaborative effort, Cancer Care Ontario (CCO) and the Ontario College of Family Physicians developed an action plan for improving the integration of primary care and cancer. The plan included a recommendation to recruit a team of family physicians as the provincial and regional leaders. Under the leadership of Dr. Cheryl Levitt, the Provincial Clinical Lead of Primary care, the task was accomplished and thirteen family physicians formed the Regional Primary Care Leads (RPCLs) and Provincial Primary Care and Cancer network (PPCCN). In addition to the formation of the team, a strategic conceptual framework, Primary Care Atom, was developed to guide the integration. Several additional activities promoted the integration. Educational material, meetings and outreach visits for professionals; consumer education; local opinion leaders; audits/feedbacks; changing medical record system and tailored interventions for aboriginals were among the vast activities that are making the integration a reality.

A primary care and cancer Engagement Strategic Framework was developed to realize the action plan for the integration of family practices & the cancer care system proposed by the leaders of CCO and the Ontario College of Family Physicians in 2007. Several interventions in professional, consumer, organizational and financial levels were utilized to accomplish this task. In vertical integration level, the primary care leaders were effectively integrated in the cancer system. In the clinical integration levels, the primary care systems’ needs and gaps were identified and addressed. In the functional integration level, the primary care providers were given the opportunity to optimize primary care engagement and integration with the cancer system.
The ‘Provincial Primary Care and Cancer Network’ was launched. The progress of the program and the Network were monitored and evaluated continuously allowing the identification of areas of improvement and allowing transparent accountability. WebEx training enhanced and facilitated the knowledge transfer exchange for the Primary Care Practitioner network. In addition, adapting, designing and disseminating innovative quality improvements and best practices through research, education, and communication were achieved in ‘Knowledge, Transfer and Exchange’ (KTE) level of integration.

Provincial Primary Care and Cancer Network members are acting as the guide and information resource for the primary care about the cancer system in their region. Their involvement in the crucial organizational governance structures as decision makers catalyzes and directs the integration. Monthly communication through webinars and teleconferences keeps the network connected and on track until their face-to-face biannual meetings. The goal is continuous quality improvement, which is being achieved by continual meetings and evaluations. Advocacy for resources required to improve the integration and engagement of the primary care and cancer systems is an ongoing effort. The network is in the process of developing a strategic plan that includes long and short-term goals.

**Problem**
1. Disorganized integration and engagement of primary care with the cancer system, beginning with screening, and particularly in screening for colorectal cancer.
2. The primary care based screening for cancer was suboptimal, especially for colorectal cancer.

**Barriers**
1. There has been no precedent of primary care engagement in a organized fashion in CCO.
2. There were no funds to support the development of a primary care strategy (a network with provincial and regional leadership).
3. Primary care is patient centred, not disease centred. The Primary Care Program does not focus on screening alone, but focuses on the whole patient and the whole cancer journey.

**Solution**
Cancer Care Ontario (CCO), a provincial agency responsible for planning, advising, implementing and monitoring initiatives to improve cancer outcomes, proposed a primary care and cancer engagement strategy in its Ontario Cancer Plan 2008 – 2011. The ColonCancerCheck program was founded in 2008 and provided an opportunity to develop a primary care strategy focusing on colorectal cancer screening. The strategy was designed to focus initially on improving screening for colorectal cancer in primary care settings by transferring evidence into practice. The engagement would eventually expand to improving primary care integration throughout the whole cancer journey from prevention and screening to end of life care and survivorship. Early detection, decreased mortality and better patient experiences along the whole cancer journey could all be improved through this important new approach.
In 2007, CCO and the Ontario College of Family Physicians held a symposium called the *Integration of Family Practices & the Cancer Care System*. Leaders from both organizations developed an action plan on how to improve primary care and cancer integration. The first recommendation was to develop a cadre of family physician leadership at the provincial and regional level.

In April 2008, CCO recruited a Provincial Clinical Lead for Primary Care (PPCL), Dr. Cheryl Levitt, to help develop and implement the strategy. Over the next nine months, Dr. Levitt developed a strategic plan and framework for CCO and together with the CCO Regional Vice Presidents for the regional cancer programs, recruited 13 family physicians as Regional Primary Care Leads (RPCLs) throughout the province.

The new RPCLs recruited are the local contacts for primary care providers and regional cancer programs in Ontario, and form the Provincial Primary Care and Cancer Network (PPCCN). The strategy and the network were formally launched at the end of October 2008 in Toronto.

A strategic conceptual framework was developed following broad provincial, national and international consultations and environmental scanning and the approach was reviewed and supported by the CCO leadership. The framework is called the Primary Care Atom. The framework guides the integration initiatives of the primary care and cancer strategy and includes three key domains of interest (vertical, clinical and functional integration) surrounded by two broad based and encompassing activities, knowledge transfer and exchange, and measurement and monitoring. About 40 activities in the five domains were identified and completed in 2009 – 2010. No theoretical models were used. We developed our own model: the Primary Care Atom.

**EVALUATION**

- **Site Visits:** The provincial team visits each of the RPCLs in their region, and conduct semi-structured interviews with the RPCL, as well as the Regional Administrative Leads (RAL) and Regional Vice Presidents (RVP) for the region. The RPCL’s progress to date, key highlights and activities, and any challenges are discussed.

- **Confidence Survey:** The RPCLs were surveyed to: 1) assess their confidence and effectiveness across four areas of the strategic framework: Vertical Integration (VI) of primary care leaders in the cancer system, Clinical Integration (CI) of addressing the primary care system’s needs, Functional Integration (FI) to assist primary providers to optimize primary care engagement with the cancer system, & Knowledge Transfer Exchange (KTE); 2) to gather their opinions on measuring and monitoring activities and the Provincial Team.

- **Event Evaluations:** Evaluation of each meeting and event held in the network, through online questionnaires after each event.

- **KTE:** Effective KTE strategies such as online collaborative tools (WebEx) were employed and refined to increase its usability in the PPCCN. The RPCLs received training on WebEx from a customized training module, and they were interviewed to access issues of usability, functionality, features, and preferences for WebEx.
• Put together proposal for a formative program evaluation to assess the network’s progress towards their goals and inform the ongoing development of the strategic framework.

Results
• Site Visits: Thirteen site visits were completed for 2009 – 2010, and resulted in quantitative data, supportive atmosphere, points for further action. Overriding positive feedback was received from the RVPs and the RALs.
• Confidence Survey: Self reported confidence and effectiveness was highest in VI and KTE activities, and weakest in FI followed by CI.
• KTE: Training and refinement of WebEx motivated the RPCLs to use the online collaborative tool for a variety of purposes: obtain literature and documents, review newly posted materials, read or participate in discussions, and access presentations.
• Identified the need to expand beyond colorectal cancer into Integrated Cancer Screening (ICS).

RESOURCE IMPLICATIONS
The project was developed based on very parsimonious funding from several contributors: Cancer Care Ontario, the ColonCancerCheck program, and the Ministry of Health. Human resources involved three days per week from the PPCL, one day per week from each of the RPCLs, and full time support from management and administrative supports.

HOW THE PROJECT ADVANCES THE QUALITY OF CANCER CONTROL
Help improve the quality of cancer care by integrating and engaging primary care in all of the key quality categories: access, safety, equity, person-centred, efficiency, effective clinical practice, and integrated and continuous improvement

REFERENCES

RESOURCES
Posters and other resources available upon request.

www.cancercare.on.ca/primarycare

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Maximizing your Patient Education Skills (MPES),
MPES Train-the-Trainer Program

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LESSONS LEARNED

• One of the most important lessons learned is how to manage the resource implications. The lack of resources (human and/or financial) can be a significant barrier in sustaining a project despite the value of the intervention. Although we did have a plan to mediate the initial costs related to sharing the MPES curriculum provincially, we did not have a well thought out sustainability plan and there was a risk that the initiative would not be offered in each of the 14 Regional Cancer Programs across Ontario. Despite our efforts to have the Regional Cancer Programs sign a contract requiring them to deliver the curriculum at least once in the fiscal year in exchange for the facilitator training and the course materials, several regions did not have the capacity to deliver the course. Each region had varying human/financial resources available to deliver MPES. For some, the trainers were staff who assumed the responsibility to deliver the course, whereas in other jurisdictions there were no staff able to take this on and no resources to hire external facilitators. Additionally, the cost associated with hiring Standardized Patients was prohibitive to many centres, particularly as the ideal class size was 16-20 participants. The cost of delivering the course to such a small group proved to be quite expensive when prorated to a per person cost.

• Another important lesson that evolved was with regard to Intellectual Property (IP) and ensuring that there is a clear understanding as to if and how a project can be shared. As the original curriculum was development by the Universith Health Network (UHN) Organization and Development in collaboration with Patient Education the IP belonged to UHN. There was so much interest in the MPES curriculum by several stakeholder groups outside UHN and there was no provision for sharing the IP. In planning the roll-out/implementation of the MPES curriculum, UHN and Cancer Care Ontario (CCO) came together to develop a train-the-trainer curriculum for MPES and we developed a contractual agreement around the intellectual property and the sharing of the curriculum provincially. This proved to be important planning foresight as with the increased interest in the course and in particular the interest of the DeSouza Institute in leveraging the course to improve oncology nursing teaching competencies, it was really important to have a clear understanding of the proprietary opportunities/limitations in further sharing the IP, and how to manage issues such as repurposing content, licensing and recognition of the contribution of the collaborators.

• I think the most important learning, however, was with regard to the process with which the content was developed and evaluated. In the case of MPES there was a very transparent and rigorous process in compiling the evidence that informed the curriculum. This allowed us
to develop a strong evaluation component which proved to be critical in gaining buy in from stakeholders and in ensuring our ability to leverage additional resources to successfully implement the MPES program.

**PROJECT OVERVIEW**

For patients and their families, effective patient education can increase knowledge and understanding of disease and treatment, improve their ability to cope with the diagnosis and course of illness, and satisfaction with care. As such, the development of organizational strategies to ensure patient teaching competencies should be an integral part of clinical care and best practice. In 2003, at University Health Network (UHN), a Patient Education Curriculum Working Group (PECWG) was established to design and develop a framework for a Professional Development Program that enables staff & clinicians to become excellent educators and facilitators in the delivery of patient education. The PECWG developed evidence-based best practice guidelines for delivering PE curriculum entitled “UHN Framework for Delivering Patient Education Curriculum,” based on adult learning and counseling principles.

In 2005 the Framework was translated into an interactive course entitled Maximizing Your Patient Education Skills (MPES) by UHN Human Resources and Organizational Development. The overall goal of the MPES course was to enable health care providers (HCPs) to develop core patient education and psychosocial competencies so they could engage in a more person-centred approach to patient care. MPES was designed to support the translation of the guidelines into action. Course topics included: adult education, communication and learning styles, curriculum development, instructional methodologies and collegial mentoring. In addition to a variety of interactive teaching methods, an innovative strategy employing “standardized patients” was utilized.

In order to improve health care provider patient teaching competencies across the Cancer Care Ontario Regional Cancer Programs, an MPES trainer the trainer curriculum was developed in collaboration with University Health Network. Two trainers from each of the 14 regions in Ontario took the MPES course and then were trained to deliver the curriculum locally.

This issue of improving HCP patient education competencies was identified, a multi-disciplinary team developed a curriculum and workshop to address the identified gap and a formal evaluation using pre and post measures was completed to assess the impact of the intervention.

Future Directions: An e-learning format is being developed for the didactic portions of MPES.

**PROBLEM**

“Patients with cancer require a high level of information and support. Unfortunately, a significant proportion of patient’s report that they are not as involved in their health care decisions as they would like, they lack information about their disease, and that they are not
treated with respect and dignity. Further, failures in communication of information about illness and treatment are the most frequent source of patient dissatisfaction and complaints.

It is expected that staff and clinicians provide excellent patient education as part of the care delivery process. Many HCPs lack the psychosocial knowledge, communication and teaching skills needed to identify and support patients' learning and informational needs because professional training often focuses on technical care and related skills. Consequently, there is a need to develop and test creative educational initiatives designed to teach the core competences required for supporting patient engagement in healthcare” (Jones, et al. 2009).

**Barriers**
- There were few programs identified offering sufficient training in this area.
- There was a lack of resources available to develop and sustain a training program to develop patient teaching competencies.

**Solution**
It was important to ensure that mechanisms were in place to help staff and clinicians become better educators so that patients understand their illness, make informed treatment related decisions and become active partners in managing their health.

