Example Multidisciplinary Cancer Conference (Tumour board): North Simcoe Muskoka LHIN

Purpose

Virtual MCCs or, the use of videoconferencing between Ontario's hospitals for the purpose of a multidisciplinary cancer conference, is an excellent solution to minimize the impact of the provinces expansive geography to provide exceptional cancer care.

The following example allows other Local Health Integration Networks (LHINs) to foresee some of the issues faced in implementing a virtual MCC. Additionally the example illustrates other issues outside of videoconferencing which may be of benefit for other LHINs to consider. This is a practice that is new and will continue to evolve through sharing best videoconferencing practices.

History of the virtual MCC Creation

In the summer of 2005, under the leadership of Dr. Duncan Paterson, Regional Surgical Oncology Lead, the Royal Victoria Hospital (RVH) Cancer Services Program began looking at tumour boards for LHIN 12 (North Simcoe Muskoka). Reviewing alternatives for structure with the surgical staff it was determined that video conferencing could offer a high standard of image transfer and good time management for surgeons. At that time it was felt that the best way to get started was to join tumour boards at Princess Margaret Hospital and Toronto Sunnybrook Regional Cancer Centre to become accustomed to the formats before starting independently.

They were slight concerns about this vertical streaming as any intimidating atmosphere between academic and community organizations would have been counterproductive. It was determined that lateral local network development would produce the most engaging atmosphere. Positive discussions were held with surgical counterparts in Credit Valley, Oshawa, Grand River, and Sudbury as a means of attaining alternatives of best practice in similar sized organizations. In fact these peers have formed a group representing community surgical oncologists.

Dr. Mike Anderson, community surgeon, took the initiative to start a LHIN 12 Videoconference tumour board for Breast and GI, as case volume allowed for Q2 week basis. These began in November 2005. All hospitals in the region are connected:

- Barrie - Royal Victoria Hospital
- Collingwood – Collingwood Marine and General Hospital
- Huntsville – Huntsville District Memorial Hospital
- Bracebridge – South Muskoka Memorial Hospital
- Midland – Huronia District Hospital
- Penetanguishene – Penetanguishene General Hospital
- Orillia – Soldiers Memorial Hospital

In addition, the Princess Margaret Hospital joins via videoconference to provide radiation consultation. To date, these Tumour Boards have been a great success.

History shows that these groups are difficult to keep engaged but we believe it can be done. First the meetings are dynamic interesting and non-threatening with input from Medical Oncology, Radiation Oncology, Surgery, Imaging, Pathology, and Nursing. The hardware and network for image transfer is available:

- Videoconferencing system
- NORTH Network

- Dual monitors
- Microphone
- Two computers connected hospital patient information network, including PACS

Refreshments are provided by the hospital or external partners (Pharma, equipment vendors, etc.) when applicable.

A huge benefit to the participants is the recognition that these tumour boards are sanctioned CME credits. These are low-cost CME credits and carry a sense of ownership for self-development. We have recognition by the applicable colleges for the credits and supply certificates of attendance.

Both Dr. Anderson and Dr. Paterson have spent a lot of time talking to surgeons, answering concerns, and reassuring them that this and other initiatives can only lead to better patient care without being restrictive or threatening. Indeed the surgeons are now embarking in Barrie (hopefully to follow in the other hospitals) to develop a program of Surgical Mentorship, led by the local surgeons.

These Tumour Boards are very attractive to smaller centres like Huntsville, Collingwood etc. and provide a sense of 'peer group' to the solo practicing surgeon.

Moving forward, the plan is for the cancer program to commit funding to support a clerical coordinator. To date this function has been absorbed in a community surgeon's office. The RVH will also purchase two new high resolution monitors to upgrade the videoconference system. Other disease sites will be added to the roster. Breast will develop locally. The ENT and GYN groups will likely connect with another centre. For Thoracic, the group will participate with Toronto General Hospital, who is in the process of arranging videoconference tumour boards and clinical rounds. Muskuloskeletal and soft tissue will to continue as at present - these tumours are rare in the region and they effectively conference on each one. GU will develop locally or could link with Oshawa (Prelim discussions).

We are very excited about this accomplishment and would welcome ideas and thoughts from others embarking on the same initiatives.

Respectfully submitted

Dr. Duncan Paterson, Surgical Oncology lead
Garth Matheson, Vice President, Regional Cancer and Clinical Services

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Further details on the virtual MCC….

Disease Sites

- Breast
- Colorectal

Background

Community General Surgeons are involved in the diagnosis and management of a significant proportion of colorectal and breast carcinomas.

Diagnostic and therapeutic advances have increased the complexity of cancer management. Multiple disciplines, including but not limited to, diagnostic imaging (DI), medical oncology, radiation oncology,

pathology, nursing, and surgery must *interact* effectively to provide optimal patient care. Multidisciplinary care is paramount to providing optimal cancer care.

