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Review

Multidisciplinary cancer conferences: A systematic review and development of practice standards

F.C. Wright[a,], C. De Vito[b], B. Langer[c], A. Hunter[c], the Expert Panel on Multidisciplinary Cancer Conference Standards[d]*

[a]*Division of General Surgery, Sunnybrook and Women's College Health Sciences Centre, 2075 Bayview Avenue, Toronto, Ont., Canada M4N 3M5*

[b]*Cancer Care Ontario's Program in Evidence-Based Care, McMaster University, 1280 Main St W Hamilton, Ont., Canada L8S 4L8*

[c]*Surgical Oncology Program, Cancer Care Ontario, 620 University Avenue, Toronto, Ont., Canada M5G 2L7*

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ABSTRACT

Background: Multidisciplinary cancer conferences (MCCs) are a forum for health care providers to discuss diagnostic and treatment aspects of a cancer patient's care. In Ontario, we have found that very few hospitals have developed cancer conferences or forums for the prospective discussion of patient cancer care. In this paper, we describe the process of creating a province-wide standards document for MCCs.

Methods: A systematic review and environmental scan were conducted to evaluate the literature regarding the impact of MCCs on physician practice patterns and patient outcomes, using the methodology of the Practice Guidelines Development Cycle. An Expert Panel was created to develop draft MCC standards. Ontario administrators and practitioners were surveyed to elicit feedback regarding the standards document. The findings were collated, and practice standards were developed.

Results: Multidisciplinary care, predominantly in the form of multidisciplinary clinics, has been shown to improve patient outcomes. While only limited evidence suggested a benefit for MCCs, they have been documented as influential in changing patient management plans. MCCs were also found to be part of standard cancer care on an international level. Ontario practitioners surveyed generally supported MCC implementation.

Discussion: We have described the process of creating an Ontario MCC standards document, including a literature review and an examination of the attitudes of Ontario practitioners and hospital administrators regarding the development and implementation of a MCC Standards document.

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[*] *Corresponding author:* Tel.: +1 416 480 4329; fax: +1 416 480 6002.
E-mail address: Frances.Wright@sunnybrook.ca (F.C. Wright).

[d] Members of the Expert Panel: Rose Cook, Peter Dixon, Patrick Gaskin, Ralph George, Esther Green, Diane Manii, Garth Matheson, Meg McLachlin, Martin O'Malley, Susan Pilatzke, Jillian Ross, Sharon Russell, Anne Snider, Hartley Stern, Maureen Trudeau, David Walde, Tony Whitton, Melissa Brouwers.

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1. Background

Multidisciplinary cancer conferences (MCCs), also known as multidisciplinary tumour boards or case conferences,[1–4] are a forum for multidisciplinary discussion regarding diagnostic and treatment aspects of a cancer patient's care. Internationally, MCCs exist in the United Kingdom (UK), under the auspices of the National Health Service (NHS),[5] and Australia,[6,7] and are considered 'integral to the patient management process and patient outcomes'[8,9] in the United States. Indeed, the Commission on Cancer (US) and the American College of Surgeons both require MCCs for the accreditation of health centres delivering multidisciplinary cancer care, and MCCs have been an established part of cancer care in the United States for more than 50 years.[8–10] In contrast, from our own work in Ontario, we have found that very few hospitals have developed cancer conferences or forums for the prospective discussion of patient cancer care.[11] The impetus to create a province-wide standards document came from the provincial cancer agency, Cancer Care Ontario, which is the principal advisor to the Government of Ontario on cancer prevention, screening and treatment and has made quality improvement in cancer care a priority. In this paper, we describe the process in creating a standards document for MCCs, including a review of both the peer-reviewed and non-peer-reviewed literature and an examination of the attitudes of Ontario practitioners and hospital administrators regarding the development and implementation of MCCs.

