Improving cancer surgery in Ontario: recommendations from a strategic planning retreat

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Introduction: The Ministry of Health and Long-Term Care mandated a rapid and thorough change in the delivery of cancer services in Ontario to integrate ambulatory services offered by Cancer Care Ontario (CCO) with the inpatient services of affiliated hospitals. The CCO Surgical Oncology Program held a strategic planning retreat to establish the basis upon which to implement surgery-specific changes. **Methods:** Participants completed a pre-retreat survey. Based on survey results, the retreat was organized around 4 themes: role of the Surgical Oncology Program; knowledge transfer; funding for cancer surgery; and research priorities. These topics were discussed in small breakout groups and by the entire assembly. **Results:** Retreat participants (n = 55) included hospital CEOs, vice-presidents of cancer services, surgeons from cancer centres and community hospitals, academic chairs of surgery, clinician researchers and managers from CCO. Responses to the pre-retreat survey (n = 38) and recommendations made by retreat participants showed strong support for the Surgical Oncology Program to take a leadership role in the development and monitoring of quality indicators, research related to cancer surgery and the creation of regional communities of practice. Funding mechanisms for cancer surgeons and hospitals performing cancer surgery were also highlighted. **Conclusion:** The Surgical Oncology Program used the results to develop a strategic plan that was approved by retreat participants and the board of the CCO. The program has embarked on a multifaceted approach to facilitate, monitor and report on the organization and delivery of cancer surgery in Ontario.

Introduction : Le ministère de la Santé et des Soins de longue durée a imposé un changement rapide et complet de la prestation des services d'oncologie en Ontario afin d'intégrer les services ambulatoires offerts par Action Cancer Ontario (ACO) aux services internes d'hôpitaux affiliés. Le Programme d'oncologie chirurgicale de l'ACO a tenu une retraite de planification stratégique afin de jeter les bases de la mise en œuvre de changements particuliers à la chirurgie. **Méthodes :** Les participants ont répondu à un questionnaire avant leur retraite qui, compte tenu des résultats du questionnaire, a été structurée en fonction de quatre thèmes : rôle du Programme d'oncologie chirurgicale; transfert de connaissances; financement de la chirurgie oncologique; priorités de recherche. Ces sujets ont été abordés en atelier et en plénière. **Résultats :** Les participants (n = 55) comprenaient des directeurs généraux d'hôpitaux, des vice-présidents de services d'oncologie, des chirurgiens de centres d'oncologie et d'hôpitaux communautaires, des directeurs de départements universitaires de chirurgie, des cliniciens chercheurs et des gestionnaires d'ACO. Les réponses au questionnaire qui a précédé la retraite (n = 38) et les recommandations des participants ont démontré qu'on appuie solidement le Programme d'oncologie chirurgicale pour qu'il joue un rôle de premier plan dans l'élaboration et la surveillance d'indicateurs de la qualité, la recherche liée à la chirurgie oncologique et la création de collectifs de pratique régionaux. On a aussi mis en évidence des mécanismes de financement pour des chirurgiens oncologues et des hôpitaux qui exécutent des interventions chirurgicales en oncologie. **Conclusion :** Le Programme d'oncologie chirurgicale a utilisé les résultats pour élaborer un plan stratégique qui a été approuvé par les participants à la retraite et le conseil d'administration d'ACO. Le programme a lancé une stratégie à volets multiples afin de faciliter et de surveiller l'organisation et la prestation de services de chirurgie oncologique en Ontario et de produire des rapports à ce sujet.

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Cancer is the second-leading cause of mortality in Ontario after cardiovascular disease. The National Cancer Institute of Canada estimated that 52 400 men and women were diagnosed with some form of cancer in 2002, and 24 000 people died from it.[1] As the population increases and ages, and as new techniques to screen and diagnose cancer are systematically applied, the number of people diagnosed with cancer will increase.

