The Rossy Cancer Network:
Building platforms for advancing knowledge in cancer care quality improvement

Ari Meguerditchian, MD, FRCPC; Wilson H. Miller Jr., MD, PhD; Armen Aprikian, MD, FRCPC; Gerald Batist, MD, FRCPC; Jaroslav Prchal, MD, FRCPC; Eduardo Franco, PhD; and Samuel Benaroya, MD, FRCPC

ABSTRACT
The Rossy Cancer Network (RCN) is an ambitious initiative to optimize cancer care for patients served by McGill University’s hospitals over the next 10 years. The RCN’s Cancer Quality & Innovation Program (CQI) focuses on developing, within the network of partner hospitals, platforms for research and educational projects in cancer care quality improvement undertaken by healthcare professionals directly involved in the provision of cancer care. Keywords: Cancer care quality, applied cancer research, knowledge translation.

Advances in science have made cancer a treatable disease, yet up to a third of patients diagnosed with cancer do not receive recommended care. These deviations from best care have been documented for all aspects of cancer management, from screening and diagnosis to posttreatment followup and end-of-life care. They impact recurrence, survival, quality of life and costs.

Cancer care poses a number of distinct quality challenges, as care is often fragmented, with patients moving across different settings and receiving care from a multitude of providers. The notion of cancer care quality is broad in 2 dimensions: it spans from diagnosis to treatment, survivorship and supportive care; and it involves many different professionals who contribute to the care people receive. This makes it especially important for care providers to harmonize, communicate and create seamless transitions.

Strategies to encourage and optimize teamwork between the many professionals involved at different stages of the cancer journey are needed to produce best outcomes. There are also challenges in translating knowledge into practice by validating and disseminating good practices. Front-line personnel are most likely to have ideas about how to improve quality, but are less able to obtain major research funding from traditional sources such as the Canadian Institutes of Health Research (CIHR). As well, better methods are required to scale up and spread good ideas, which too often lack validation and the compelling data needed to garner widespread support.

Finally, the survivorship period presents a distinct set of challenges. The ever-increasing cohort of cancer survivors has many unmet needs, ranging from physical and psychological issues to reintegration into active personal, professional and societal roles. We are currently limited by the lack of knowledge on how to best achieve this, even as these patients have a decreasing frequency of contact with institution-based cancer care providers.

THE QUALITY CHALLENGE
The quality challenge we took on at the RCN goes beyond fixing problems or catching up to exemplary practices and processes that exist elsewhere. It involves putting in place the framework, both tangible and philosophical, for generating new knowledge on the best ways to deliver cancer care. The aim is to turn the cancer centres affiliated with McGill University into living laboratories capable of experimenting and evaluating ways of doing things differently and better for the patient.

Quality in cancer care is still to some extent an abstract notion. Only recently have we started developing operational frameworks, usable definitions and specific targets. Many questions remain: How do you measure quality? What are the key milestones in improvement? Through the CQI program, the RCN is investing in knowledge generation...
and translation in cancer care quality as a comprehensive notion in order to position McGill University and its affiliated hospitals as leaders in the field. There is tremendous potential to cross-fertilize and combine expertise held within these institutions. Our activities are designed to encourage the formation of new collaborations and promote a culture of innovation in developing quality in cancer care through 3 streams: research, skills integration and educational initiatives.

**APPLIED RESEARCH**

The CQI program has established a robust research agenda. It is designed to encourage people who deliver care — doctors, nurses, physiotherapists, dieticians, rehabilitation specialists, psychologists and others — to develop and validate quality improvement strategies. Their challenge is to design a cancer care improvement initiative that is grounded in scientific evidence, demonstrate whether and how it works to optimize quality, and objectively assess its impact on patient care. Successful projects will serve as models that can be implemented on a larger scale.