2. Patients and methods

2.1. *Literature review*

To develop the MCC standards document, the Program in Evidence-Based Care (PEBC) conducted a comprehensive review of the published evidence on MCCs using the methodology of the Practice Guidelines Development Cycle.[12,13] Clinical Programs at Cancer Care Ontario (CCO) conducted an environmental scan of unpublished MCC 'grey' literature.

3. Examination of the evidence

3.1. *Literature search strategy*

A literature search for published articles relevant to the topic of MCCs focused on MEDLINE (OVID; 1960 through November 2005, Week 3), using the following terms: 'tumo$*r* board$.mp.', 'multidisciplinary conference$.mp.', 'multidisciplinary clinic$.mp.', 'multidisciplinary team$.mp', and 'morbidity and mortality conference$.mp.' Oncological reports were included in the standards document if they provided information on the organisational structure and function of MCCs and/or on the effect of those conferences on patient outcomes. Three additional articles were included in the manuscript.[52,54,55] Articles in a language other than English were excluded.

3.2. *Environmental scan*

Unpublished sources were sought by contacting individuals responsible for MCCs in Canadian hospitals and by conducting an Internet search for health care organisations providing information on their MCCs and/or related multidisciplinary structures.

4. Results

4.1. *Literature search report characteristics*

The published reports selected for inclusion in this document provide both descriptive and analytical evidence supporting the establishment, function, and ongoing evaluation of an MCC (Table 1).

4.2. *Impact of multidisciplinary cancer patient management on outcomes*

Ten studies linked outcome data with the introduction or presence of MCCs or similar groups, although none of the evidence explicitly proved a causal link.[9,20–28] All studies concluded that a multidisciplinary setting resulted in positive patient outcomes, in terms of diagnosis and/or treatment planning,[9,18,24–26,28] survival,[22,23,27,28] patient satisfaction,[24] and clinician satisfaction in terms of communication and cooperation[20] (Table 2).

4.3. *Multidisciplinary cancer conference structure and function – key components*

4.3.1. *Protocol or mandate*

Several studies described that having a MCC protocol or operational policy was a necessity.[5,7,46] Other studies documented the motivating principle, to ensure the most up-to-date treatment and follow-up recommendations for all cancer patients seen in the facility, through a multidisciplinary treatment approach, for their MCC.[5,7,21,35,39,40,46] Described secondary objectives of a MCC included continuing education for health care professionals, maintaining a cancer tumour registry, acting as a quality improvement forum, and maintaining a commitment to research and clinical trials (Table 3).

Table 1 – Published articles and Web sources eligible for inclusion

Category	Number of reports	References
Multidisciplinary cancer conferences and multidisciplinary Panels: an emerging quality improvement entity	11	[1,2,4,14–19]
Impact of multidisciplinary cancer patient management on outcomes	10	[9,20–28]
How a multidisciplinary cancer conference should function	30	[3,5–10,21,29–50]
Multidisciplinary cancer conference structure and function – key components	22	[2,3,5–8,10,21,29,31–41,46,47]

Table 2 – Studies which demonstrated improved outcomes with multidisciplinary patient management