The growing cancer burden has serious implications for cancer care delivery in the province. In 1995, the Ontario Ministry of Health prepared a Cancer Action Plan (an internal document). It documented that 50% of incident cancer cases were cared for in the community and suggested this may have resulted in differential rates of access to multidisciplinary care for patients.

Since surgeons are often the primary referral point for oncology services, the provincial cancer agency, Cancer Care Ontario (CCO), was asked to develop and implement an integrated system of cancer surgery. The integrated system would bring together surgeons performing cancer surgery in the community, teaching hospitals and cancer centres. Prior to this mandate, the focus of CCO's treatment program was on radiation and systemic therapy, delivered in 12 distinct ambulatory treatment centres. Cancer surgery was, and continues to be, delivered in most of the 130 active treatment hospitals of Ontario.

The Surgical Oncology Program was formed in 1998 to establish departments of surgical oncology in all regional cancer centres and promote multidisciplinary consultation and treatment. Based on this mandate, the Program's activities have included:

- research projects to investigate cancer surgery waiting times, the impact of the pancreatic cancer surgery task force report and gynecological oncology shared care
- development of cancer surgery practice guidelines
- establishing a network to communicate with surgeons throughout the province by means of the Internet, professional groups, newsletter and videoconference rounds

The Cancer Services Implementation Committee was struck in July 2001 to identify ways to improve the integration of cancer services at the local and regional levels, the quality of patient care and the efficiency of the cancer service component of Ontario's health care system. The Committee concluded that cancer care and associated information were fragmented; quality standards to ensure that patients have access to appropriate care were insufficient; hospital funding approaches were inadequate to support cancer services; and information on practice patterns and outcomes for all aspects of care was lacking.

Based on its review, the Cancer Services Implementation Committee issued several recommendations that focused on 3 strategic areas: integration and coordination of care; a comprehensive cancer information system; and development of an initiative to monitor, assess and improve the quality of cancer services.

Given the importance of surgery in the management of patients with cancer, the CCO board of directors determined that improvement in the delivery and quality of cancer surgery, along with the 3 strategic areas recommended by the Cancer Services Implementation Committee, would become organizational priorities.

Subsequently, the mandate of the Surgical Oncology Program was renewed to focus on the assessment of the quality of cancer surgery services in Ontario, recommendation of strategies for improving their delivery, and evaluating and reporting on the implementation of these strategies. To encourage broad stakeholder input and support, the Program organized a strategic planning retreat. Feedback would help to identify activities and structures essential to the improved delivery of cancer surgery.

Methods

Possible participants were identified through consultation with the vice-presidents of cancer services at the regional cancer centres and the regional heads of Surgical Oncology. Before the event, participants were asked to complete a brief survey designed to gather opinions on the strengths of, and challenges facing, cancer surgery delivery in Ontario, suggested strategies for addressing these issues, and the perceived role of the Surgical Oncology Program in carrying out these activities.

The survey, which was developed by 2 people and modified after review by 3 members of the planning committee, included both closed and open-ended questions. It was distributed by email, with reminders to reply sent 2 weeks after; participants were asked to return the completed survey by fax. Summaries of the responses were provided to the guest speakers to inform the content of their presentations at the workshop.

The retreat was organized around 4 thematic areas:

- Role of the Surgical Oncology Program in cancer centres and the community (speakers: Dr. G. Browman and J. Skot)
- Concepts in knowledge transfer for professional development (speakers: Drs. M. Fung Kee Fung and R. Reznick)
- Funding for cancer surgery in Ontario (speaker: Dr. R. Bell)
- Research directions and opportunities (speakers: Drs. M. Simunovic, R. Bell, and B. Zanke)

For each of the first 3 themes, a presentation was delivered, the topic was discussed in small breakout groups, a representative from each group reported their discussion to the general assembly, and highlights of the discussions were documented. A fourth theme, research directions and opportunities, was discussed by the full assembly.