Developed a strategic framework that:
- Ensured a successful teaching process in the delivery of patient education by optimizing learner outcomes, providing consistency in the teaching process, and ensuring a successful teaching-learner interaction.
- Promoted effective teaching in the delivery of patient education that will result in/enable patients to take active part in their care.
- Ensured a successful teaching process such that patients understood their illness and its treatment and its management.
- Designed a professional development program to enable staff and clinicians to become excellent educators and facilitators in the delivery of patient education. A curriculum was developed to educate healthcare professionals with limited background in:
  - Theories of teaching
  - Theories of learning
  - Effective communication
  - Principles of adult learning
  - Curriculum and instructional design
  - Methods of evaluating teaching and learning

“In response, an innovative, evidence-based, interactive and inter-professional course entitled *Maximizing Your Patient Education Skills* (MPES) was developed. This course enables HCPs to develop core patient education and psychosocial competencies so they can engage in a more person-centred approach to patient care” (Jones, et al. 2009). The purpose of this innovative, interactive course (MPES) developed at UHN is to improve interprofessional HCPs patient
teaching competencies. This evidence-based course integrates psychosocial and patient education (PE) theory in a brief problem-focused and interactive workshop using multiple standardized patients (SPs).

In order to roll-out this evidence-based curriculum to the Regional Cancer Programs across Ontario, a multidisciplinary team at CCO and UHN collaborated in the development of a train the trainer program.

Results of research are being disseminated through presentations at scientific meetings, publications in peer-reviewed journals, and e-based dissemination with our partners. Adoption, adherence and implementation are being enabled through CCO. The Pathman-PRECEDE model for knowledge translation was also used in the development of this initiative.

**Evaluation**

A multi-site research study was conducted in seven cancer programs across Ontario. The aim of this study was to evaluate the acceptability and relevance of the MPES course, and to test whether participation in this course would significantly improve knowledge regarding PE theory, self-assessed PE competencies, and PE skills including the ability to identify and appropriately respond to different learning and communication styles based on clinical case vignettes. The method used was a one group, multi-site, pre-post intervention. Participants completed a pre-assessment (T1), participated in the 4-hour MPES course, and then a 3-month post-assessment (T2). A focus group was conducted with sub-set of participants.

“Preliminary results indicate that MPES is acceptable and useful. However, more formal evaluation is needed. Methods: Using a pre-post test design we will assess the effectiveness of this course on PE and communication knowledge and skills in 120 oncology HCPs at five cancer centres in Ontario. Further, we will utilize qualitative methods to assess barriers and enablers to incorporating learning into practice.” (Jones, et al. 2009)

Results demonstrated that 75% of participants completed both pre and post measures. Participants were highly satisfied with MPES and found it to be relevant. Results showed that MPES had a significant impact on all of our outcome measures. Findings from this study show that oncology HCPs’ knowledge of patient education theory, self-assessed competencies and skills can improve after participating in a brief problem-focused and interactive workshop. Efforts to further develop this course include exploring alternative funding models and using different learning platforms.

**Resource Implications**

The collaboration between UHN and CCO allowed for the non-proprietary sharing of resources. UHN provided the curriculum and related course materials (workbooks, PowerPoint slides, etc.) in a CD such that each Regional Cancer Program could use and adapt the materials to their respective sites. CCO provided the resources to develop the train the trainer curriculum and to deliver the training to two member teams from each of the 14 regions in Ontario. While the use of SPs is a most valued course element, there are significant costs associated with their use and
class sizes are small (max. 20) such that all the participants have the opportunity to interact with the SPs. Also the current curriculum requires that participants attend a half day training and this is a challenge for many HCPs and the respective organizations. We are now exploring alternative funding models to support the training and use of SPs as well as opportunities to deliver the didactic portion of the curriculum on-line.

**HOW THE PROJECT ADVANCES THE QUALITY OF CANCER CONTROL**

There is growing recognition for the need to address patient and family information and support needs. This formal patient education and communication skills continuing education teaches HCPs competencies in the principles and practice of providing education and support to patients and their families. Given the evidence that a more patient-centred approach, including well-planned education and support, can contribute to a number of health outcomes and cost of care, and the evidence that HCPs may lack the skills to teach and support patients and their families effectively, it is expected that MPES will fill an unmet training need. By providing formal patient education and communication skills training through the use of innovative and interactive teaching methods (i.e. simulated patients), oncology HCPs can more effectively promote and encourage patient engagement in healthcare and provide a more person-centred approach to cancer care and improve system competency.

**REFERENCES**


RESOURCES
The PDF document “Best Practices Guidelines (March 24)” is available from Audrey Jusko-Friedman. See contact information below.

CONTACT INFORMATION:
Name: Ms. Audrey Jusko-Friedman         Email address: Audrey.Friedman@uhn.on.ca
The Coordinated Approach of the Interdisciplinary Thyroid Oncology Clinic to Patient Care

QE II Health Sciences Centre, Halifax, NS
Dr. Ali Imran, Dr. Murali Rajaraman

LESSONS LEARNED
1) A multidisciplinary approach definitely improves thyroid cancer care delivery, but with a rising incidence and excellent prognosis of thyroid cancer, providing life-long follow-up to each patient through such clinics is neither feasible nor practical. Therefore, new multidisciplinary models providing surveillance of low-risk individuals through primary care service are needed.

2) There is also a strong need for developing national thyroid cancer consensus guidelines as well as establishing national database to monitor trends, treatment strategies and outcomes. The reason being that there are only a handful of larger thyroid cancer care groups in Canada and they need to pool their 'resources' and information.

3) A significant investment of time and resources from a wide variety of health care professionals is needed to provide the necessary patient-centred, multidisciplinary care required for thyroid cancer patients. However, the benefits are numerous including the establishment of an expanding, dedicated group of professionals that remain focused by the evolving needs in thyroid cancer care, research, education, advocacy and administration.

4) One major challenge has been that the administrative and resource infrastructure remains divided and separate amongst the various departments and disciplines, which does not facilitate multidisciplinary initiatives undertaken across various cancer care specialties.

PROJECT OVERVIEW
The team identified several care gaps in the management of thyroid cancer care within capital district, Halifax, NS, and developed a systematic, patient-focused interdisciplinary care model to improve care delivery.

Although the wait time to first post-op consultation increased, this is outweighed by other identified benefits of the Interdisciplinary Thyroid Oncology Clinic (ITOC). This experience provides valuable information to help advance new models of care for the rapidly growing numbers of people with thyroid cancer.

With the development of the ITOC, we have been able to:
1. Identify and clarify caregiver roles (previously overlapping)
2. Raise awareness, prevention, screening, diagnosis, referral
3. Educate patients on the importance of regular, long term follow up
4. Consider the cost of treatment (socioeconomic and toxicity)
5. Provincial & Regional: communication & coordinated effort among caregivers & patients through management guidelines and National Database (Canadian Thyroid Cancer Consortium)

**PROBLEM**

There was a need to end the fragmented patient care and start a coordinated approach. Thyroid cancer patients were being followed by a number of different specialists in a variety of different places. As a result, patients had to make several appointments over the course of the year for diagnostic testing and subsequent follow-up visits. This approach often resulted in a lack of coordination between specialists, duplication of tests, mixed messages for patients and wasted time for patients and health providers.

**BARRIERS**

Thyroid cancer care is complex requiring several specialties such as general surgery, ENT, radiation oncology, nuclear medicine, endocrinology and family medicine. It was challenging to bring the key players on board. Most thyroid cancer patients have excellent prognosis but they require life-long follow-up. This can become challenging over the years. There was also considerable lack of uniformity in management of thyroid cancer which led to confusion among patients and caregivers and in some cases made adequate follow-up difficult. Other barriers included lack of infrastructure for a large interdisciplinary team and lack of patient registry.

**SOLUTION**

The Cancer Care Program of Capital Health (Halifax) developed an Interdisciplinary Thyroid Oncology Clinic (ITOC) in 2005 primarily by Drs. S. Ali Imran (endocrinology), Mal Rajaraman (radiation oncology) and Dr. David Barnes (nuclear medicine) which resulted in a coordinated approach to patient care from a fragmented one. The clinic has benefitted by the recent addition of Dr. Rob Hart (ENT) who brings his surgical expertise to the patients. Overall the team’s membership includes more than a dozen health care and support professionals including physicians trained in radiation oncology, nuclear medicine, otolaryngology – head and neck surgery and endocrinology; specialist nurses; medical radiation technologists; nuclear medicine technicians; dieticians; and administrative staff. They work together to provide comprehensive care to each patient.

Since its creation, this one-stop care provides coordinated and consistent ongoing care for around 600 patients per year. Operating one to two days a week from the VG Site of the Queen Elizabeth II Health Sciences Centre, the clinic has streamlined patient care for both newly diagnosed patients and those requiring follow-up. Following surgery, thyroid cancer patients are referred to the clinic through a single referral point and are assessed by endocrinology, radiation oncology, and nuclear medicine specialists. Patients receive clear and timely communication about upcoming tests and appointments, and if they are having any issues related to their thyroid, they know they can call a main number and receive assistance. The team ensures patient’s receive holistic care and feel valued as a patient and as a person. Family
physicians receive concise guidelines about thyroid replacement and calcium management and patients have immediate access to health care providers.

The team has now developed a provincial set-up involving regional members across the province to develop uniformity of care across the board. An online, multicentre integrated clinical and research information management system has been customized for thyroid cancer to provide a single source of concise and accurate case information to caregivers and as a basis for clinical research. In addition, a computerized decision support system is being established.

ITOC Team’s commitment to quality and excellence in patient care earned them Cancer Care Nova Scotia’s 2009 Excellence in Patient Care Award.

As is well known, the transfer of continuity of care innovations to practice is a complex process that is compounded by the need to simultaneously target multiple settings and providers. While we did not employ a knowledge transfer model to guide our implementation, we did make use of some knowledge transfer and exchange strategies. We began with the collection of evidence-based information from research and others sources to generate consistent knowledge about the management of thyroid cancer and actively transferred this knowledge to other health professionals and patients with a strong emphasis on the ways in which it creates value for patients and health professionals alike. We used a variety strategies to enhance direct person-to-person communication and education such as; housing a team of providers in the same area where providers could develop a shared understanding of each others roles relative to the management of the patient; supported a culture in which patients and family physicians could feel free to call at any time with questions; drafted letters to family physicians with clear guidelines for patient follow-up care and subsequently hosted focus group meetings with them to learn about their experiences and what was most helpful to them; offered mentor-guided learning experiences for health professional students where they could benefit from an interdisciplinary team approach and gain insight from both patient and provider perspectives; developed and conducted patient education symposiums and packaged information into patient friendly education booklets; developed collaborative networks and a community of practice with colleagues from across the province; presented at the 2009 World Congress on Thyroid Cancer and the International Ca-PRI conference in 2010; and are in the initial stages of developing a web-based process for sharing practice guidelines.

**Evaluation**

A quality improvement study of 108 consecutive thyroid cancer patients was undertaken for a pre/post ITOC comparison of wait times and frequency of hospital visits using existing hospital data in combination with chart reviews. In addition, focus groups were conducted with both patients and health care providers.

Results: Leslie McLean (leslie.mcLean@cdha.nshealth.ca) was the evaluator.

The comparison of wait times before and after the establishment of the clinic found that although wait times from final surgery to first post-op consultation increased, there was a
decrease in overall time from surgery to completion of all post-op consultations: 651 to 177 days. There was also improved (30% vs. 71%) and more timely (698 vs. 143 days) access to endocrine consultation and a reduction in the frequency of hospital visits.

The findings of the focus groups and interviews conducted with patients and health care providers were extremely positive.

According to patient participants, the main benefits of the clinic include:
- the ability to be seen by health care providers when needed;
- the amount of time health care providers spend with them and the consistent advice they provide;
- the expertise of the health care providers and the confidence and trust that this instills;
- the focus on the “whole” person;
- the coordination and consistency of care that stems from a central clinic and effective team work that includes the patient;
- timely notification of appointments, test and procedures;
- the quality of education, particularly the group information sessions conducted by the physicians;
- the communication between the specialists and family physicians.

Patients articulated that the greatest benefit is the “one-stop shop” and its associated decrease in the number of hospital visits which positively impacts on the cost of travel, accommodation, parking, work-life and psychological well-being.

Health provider participants identified the following benefits:
- ready access to a centrally located team of interdisciplinary health care providers with a wide range of expertise in the care of thyroid cancer;
- improved interdisciplinary and interdepartmental communications, coordination and relations among radiation oncology, endocrinology, nuclear medicine, surgery and primary care;
- more clearly defined roles for health care providers and patients;
- streamlined patient flow and care processes;
- standardized and centralized referral and booking procedures;
- consistent, accurate and timely information sharing and education for patients and better preparation for appointments, tests and procedures;
- more holistic, consistent and responsive patient care;
- a reduction in unnecessary tests and procedures;
- unique learning and clinical research opportunities for health care providers and health profession students.

**Resource Implications**

Pooling of resources from various departments and industry was required. As the project progresses and patient population expands, there is inadequate infrastructure to support such interdisciplinary initiatives.
HOW THE PROJECT ADVANCES THE QUALITY OF CANCER CONTROL

It realizes the clear benefits of interdisciplinary care in improving efficiency and consistency of patient-centered care. Additionally, centralization of expertise in a relatively rare cancer has allowed pooling of resources and the ability to address many shortcomings in awareness, education, research, and policy making.

REFERENCES

No references reported.