Study	Type of study	Endpoints assessed	Outcome
Smith et al.[20]	Retrospective review of cancer database Questionnaires of rural and consultant physicians	Impact of TB, and a Hospital Cancer Program in a rural setting on cancer care compared to other rural centres without hospital cancer program	More patients from area studied were treated locally Higher incidence of radiation treatment for prostate cancer
			75% of rural physicians attended TB 49% gained new information frequently, 42 % gained new information occasionally at TB
		Physician (rural and consultant) satisfaction with TB	95% usually followed TB recommendations 95% of consultant physicians felt outside consultations should be continued
Scholnik et al.[21]	Retrospective review of the effect of teleconferencing on implementation of TB recommendations at a single centre	TB participant questionnaire	Teleconferencing was felt to be an acceptable addition to a face-to-face TB. Patient management could be facilitated by teleconferencing
		Chart Review of patients whose cases were discussed via teleconference	66% of patients were treated according to TB recommendations (14% lost to FU, 11% patients refused TB recommendations)
Junor et al.[22]	Retrospective population-based analysis *w* of patients with ovarian cancer	Survival of patients with ovarian cancer based on patient factors and organisational/delivery of care factors	Referral to a multidisciplinary clinic (MD clinic) (gynaecologist and oncologist) $p < 0.001$ Receipt of platinum chemotherapy Referral to MD clinic still significant even accounting for higher rate of platinum chemotherapy if attended MD clinic*
Sainsbury et al.[23]	Retrospective review of county cancer registry data (1979–1988)	Five year survival for breast cancer patients	Increased survival of patients seen by surgeons who treat >30 cases per year Increased receipt of chemotherapy/hormone therapy by patients who were treated by high volume surgeons (>30 cases/year) Implication: increased use of multidisciplinary team with high volume surgeons
Gabel et al.[24]	Retrospective case cohort study. Comparing patients who were seen before and after a MD breast cancer clinic was initiated	Breast cancer treatment timeliness Patient satisfaction	Time between diagnosis and treatment decreased ($p < 0.0008$) Increased patient satisfaction with MDC approach
Chang et al.[25]	Retrospective cohort study comparing treatment recommendations before and after a MD breast cancer assessment in 75 consecutive patients	Treatment recommendations made before and after a MD breast cancer assessment	MDP recommended treatment change in 43% of cases (breast conservation 41% or re-excision 6%, further work-up 31%, treatment change based on change in diagnosis at pathology review 9%, addition of post-mastectomy radiation 9%, addition hormone therapy 3%)
Petty and Vetto[9]	Prospective review to assess if TB recommendations were implemented into practice in one state	Assess if TB recommendations were implemented in practice	84% of TB recommendations implemented (93% of diagnosis and 83% of therapy recommendations)
Santoso et al.[26]	Cohort study comparing treatment recommendations before and after a MD gynaecologic oncology tumour conference in 459 cases	Identification of discrepancies (change in tumour site, stage or treatment) in patients with gynaecologic cancer when cases were reviewed at a TB Major discrepancy: change that affected patient care Minor discrepancy: change that did not affect patient care	TB identified 32 cases (6.9%) where there were discrepancies between 23 (5%) showed major discrepancies
Birchall et al.[27]	Retrospective cohort review comparing 2 year survival in head and neck cancer patients in the south and west of England before and after a Standards document publication (1996–2000)	2 year survival for head and neck cancer patients	Overall no change in 2 year survival Patients assessed in a MD clinic (consultant oncologist, radiotherapist and head and neck surgeon) exhibited improved 2 year survival ($p = 0.03$) Wait times increased over 2 year time period
Lutterbach et al.[28]	Retrospective review of 1516 patients with a brain lesion discussed at a MDB	Assess if recommendations made at Brain Tumour Board were implemented	91% of MDB recommendations implemented

Abbreviations: FU, follow-up; MD, Multidisciplinary; MDB, Multidisciplinary Board; MDC, Multidisciplinary Care; MDP, Multidisciplinary Panel; Ref., reference; TB, Tumour Board.

Table 3 – Multidisciplinary cancer conference: key components

Study (Ref.)	NBCC (Aus)		NSWBCI (Aus)[54]	MMS[31]	NHS (UK)[54]	ACoS: CoC (USA)[3]	McGill[29]
Key component	MDM[7]	NDP[30]					
Protocol/policy	X	X	X		X		X
Team members	X			X	X	X	
Coordinator role	X				X		
Roles and responsibilities	X			X	X	X	
Standards/guidelines	X	X		X	X	X	
Cases	X			X	X		
Resources	X	X	X		X	X	
Meeting input/output	X		X		X		
	Rosenblum[47]	De Guzman[46]	Billingsley[32]	BAHNO[41]	Piorkowski[40]	Gray[39]	Kneece[37]
Mandate/standards	X	X	X	X	X	X	X
Team members	X	X	X	X	X	X	X
Responsibilities	X	X	X	X	X	X	X
Communication	X	X	X	X			X
Data management and support	X	X	X	X		X	
Meeting	X	X	X	X		X	X