Discussions by breakout groups and by the general assembly were re-

corded, and common themes identified. This information was incorporated into a retreat summary report distributed to all participants for validation, which served as a basis for preparation of a Surgical Oncology Program strategic plan.

Results

Retreat participants

The strategic planning retreat was held in Toronto on February 28, 2003. Fifty-five individuals actively participated in the retreat; 17 more attended as guest observers. Participants represented heads of hospitals, vice-presidents of cancer services, surgeons from cancer centres and community hospitals, academic chairs of surgery, clinician researchers, program directors and executive managers of Cancer Care Ontario (Table 1).

Pre-retreat survey

A total of 38 completed surveys were received from the 55 participants (a 67% response rate). Several of the strengths noted by respondents were also considered challenges (Box 1); for example, "quality of surgery" was suggested as a strength and "uneven quality of surgery" as a challenge. Issues considered to be challenges could be categorized into the areas of quality, communication, research and funding.

Respondents clearly perceived the role of the Surgical Oncology Program to encompass cancer surgery quality, research, and education of both a training and a continuing nature; but opinions conflicted over the Program's responsibility for funding cancer surgery (Table 2). When asked to name activities that the Program should undertake, respondents suggested implementation of regional diagnostic assessment units for improved access to diagnostics and surgery; establishing a funding formula based on volume and complexity; development of treatment standards where evidence exists; promotion of regional multidisciplinary teams; quality assurance, including the monitoring and reporting of wait times; and creation of a surgical professional development program. Research activities suggested by respondents included monitoring of practice patterns in cancer surgery; development and measurement of quality indicators to evaluate access and outcomes; trials of surgical techniques; evaluation of knowledge transfer and continuous professional development interventions; identification of human resource needs; and implementation of a funding formula for cancer surgery.

Breakout sessions

Notes recorded on discussions by breakout groups and the general assembly were analyzed for common themes (Box 2). Similar recommendations to those reported by survey respondents emerged, including the need for research, communication, education and sufficient funding.

Table 1

Retreat participants and their affiliations

Dr. Jacques Abourbih, Sudbury RCC	Dr. Sherif Hanna, Toronto-Sunnybrook RCC
Dr. Barry Anderson, Fort Frances Clinic	Ms. Angie Heydon, CCO
Ms. Helen Angus, CCO	Dr. Eric Holowaty, CCO
Dr. Fred Ashbury, PICEPS Consultants, Inc.	Dr. Alan Hudson, CCO
Dr. Philip Barron, Ontario Association of General Surgeons	Dr. Richard Inculet, London RCC
Dr. Robert Bell, University Health Network	Dr. Jonathan Irish, University Health Network
Ms. Paula Bond, Windsor Regional Hospital	Dr. Allan Kirk, NW Ontario RCC
Dr. Susan Brien, Windsor RCC	Ms. Ann Kohen, CCO
Dr. George Browman, Hamilton RCC	Dr. John Lackner, Grand River Hospital
Dr. Adalsteinn Brown, University of Toronto	Dr. Bernard Langer, Univ. Health Network
Dr. Peter Brown, Queen's Univ., Kingston	Dr. Bogdan Laschuk, Windsor Regional Hosp.
Mr. Ian Brunskill, CCO	Dr. Angus Maciver, Ontario Association of General Surgeons
Mr. Ken Burgoine, patient representative	Mr. Ray Marshall, Brockville General Hosp.
Ms. Patricia Campbell, Grey Bruce Health Services	Dr. David McCready, Univ. Health Network
Dr. Paul Chiasson, William Osler Health Ctr.	Dr. Doug Mirsky, Queensway–Carleton Hospital
Ms. Angela Coates, Hamilton RCC	Dr. Craig Muir, Greater Niagara General Hospital
Ms. Gabrielle Coe, Royal Victoria Hospital of Barrie	Dr. Duncan Paterson, Royal Victoria Hospital of Barrie
Dr. Shaun Costello, Grand River Hospital	Ms. Susan Pilatzke, NW Ontario RCC
Ms. Rhonda Crocker, Thunder Bay Regional Hospital	Mr. Michael Power, NW Ontario RCC
Dr. Jacqueline Crosby, Tillsonburg Hospital	Dr. Richard Railton, Niagara Health System
Ms. Catherine David Nolan, CCO	Dr. Richard Reznick, University of Toronto
Dr. Dave Davis, University of Toronto	Mr. Raymond Rousson, Ottawa RCC
Dr. Brian Dingle, Grand River RCC	Dr. Jamie Scott, Peterborough Civic Hosp.
Dr. Peter Dixon, Durham RCC	Dr. Marko Simunovic, Hamilton RCC
Dr. Nancy Down, North York General Hosp.	Ms. Janice Skot, Northeastern Ontario RCC
Dr. Jay Engel, London RCC	Dr. Andrew Smith, Toronto-Sunnybrook RCC
Dr. Bill Evans, London RCC	Dr. Anne Smith, Kingston RCC
Dr. Allan Forse, Hotel Dieu-Grace Hospital	Dr. Hartley Stern, coordinator, Surgical Oncology Program
Ms. Lisa Fox-Goguen, Hamilton RCC	Dr. Terry Sullivan, CCO
Dr. Michael Fung Kee Fung, Ottawa RCC	Dr. Bryce Taylor, University Health Network
Ms. Anna Gagliardi, CCO	Ms. Leslee Thompson, CCO
Dr. Ralph George, Kingston RCC	Dr. Anthony Whitton, CCO
Ms. Esther Green, CCO	Dr. J.E.M. Young, Hamilton RCC
Ms. Anna Greenberg, CCO	Dr. Brent Zanke, CCO
Dr. Eva Grunfeld, University of Ottawa	