RESOURCES


CONTACT INFORMATION:

Name: Dr S. Ali Imran    Email address: Ali.imran@cdha.nshealth.ca
Name: Dr. Murali Rajaraman  Email address: Murali.rajaraman@cdha.nshealth.ca
Practical Field Initiatives: Interventions Summary

Table 2 includes data elements extracted for each field initiative profiled in our Casebook from the data collection form used in our Casebook project. The objective of this table is to supplement the information provided in the Project Profiles and to provide an overview of each project’s intervention details.

Table 2. Summary of Interventions used in the Field Initiatives

<table>
<thead>
<tr>
<th>Intervention Type/Focus</th>
<th>Delivery Modality</th>
<th>Target Outcome</th>
<th>Implementation Level</th>
<th>Cancer Diagnosis</th>
<th>Cancer Care Continuum</th>
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<tr>
<td><strong>Regional Aboriginal Cancer Strategy – Northwestern Ontario: Consumer and Organizational</strong></td>
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<td>Quality improvement</td>
<td>People</td>
<td>Improved Knowledge, Changed attitude, intention to behave, and Behavior change</td>
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<td>Breast, Gastrointestinal, and Genitourinary</td>
<td>Preventive, Screening, and Diagnosis</td>
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<td>Same as above</td>
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<td>Changed attitude, and Behavior change</td>
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<td>Prevention, Screening, and diagnosis</td>
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<td>Quality improvement</td>
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<td>Lung, Breast, Colorectal, Prostate</td>
<td>Diagnosis, Treatment</td>
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<td>Diagnosis, Treatment</td>
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<td>Intervention Type/Focus</td>
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<td>Lung, Breast, Colorectal, Prostate</td>
<td>Diagnosis, Treatment</td>
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Effects of Change in Rectal Cancer Management to TME Surgery and Preoperative Short Course Radiation in Outcomes in a North American Population: Professional

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<th>Implementation Level</th>
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<td>Static Technology</td>
<td>Behavioral Change</td>
<td>Regional</td>
<td>Not Specified</td>
<td>Treatment</td>
</tr>
<tr>
<td>Continuity of care (Improved coordination of care)</td>
<td>People (Face to face)</td>
<td>Behavioral Change</td>
<td>Regional</td>
<td>Not Specified</td>
<td>Treatment</td>
</tr>
<tr>
<td>Interdisciplinary team collaboration (Clinical multidisciplinary teams)</td>
<td>People (Face to face)</td>
<td>Behavioral Change</td>
<td>Regional</td>
<td>Not Specified</td>
<td>Treatment</td>
</tr>
<tr>
<td>Intervention Type/Focus</td>
<td>Delivery Modality</td>
<td>Target Outcome</td>
<td>Implementation Level</td>
<td>Cancer Diagnosis</td>
<td>Cancer Care Continuum</td>
</tr>
<tr>
<td>------------------------</td>
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</tr>
<tr>
<td>Collaborative Palliative Care Practice Project - Mentorship Program for Interprofessional Primary Healthcare Teams: <em>Professional</em></td>
<td></td>
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</tr>
<tr>
<td>Distribution of Educational Materials</td>
<td>People</td>
<td>Improved Knowledge</td>
<td>Provincial</td>
<td>Not specified</td>
<td>Palliative End of Life</td>
</tr>
<tr>
<td>Educational Meetings</td>
<td>People</td>
<td>Improved Knowledge</td>
<td>Provincial</td>
<td>Not specified</td>
<td>Palliative End of Life</td>
</tr>
<tr>
<td>An Integrated Approach to a Knowledge Management Framework for Cancer Care: <em>Organizational</em></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Quality Improvement</td>
<td>Mixed and not specified</td>
<td>Improved Knowledge uptake</td>
<td>Provincial</td>
<td>all</td>
<td>Diagnosis, treatment and follow-up through to supportive Care</td>
</tr>
<tr>
<td>Healing Beyond the Body Volunteer Program: <em>Consumer and Organizational</em></td>
<td></td>
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<tr>
<td>Support</td>
<td>People</td>
<td>Satisfaction, improved knowledge</td>
<td>Regional</td>
<td>Breast, Gastrointestinal, Genitourinary, Gynecology, Head and neck, Hematologic, Lung, Melanoma, Neuro-oncology, Sarcoma</td>
<td>Supportive Care</td>
</tr>
<tr>
<td>Providing information to education</td>
<td>People</td>
<td>improved knowledge</td>
<td>Regional</td>
<td>Same as above</td>
<td>Supportive Care</td>
</tr>
<tr>
<td>Facilitating communication and decision making</td>
<td>People</td>
<td>Satisfaction, improved knowledge</td>
<td>Regional</td>
<td>Same as above</td>
<td>Supportive Care</td>
</tr>
<tr>
<td>Improving quality</td>
<td>People</td>
<td>Satisfaction, improved knowledge</td>
<td>Regional</td>
<td>Same as above</td>
<td>Supportive Care</td>
</tr>
<tr>
<td>change in scope and nature of benefits and services</td>
<td>People</td>
<td>Satisfaction, improved knowledge</td>
<td>Regional</td>
<td>Same as above</td>
<td>Supportive Care</td>
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<tr>
<td>Intervention Type/Focus</td>
<td>Delivery Modality</td>
<td>Target Outcome</td>
<td>Implementation Level</td>
<td>Cancer Diagnosis</td>
<td>Cancer Care Continuum</td>
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<td>---------------------------------------------------------------------------------------</td>
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<td>------------------------------------------------------------</td>
</tr>
<tr>
<td>Quality Improvement: Organizational changes: routine symptom screening</td>
<td>Interactive technology and mixed</td>
<td>Earlier detection and response to patient distress; Common language across providers and sectors</td>
<td>Provincial</td>
<td>Lung and all other cancer</td>
<td>Treatment, Supportive Care, Palliative and End of Life Care</td>
</tr>
<tr>
<td>Facilitating communication and decision making; audit and feedback</td>
<td>Interactive technology and mixed</td>
<td>Patient engagement and satisfaction; Clinical practice change</td>
<td>Provincial</td>
<td>Lung and all other cancer</td>
<td>Treatment, Supportive Care, Palliative and End of Life Care</td>
</tr>
</tbody>
</table>

**Implementation of the Oncology Pivot Nurse Program in Quebec: Consumer**

<table>
<thead>
<tr>
<th>Providing information or education</th>
<th>People</th>
<th>Behavior Change &amp; Improved Knowledge</th>
<th>Regional</th>
<th>Head &amp; Neck</th>
<th>Supportive Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improving quality</td>
<td>People</td>
<td>Changes to patients Outcome</td>
<td>Regional</td>
<td>Head &amp; Neck</td>
<td>Supportive Care</td>
</tr>
<tr>
<td>Facilitating communication and decision making</td>
<td>People</td>
<td>Improved Knowledge</td>
<td>Regional</td>
<td>Head &amp; Neck</td>
<td>Supportive Care</td>
</tr>
<tr>
<td>Support</td>
<td>People</td>
<td>All of the above</td>
<td>Regional</td>
<td>Head &amp; Neck</td>
<td>Supportive Care</td>
</tr>
</tbody>
</table>

**CCOs Provincial Primary Care and Cancer Engagement Strategy: Professional; Consumer; Organizational; Financial and Regulatory**

| Quality Improvement (Development, refinement, and revising of guidelines)              | People and Mixed                    | Behavioural Change & improved knowledge                                         | Provincial           | Not specified                         | Not specified                                             |


<table>
<thead>
<tr>
<th>Intervention Type/Focus</th>
<th>Delivery Modality</th>
<th>Target Outcome</th>
<th>Implementation Level</th>
<th>Cancer Diagnosis</th>
<th>Cancer Care Continuum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical multidisciplinary teams and continuity of care</td>
<td>People and Mixed</td>
<td>Behavioural Change</td>
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<td>Not specified</td>
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<td>Mixed</td>
<td>Behavioural Change</td>
<td>Provincial</td>
<td>Not specified</td>
<td>Not specified</td>
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<tr>
<td>Ownership accreditation and affiliation status of hospitals and other facilities</td>
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<td>Behavioural Change</td>
<td>Provincial</td>
<td>Not specified</td>
<td>Not specified</td>
</tr>
<tr>
<td>Distribution of Educational Materials</td>
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<td>Provincial</td>
<td>Not specified</td>
<td>Not specified</td>
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<td>Educational Meetings</td>
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<td>Provincial</td>
<td>Not specified</td>
<td>Not specified</td>
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<td>Educational Outreach Visits</td>
<td>Mixed</td>
<td>improved knowledge &amp; Behavioural Change</td>
<td>Provincial</td>
<td>Not specified</td>
<td>Not specified</td>
</tr>
<tr>
<td>Local Opinion Leaders</td>
<td>Mixed</td>
<td>Behavioural Change &amp; Intention to behave</td>
<td>Provincial</td>
<td>Not specified</td>
<td>Not specified</td>
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<tr>
<td>Patient-Mediated</td>
<td>Mixed</td>
<td>Behavioural Change</td>
<td>Provincial</td>
<td>Not specified</td>
<td>Not specified</td>
</tr>
<tr>
<td>Audit and Feedback</td>
<td>Mixed</td>
<td>improved knowledge &amp; Behavioural Change</td>
<td>Provincial</td>
<td>Not specified</td>
<td>Not specified</td>
</tr>
<tr>
<td>Reminders - General</td>
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<td>Behavioural Change</td>
<td>Provincial</td>
<td>Not specified</td>
<td>Not specified</td>
</tr>
<tr>
<td>Reminders - Computer Physician Order Entry</td>
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<td>Behavioural Change</td>
<td>Provincial</td>
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<td>Not specified</td>
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<tr>
<td>Intervention Type/Focus</td>
<td>Delivery Modality</td>
<td>Target Outcome</td>
<td>Implementation Level</td>
<td>Cancer Diagnosis</td>
<td>Cancer Care Continuum</td>
</tr>
<tr>
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<td>-------------------</td>
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<td>------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>Tailored Interventions (Aboriginals)</td>
<td>Mixed</td>
<td>improved knowledge &amp; Behavioural Change</td>
<td>Provincial</td>
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<tr>
<td>Mass Media</td>
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<td>Provincial</td>
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<td>Not specified</td>
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<tr>
<td>Professional – other (Several professional groups such as Nurses, pharmacist, Social workers, dietitians)</td>
<td>Mixed</td>
<td>improved knowledge &amp; Behavioural Change</td>
<td>Provincial</td>
<td>Not specified</td>
<td>Not specified</td>
</tr>
<tr>
<td>Providing information or education</td>
<td>Mixed</td>
<td>improved knowledge</td>
<td>Provincial</td>
<td>Not specified</td>
<td>Not specified</td>
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<tr>
<td>Supporting behaviour change</td>
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<td>Behavioural Change</td>
<td>Provincial</td>
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<tr>
<td>Acquiring skills and competencies (Direct Consumer education through cancer centers)</td>
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<td>Provincial</td>
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<td>Not specified</td>
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<tr>
<td>Support</td>
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<td>improved knowledge &amp; clinical (Changes to Patient outcome)</td>
<td>Provincial</td>
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<td>Not specified</td>
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<td>improved knowledge</td>
<td>Provincial</td>
<td>Not specified</td>
<td>Not specified</td>
</tr>
<tr>
<td>Minimizing risks or harms</td>
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<td>improved knowledge &amp; Behavioural Change</td>
<td>Provincial</td>
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<td>Not specified</td>
</tr>
<tr>
<td>Improving quality</td>
<td>Mixed</td>
<td>Behavioural Change</td>
<td>Provincial</td>
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<td>Consumer system participation</td>
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<td>Provincial</td>
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<tr>
<td>Intervention Type/Focus</td>
<td>Delivery Modality</td>
<td>Target Outcome</td>
<td>Implementation Level</td>
<td>Cancer Diagnosis</td>
<td>Cancer Care Continuum</td>
</tr>
<tr>
<td>---------------------------------------------------------------</td>
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<td>-----------------------------------------------------</td>
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<tr>
<td>Revision of Professional Roles - Pharmacy</td>
<td>Mixed</td>
<td>improved knowledge &amp; Behavioural Change</td>
<td>Provincial</td>
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<td>Not specified</td>
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<tr>
<td>Revision of Professional Roles - Nursing</td>
<td>Mixed</td>
<td>improved knowledge &amp; Behavioural Change</td>
<td>Provincial</td>
<td>Not specified</td>
<td>Not specified</td>
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<tr>
<td>Revision of professional roles - general</td>
<td>Mixed</td>
<td>improved knowledge &amp; Behavioural Change</td>
<td>Provincial</td>
<td>Not specified</td>
<td>Not specified</td>
</tr>
<tr>
<td>Quality Improvement</td>
<td>Mixed</td>
<td>improved knowledge</td>
<td>Provincial</td>
<td>Not specified</td>
<td>Not specified</td>
</tr>
<tr>
<td>Changes in medical records systems</td>
<td>Static Technology and People</td>
<td>Behavioural Change</td>
<td>Provincial</td>
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<tr>
<td>Changes in physical structure, facilities and equipment</td>
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<td>clinical (Changes to Patient outcome)</td>
<td>Provincial</td>
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<td>Not specified</td>
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<tr>
<td>Changes in scope and nature of benefits and services</td>
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<td>Behavioural Change</td>
<td>Provincial</td>
<td>Not specified</td>
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<tr>
<td>Changes to settings/site of delivery service (Aboriginals and unattached cancer patients screened for cancer)</td>
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<td>improved knowledge &amp; Behavioural Change</td>
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<td>Not specified</td>
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<tr>
<td>Clinical multidisciplinary teams</td>
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<td>improved knowledge &amp; Behavioural Change</td>
<td>Provincial</td>
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<td>Not specified</td>
</tr>
<tr>
<td>Continuity of care</td>
<td>Mixed</td>
<td>Behavioural Change</td>
<td>Provincial</td>
<td>Not specified</td>
<td>Not specified</td>
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<tr>
<td>Skill mix changes (Pivot Nurse Flexic?)</td>
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<td>clinical (Changes to Patient outcome)</td>
<td>Provincial</td>
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<td>Not specified</td>
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<tr>
<td>Intervention Type/Focus</td>
<td>Delivery Modality</td>
<td>Target Outcome</td>
<td>Implementation Level</td>
<td>Cancer Diagnosis</td>
<td>Cancer Care Continuum</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Communication and case discussion between distant health professionals (Communication pilot project-Colon Cancer – Rural Areas- focus group &amp; evaluation)</td>
<td>Mixed</td>
<td>improved knowledge &amp; Behavioural Change</td>
<td>Provincial</td>
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<td>Not specified</td>
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<tr>
<td>Organisational (Patient oriented interventions)</td>
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<td>clinical (Changes to Patient outcome)</td>
<td>Provincial</td>
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<td>Not specified</td>
</tr>
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<td>Formal integration of services</td>
<td>Mixed</td>
<td>clinical (Changes to Patient outcome)</td>
<td>Provincial</td>
<td>Not specified</td>
<td>Not specified</td>
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<td>Satisfaction of providers with the conditions of work and the material and psychological rewards (Huge incentive around cancer)</td>
<td>Mixed</td>
<td>Behavioural Change</td>
<td>Provincial</td>
<td>Not specified</td>
<td>Not specified</td>
</tr>
<tr>
<td>Ownership, accreditation, and affiliation status of hospitals and other facilities (Large accreditation program - Acquiring certification &amp; Special education)</td>
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<td>improved knowledge</td>
<td>Provincial</td>
<td>Not specified</td>
<td>Not specified</td>
</tr>
<tr>
<td>Organisational (Provider) - Other</td>
<td>Mixed</td>
<td>clinical (Changes to Patient outcome)</td>
<td>Provincial</td>
<td>Not specified</td>
<td>Not specified</td>
</tr>
<tr>
<td>Intervention Type/Focus</td>
<td>Delivery Modality</td>
<td>Target Outcome</td>
<td>Implementation Level</td>
<td>Cancer Diagnosis</td>
<td>Cancer Care Continuum</td>
</tr>
<tr>
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<td>----------------------</td>
</tr>
<tr>
<td>Organisational (Structural) - Other</td>
<td>Mixed</td>
<td>clinical (Changes to Patient outcome)</td>
<td>Provincial</td>
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<td>Not specified</td>
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<tr>
<td>Financial (professional reimbursement and Penalties)</td>
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<td>Behavioural Change</td>
<td>Provincial</td>
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</table>