Abbreviations: ACoS: CoC – American College of Surgeons: Commission on Cancer; McGill – McGill University Health Centre; MMS – Massachusetts Medical Society; NBCC (Aus) MDM – National Breast Cancer Centre (Australia), MultiDisciplinary Meetings; NBCC (Aus) NDP – National Breast Cancer Centre (Australia), National Demonstration Project; NHS (UK) – National Health Service (United Kingdom), Department of Health; NSWBCI (Aus) – New South Wales Breast Cancer Institute (Australia); VA Puget (USA) – Veteran Affairs, Puget Sound, USA.

4.3.2. *Team members*

The membership of the MCC reflects the multidisciplinary nature of the body and the size and structure of the hospital.[3,5,7,21,31–33,3,34,36,37,39–41,46,47] Suggested attendees included diagnostic radiologists, pathologists, surgeons, medical oncologists, radiation oncologists; the cancer program administrator; a tumour registrar, oncology nurses, social work, palliative medicine, nutritional services, pastoral care, pharmacy, mental health, the public; nuclear medicine, physical/occupational therapy, and the patient's primary care physician.[2,3,5,7,32,35–37,39,41,46,47]

4.3.3. *Roles and responsibilities*

A number of studies recommended that there be a recognised leader with designated responsibilities to ensure smooth functioning of the MCC.[21,32,33,36,37,40,46,47] In addition a coordinator whose main responsibility was to organise each meeting was described as a necessary support person[8,10] (Table 3).

4.3.4. *Data management and support*

Up-to-date technological equipment, such as computer systems with computer-generated image display capabilities; videoconferencing equipment as well as dedicated meeting rooms with adequate facilities for displaying X-rays and pathology slides were described as necessary.[5,7,32,39,41,46,47]

4.3.5. *Format*

Weekly MCC meetings on a set day and at a set time for a minimum of one hour seemed to be ideal. Meeting presentations could involve prospective review of new cancer cases, recurrent cases, and previously reviewed cases requiring additional follow-up.[8,10,38]

5. Discussion

The hypothesis that improving the processes and structure of health care can improve patient care outcomes is tantalising. Limited evidence for the efficacy of multidisciplinary care, predominantly in the form of multidisciplinary clinics, has demonstrated improved survival in retrospective studies for patients with breast, head and neck, and ovarian cancer.[22,23,27] Birchall et al. studied processes of care for patients with head and neck cancer in England before and after the Calman-Hine Expert Advisory Group on Cancer that recommended that designated cancer units and multidisciplinary care be established.[27,51] They identified that after the Calman-Hine report, more patients were assessed in a multidisciplinary clinic (46% versus 74%), and those patients had an improved 2 year survival.[27] Junor et al. studied patients with ovarian cancer in Scotland and identified that assessment at a multidisciplinary clinic, defined by gynaecologist and oncologist attendance, was an independent predictor of improved 5 year survival (65% versus 81% of patients died in combined clinic versus non-combined clinic).[22] Davis et al. compared patient characteristics and survival for patients with Hodgkin's disease who were either treated at Centralized Cancer Centers (CCC) or in a SEER (Surveillance, Epidemiology and End Results Program) region.[52] They found that while patient characteristics were the same, the mortality rate for patients treated in SEER regions was 1.5 times that of patients treated at CCCs, independent of age or patient stage, and suggested that the process and quality of care is better at CCCs. In the non-oncologic literature, multidisciplinary clinics have also been shown to have a survival benefit. For example, patients with amyotrophic lateral sclerosis (ALS) who attended a multidisciplinary clinic had a prolonged survival, and had a 29.7% decrease in 1-year mortality.[53] These studies all demonstrate or suggest that the organisation and delivery of care can have a decided effect on a patient's overall survival. The data are more limited in suggesting a benefit for MCCs, although some studies have demonstrated that a patient's management plan will change in 7–43% of cases and that the majority (66–95%) of recommendations made at an MCC will be incorporated into the patient's treatment plan.[8,21,25,28]