Funding conditions are in line with the RCN philosophy. The project has to support a partnership between at least 2 McGill hospitals. It has to target an actual quality issue, most often identified through a bottom-up process (after all, front-line providers are generally best positioned to identify areas for improvement). Potential improvements are also informed by results of patient surveys conducted in the RCN’s first year. The grants competition introduces the notions of reporting on results and of investment decisions based on objective data. It generates motivation by targeting all the people who are in daily contact with cancer patients and have ideas about how things could be done differently, but have difficulty accessing the necessary investment to try out the change. The RCN grants provide the “angel investment” that allows recipients to demonstrate how they can positively impact cancer care quality.

The grants range from $50,000 to $100,000. Close to $550,000 was awarded in 2014. With those funds, research teams have the means to acquire the necessary equipment and skills to implement their quality-improvement proposal and measure its impact. Measurement is an essential component if we are to produce demonstrable improvements that will convince others to take up successful projects.

Acquiring expertise in this area can prove very valuable. Principal and co-applicants must be from McGill-affiliated hospitals. They benefit from the vast pool of expertise within the University system. Teams also have the flexibility to acquire particular skill sets not available at McGill from other centres. This will prove very useful in identifying gaps within the McGill network and taking steps to bring that expertise in, through partnerships or cross-appointments.

Grant proposals are assessed by an external expert peer review committee that looks for relevance, innovativeness, potential to work and ability to further the RCN mandate and cancer care quality. The committee does far more than simply rank the proposals for funding priority; members have clinical and management experience in implementing and assessing innovation and provide feedback on each proposal, which helps applicants refine their research and identify appropriate methods. Committee members are attuned to the challenges in cancer care and, when they recognize an idea of value, can invest a significant amount of time in supporting the development of the proposal until it appears solid. Teams benefit from the committee’s mentorship to refine their ideas and develop their skills.

This work is a representation of peer review at its best.

**2014 RESEARCH PROJECTS**

Six projects were funded in the first year of the grants competition. Teams cover a wide range of quality issues and involve fruitful partnerships among professions and between staff from the different institutions. Some projects also created high-value educational opportunities for research trainees or graduate students.

**Improving the quality of care to kidney cancer patients undergoing nephrectomy: Introduction of an Enhanced Recovery After Surgery (ERAS) program**

This team, led by urologist Dr. Franck Bladou, seeks to reduce adverse events following kidney cancer surgery that currently affect about 1 out of 4 patients. The team is adapting a care pathway called Enhanced Recovery After Surgery (ERAS) to nephrectomy, piloting the new pathway with a view to implementing it across the RCN hospitals. ERAS involves process changes before, during and after surgery and has been shown in other surgical domains to reduce complication rates, length of hospital stay and total costs. Dr. Bladou’s team will also focus on understanding how to overcome challenges related to the implementation of a new care process.

**Team:** Dr. Franck Bladou (lead), Dr. Maurice Anidjar, Dr. Wassim Kassouf and Dr. Simon Tanguay.

**Castration-resistant prostate cancer: Evaluation of the quality of care, disease management, and associated costs in a real-life setting**

Recognizing that knowledge and quality of care gaps in the treatment of castrate-resistant prostate cancer (CRPC) have become more acute with the recent expansion of treatment options, this project aims to define the impact of these gaps on outcomes and equity of access. The study evaluates the quality of care provided within the McGill-affiliated hospitals against Canadian clinical practice guidelines and other indicators of quality of care, in order to identify factors associated with suboptimal care and develop interventions to address them. The team is creating a database of patients with CRPC, to come up with a patient risk profile to target those patients that will require additional support. They are also looking at the impact of inequities resulting from incomplete coverage of costly new therapies on survival and quality of care, and findings may point to opportunities for budget adjustments or reallocations.

**Team:** Dr. Alice Dragomir (lead), Dr. Franck Bladou, Dr. Fabio Cury, Ms. Olga Guerra, RN, Dr. Wassim Kassouf, and Dr. Mary Vanhuyse.
Looking forward: the impact of a supportive re-entry program tailored by and for patients completing cancer treatment

Patients diagnosed with cancer experience significant psychological distress when nearing the completion of their treatment. This team, led by clinical psychologist Rosanna Faria, brings together patients and clinical staff at 2 McGill-affiliated hospitals to design, disseminate and test resources and interventions to help smooth the transition between active care and survivorship. Expected benefits include improved preparation for life after treatment, decreased cancer-related distress and better overall patient experience. An important component of the project involves dissemination of training in the use of resources by professional groups.