Maximizing your Patient Education Skills (MPES)- MPES Train-the-Trainer Program: *Professional*

<table>
<thead>
<tr>
<th>Distribution of Educational Materials</th>
<th>People and Mixed</th>
<th>Improved knowledge</th>
<th>Provincial</th>
<th>Applicable to all</th>
<th>Applicable to multiple</th>
</tr>
</thead>
<tbody>
<tr>
<td>experiential learning using simulated patients</td>
<td>People and Mixed</td>
<td>Improved knowledge, behavior and skills</td>
<td>Provincial</td>
<td>Applicable to all</td>
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</tbody>
</table>

The Coordinated Approach of the Interdisciplinary Thyroid Oncology Clinic to Patient Care: *Organizational*

<table>
<thead>
<tr>
<th>Quality Improvement</th>
<th>People (face to face)</th>
<th>Clinical</th>
<th>Regional</th>
<th>Head &amp; Neck</th>
<th>Not Specified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical interdisciplinary teams</td>
<td>People (face to face)</td>
<td>Clinical, Satisfaction &amp; Behavior change</td>
<td>Regional</td>
<td>Head &amp; Neck</td>
<td>Not Specified</td>
</tr>
<tr>
<td>Change in setting and/or site of delivery services</td>
<td>People (face to face)</td>
<td>Clinical</td>
<td>Regional</td>
<td>Head &amp; Neck</td>
<td>Not Specified</td>
</tr>
<tr>
<td>Continuity of care</td>
<td>People (face to face)</td>
<td>Clinical</td>
<td>Regional</td>
<td>Head &amp; Neck</td>
<td>Not Specified</td>
</tr>
<tr>
<td>Formal integration of services</td>
<td>People (face to face)</td>
<td>Clinical</td>
<td>Regional</td>
<td>Head &amp; Neck</td>
<td>Not Specified</td>
</tr>
</tbody>
</table>
Part II. KT Projects:

Research Studies
Research Studies of KT for Cancer Control
Table 3 includes a summary of the 11 KT research studies profiled in Part II of this Casebook. The objective of this table is to provide grant information of each research study described in the Structured Abstracts.

Table 3. Grant information for KT research studies described in the Structured Abstracts.

<p>| CIHR (2005-2009). Eligible Studies, n=21; Published studies for inclusion in the Casebook, n=5 |</p>
<table>
<thead>
<tr>
<th>Province</th>
<th>Contact Person</th>
<th>Grant Year</th>
<th>Cancer Care Continuum</th>
<th>Grant Title</th>
<th>Published Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BC</td>
<td>J. L. Oliffe</td>
<td>2006</td>
<td>Post-Diagnosis</td>
<td>The role of prostate cancer support groups (PCSGs) in health promotion</td>
<td>The Role of Prostate Cancer Support Groups in Health Promotion Executive Summary: 2009 Support and assistance provided by: The Role of Prostate Cancer Support Groups</td>
</tr>
<tr>
<td>ON</td>
<td>L. Hoffman-Goetz</td>
<td>2009</td>
<td>All Stages</td>
<td>Comprehension of cancer risk information on the Internet: Role of graphical, numerical, and text formats by older adults</td>
<td>Comprehension of Internet-based numeric cancer information by older adults</td>
</tr>
<tr>
<td>ON</td>
<td>M. Brouwers</td>
<td>2009</td>
<td>All Stages</td>
<td>Practice Guidelines Summer Institute</td>
<td>Practice Guidelines Summer Institute</td>
</tr>
<tr>
<td>ON</td>
<td>S. H. Campbell</td>
<td>2008</td>
<td>Long-Term Survivorship and Follow-up</td>
<td>Cancer Survivorship: An Inter-Provincial Study to Determine the Prevalence and Predictors of the Unmet Needs of Cancer Survivors and Their Principal Support Person</td>
<td>The Cancer Support Person’s Unmet Needs Survey</td>
</tr>
</tbody>
</table>

<p>| CCSRI (2005-2008 and 2009-2010). Eligible Studies, n=23; Published Studies for inclusion in the Casebook, n=6 |</p>
<table>
<thead>
<tr>
<th>Province</th>
<th>Contact Person</th>
<th>Grant Year</th>
<th>Cancer Care Continuum</th>
<th>Grant Title</th>
<th>Published Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ON, MB</td>
<td>E. Chow</td>
<td>2005</td>
<td>Treatment</td>
<td>Development of a Canadian-led international bone metastases module to accompany the European Organization for Research</td>
<td>The European Organisation for Research and Treatment of Cancer Quality of Life Questionnaire for</td>
</tr>
<tr>
<td>BC</td>
<td>B.J. Davison</td>
<td>2005</td>
<td>Treatment Onwards</td>
<td>Evaluating a decision support intervention for men with prostate cancer</td>
<td>Comparing a generic and individualized information decision support intervention for men newly diagnosed with localized prostate cancer</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>AB, BC, ON</td>
<td>T. Hack</td>
<td>2007</td>
<td>Treatment Onwards</td>
<td>Providing audiotapes of primary oncology treatment consultations to women with breast cancer: a tri-province randomized controlled trial</td>
<td>Standardized audiotape versus recorded consultation to enhance informed consent to a clinical trial in breast oncology</td>
</tr>
<tr>
<td>AB</td>
<td>M. Keats</td>
<td>2006</td>
<td>Survivorship and Follow-up</td>
<td>Attitudes and behaviours of paediatric oncologists towards physical activity in childhood cancer survivors: the impact of a web-based intervention on oncologist's counselling practices and survivor behaviour</td>
<td>An examination of the beliefs, attitudes and counselling practices of paediatric oncologists toward physical activity: A provincial survey</td>
</tr>
<tr>
<td>BC</td>
<td>K. Stajduhar</td>
<td>2007</td>
<td>Palliative and End of Life</td>
<td>Family caregiving coping in end-of-life cancer care</td>
<td>Factors influencing family caregivers' ability to cope with providing end-of-life cancer care at home</td>
</tr>
</tbody>
</table>

and Treatment of Cancer QoL Group core questionnaire (EORTC QLQ-C30) for future clinical trials in patients with bone metastases.
Structured Abstract 1

The European Organization for Research and Treatment of Cancer Quality of Life Questionnaire for patients with Bone Metastases: The EORTC QLQ-BM22


Background
With advances in the systemic treatment of advanced cancer patients with osseous metastases, there is a fundamental requirement for the development of a Health-Related Quality of Life (HRQOL) assessment tool that is specific to such patients, in order to provide a comprehensive evaluation of any intervention. Often the objective effects of treatments on bone metastases have proven difficult to measure and the assessment of patients’ subjective benefit is, therefore, critically important. The European Organization for Research and Treatment of Cancer Quality of Life Group has developed a 30-item core cancer questionnaire, the EORTC QLQ-C30, which measures HRQOL in clinical trials.

Objectives
To develop a bone metastases module to supplement the EORTC QLQ-C30 or the EORTC QLQ-C15-PAL for patients with bone metastases.

Methods
Phases 1–2 of module development were conducted in Canada, Australia and Germany according to EORTC QOL group guidelines. In the first phase, HRQOL issues relevant to bone metastases patients were determined through a literature search, as well as semi-structured interviews with patients and health care professionals (HCPs). The results from these interviews were analyzed using descriptive statistics based on mean score, prevalence ratios, and the percentage that prioritized them. In the 2nd phase, the selected issues were constructed into items according to their compatibility with EORTC QLQ-C30 response categories, their compatibility to the 1-week time frame of EORTC QLQ-C30 wherever possible, and whether they referred to states rather than to changes. Existing questionnaire items were harmonised using the EORTC QOL Item Bank. Phase 3 was conducted in nine countries in seven languages to determine whether the set of module items were comparable cross-culturally. Patients were asked to complete the EORTC QLQ-C30 and the bone metastases module indicating if they found any questions annoying, confusing, upsetting or intrusive, and if so, they were asked to rephrase the question. In this final phase, the final wording was achieved using a consensus methodology, where all co-authors considered the data on comprehensibility, and then agreed on appropriate rewording.

Results
Sixty-one health-related quality of life (HRQOL) issues were generated from health care professionals (n = 152) and patients (n = 413). This resulted in a 22-item provisional module. Further testing in 170 patients from nine countries resulted in the EORTC QLQBM22 module, containing 22 items, conceptualized into both symptom scales, with five painful sites and three pain characteristics, and also functional scales, with eight functional interference and six psychosocial aspects.
Conclusion
This study provides a provisional comprehensive HRQOL measurement tool for future trials, which will continue to undergo further validation.

Citation
Structured Abstract 2

Comparing a Generic and Individualized Information Decision Support Intervention for Men Newly Diagnosed with Localized Prostate Cancer

Davison, BJ, Goldenberg, SL, Wiens, KP, and Gleave, ME.

Background
There is evidence that men newly diagnosed with prostate cancer want to be informed and involved in treatment decision-making with their physician. Clinicians continue to provide information using a generic approach, even though several studies suggest that an individualized approach is optimal. The goal of most information interventions is to reduce decisional conflict and increase the likelihood that treatment choices are based on adequate knowledge, realistic expectations of outcomes, and personal values.

Objectives
A randomized study was conducted to compare a generic and individualized approach to providing decisional support to men newly diagnosed with localized prostate cancer.

Methods
Patients (N = 324) were referred by community urologists to a patient education center where they were randomly assigned to receive either an individualized or generic information intervention. Men assigned to the generic group viewed a video on the various treatments available for localized prostate cancer. Men in the individualized information group used a computer program to identify their information preferences. Computer printouts on top information preferences were individualized according to patient’s specific disease characteristics, followed by a discussion of the pros and cons of each recommended treatment option. Both groups received a standardized package of written information. Men completed measures of decision control, satisfaction, and decision conflict at two points: once at baseline and once after a definitive treatment decision.

