Cancer Surgery Standards: 
A Regional Quality Improvement Strategy

Cancer Services in Ontario Conference 
Ontario Hospital Association

Dr. Hartley Stern, Provincial Head of Surgery, 
Cancer Care Ontario and 
Regional Vice President, 
The Ottawa Hospital Cancer Centre

May 15th, 2007
Cancer Care Ontario (CCO)

- Agency of Ontario government
- Principal advisor re complete spectrum of cancer services
- Directs over $500-million provincial dollars annually for cancer prevention, detection and care
- Operates research, screening and prevention programs
- Collects and monitors information about cancer, and puts this information in the hands of policy makers, researchers and health care providers
- Rapidly applies research and evidence to create standards and guidelines for health professionals and organizations and works with them to plan and improve cancer services
- Promotes accountability by measuring and publicly reporting on cancer system performance
Surgical Oncology Program Organization (2001)

- Provincial Head – Hartley Stern
  - quality tools - guidelines, standards, indicators - B Langer
  - knowledge transfer - M Fung Kee Fung
  - funding - hospitals, surgeons - J Irish
  - health services research - D Urbach

- Regional surgical oncology heads - (14)

- Surgeons - Communities of Practice
Quality surgical care – 3 levels

- Individual surgeon
- Surgical department or hospital
- Region or country
Available Databases/Support

• CIHI - discharge abstract database
• OHIP - physician billings
• OCR - integrated patient information
  - synoptic path report
• ICES - Ont Gov funded - health services research institute
Example of Cancer Surgery
Data Available

• Distribution of cancer surgery cases by:
  - disease site
  - hospital
  - region

• Stratified by:
  - number of cases
  - weighted cases
Goal - Provincial ‘System’ of Surgical Cancer Care

• Patient centered, high quality, accessible, integrated, multidisciplinary

• Regional/provincial networks of care
  - complex/uncommon care in regional centers
  - ‘standard’ care more distributed
In Champlain LHIN...

- In 2005, The Champlain Regional Cancer Program (RCP) identified the need to improve access to quality, standardized cancer surgery as a priority.

- A 2005 Change Foundation Grant was received to develop communities of practice (COP) for breast, colorectal and prostate cancer surgery, and implement and evaluate peri-operative clinical pathways for each of these disease sites.
Communities of Practice

Criteria:
- Meet
- Share
- Lead
- Communicate

Infrastructure:
- Communication System
- Facilitators
- Decision Support
- Project Support

Performance Data
Integrated CoP Knowledge Spiral Model

Social Capital

Tacit
- Mentorship
- Site visits
- Apprenticeships
- Process Mapping

Explicit
- Multidisciplinary teams
- Pathways
- Small group learning

Organizational Memory

Tacit
- Evidence Practice gaps
- Opinion Leaders
- Reminders
- Audit/feedback

Explicit
- Performance data/Benchmarking
- Guidelines
- Systematic reviews

Learning & Problem solving

Knowledge Transfer

Innovation

Champlain District Regional Cancer Program (RCP)

- RCP Steering Committee
- Regional Operations Committee
- Regional Surgical Oncology Committee
- Regional Palliative Oncology Committee
- Regional Education Committee
- Regional Advisory Committee
- Regional Systemic Therapy Committee
- Site Group Council

LHIN Regional Cancer Program

- CCAC - Public Health Units - The Ottawa Hospital - Community Hospitals - The Ottawa Hospital Regional Cancer Centre - Primary Care Providers - Voluntary Organizations - Medical Specialists - Self Help Groups - Academia - Patients/Consumers - Governmental Agencies

Regional Partnerships
- Champlain District End-of-Life Network
- Prevention and Screening Network

Regional Site Groups:
- Regional Breast Cancer Disease Site Group
- Regional Lung Cancer Disease Site Group
- Regional Colorectal Cancer Disease Site Group
- Regional Prostate Cancer Disease Site Group
- Others
Need for a new and innovative Regional Cancer Surgery Model

**Key Principles:**

Virtual programs that will link together providers, patients, organizations and decision makers within a defined geographic area.

- focus on the common goal of improving access to quality cancer services within their communities
- services will continue to be delivered within individual organizations and agencies.