Team: Ms. Rosanna Faria (lead), Ms. Manon Allard, RN, Dr. Marc David, Dr. Sergio Faria, Ms. Lisa Kathryn Goldenberg, Dr. Jeannie Haggerty, Dr. Tarek Hijal, Dr. George Michaels, and Mr. Marc Pineault.

Streamlining the trajectory for esophagogastric patients with cancer: the STOP-cancer initiative

Centralization of surgical care for esophageal and gastric cancers results in better outcomes and more effective use of costly resources. The RCN’s STOP-Cancer initiative builds on this foundation to understand how the trajectory from diagnosis to surgical treatment can be accelerated for these patients. The team is creating a standardized patient intake pathway and will measure whether the structure translates into faster access to appropriate care. In this group of patients, delays often entail difficulty eating, weight loss and, consequently, an inability to tolerate appropriate yet aggressive treatment. The project brings together surgeons, gastroenterologists, oncologists, radiation oncologists, clinical coordinators and nurses from many departments within three hospitals to implement a streamlined approach to diagnosis and treatment. It involves expedited treatment following endoscopy, but also seeks to improve early diagnosis through communication with primary care physicians and the public.

Team: Dr. Lorenzo Ferri (lead), Dr. Thierry Alcindor, Dr. Gad Friedman, Dr. Gaetano Morelli, and Dr. Kevin Waschke.

ABOUT THE ROSSY CANCER NETWORK

The Rossy Cancer Network (RCN) was established in 2012 to improve the quality of cancer care received by the population served by the McGill Academic Health Network (MAHN), which includes McGill University, the McGill University Health Centre (MUHC), the Jewish General Hospital and St. Mary’s Hospital Center. Together they make up one of the largest cancer networks in Canada. The challenge is to integrate the cancer care provided by each of these institutions, recognizing that patients rely on multiple institutions through their cancer journey. The aim is to create a world-class comprehensive cancer network with outcomes in cancer survival, mortality and patient satisfaction as good as or better than those of the leading international comprehensive cancer centres.

The RCN was initiated with a $30 million gift from the Rossy Family Foundation, which was matched by $28 million raised through the fund-raising efforts of McGill University, the Cedars Cancer Institute of the MUHC, and the foundations of the Jewish General Hospital and St. Mary’s Hospital. The RCN established an international advisory panel led by Dr. Terrence Sullivan to guide and monitor progress through formal score cards. The RCN is governed by an Executive Committee made up of the chiefs of oncology departments at each of the hospitals, the Vice-Dean of McGill’s Faculty of Medicine, the Chair of the Faculty’s Department of Oncology, and the lead of the Cancer Quality & Innovation Program.

Work streams have been established on quality of care indicators, data integration among the hospitals, patient experience surveys and synoptic reporting of pathology. Cross-institutional disease-site teams are working to align best practices, integrate tumour boards, develop a shared information technology infrastructure, and increase clinical trial enrolment. Pilot projects have been initiated to measure and improve the patient experience of care, and validated projects will be spread to each of the RCN institutions.
**Effect of early compression therapy on incidence of lymphedema in patients treated for gynecologic cancer**

This project aims to reduce the incidence and impact of lower limb lymphedema in patients with gynecologic cancer who are treated with surgical lymph node dissection. The team, composed of physiotherapists, physicians, surgeons, nurses and rehabilitation professionals, considers that better understanding of the value of early compression therapy will contribute to developing postoperative guidelines for these patients. A variety of strategies are now used, from physiotherapy to lymphatic draining to compression stockings. The project aims to confirm which of these methods work and which do not, in order to standardize the approach in line with scientific evidence. As a pilot study, it will also enable an evaluation of the study design, patient recruitment and assessment methods, and thus prepare for future randomized controlled trials in this field.