Results
Results demonstrated that overall both groups reported increased levels of decision control and lower levels of decision conflict after their treatment decision. All men reported being satisfied with their preparation to make a treatment decision. Compared to the generic information group, men who received the individualized information were more satisfied with the type, amount and method of providing information, and role played in treatment decision making with their physician (p<0.002).

Conclusion
Both information interventions seem to be similar in providing decisional support to this group of men at the time of diagnosis. Further research is required to determine how to identify men who may benefit from a more individualized approach.

Citation
Structured Abstract 3

Standardized audiotape versus recorded consultation to enhance informed consent to a clinical trial in breast oncology
Hack, TF, Whelan, T, Olivotto, IA, Weir, L, Bultz, BD, Magwood, B, Ashbury, F, and Brady, J.

Background
Many patients participating in clinical research studies report being inadequately informed or cannot recall or understand important information about their disease, treatment, or the investigational nature of their treatment. Consultation recording has been shown to improve learning, understanding, and recall of cancer treatment, and cancer treatment. Provision of an audiotape of trial-relevant information to patients considering clinical trial enrollment may enhance their understanding and recall of trial specifics and improve the informed consent process.

Objectives
The purpose of this study was to systematically compare two audiotape formats for the delivery of information relevant to informed consent to participate in a clinical trial in breast oncology, and to establish the feasibility of adding a consultation recording protocol to a clinical treatment trial.

Methods
Participants were 69 women with newly diagnosed breast cancer and 21 oncologists from 5 Canadian cancer centers. Patients were block randomized to one of three groups: 1. standardized audiotape; 2. consultation audiotape; or 3. both audiotapes. Patients received their tapes immediately following the clinical trial consultation. Patient outcomes included perception of being informed about clinical trials, knowledge of information relevant to providing informed consent to a clinical trial, and satisfaction with communication during the consultation.

Results
The consultation audiotapes contained less trial-related information than the standardized audiotape but there were no differences in clinical trial knowledge or perception of being informed across the intervention groups. Patients expressed a marginally significant preference for consultation audiotapes over standardized audiotapes.

Conclusion
Patients tended to prefer receiving an audiotape of their own consultation over a standardized audiotape. The majority of oncologists considered the audiotape intervention feasible but were less enthusiastic about being involved in a larger study given the accrual challenges that arose when trying to ‘piggy-back’ one randomized controlled trial on an existing clinical trial.

Citation
Structured Abstract 4

Impact of providing audiotapes of primary treatment consultations to men with prostate cancer: A multi-site, randomized, controlled trial
Hack, TF, Pickles, T, Bults, BD, Ruether, JD, and Degner, LF.

Background
Consultation audiotapes allow for memories to be refreshed, for the learning of information not recalled from the initial consultation, and for a clearer understanding of one’s cancer treatment. They are a means of providing relevant illness information to men with prostate cancer to enable them to be a more fully informed and more active treatment consumers if they so prefer.

Objectives
The purpose of this investigation was to systematically examine the efficacy of providing men with prostate cancer with an audiotape of their primary treatment consultation.

Methods
Participants included 425 men newly diagnosed with prostate cancer and 15 radiation oncologists from 4 cancer centers in Canada. Patients were block randomized to one of four consultation groups: 1. Standard care control-not audio-taped; 2. Audio-taped-no audiotape given; 3. Audio-taped-patient given audiotape; and 4. Audio-taped-patient offered choice of receiving audiotape or not (4 patients declined; 94 accepted). Patient outcomes were measured at 12 weeks post-consultation: perceived degree of information provision; audiotape satisfaction and use; communication satisfaction with oncologist; mood state; and cancer specific quality of life.

Results
Patients receiving the consultation audiotape reported having been provided with significantly more disease and treatment information in general (p = 0.04), and more information about treatment alternatives (p = 0.04) and treatment side effects (p = 0.01) in particular, than patients who did not receive the audiotape. Audiotape benefit was not significantly related to patient satisfaction with communication, mood state or quality of life at 12 weeks post-consultation, and was not significantly affected by choice of receiving the audiotape. Patients rated the audiotape intervention positively, with an average score of 83.0 out of 100.

Conclusion
Consultation audiotapes are rated highly by men with prostate cancer, and these audiotapes help to enhance their perception of having been provided with critical disease- and treatment-related information.

Citation
Structured Abstract 5

An examination of the beliefs, attitudes and counseling practices of paediatric oncologists toward physical activity: A provincial survey
Keats, MR, Culos, SN, and Courneya, KS.

Background
With an increasing population of childhood cancer survivors and a growing recognition of the long-term effects of diagnosis and treatment, it is imperative that modifiable risk factors for long-term health and disease comorbidity be identified and addressed. Physical activity is one therapy that is gaining credibility in enhancing quality of life and reducing the burden of disease.

Objectives
To examine the beliefs, attitudes, and counselling practices of paediatric oncologists, and their role in advocating and promoting physical activity.

Methods
All Alberta-based physicians with a known specialty in paediatric oncology (n=21) were asked to participate. They received a questionnaire package that included a detailed cover letter, an informed consent form, a survey, and a stamped self-addressed return envelope. Efforts to increase response rates included multiple reminders, stamped return envelopes, coloured paper, illustrations, assurances of confidentiality and a personalized cover letter. In the survey, physicians were asked to report their actual exercise behavior, their perceived barriers to personal exercise and their perceived importance of personal exercise. Furthermore, they reported the perceived importance and risk of physical activity in adolescent survivors, in addition to their exercise counseling practices with this population.

Results
All responding physicians surveyed indicated that they were physically active on a regular basis with the major barriers being lack of time (91.7%) and lack of motivation (33.3%). They also regarded both personal exercise and physical activity for childhood cancer survivors as moderately to extremely important. Fifty percent of the respondents believed that there is no adverse risk associated with physical activity in this survivor group. While the bulk of physicians report prescribing physical activity, few believed that their patients actually follow these recommendations. The major barriers for counseling patients about physical activity were lack of knowledge or resources (54.5%) and inadequate time (45.5%).

Conclusion
Responding oncologists acknowledge the importance of physical activity for all survivors; however, future research is needed to better understand how to best promote healthy active living within this group.

Citation
Structured Abstract 6

Factors Influencing Family Caregivers’ Ability to Cope With Providing End-of-Life Cancer Care at Home
Stajduhar, KI, Leigh Martin, W, Barwich, D, and Fyles, G.

Background
Dying at home is a goal promoted by many healthcare providers and governments as a way to enhance the dying experience for cancer patients and their family members. A key element to realizing this goal is the availability of a family member who is willing to provide care at home. Little research has been conducted on the factors that influence family caregivers’ ability to cope with providing end-of-life cancer care at home.

Objectives
The purpose of this qualitative study was to describe factors influencing family caregivers’ ability to cope with providing such care.

Methods
An interpretive descriptive research design guided this study. Family members who were actively providing care to person who was known to be dying from cancer were recruited to participate. Healthcare providers employed by hospice, home care agencies, outpatient pain and symptom management clinics approached eligible family caregivers and informed them about the study. Purposive sampling was used to guide selection of participants. In-depth semistructured interviews with 29 active family caregivers were conducted. An interview guide was used to facilitate conversations with participants, focusing on factors that influenced how they were coping with caregiving. Approximately half of the interviews were conducted and then data were concurrently analyzed to direct the remaining interviews. Preliminary concepts and themes were developed and used to categorize and code the data. Though investigators coded the interviews independently to identify areas of similarities and differences, a final analytic scheme was devised when agreement was reached.

Results
Our findings suggest 5 factors that influenced the caregivers’ ability to cope: (1) the caregiver’s approach to life, (2) the patient’s illness experience, (3) the patient’s recognition of the caregivers’ contribution to his or her care, (4) the quality of the relationship between the caregiver and the dying person, and (5) the caregiver’s sense of security.

Conclusion
Findings provide important information to assist in informing health services and policies directed at enhancing family caregivers’ coping abilities.

Citation
Structured Abstract 7

Practice Guidelines Summer Institute
Brouwers, M and the Capacity Enhancement Program at McMaster University

Background
In May 2008, the Capacity Enhancement Program (CEP) developed a national needs assessment survey designed to assess the training and educational priorities of key cancer stakeholders. Guideline methodologies and Knowledge Transfer and Exchange (KTE) were identified as priority topics for training.

Objectives
To enable a diverse group of Canadian clinical and health services research trainees to participate in an in-depth critical examination of practice guideline and evidence synthesis approaches. Another objective was to enhance the critical appraisal skills of participants to promote use and application of evidence while incorporating values and preferences in the clinical setting and in the organization of cancer care.

Methods
The institute was lead by faculty and leaders in the clinical practice guideline and evidence field, including Dr. Brouwers, Dr. Browman, Dr. Graham, Dr. Meyer, Dr. Palda, and Dr. Sussman. Other invited speakers provided their expertise on literature searching, synthesizing the evidence, and practical practice guideline development. The format consisted of interactive presentations, panel and group discussions, tutorials, and break-out sessions involving the opportunity to review current and controversial issues around the guideline development and evidence enterprise. A two page anonymous evaluation was conducted on the last day. It included 35 items: 30 items answered with a 5-point scale (1-strongly disagree to 5-strongly agree) that addressed content, facilitators, sessions and outcomes and 5 open-ended questions. The response rate was 68%.

Results
The content received a mean score of 4.36/5. It was thought that the objectives of the workshop were well covered but not all of the participants’ objectives were met, and the pace of some of the sessions may not have been appropriate for all participants. The facilitators (mean score= 4.66/5) rated very high in their content knowledge, clearly answering questions and providing an environment that encourages learning and participation. Participants, then, rated the quality of individual sessions at the Institute, where the overall mean agreement score for the statements was 4.46/5. The highest rated sessions were Practice Guideline Orientation, Evidence Evaluation, and Developing Recommendations. Overall, participants felt they increased their knowledge and skills, and learned applicable information at the Institute and would recommend the Institute to others (4.71/5).

Conclusion
Overall, the Institute was considered to be a success by both the participants and the facilitators. The evaluations received clearly demonstrated that the format of the Institute was very successful in providing the participants with a great learning environment and experience.
Citation
Structured Abstract 8

The Cancer Support Person’s Unmet Needs Survey
Campbell, HS, Sanson-Fisher, R, Taylor-Brown, J, Hayward, L, Wang, XS, and Turner, D.

Background
Although there has been extensive research about caregivers’ quality of life during diagnosis and treatment, there is limited research on the experiences and needs of those providing support to long-term survivors. The extent to which those providing support after active treatment have similar or different needs is not well understood. Support persons’ needs may actually increase, given the long-term health problems and chronic disabilities that can occur.

Objectives
The purpose of this study was to develop a psychometrically rigorous tool to measure the unmet needs of those persons identified by a cancer survivor as the principal individual who is providing support to them during their survivorship period.

Methods
Development of the domains and the items followed an extensive literature review, iterative input from support persons, and consultation with health professionals and front-line staff working with cancer survivors and their supports. Cognitive interviews helped clarify item wording, and the draft questionnaire was reappraised by a group of support persons. The questionnaire was reduced to 90 items and sent to a stratified, random sample of cancer survivors selected from a provincial population-based cancer registry. They were asked to give the survey to their support person.

Results
The resulting 78-item Support Person Unmet Needs Survey has high acceptability, item test-retest reliability, internal consistency (Chronbach alpha=.990), and face, content, and construct validity. It captures 6 domains of unmet needs and accounts for 73.5% of total variance: Information and Relationship Needs (27 items, 22.1% of variance), Emotional Needs (16 items, 15.2%), Personal Needs (14 items, 14.0%), Work and Finance (8 items, 8.8%), Health Care Access and Continuity (9 items, 8.6%), and Worries about Future (4 items, 4.8%).

Conclusion
This instrument will be of use where there is an interest in examining the impact of cancer not only on cancer survivors but also on their identified principal support persons.

Citation
Structured Abstract 9

Comprehension of Internet-based numeric cancer information by older adults
Donelle, L., Hoffman-Goetz, L., Gatobu, S., and Arocha, J.F.

Background
Competency in health numeracy is essential in understanding risk about disease susceptibility and the consequences of disease treatment. Both health literacy and skill in using the Internet to obtain health information are lower among older compared with younger adults. Presentation format of health information has been shown to influence comprehension.

Objectives
The objective of this study was to determine the influence of information formatting (text and graphic) on older adults’ comprehension of Internet-based numeric cancer risk information.

Methods
This cross-sectional study involved a convenience sample of adults, aged 50 years and older from diverse ethnic and educational backgrounds. Cancer risk information, obtained from a Canadian Cancer Society web page, was presented as text, graphics or as a combination of text and graphics formats. Comprehension of the information was assessed by six questions focused on basic numeracy skill and ability to perform simple calculations and operations. A three-item general context numeracy and an eight-item health context numeracy instrument were used to describe health numeracy skills of participants. The six-item Newest Vital Sign (NVS) test was used to assess prose and numeric health literacy.