A means of facilitating this interaction is the multidisciplinary tumour board (TB). This consists of a regularly scheduled meeting of these disciplines to prospectively discuss management of breast and colorectal carcinomas. A TB should improve both individual patient care and global oncologic care by facilitating the interaction and education of health care professionals. This forum will allow for shared experience and expertise among colleagues.

In a community setting the critical mass required to maintain a tumour board may be unattainable at a single institution. Videoconferencing has evolved to permit remarkably high quality transmission of audio and visual images in real time in addition to transmission of most forms of digital media. NORTH network allows for integration with the other hospitals within the LHIN. The TB is also connected to the Princess Margaret Hospital for radiation oncology and a clinical trial expertise. Occasionally, the TB has connected to the Sunnybrook Health Sciences Centre for surgical oncology expertise. This should allow for a sustainable critical mass.

Functioning of the Tumour Board

Case Selection

The North Simcoe-Muskoka GI and Breast Tumour Board is predominantly a forum for gastrointestinal and breast tumours but lymphoma and neuroendocrine tumours have been presented. New cases may be brought forward by any participant but most are presented by their surgeon or oncologist. TB's are not intended as a forum for retrospective presentation of unique cases but rather the planning of individual patient care.

Decision Making

TBs should optimally act on the basis of consensus but integral to consensus are differing and sometimes dissenting opinions. To allow full and frank discussion patients are not permitted to attend TB's. The goal is to achieve consensus opinion rather than dictating physician behaviour. In order to practice evidence based medicine, a member of the tumour board is connected online during the forum to access CCO for practice guidelines and Medline searches.

Prospective

Wherever possible, cases should be reviewed prospectively to optimize patient management. Increasingly, management options may include neoadjuvant care which may preclude surgical intervention. TBs are held on a bi-weekly basis to avoid undue delay in treatment. It was initially considered to present all cases as detected at the pathologic diagnosis stage; however, it proved impractical to present a patient without appropriate clinical background. Clinicians are encouraged to bring cases to the tumour board as early in the workup as possible.

Multidisciplinary Care

Multidisciplinary care represents an optimal approach to cancer management. Community surgeons typically function in silos rather than in forms of collaborative practice. Optimal cancer management involves multiple disciplines and effective *interaction* between many individuals is essential. As a minimum, these TBs require participation from surgery, diagnostic imaging, medical oncology, and radiation oncology. We also utilize expert opinions in surgical oncology which we access through telehealth.

Telehealth

Telehealth via the North Network allows broader access to tumour boards with participation from all hospitals in our LHIN. Furthermore, it allows for the attendance of a radiation oncologist from Princess Margaret Hospital and other experts, as required. Diagnostic imaging, pathology images, and photographs are shared with each participating site. This also allows us to address a 'critical mass' issue which is as relevant in larger sites as it undeniably is in smaller centres.

Documentation

Cases presented at the TB will be archived in a database. Database software was generated by a local surgeon which tracks the cases presented, staging, and treatment recommendations. This software allows for tracking outcomes of discussions related to cases presented. This will be maintained in a locked room and password protected with the only patient identifiable variable being HRN number.

Structure

The TB meets every two weeks on Friday mornings for 1 hour. This allows for presentation of most cases prospectively and in a timely fashion. If DI and Pathology support is necessary, cases are referred no later than 48 hours prior to the TB. All cases are sent to the TB moderator's office and information is disseminated to the various departments. The Lead or delegate for each department then prepares the material.

Videoconferencing

Most hospitals in Ontario now have videoconferencing capabilities and all hospitals in LHIN 12 are linked via the NORTH network. This is a cable based system with high quality, real time, video and audio transmission capabilities. A "bridge" connecting each institution via the NORTH network is arranged by the institutional telehealth coordinator. Two monitors are required at each site to allow for face to face communication on one monitor while projecting imaging and pathology on the other. When no other images are displayed, the second monitor roams from site to site every two minutes. As soon as an individual speaks they will be seen on a monitor at all sites. Muting microphones except when in use improves video quality. Essentially anything that can be opened into a computer window can be projected via videoconferencing. MRI, CT, US, plain films, endoscopy images, and pathology slides (via digital camera) can be shared with all sites. Unfortunately, mammograms remain challenging to transmit effectively, particularly subtle lesions.

Resources

- Telehealth network (NORTH Network)
- Videoconferencing equipment (cameras, computer input adaptors)
- Dual monitors
- 2 computers (one provided by NORTH Network)
- Microphone
- PACS access
- Internet access (CCO guidelines, medline)
- Digital camera (for image projection)
- Administrative support

CME

Applications have been submitted to the RCPS(c) for specialist and CCFP for GP Oncologist CME accreditation.