Ontario Cancer Plan 2005-2008
Champlain Model for Improving Access to Quality Cancer Surgery

TOH Regional Cancer Centre
- Leadership in Quality Agenda
- Central Co-ordination
- Access to Integrated Cancer Care
- Surgical Consultation for Ottawa Patients and Complex Case

Cancer Hub

The Montfort Hospital
Satellite Cancer Program

The Ottawa Hospital (TOH)

The Queensway-Carleton Hospital
Satellite Cancer Program

Cornwall Community Hospital
Satellite Cancer Program

Renfrew Victoria Hospital
Satellite Cancer Program

Pembroke Regional Hospital
Satellite Cancer Program

Winchester District Memorial Hospital
Satellite Cancer Program

Hawkesbury District General Hospital
Satellite Cancer Program
Table 1: Current Model Compared To Proposed Regional Model for Cancer Surgery

<table>
<thead>
<tr>
<th>Key Element</th>
<th>Current Model</th>
<th>Proposed Model</th>
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<tbody>
<tr>
<td>Centralized referral/triage</td>
<td>• Lack of co-ordination leading to unused capacity</td>
<td>• Centralized co-ordination leading to decreased wait times by improving access to appropriate cancer surgery</td>
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<tr>
<td></td>
<td>• Unknown surgeon/institution wait times</td>
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<tr>
<td>Regional Standards</td>
<td>• Minimal; little regional planning of health services</td>
<td>• Mutually determined evidence based standards with linked performance indicators</td>
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<tr>
<td>Regional Multidisciplinary Cancer</td>
<td>• Tumour boards mainly attended by TOHRCC Oncologists</td>
<td>• Regional access for multidisciplinary teams to discuss cases</td>
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<td>Conferences (MCC)</td>
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<tr>
<td>Regional Education</td>
<td>• Mainly annual conferences</td>
<td>• Regular access to video-conferenced MCCS, cancer rounds, regular inservices based on identified priorities</td>
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<tr>
<td>Performance Data</td>
<td>• Limited capacity to capture performance data</td>
<td>• Access to real time data and performance data linked to identified benchmarks; iterative feedback process</td>
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<tr>
<td>Regional Infrastructure</td>
<td>• Informal</td>
<td>• Formalized networks and committees for strategic decision making</td>
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<tr>
<td></td>
<td></td>
<td>• Forums for clinical decision making</td>
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<td></td>
<td></td>
<td>• Communities of practice to discuss common issues related to practice, process and knowledge gaps</td>
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<td>• Hub/spoke model linking the CAC with Regional Cancer Satellites</td>
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An innovative model is only useful if it can be applied when a new initiative arises........
Colon Cancer Screening to Assessment

High Risk
- Screening Colonoscopy
-ve

Symptomatic
- Diagnostic Colonoscopy
-ve

TOH Regional Cancer Centre
Cancer Assessment Clinic
- Leadership in Quality Agenda
- Central Co-ordination
- Access to Integrated Cancer Care
- Surgical Consultation for Ottawa Patients and Complex Case

The Montfort Hospital
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The Ottawa Hospital (TOH)
Cancer Hub
+ve

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Satellite Cancer Program

Pembroke Regional Hospital
Satellite Cancer Program

Winchester District Memorial Hospital
Satellite Cancer Program

Hawkesbury District General Hospital
Satellite Cancer Program

Family Doctor

Recall for screening

-ve

+ve
Colon Cancer Assessment in the Cancer Assessment Clinic

Colon Cancer Perioperative Patient Flow

Self referral:
- Medical cancer
- Screening

Self referral:
- High risk
- Screening

Self referral:
- High risk
- Screening

Patient presents to G.P.:
- Physical
- F. O. B. T.

Colonoscopy +/-
SA screen +/-
CT colonography +/-

Refer to G.I. or O.P.

Refer to Cancer Assessment Clinic

Investigation:
- Urea, CT, pelvis, Lab. OSC, BUN, Cr,
- CEA, LFTs, albumin, PT, INR, GEA

Consult visit:
- Referred plan diagnosis
- Patient education
- Supportive care needs assessment

Consult visit:
- Referred plan diagnosis

No

Yes

CT scan

Thoracic consult

HFB consult

Decision to operate
- Candidate for MIS or open

MCC presentation as required

Open

Tumour localization:
- Indicating staging
- CT colonography

Referral to appropriate surgeon/ specialist
- Regular
- CRC

Reference

ET consult

No

Preop workup:
- Preoperative test visit
- Anaesthesia review
- Surgical preparation
- Reinforcing patient education
- Implement clinical pathway