Results
There was no statistically significant effect of presentation format on participants’ comprehension of the cancer information. Participants’ comprehension of basic health numeracy information was positively correlated with education (p≤0.05) and income (p≤0.01) whereas comprehension of information that assessed calculation and operations numeracy skill was positively correlated only with income (p≤0.05). Health literacy skill and income explained a significant proportion of the variance in overall comprehension of Internet-based cancer risk information (R²=0.414, p≤0.01) in this sample of older adults.

Conclusion
Format of numeric risk information was not a significant factor in the comprehension of cancer risk information in this group of ethnically diverse, older adults. However, comprehension of the information was related to health literacy skill and income.

Citation
Structured Abstract 10

The Role of Prostate Cancer Support Groups in Health Promotion
Oliffe, JL, Bottorff, JL, Hislop, TG, and McKenzie M.

Background
As Canadian men are living longer with prostate cancer, the most common cancer in this demographic, the death rate is significantly lower than the incidence rate. Since no known cure currently exists, prostate cancer will become a chronic, long-term illness. Health and illness information being integral to the well-being of these men, prostate cancer support groups (PCSGs) have emerged as important community-based resources.

Objectives
To explore the feasibility of survivor volunteer led PCSGs, men’s and women’s patterns of engagement with and perspective about PCSGs, as well as factors shaping health promotion practices at PCSGs.

Methods
A qualitative ethnographic design, including fieldwork, participant observations, and individual interviews provided an effective way to establish understandings about PCSGs. The primary characteristic of the study was its commitment to cultural interpretations of the practices and social norms at the PCSGs. We attended and observed meetings at 16 groups in diverse rural and urban locations in BC, Canada. Five groups focused their meetings on psycho-educational presentations, six groups were discussion-based, and five groups combined psycho-education with discussion. All the groups were led by prostate cancer survivor volunteers and the number of attendees ranged from 4 to 100 people ($M = 27$). Potential interviewees volunteered from each PCSG and from that pool we interviewed 54 men with varying group associations.

Results
In total, the 54 interviewees accounted for approximately 16% of all the men observed at the group meetings. These men had attended PCSGs for an average of 5 years with a mean diagnosis of 6 years. Twenty women from 11 of the 16 groups were also interviewed. Most participants ($n = 16$) attended with their husbands and for a duration of 6 months to 13 years. In terms of group sustainability, cohesive leadership, shared management, and specific group facilitation strategies were integral to meeting the diverse needs of attendees and fostering their camaraderie and commitment to the group. PCSGs’ dependence on one or two leaders and lack of defined terms and tenure, meant that group leaders were at risk for burnout. These men routinely discussed ordinarily private illness experiences and engaged with self-health, thereby participating in health promotion. Group members often focused on facts and figures, enabling many to objectify and position their cancer as manageable. Psychosocial benefits, including improved mood, mental health, and quality of life, were reported. The presence of humour disarmed the men’s stoicism and marked the boundaries for mutual help. Though the initial reason for women attending was to support their husbands, continued attendance was due to their need to manage their experience of their partner’s illness. They often assumed three roles, which included social facilitators, background supporters, and cancer co-survivors.
Conclusion
Balancing information with discussions about healthful practices maintained the attendee’s interest, but avoided overloading men with information. Humour also played a positive role in group interaction, and could be useful in the delivery of other men’s health promotion programs.

Citation
Structured Abstract 11

Moving Evidence to Application: A Three Province Cancer Collaborative

Background
The project "Moving Evidence to Application: A Three Province Cancer Collaboration" is a collaborative effort involving the cancer agencies of Alberta, Saskatchewan, and Manitoba in response to the request for applications (RFA) from Canadian Institutes of Health Research (CIHR): “Toward Canadian Benchmarks for Health Services Wait-times: Evidence, Application and Research Priorities”.

Objectives
To review definitions and metrics for wait times in cancer care to arrive at one approach for measuring wait-times and examining the feasibility of implementing this approach in the Canadian setting. This will be accomplished through (1) a systematic literature review on wait-times for cancer patients to summarize the current evidence regarding benchmarks and definitions for wait-times. As well, (2) to survey and summarize issues found within the three participating provinces in terms of applying definitions found in the literature review. The process would include developing and testing standardized wait-time definitions and metrics by applying them to existing data. Lastly, (3) to identify priority areas and questions for future research based on both the literature review and introspective evaluation of our current systems.

Methods
Objective 1
Sources for the review included the database searches of scientific journals, websites, news articles, and reports, both professional and governmental, related to wait-times. The databases included Ovid Medline, CINAHL, HealthSTAR, EMBASE, and Web of Science. All searches were restricted to abstracts written in English or French. The search criteria were specific to each database. Websites were identified through systematic and targeted methods. Relevant new articles were attained through the Alberta Cancer Board from the Edmonton Journal and their references were identified. Formal reports catalogued at the Cross Cancer Institute library were also identified.

Once the duplicate articles were removed, the database results were separated into twenty separate lists = and distributed to three investigators for initial review. The main categories used to determine relevance were cancer site (lung, colorectal, other) and objective of the original RFA, including: (1) national or international wait-time benchmarks, metrics, or reporting that have been proposed, implemented, and/or evaluated; (2) evidence/reasoning behind any of the benchmarks; (3) actual wait-times experienced; (4) relationship between any of patient characteristics, patient outcomes, and wait-times, and (5) review articles of any of wait-times, benchmarks, metrics, and/or reporting. Afterwards, a research assistant reviewed and abstracted specific data such as purpose, definitions of start and end-times, metrics used in reporting wait-times, baseline and outcome measures used. References from each source underwent an initial review and then a formal review as appropriate.
Objective 2
A workshop was held in Calgary, where participants included cancer agency representative (Cancer Care Manitoba, Saskatchewan Cancer Agency, and the Alberta Cancer Board) and health care professionals involved within the cancer care continuum. The primary questions addressed were “what steps can we take towards standardizing (wait-time definitions, metrics, and reports)” and “how can we account for the entire cancer patient care continuum”. Furthermore, the reasoning behind the questions was also explored. Through this workshop, a pilot project was agreed upon to determine whether pre-diagnosis procedure dates can be captured for lung and colorectal cancers that were diagnosed in the first quarter 2004 using data from provincial health departments. The dates of interest included first contact date for suspected cancer and dates of diagnostic procedures.

Results
Although both colorectal and lung cancer were to be studied, only a couple of articles were identified regarding waiting times for colorectal cancer treatment, thereby disabling the verification of any trends demonstrated within the lung cancer literature. Furthermore, though the entire cancer care continuum was to be evaluated, most studies focused on time to radiotherapy or surgery. Data regarding the pre-diagnostic and post-treatment intervals were virtually non-existent.

As well, the few studies that have tried to evaluate the relationship between various time-intervals in the lung cancer patient trajectory and outcomes have all looked at survival as the outcome, have used retrospective data, and have been too small to properly evaluate the complexity of the intervals and the disease. Time to next treatment matters after initial surgical resection and chemotherapy used to reduce tumor size prior to radiation therapy because rate of tumor growth increases after partial treatment. Since lung cancer patients tend to be diagnosed with advanced disease, treatment is with palliative intent rather than curative intent; of those with potentially curative disease, wait-times appear to be too long (in the audits conducted in UK and Sweden) such that some become incurable during the pre-treatment period.

As studies, which quantify time, have not been conducted between care steps along the entire patient care continuum, cancer care providers both inside and outside provincial cancer care systems do not actually know where current roadblocks to care are relative to other steps. Therefore, optimal long-term decision-making cannot occur. Studies at the population level are needed to identify the current care intervals that are roadblocks so that proper allocation of resources can be made, appropriate service delivery changes can be identified, constructive changes implemented, and long-term planning made.

Conclusion
A method to accurately identify patients who are likely to progress quickly (i.e., fast-growing tumors) is necessary rather than setting wait times to be short for everyone. Time intervals experienced by patients in other countries are not helpful for Canadians to determine if/how/where the Canadian cancer care system needs to be fixed. More studies need to be conducted within Canada to ascertain this.

Studies that evaluate the cancer continuum have not been conducted because the data to do so are not readily available. Developing infrastructure to link existing data and designing and implementing appropriate quality assurance around the key data elements is needed. These activities require engagement of stakeholders and care deliverers both inside and outside the cancer system. Infrastructure that allows electronic capture and analysis of key data points is essential in order to identify and respond to local key resource problems in a timely and accurate manner. Such infrastructure is required to compare the cancer system across provinces. This is essential in order to
identify and respond to provincial and nation problems in an efficient manner. Resources to support development of this infrastructure are needed for all provinces.

Coming to a common understanding across provinces regarding definitions and reporting of time between cancer care steps is not easy. Face-to-face discussions involving individuals familiar with the data and databases are required because nuances in the data and in the “common understanding” will likely result in differences in data ultimately pulled and compared. Unless details regarding the data are discussed, it is likely that the “comparable data” will not actually be comparable.

Citation

http://webcache.googleusercontent.com/search?q=cache:BgNaItLO89QJ:www.cancerboard.ab.ca/Research/OurResearchers/Biographies/Research_Stories_Winget+Winget+%22Moving+Evidence+to+Application%22+&cd=1&hl=en&ct=clnk&gl=ca


http://www.cancerboard.ab.ca/NR/rdonlyres/0EAFAD26-127B-400B-9B33-78550F66C3AF/0/CIHR_Report_3.pdf

Last access on 10 Sep 2010.
Part III.

Appendices & Tables
Dear <NAME>,

I am writing to you today with an invitation to participate in the Canadian Cancer Control Knowledge Translation Casebook, a research project funded by the Canadian Partnership Against Cancer (the Partnership) and the Ontario Institute of Cancer Research (OICR). We are approaching leaders in Canada to assist us in profiling examples of innovative projects to improve the quality of cancer control in Canada.

The intent of the casebook is to profile the excellent work undertaken by individuals, groups, or organizations across Canada to improve cancer control and to create an on-line resource of examples of best practices and to profile these examples in dissemination, implementation, and training initiatives. These cases will also be used to help scope out future research priorities in the area of knowledge translation and exchange in cancer control. The casebook will be publicly available and housed on the Cancer View website (www.cancerview.ca), a cancer resource centre of the Partnership. Examples of a casebook submission could include: the development of a tool to facilitate the implementation of evidence into practice; a re-organization of care to improve patient flow or patient satisfaction with the experience at the cancer centre; or an introduction of educational materials in the community to improve knowledge and feelings of self-efficacy among cancer survivors. The focus is on the improvement of cancer control for the cancer patient or survivor at any point along the cancer care continuum, specifically from diagnosis to survivorship.
We are seeking nominations from you and other leaders across the country. Nominations must involve Canadian content or contributions, be from groups or individuals belonging to a recognized Canadian organization or institution and be seen to improve some aspect of cancer care delivery, organization, or patient care. In addition, we have outlined a list of inclusion criteria to facilitate your nominations and in turn, our selections of nominated cases. All criteria must be met in order to be considered. The criteria include:

- a specific problem was identified;
- an organized and deliberate effort (big or small) was developed and implemented to address the identified problem; and
- an evaluation was undertaken to assess this effort. The evaluation could be formal or informal and it could incorporate a range of indicators including structural (e.g., changes to the setting that have an impact on care); process (e.g., metrics regarding how an activity or solution was delivered – satisfaction, knowledge, behavior); and/or outcomes (e.g., clinical measures).

You are free to nominate activities from your own or others’ organizations or jurisdictions. From these nominations we will be gathering more data and information to complete the casebook profile.

Enclosed you will find a nomination sheet that identifies the minimum information we require for the nomination. We would ask that you please complete the form and return it to our office or you may wish to send an e-mail that includes this information. We would kindly ask that you submit no more than two nominations.

Please forward your nominations to Sheila Bouseh, Research Coordinator for the Casebook project, via email at bousehs@mcmaster.ca by <DATE>. If you have any questions regarding the Casebook or the umbrella research project, please contact Julie Makarski, Research Manager, at makarsj@mcmaster.ca or myself at mbrouwer@mcmaster.ca.

We look forward to hearing from you and thank you in advance for your time and consideration.

Sincerely,

Melissa Brouwers, PhD
Principal Investigator, Knowledge Translation to Improve Quality of Cancer Control in Canada Project:
What we know and what is next
Associate Professor and Lead of Health Services Research, Department of Oncology, McMaster University
Associate Member, Department of Clinical Epidemiology and Biostatistics, McMaster University

The Knowledge Translation to Improve Quality of Cancer Control in Canada Project is funded by the Ontario Institute for Cancer Research and the Canadian Partnership Against Cancer.
Knowledge Translation to Improve Quality of Cancer Control in Canada Project:  
What we know and what is next

Canadian Cancer Control Knowledge Translation Casebook:  
NOMINATION SUBMISSION FORM

Please complete the following nomination form. If you are submitting two nominations, please complete two separate forms. You may also send an email with the information below. Please forward your nominations to Sheila Bouseh at bousehs@mcmaster.ca. Thank you for your time and support of this important project.