Cancer Care Ontario = Cancer Care Ontario; Ctr. = Centre; Hosp. = Hospital; NW = Northwestern; RCC = Regional Cancer Centre; Univ. = University

Retreat summary

Information collected from the pre-retreat survey and at the retreat was summarized and distributed to all participants for verification. The summary included suggested strategies for addressing the recommendations offered by retreat participants so that they could provide direct feedback to the surgical oncology strategic plan.

Discussion

Responses to the pre-retreat survey and recommendations made by retreat participants showed there was strong support for the Surgical Oncology Program to take a leadership role in the development and monitoring of quality indicators, research related to cancer surgery, and improved communication and continuing professional development through the creation of regional communities of practice. Appropriate funding mechanisms for both cancer surgeons and hospitals performing cancer surgery were also highlighted as a priority, but with provisos that funding formulas reflect volume, complexity and the setting of care.

The Surgical Oncology Program has since undertaken a program of performance measurement. There are few initiatives developing indicators to measure the quality of cancer care. Most notably, a group associated with the RAND Institute developed indicators for 6 types of cancer (lung, breast, prostate, cervical, colorectal and skin),[2] and the United Kingdom's National Health Service developed them for lung, colorectal and breast cancer.[3] Performance measurement involves the selection of evidence- and consensus-based indicators of quality of care for cancer surgery, followed by analysis of related data for Ontario. After verification of the results by hospitals in the province, a report can be prepared describing cancer surgery patterns of practice, highlighting any issues of concern and recommending strategies for addressing them. The process is currently focusing on surgery for breast and colorectal cancer; prostate and ovarian will follow.

Retreat participants strongly encouraged the development of regional structures supported by the local cancer program, led by an academic/cancer-focused surgeon and involving a network of community-based surgeons interested in cancer to engage in knowledge-transfer activities. The same network of surgeons could also support research activities by participating in studies themselves and by enrolling patients into studies. Development of a knowledge-

Box 1. Characteristics of cancer surgery delivery in Ontario noted by survey respondents