Surgery

Postop follow-up appointment

Patient status:
- Prostate cancer
- Metastatic disease present
- Young patient (<50 years old)
- Liver or lung metastases

Referred to Oncology TUMRCC

Yes

No

Bjorne / O. I. O. P.

for recurrence
Lung Cancer Process Map – Future State

1. Surgeon & Radiologist meet 4 days / week to review new cases and determine pre-op work.
2. CT completed?
   - Yes
     - Consult Visit (Same day bloodwork & PFT)
     - Results posted in OACIS
     - Results posted in OACIS
   - No
     - Telephone Assessment (RN)
     - Chest CT, Bloodwork
     - Results posted in OACIS
3. Results posted in OACIS
   - 6 days
     - Staging – Brain, Abdominal and Pelvic CT
     - Staging – Bone Scan
     - Biopsy to confirm cancer
       - FNA in Angio (Radiology)
       - Biopsy to confirm cancer
         - FNA in CT (Radiology)
       - Biopsy / cytologic procedure to confirm cancer in Bronchoscopy
         - (Surgeon / Respirologist)
   - 5 days
     - Cardiopulmonary Assessment – Exercise test, Echocardiogram
4. Second Clinic Visit
   - (Results, PI, Education)
   - (TOHRCC Reg.)
   - (Joint Oncology Clinic as required)
5. MCC Review and Oncology Consult
   - Yes
     - 5 days
     - Yes
     - 1 week

6. RFA is completed for surgical candidates
   - 5 days
   - Non-Surgical Candidates
   - Abnormal PAU results communicated prior to surgery
   - 1 week for appointment
   - 2-3 weeks post discharge
7. Patient Follow Up
   - x weeks
8. Referral to TOHRCC
9. PAU Visit
   - Anesthesiologist Consult
   - Physiotherapist Consult
10. PAU Visit
    - 5 days
    - Surgery is booked
11. Surgical procedure
    - 1 week
    - Results posted in OACIS
12. Pathology prepares specimen and reads results
13. Post-operative Clinic Visit
14. Concrete Tumor Board
Key Leveraging Opportunities

- Well established regional cancer program/networks (Regional Education Committee, Community of Practice for Colorectal Cancer Surgery, link with Prevention and Screening network)

- Champlain Regional Cancer Surgery Model with a Colorectal Assessment Unit in The Ottawa Hospital Cancer Assessment Clinic

- Champlain Regional Cancer Prevention and Screening Model → integration with other screening initiatives (breast, cervical etc.)
Next Steps

• Form a regional colorectal screening work group

• Develop, implement, and evaluate a regional education plan to complement CCO initiatives with College of Family Physicians

• Engage family physicians in identifying high risk individuals

• Finalize regional process for transitioning screen detected abnormalities to assessment/diagnosis
Regional Cancer Surgery Model: Priority Related Innovations

- Inventory of all multidisciplinary clinicians and administrative regional partners
- Formation of site specific priority teams and journal clubs
- Multidisciplinary Cancer Conferences via videoconferencing
- Regional Colon and Breast Cancer Surgery Guidelines under development
- Clinical Pathways for Colorectal and Breast Cancer Surgery; regional pilot in planning phase
- Champlain LHIN video-conferenced education e.g. Oncology Grand Rounds, Nursing In-services, Multidisciplinary Cancer Conferences
- Minimally Invasive Colorectal Cancer Surgery Regional Workshop held; 2nd workshop scheduled for June
- Community of Practice Newsletters for Breast and Colorectal
Key Ingredients:

- Surgical Oncology Champion and Regional Administrator (Senior Advisor Regional Cancer Operations)
- Vice President (VP) - Regional Cancer Program, Regional VPs/Heads of Surgery/ Leaders in Surgical Oncology all equally committed
- Regional co-ordinator for cancer surgery (Advanced Practice Nurse, Regional Cancer Surgery)
- Disease site surgeon leaders
- Decision support buy-in: reliable and timely data
- Linkage with overall Regional Cancer Program and LHIN agendas (commitment of administrators and clinicians)
Lessons Learned

- Need to engage both surgeons and interdisciplinary clinicians, and Administrators
- Leverage Burning Platform (eg. Wait Times –pay per performance)
- Ensure relevance to practice
- Clearly defined project team: roles & responsibilities
- Build sustainability into your plan!
  - Explore funding opportunities
  - Engage interested opinion leaders actively into the process
- Keep the momentum!