I. NOMINATOR DETAILS

Name: ___________________________ Phone: ___________________________
Address: _________________________ Email: ___________________________

Assistant Name: ___________________ Email: ___________________________

II. DETAILS OF NOMINEE

a) Name of project or initiative  
   if no formal name exists, a label that might best describe it

b) Short description of project or initiative  
   Please provide an overview of the project/initiative and how it meets generally the criteria for inclusion

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Appendix B: Nominated Projects Letter and Profile Form

<DATE>

Name
Organization
Email

RE: Profile of <KT Project Name> in the Knowledge Translation for Cancer Control in Canada Casebook

Dear <Salutation>, <Name>,

Congratulations on the nomination of your <NAME> project in response to our call for nominations for the Canadian Knowledge Translation for Cancer Control Casebook. **This letter is to inform you that your project has been selected from the collection of nominations to be profiled in the Casebook.** We are contacting you as your name was listed as the project’s contact person on the nomination form.

To provide you with some background, earlier this year we put out a call to various cancer care and system leaders across Canada for nominations of projects that had a knowledge translation or quality improvement focus with the goal of improving the quality of cancer control across the cancer care continuum. The nominated projects were to have i) identified a problem, ii) developed and/or implemented a project to address the problem and iii) undertaken some form of evaluation of the project. The selected projects would be profiled in greater detail and compiled in a national Casebook, which will be housed on the CancerView website (www.cancerview.ca). In addition, all nominated projects will be presented at a national meeting of the project in June 2010 and will be used to help scope out future research priorities in the area of knowledge translation and exchange in cancer control. The Casebook project is part of an overall research program aimed at identifying effective strategies to improve the uptake of cancer control options. The research program is funded by the Ontario Institute for Cancer Research/Cancer Care Ontario, and the Canadian Partnership Against Cancer.

**We would like to request your review and confirmation of your project’s profile.** We have compiled a summary of your project based on the information submitted through the nomination process and using additional sources we were able to locate that describe your project. We have included the summary package and we would like to request your confirmation of your project’s details. Your review will ensure that we have represented your project accurately and with the most appropriate information.
We would like to accommodate your preference for undertaking your review and confirmation of your project’s details. For example, you may choose to review and “fill in the blanks” (as applicable) on your own and simply return to us or you may wish to set up a telephone call to complete the review and confirmation of details by phone with one of the project’s research assistants. Our intent is to facilitate your review so that the process is simple and streamlined. Please indicate your preference and return to us by email at your earliest convenience or by <DATE>; we will then be back in touch with you with next steps depending on your preferred method. Feel free to simply write your preference or copy and paste your preference from below in the email reply.

☐ I will review the Project Profile Package and return my feedback, including edits, by email.
☐ I will review the Project Profile Package and return my feedback, including edits, by phone.
☐ Other. Please indicate your preference.

Once again, congratulations on your nomination. We thank you in advance for your collaboration on completing your project’s profile for the Casebook. If you have any questions, please do not hesitate to contact myself (mbrouwer@mcmaster.ca ) or Julie Makarski, project manager (makarsj@mcmaster.ca ).

We look forward to hearing back from you.

Sincerely,

Melissa Brouwers, PhD
Principal Investigator, Knowledge Translation to Improve Quality of Cancer Control in Canada Project: What we know and what is next

Associate Professor and Lead of Health Services Research, Department of Oncology, McMaster University

Associate Member, Department of Clinical Epidemiology and Biostatistics, McMaster University

The Knowledge Translation to Improve Quality of Cancer Control in Canada Project is being conducted with the support of the Ontario Institute for Cancer Research through funding provided by the Government of Ontario and the Canadian Partnership Against Cancer.
Knowledge Translation to Improve Quality of Cancer Control in Canada Project: What We Know and What Is Next

Knowledge Translation for Cancer Control in Canada: Casebook

Project Profile Package for Review and Confirmation
# Project Profile

**PRIMARY CONTACT:**

- **Name:**
- **Title:**
- **Facility:**
- **Department:**
- **Address:**
- **City:**
- **Postal Code:**
- **Telephone:**
- **Email:**

**PROJECT:**

- **Title:**

**Project Team Members:**

**INTERVENTION FOCUS:**

- Professional □
- Consumer □
- Organizational □
- Financial □
- Regulatory □

**PROJECT OVERVIEW:**

<table>
<thead>
<tr>
<th>Type of Intervention</th>
<th>Delivery Modality</th>
<th>Target Outcome</th>
<th>Implementation Level</th>
<th>Cancer Diagnosis</th>
<th>Cancer Care Continuum</th>
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**PROJECT DETAILS:**

**SHORT DESCRIPTION OF THE PROJECT:**

**WHAT WAS THE PROBLEM IDENTIFIED?**
<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
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<tbody>
<tr>
<td>WHAT WERE THE BARRIERS TO RESOLVING THE PROBLEM?</td>
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<tr>
<td>WHAT WAS THE SOLUTION?</td>
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<tr>
<td>WHAT METHODS (FORMAL, INFORMAL) DID YOU USE TO EVALUATE YOUR PROJECT?</td>
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<tr>
<td>WHAT WERE THE RESULTS OF YOUR EVALUATION?</td>
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<tr>
<td>HOW DOES YOUR PROJECT ADVANCE THE QUALITY OF CANCER CARE?</td>
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<tr>
<td>WHICH KT STRATEGIES OR QUALITY IMPROVEMENT WERE USED?</td>
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<td>WAS A KT MODEL USED?</td>
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<td>SUMMARY:</td>
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<td>RELATED MATERIALS (E.G., TOOLS):</td>
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</table>
FOR MORE INFORMATION VISIT (E.G., WEBSITE):

RELATED PUBLICATIONS:

Notes, additional information from Project Profile Reviewer:

Can the primary contact(s) listed on page 1 be listed in our public Casebook (name and email)?

Y □       N □

If “No”, please provide name and email of who can be included in the Casebook:

____________________________________________________________________________________
**Appendix C: Legend for completion of the KT Field Initiative Profiles**

Knowledge Translation to Improve Quality of Cancer Control in Canada: what we know and what is next.

**Knowledge Translation for Cancer Control: Casebook**

**Legend: Companion Document to “Project Profile Package”**

We have completed the information fields as best and as complete as possible given the information available to us. We kindly ask that you i) review, confirm, and/or correct the content and ii) provide more details/information where it is either lacking or incomplete.

This document is intended as a guide to outline the content for each item listed in the “Project Profile Package”.

<table>
<thead>
<tr>
<th><strong>Heading</strong></th>
<th><strong>Content Guidelines</strong></th>
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</table>
| Project: Title        | • The official title of the project  
                          • Multiple titles can be included (e.g., short and long versions)                                                                                                                                                    |
| Project Team Members  | • All individuals who were a part of the project’s development and implementation                                                                                                                                       |
| Lessons Learned       | • Each context is unique, and different considerations are made when planning and implementing a specific project. Highlighting lessons learned from successful projects might be useful to others as they plan and implement their projects in their respective contexts.  
                          Please note your insights as to the lessons you learned from your project. In doing so, please consider the following:                                                                                           |
• Please provide at least 2-3 lessons learned
• Lessons learned can be both positive and things that can be improved that perhaps are not so positive
• Please indicate briefly why / how those lessons were learned and why they are important (e.g., “...we ought to have involved [name of key players] in our development stage, which would have facilitated the acceptance of the change...”;
“...by us addressing the very important barrier of [name of barrier] when developing our project, we ensured our successful implementation and adherence to the new tool...”.) Feel free to use any format that facilitates your response (e.g., point form); we will do all the editing, etc.

Project Details:
• This section allows for more qualitative project details.
• Each subsection is described below.

Project Overview: Short description of the project
• A brief description of the project
• Information such as the who, why, what, when, how can be included
• A brief summary of the project that will provide a good overview and understanding of the project
• There is no maximum or minimum requirements in terms of length, but conciseness is the goal
• Provide a summary of the project based on the information presented.
• Additional information, such as “future directions”, etc. can also be included here.

What was the problem identified?
• Indicate here the problem that was identified and as such was the impetus for the project.
• Provide as much detail as relevantly possible
• This information will set the stage for the rest of the information and can illustrate how and why certain aspects of the project fit together.
• The identification of barriers is an important step in any knowledge translation / quality improvement.
<table>
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<tr>
<th>Heading</th>
<th>Content Guidelines</th>
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<tbody>
<tr>
<td>What were the <strong>barriers</strong> to resolving the problem?</td>
<td>project; when barriers are addressed, interventions can be tailored to address those barriers and improve chances of success.</td>
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<tr>
<td>What was the <strong>solution</strong>?</td>
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<td>• List all barriers that were considered / identified related to your project.</td>
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<td>• Indicate the what’s and how’s the project details / intervention strategies / development, etc. met the barriers and problem identified.</td>
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<td>• Was a KT model used? When designing your project, did you use explicitly a model to guide your project? (e.g., Knowledge to Action cycle, PARiHS, theoretical model of diffusion of innovations, etc.)</td>
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<td>• Which knowledge translation (KT) or quality improvement strategies were used? Indicate / list which specific interventions/strategies were used in the project to achieve</td>
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<td>• Type of Intervention: A further specification of the “Intervention Focus” above**.</td>
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<td>• Indicate the type of intervention used in the project, e.g., educational materials, audit and feedback, etc.</td>
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<td>• If more than one type were used, please list all.</td>
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<td>• Delivery Modality: How the intervention was delivered, e.g., face to face, telephone, internet, written materials such as pamphlet, interactive technology, static technology or mixed, etc.</td>
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<td>• Target Outcome: What was the intent of the project with respect to the outcome to be modified? E.g., change in knowledge, change in behaviour, change in attitudes, changes in clinical outcomes, satisfaction, etc.</td>
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<td>• Implementation Level: The level at which the project was implemented, e.g., locally within the organization, at the provincial level, at the national level, etc.</td>
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<td>• Cancer Diagnosis: The specific diagnosis that was targeted, e.g., breast, lung, genitourinary, etc.</td>
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<td>• If the project was not specific to one cancer diagnosis or was applicable to all, please indicate as such.</td>
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<td>• Cancer Care Continuum: What stage of the cancer care</td>
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<td>Heading</td>
<td>Content Guidelines</td>
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<td>continuum does the project target, e.g., screening, diagnosis, surgery, treatment, supportive care, follow-up, survivorship, and palliative &amp; end of life care?</td>
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<td>- If the project was not specific to one stage or was applicable to multiple, please indicate as such.</td>
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<td>- intended outcomes. You may also wish to expand upon the above to indicate the “why”.</td>
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<td></td>
<td>- Intervention Focus: Professional, Consumer, Organizational, Financial, Regulatory</td>
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<td></td>
<td>- Please outline an overview of key aspects of the project related to the “KT for Cancer Control in Canada project”.</td>
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<td>- Projects can be categorized based on the intervention’s focus or target*:</td>
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<td></td>
<td>- Professional: <em>Interventions that target professionals directly, aiming to improve practice.</em></td>
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<td>- Consumer: <em>Interventions that target consumers, e.g., that affect drug use by and prescribing for consumers.</em></td>
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<td>- Organizational: <em>Interventions that involve a change in the structure or delivery of health care.</em></td>
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<td>- Financial: <em>Interventions that change professional reimbursement, incentives and penalties.</em></td>
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<tr>
<td></td>
<td>- Regulatory: <em>Interventions that change professional reimbursement, incentives and penalties.</em></td>
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</tbody>
</table>

What methods (formal, informal) did you use to evaluate your project?

- Please provide details regarding your evaluation of the program.
- If multiple evaluations were undertaken, please describe each.
- The evaluations can be any and can be formal (e.g., large scale program evaluation) or informal (e.g., short satisfaction survey).
- If results are not yet available and/or if evaluations are
### Content Guidelines

- What were the results of your evaluation?
- Please provide a summary of your results
- An interpretation of the results may be included

What were the **resource implications** of the project, if any?

- Comment on the costs associated with the project; e.g., different inputs such as funds, human resources, time
- If you would like to comment on lessons learned or to include any other information related to resources, please do.

**How does your project advance the quality of cancer control?**

- Please comment on the impact of your project and how it might serve as a model/example for other initiatives

### References:

- **Related Materials (e.g., tools)**
  - Please list / provide access to (e.g., via website, citation) any related materials as appropriate

- **For more information, visit (e.g., website)**
  - If there is a website, please list.
  - If multiple websites, please list, indicating which is the primary site.

- **This project is cited at**
  - Please indicate relevant citations, etc.

- **Related publications**
  - Please indicate any related citations, etc.

- **Notes, additional information from the Project Profile Reviewer**
  - If you have any information not captured above that you would like to share, and that you think is important to profile about the project, please indicate here.
**Content Guidelines**

Primary Contact(s)

Can the primary contact(s) listed on this page be listed in our public Casebook (name and email)?

- Name and contact information of the project's contact(s)
- We would like to include the name and email address of the project's contact person(s) in the Casebook profile to be posted to the web. This person may be contacted in future with any “public” inquiries about the project as the Casebook will be live on the web once it is complete.