Strengths

- Dedicated, well-trained specialists
- Areas of expertise
- Quality of surgery
- Local delivery of surgical care
- Work collaboratively with other cancer specialists and community surgeons
- Network and sharing of information between surgical oncologists
- Multidisciplinary care
- Continuing medical education programs available to develop and maintain expertise
- Some evidence-based guidelines
- Some capacity to monitor access and wait times, quality control, compliance with Ontario Cancer Registry
- Reasonable access to care
- Appropriate referrals to surgical oncologists
- Access to modern technology
- Awareness of system inefficiencies, gaps
- Coordinated follow-up for patients
- Universal provincial health insurance

Challenges

- Poor stable funding (including lack of volume–complexity funding, inappropriate compensation for surgical oncologist)
- Uneven quality of surgery, patient outcomes, poor or no quality assurance
- Generally poor communication with patients and other health care providers
- Poor networking, coordination, including poor informatics
- Poor research network and infrastructure
- Hospitals inconsistent re priority given to cancer surgery
- Community surgeons attempting complex surgery (i.e., pancreatic)
- Excessive surgery waiting times (operating room time)
- Wait times to see specialists (shortage of surgical oncologists)
- Lack of diagnostic resources (radiology, positron-emission tomography)
- Need for evidence-based practice guideline development and implementation
- Gap between academic and community physicians
- Lack of a well-functioning, province-wide referral, consultation and educational network

transfer network is predicated on establishing incentives for leaders of regional networks with additional funding to support knowledge transfer activities. Notably, such a network could also support the proposed provincial tumour-banking initiative that was introduced at the retreat, which was well received by the participants.

Although there was overall support for an alternate funding scheme to support cancer surgery, retreat participants voiced some concerns that will need to be addressed by the Cancer Surgery Quality Funding Subcommittee in their deliberations. Any subsequent funding scheme will need to be implemented with appropriate communication about these issues.

The organization, delivery and outcomes of cancer surgery in Ontario have not been extensively evaluated. A major study describing cancer surgery practice patterns in Ontario between 1992 and 1995 was conducted by the Institute for Clinical Evaluative Sciences.[4] Variations in surgical rates across regions were associated with incidence, and most patients requiring uncommon procedures went to high-volume institutions, but the report recommended further in-depth analysis to evaluate access and appropriateness. A more recent review of provincial research on cancer surgery topics found that few subsequent investigations of access to and appropriateness of cancer surgery in Ontario have been conducted.[5] The review recommended that a systematic plan of quality improvement is required to develop indicators of quality cancer surgery for all disease sites and monitor those indicators regularly, such that variations in care can be identified and addressed. Apart from the performance measurement program already described, the Surgical Oncology Program is planning a follow-up retreat in October 2004 focusing on cancer-surgery research to identify clinical and health services research that was recently funded and is currently taking place; trials and research studies that would be desirable; and whether resources are currently in place to undertake recommended research activities.

Conclusion

The retreat designed to identify activities and structures essential to the improved delivery of cancer surgery was successful for several reasons. Participants reflected a broad range of perspectives, including those of administrative and clinical managers, surgeons from both academic and community settings, and researchers.

Feedback collected from the pre-retreat survey corresponded with what was recorded at the retreat. Participants agreed that the traditional delivery of cancer surgery through formal and informal structures must be abandoned in favour of an integrated system that would, through improved communication via communities of practice and quality improvement driven by performance measurement and research, offer patients and providers with access to the full range of cancer care services available in Ontario. There