**Team:** Ms. Shirin Shallwani, physiotherapist and Dr. Anna Towers (co-investigators), Dr. Lucy Gilbert, Dr. Walter Gotlieb, Ms. Pamela Hodgson, Ms. Lisa Kham, Ms. Sarah Khan, Dr. Sharon Salvador, and Ms. Angela Yung, supported by Ms. Rachel Pritzker, Ms. Judith Soicher, and Ms. Jadranka Špahića.

**Women’s experience with breast cancer**

The key to improving the quality of cancer care is a better understanding of how patients experience care. In this project, a team of clinicians and researchers from St. Mary’s Hospital Centre, the McGill University Health Centre and McGill University are working together to complete individual interviews with women living with breast cancer in Quebec, to understand their experiences and choices. The interviews are conducted by an experienced qualitative researcher. As a collection, they provide patients an opportunity to hear about others’ experiences and choices; they also provide a starting point for discussions among healthcare professionals about how care might be improved. The project is modelled on an award-winning initiative in the UK (www.healthtalkonline.org), which presents patient experiences of over 80 conditions or illnesses. A research team at St. Mary’s Hospital Centre has initiated a Canadian version, with patient stories posted on the web site: www.healthexperiences.ca. Interviews are organized into topics or themes important to participants.

**Team:** Dr. Donna Stern (lead), Dr. Tarek Hijal, Dr. Neil Kopel, Dr. Susan Law, and Ms. Ilja Ormel.

**SKILLS BUILDING**

CQI also supports capacity-building within the network of partner hospitals through its “Investing in the Future” educational grants program for professionals willing to undertake learning experiences and acquire particular skill sets relevant to the RCN. In 2014, the MUHC’s associate clinical director of radiation oncology undertook studies in health economics at the London School of Economics to hone his skills in optimal resource allocation in cancer care delivery. The surgical nursing team at St. Mary’s Hospital Centre received training at the De Souza Oncology Nursing Institute to become better equipped to handle the increasing cancer clientele, communicate with families more effectively and assure safe transitions of care at discharge. The head nurse for inpatient hematology-oncology at the Jewish General Hospital undertook training at Harvard Business School in improving healthcare transitions, supporting teams and managing conflict. The knowledge gained enhances McGill’s rich inventory of skills and expertise. It will allow partner hospitals to further excel at delivering best cancer care.

**ADVANCED STUDIES**

The Kuok Fellowship was established as a collaboration between the RCN, the Kuok family and the Faculty of Medicine to support graduate studies at McGill University in fields relevant to cancer care quality improvement. The winner of the inaugural competition of 2014 is Jonathan di Tomasso, registered dietitian at the McGill University Health Centre. Mr. di Tomasso was working in the Cancer Rehabilitation clinic with patients having complex issues before, during and after cancer treatment. He will be pursuing studies in human nutrition at McGill University, working on nutrition assessment tools and techniques aimed at rapidly identifying patients with poor nutritional status and at risk of responding poorly to treatment (chemotherapy, surgery or radiotherapy).

**CONCLUSION**

The RCN is revealing the enormous potential and talent within the network, and highlighting the passion for excellence that drives the McGill community. It is also highlighting the partnerships that can be forged between McGill institutions to the benefit of the patients. CQI investments have already started to provide returns. Research supported by the CQI program has been presented at national and international conferences. Most recently, financial support from CQI allowed a team to successfully compete for funding from the Canadian Institutes of Health Research.

**THE NUMBERS**

In 2012 the Rossy Cancer Network hospitals (the McGill University Health Centre, the Jewish General Hospital and St. Mary’s Hospital Center) carried out over:

- 18,000 imaging studies
- 8,500 molecular/cytogenetic pathology reports
- 47,000 surgical clinic visits of cancer patients
- 61,000 radiation oncology treatments
- 107,000 intravenous chemotherapy drug deliveries
- 42,000 followup visits of cancer patients with a pivot nurse
- 1000 initial visits in psychosocial oncology