The contact(s) are those who can provide information and who are the best point person to communicate with regarding the project. Please provide name and email of who can be included in the Casebook. If the primary contact(s) on this page of the Project Profile is not the appropriate name to be listed, please provide an alternate name/email address.

---

*Adapted from: Rx for Change database.  

**see Table below for listing of intervention types from Rx for Change. Table was adapted from: Rx for Change database website.  

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<thead>
<tr>
<th>Type of intervention</th>
<th>Intervention</th>
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| Professional | • Ownership accreditation and affiliation status of hospitals and other facilities  
• Distribution of Educational Materials  
• Educational Meetings  
• Local Consensus Process  
• Educational Outreach Visits  
• Local Opinion Leaders  
• Patient-Mediated  
• Audit and Feedback  
• Reminders - General  
• Reminders - Computer Decision Support Systems (drug dosing)  
• Reminders - Computer Physician Order Entry  
• Tailored Interventions  
• Mass Media  
• Professional - other  
• Multifaceted |
| --- | --- |
| Consumer | • Providing information or education  
• Supporting behaviour change  
• Acquiring skills and competencies  
• Support  
• Facilitating communication and decision making  
• Minimising risks or harms  
• Improving quality  
• Consumer system participation |
| Organizational | • Revision of Professional Roles - Pharmacy  
• Revision of Professional Roles - Nursing  
• Revision of professional roles - general  
• Quality Improvement  
• Changes in medical records systems  
• Changes in physical structure, facilities and equipment  
• Changes in scope and nature of benefits and services  
• Changes to settings/site of delivery service  
• Clinical multidisciplinary teams  
• Continuity of care  
• Skill mix changes  
• Communication and case discussion between distant health professionals  
• Organisational (Patient oriented interventions)  
• Formal integration of services  
• Satisfaction of providers with the conditions of work and the material and psychological rewards  
• Ownership, accreditation, and affiliation status of hospitals and other facilities  
• Organisational (Provider) - Other  
• Organisational (Structural) - Other |
| Financial | • Financial  
• Formulary |
| Regulatory | • Regulatory |

Table of Interventions from Rx for Change database.
### Appendix D: Overview matrices of field initiatives, e.g., by province, continuum of care, etc.

<table>
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<th>Prevention</th>
<th>Screening</th>
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<th>Treatment</th>
<th>Palliative End</th>
<th>Follow Up</th>
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<td>One Stop Cancer Screening for Women</td>
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<td>Champlain Regional Cancer Surgery Program and The Ottawa Hospital Cancer Assessment Clinic</td>
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<td>Family Physician Model Recruitment Strategy for the BSP</td>
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<td>Triple Assessment Model for Screen Detected Abnormalities in the OBSP</td>
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<td>Synoptic Reporting Tools Project (SRTP)</td>
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<td>Effects of Change in Rectal Cancer Management to TME Surgery and Preoperative Short Course Radiation in Outcomes in a North American Population</td>
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<td>Rapid Response Radiotherapy Program (RRRP)</td>
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<td>Radiation Wait Time Improvement Project</td>
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<td>Reducing Emergency and Acute Care Hospitalization Initiative (REACH) Clinic</td>
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<td>Nurse Led Patient Care Rounds</td>
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<td>Helical Tomotherapy: Ontario's First Implementation for a Novel Radiotherapy Technology <strong>2</strong></td>
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<td>Optimization of Referral to Consult Wait Times</td>
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<td>Real Time Monitoring of Radiation Treatment Wait Times</td>
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<tr>
<td>Waterloo Wellington LHIN Wait Time DATA Alignment Committee</td>
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<td>Quality in Family Practice Program</td>
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<tr>
<td>Provincial Tumour Groups and the Provincial Systemic Program developing evidence-based guidelines</td>
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<tr>
<td>Improving the interval from abnormal screen to diagnosis</td>
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**1** - The intervention was targeting prevention (note: projects targeting prevention alone are not included in our casebook) and there was no related additional information on-line

**2** - Not a KT Intervention; Might be considered as “Changes in physical structure, facilities, and equipment”
### Appendix E: Overview matrix of KT research studies described in the Structured Abstracts, by province, continuum of care, etc.

|        | Prevention | Screening | Diagnosis | Treatment | Palliative End of Life | Follow-Up | Supportive care | Breast | Gastrointestinal | Genitourinary | Gynecological | Head & Neck | Hematologic | Lung | Melanoma | Neuro-oncology | Sarcoma | Other | Not Specified | Regional | Provincial | National | Alberta | B.C. | Manitoba | New Brunswick | Newfoundland | Nova Scotia | Ontario | Prince Edward Island | Quebec | Saskatchewan |
|--------|------------|-----------|-----------|-----------|------------------------|-----------|------------------|--------|------------------|--------------|---------------|-------------|-------------|-------|----------|----------------|--------|-------|-------------|----------|-----------|----------|--------|------|---------|---------------|-----------|--------------|---------|---------|----------------|--------|-------------|
| Donnelle | -          | •         | •         | •         | •                      | •         | •                | •      | •                |              | •             |            | •           | •     | •        |                |        |       |             |          |           |          |        |      |         |                |          |              |         |         |
| Campbell |            |           |           |           |                        |           | •                |        | •                |              | •             |            | •           | •     |          |                |        |       |             |          |           |          |        |      |         |                |          |              |         |         |
| Winget   | -          | •         | •         | •         | •                      | •         | •                | •      | •                | •            | •             |            | •           | •     |          |                |        |       |             |          |           |          |        |      |         |                |          |              |         |         |
| Oliffe   | -          | •         | •         | •         | •                      | •         | •                |        | •                |              | •             |            | •           | •     |          |                |        |       |             |          |           |          |        |      |         |                |          |              |         |         |
| Brouwers | -          | •         | •         | •         | •                      | •         | •                | •      | •                | •            | •             |            | •           | •     |          |                |        |       |             |          |           |          |        |      |         |                |          |              |         |         |
| Keats    |            |           |           |           |                        |           | •                |        | •                |              | •             |            | •           | •     |          |                |        |       |             |          |           |          |        |      |         |                |          |              |         |         |
| Stajduhar|            |           |           |           |                        |           | •                |        | •                |              | •             |            | •           | •     |          |                |        |       |             |          |           |          |        |      |         |                |          |              |         |         |
| Davison  | -          | •         | •         | •         | •                      | •         | •                |        | •                |              | •             |            | •           | •     |          |                |        |       |             |          |           |          |        |      |         |                |          |              |         |         |
| Hack(sep)| -          | •         | •         | •         | •                      | •         | •                |        | •                |              | •             |            | •           | •     |          |                |        |       |             |          |           |          |        |      |         |                |          |              |         |         |
| Hack(aug)| -          | •         | •         | •         | •                      | •         | •                |        | •                |              | •             |            | •           | •     |          |                |        |       |             |          |           |          |        |      |         |                |          |              |         |         |
| Chow     |            |           |           |           |                        |           | •                |        | •                |              | •             |            | •           | •     |          |                |        |       |             |          |           |          |        |      |         |                |          |              |         |         |
Appendix F: KT research studies “in progress” found eligible from CCSRI and CIHR databases

<table>
<thead>
<tr>
<th>#</th>
<th>Investigator</th>
<th>Project Title</th>
<th>Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Murray, M. A.</td>
<td>Evaluation of a training intervention on nurses” and care coordinators” provision of decision support related to place of care at the end of life</td>
<td>2007-01-07 to: 2008-03-31</td>
</tr>
<tr>
<td>2</td>
<td>Duffett-Leger, L.</td>
<td>Developing an innovative web-based approach to promote cervical health in young women</td>
<td>2008-01-07 to: 2008-11-30</td>
</tr>
<tr>
<td>3</td>
<td>Feldman-Stewart, D.</td>
<td>Adapting an information booklet on early-stage prostate cancer to the computer environment</td>
<td>2003-01-07 to: 2007-06-30</td>
</tr>
<tr>
<td>4</td>
<td>Feldman-Stewart, D.</td>
<td>Effectiveness of explicit values clarification: a randomized controlled trial of two versions of a decision aid for men with early-stage prostate cancer</td>
<td>2006-01-07 to: 2009-06-30</td>
</tr>
<tr>
<td>5</td>
<td>Pearce, N.</td>
<td>Peer support service utilization by older adults living with cancer</td>
<td>2004-01-07 to: 2007-08-31</td>
</tr>
<tr>
<td>7</td>
<td>Stern, A.</td>
<td>Online support for caregivers of palliative cancer patients</td>
<td>2005-01-07 to: 2008-06-30</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>#</th>
<th>Investigator</th>
<th>Project Title</th>
<th>Period</th>
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<tbody>
<tr>
<td>12</td>
<td>Chochinov, H.</td>
<td>National patient dignity inventory study</td>
<td>2008-01-07 to: 2011-06-30</td>
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<tr>
<td>13</td>
<td>Gagnon, P.</td>
<td>Creating meaning following cancer: a cognitive-existential intervention to improve existential and global quality of life</td>
<td>2008-01-07 to: 2012-06-30</td>
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<tr>
<td>14</td>
<td>McGowan, Erin</td>
<td>Pilot study of a behavioural change intervention to increase physical activity and quality of life in prostate cancer patients</td>
<td>2009-01-09 to: 2011-08-31</td>
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<tr>
<td>15</td>
<td>Thorne, S.</td>
<td>Communication in cancer care: longitudinal cohort analysis of patterns and variations across the cancer trajectory</td>
<td>2009-01-07 to: 2012-06-30</td>
</tr>
<tr>
<td>16</td>
<td>Roberge, D.</td>
<td>Evaluation of the impact of interdisciplinarity in cancer care</td>
<td>2009-01-07 to: 2012-06-30</td>
</tr>
<tr>
<td>17</td>
<td>Classen, C.</td>
<td>Development of an internet-based support group for sexual problems due to gynecological cancer</td>
<td>2008-01-04 to: 2010-03-31</td>
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</tbody>
</table>

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<thead>
<tr>
<th>#</th>
<th>Principal Investigator</th>
<th>Project Title</th>
<th>Period*</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Kennedy, E.</td>
<td>Using patient and physician perspectives to develop treatment decision making tools that support patient-centred care for colorectal cancer</td>
<td>2009-01-07 to: 2011-01-07</td>
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<td></td>
<td>Author(s)</td>
<td>Title</td>
<td>Dates</td>
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<tr>
<td>2</td>
<td>Sawka, A.M.</td>
<td>Decision Aid for Radioactive Iodine Remnant Ablation in Early-Stage Papillary Thyroid Cancer</td>
<td>2009-01-07 to: 2010-01-07</td>
</tr>
<tr>
<td>3</td>
<td>Aubin, M.</td>
<td>Interventions to Improve Continuity of Care in the Follow-up of Patients with Cancer: A Cochrane Systematic Review</td>
<td>2009-03-07 to: 2010-03-07</td>
</tr>
<tr>
<td>5</td>
<td>Brouwers, M.C.</td>
<td>Innovations to enhance the capacity of practice guidelines to improve health and healthcare systems: AGREE Application Appropriateness Action (AGREE A3)</td>
<td>2009-06-07 to: 2012-06-07</td>
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<tr>
<td>6</td>
<td>Howell, D.M.</td>
<td>A Core Set of Patient Focused Cancer Care Outcomes for Canada: Knowledge Translation Phase</td>
<td>2009-08-07 to: 2010-08-07</td>
</tr>
<tr>
<td>7</td>
<td>Andersen, D.R.</td>
<td>Cancer and Young Adults: Understanding Illness through Metaphors and Narratives</td>
<td>2009-11-07 to: 2012-11-07</td>
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<tr>
<td>9</td>
<td>Menon, D., Browman, G.P.</td>
<td>Development and validation of tools to facilitate resource allocation decisions for access to new technologies in cancer control.</td>
<td>2007-05-10 to: 2011-05-10</td>
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<tr>
<td>12</td>
<td>Grunfeld, E.</td>
<td>Towards improving access to quality colorectal cancer services across the cancer control continuum</td>
<td>2006-06-01 to: 2006-10-31</td>
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<tr>
<td>13</td>
<td>McBride, M.L.</td>
<td>Research Program on Cancer Survivorship Care</td>
<td>2006-06-01 to: 2006-10-31</td>
</tr>
<tr>
<td>14</td>
<td>Menon, D., Browman, G.P.</td>
<td>Development and validation of tools to facilitate resource allocation decisions for access to new technologies in cancer control</td>
<td>2006-11-01 to: 2011-11-01</td>
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<tr>
<td>15</td>
<td>McGregor, S.E.</td>
<td>Engaging family physicians and patients in an intervention to increase uptake of colorectal cancer screening: A pilot study</td>
<td>2006-02-01 to: 2007-01-31</td>
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<tr>
<td>16</td>
<td>Thorne, S.E.</td>
<td>Communication in cancer care: The trajectory of interaction between patients and health care professionals</td>
<td>2005-11-10 to: 2010-11-10</td>
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*Approximate dates based on the available information on CIHR website*