Table 2

Perceived role of the Surgical Oncology Program

Task	+	%	Comments
Assess hospital performance according to accepted indicators of quality cancer surgery	31	86	What are accepted indicators of quality cancer surgery? Quality indicators only useful if based on evidence — need benchmarking and data collection Data and research important to cancer care delivery Need resources in place to enable hospitals to achieve targets Audit both surgeon and hospital performance Important to establish standards of care
Seek funding of cancer surgery based on projected case volumes	25	69	Incentive formula similar to cardiac surgery Does not address cancer related needs for all regions (i.e., low volume regions) Important to develop a volume-complexity funding formula
Pursue a provincial alternate funding plan for surgical oncology	13	36	Very important As currently proposed will negatively impact on surgical case volumes May not improve care, i.e., issues of access and quality of surgery Hard to remunerate oncology component as most surgeons do general surgery as well Needs clarification
Conduct and participate in health services research on cancer surgery topics	32	89	Will provide tools to evaluate practice patterns and outcomes and improve quality Could focus on new care delivery models
Coordinate educational initiatives related to surgical, residency and fellowship training	32	89	Training should be approved by body outlining qualifications for specialty in cancer surgery Would like a formal surgical oncology designation
Coordinated initiatives related to continuing professional development of surgeons on cancer surgery topics	36	100	To communicate standards of care Important as new knowledge is continually being developed Should initially focus on community surgeons Knowledge translation of what is known to be of benefit Need interdisciplinary education

+ = number of affirmative responses; % = percentage of 55 retreat participants

Box 2. Thematic analysis of retreat discussion

Communication

Advocacy to policy makers, champion, lobbyist

Increase public awareness of cancer surgery issues

Clarify how Cancer Care Ontario and the Surgical Oncology Program interface with the larger system

Systems approach — liase with a range of professionals including family physicians

Create public registry of cancer surgeons and mentors

Be more proactive in initiating, leading and sustaining these communication linkages

Knowledge Transfer

Surgeons are thirsty for knowledge; need to provide them with tools that work, opportunities for engagement, and a non-judgmental team-based approach

Need guidelines and benchmarks for surgical procedures, also preoperative assessment and expected outcomes

Develop teams and communities of practice to enable adherence to guidelines and transmit emerging techniques

Mentoring/telementoring

Extra continuing professional development credits or other incentives to encourage participation in mentoring

Offer "membership" in surgical oncology program based on peer supervision, self-monitoring of practice

Improve relationship between cancer surgeons practising in cancer centres and community hospitals: promote buy-in, mutual respect and case sharing

Research

Need data to understand practice patterns, identify possible solutions and appropriately allocate resources

Because the system has limited capacity to absorb new activities, so build on existing successful initiatives, and pioneer and evaluate innovative strategies to improve the organization and delivery of cancer surgery and associated services

Support for province-wide tumour-banking initiative

Central group of experts to which other centres would report and who would coordinate surgical oncology research

Regional programs mandated to develop structures to support provincial research initiatives

Appoint academic surgeons as regional liaisons to interact with community surgeons

Identify network of community surgeons interested in cancer surgery research initiatives

Link knowledge transfer activities to research activities

Community surgeons are interested in supplying cases for research and partnering with academic surgeons to examine outcomes

Overcome fundamental data barriers

Funding

Issues may be somewhat different for general surgeons in community setting

Core funding plus incentives for surgeons and hospitals

Investigate pros/cons of volume based funding outside of global budget

Incorporate some measure of complexity

Link funding to quality outcomes

Take into account projected incidence and increased screening

Hospitals need funding for dedicated operating room time, to support self-monitoring and participation in mentorship, support for multidisciplinary clinics, and dedicated equipment for cancer, e.g., computed tomographic scanners

Surgeons need an alternate funding plan to protect time for essential knowledge transfer and quality activities

Mini-fellowship funding — stipend to support mentor and mentoree

Wait list management

Tracking of cancer patients at system level and surgery patients at hospital level

Investigate follow-up to identify unnecessary use of specialized resources

Human resource planning — funding of fellowships

Nurse navigators

Take into account funding issues for associated professionals and resources

was clear recognition that investigation and implementation of appropriate funding mechanisms is required to enable the activities recommended and sustain an integrated system of cancer care delivery.

The Surgical Oncology Program used the results of the retreat to develop a strategic plan that was approved by retreat participants and the Board of Cancer Care Ontario. The program has embarked on a multifaceted approach to facilitate, monitor and report on the organization and delivery of cancer surgery in Ontario.

Competing interests: None declared.

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