Despite such limited data, MCCs or tumour boards are an accepted component of cancer care in many countries. In Australia, MCCs were introduced to improve breast cancer care as a national demonstration project in 2000.[7] Comments from participating physicians at the project's assessment in 2002 suggested that they were a useful component of patient care, 'people who had unusual patterns of practice have normalised them... (now) treatment is much more aligned to guidelines' and 'the benefits [of the meetings] have just been absolutely incalculable to us'.[7] In the United Kingdom, a National Cancer Plan was published in 2000 that stressed the importance of multidisciplinary teams working in the management of cancer patients and advised that all patients with cancer should be formally reviewed by a specialist team.[54] A recent survey of British surgeons who treated breast cancer patients demonstrated that surgeons actively supported multidisciplinary breast meetings by attending 98.5% of all meetings and chairing 76.5% of meetings.[55] In addition, 75.7% of respondents felt that these meetings represented an educational experience for their trainees. In the United States, MCCs are considered 'integral to the patient management process and patient outcomes',[8,9] and the Commission on Cancer (US) and the American College of Surgeons both require multidisciplinary cancer conferences for the accreditation of health centres delivering multidisciplinary cancer care.[3] Clearly, however, and despite international support, further qualitative and quantitative research is required to determine if MCCs have the same benefits in terms of patient outcomes as multidisciplinary clinics.

A number of barriers to both the initiation and sustainability of the MCC were identified from our Ontario administrator and physician survey. These barriers included the lack of time and financial compensation for attending a MCC, the lack of specialists in community hospitals, the lack of a coordinator to prepare for an MCC, and medico-legal concerns, especially if there was disagreement about the patient management plan amongst MCC participants. Similar barriers have been documented in the Australian MCC experience.[7] Suggested solutions from the Australians included strong institutional support that includes providing meeting rooms, communications equipment, and administrative staff, as well as having a local clinical opinion leader as a lead advocate for the MCC. Because limited literature exists about barriers to initiating and sustaining MCCs in Ontario, further research into this area is also suggested, especially as MCCs are becoming a more common component of cancer patient care.

6. Development of the clinical practice guidelines

6.1. *MCC Expert Panel consensus*

An Expert Panel was created by Clinical Programs at CCO and was comprised of surgeons, medical oncologists, radiation oncologists, pathologists, diagnostic imagers, social workers, palliative care physicians, and nurses and administrators, including regional vice presidents of Cancer Centres, planners, and representatives from CCO and the PEBC. A draft standards document was generated by a subgroup of the Expert Panel (CDV, FW, BL, AH) after reviewing the literature and was the topic of intense discussion at the first meeting of the Expert Panel. As a result of that discussion, the draft standards were revised by the subgroup and sent back to the entire Expert Panel for further review.

6.2. *External review by Ontario clinicians and administrators*

The re-written standards were then sent for external review by mailed survey to a random sample of 206 Ontario practitioners and administrators involved in cancer patient care (Table 4). The mailed survey consisted of items that addressed the quality of the draft MCC standards and whether the report should serve as a practice standard.

1. Return rate: 43% (65% clinician, 35% administrators).
2. Written comments attached: 20%.
3. Agreement with summary of evidence: 72%.
4. Believe will provide benefit for patients: 80%.
5. Would be comfortable if patients received care as recommended in document: 88%.
6. Approval of the standards recommendation as a practice standard: 66%.

Table 4 – External review participants

	N participants
Clinicians	
Medical oncology	19
Radiation oncology	19
Surgery	51
Pathology	19
Medical imaging	10
Palliative and supportive	11
Nursing	17
Health Care Administration	
Chiefs/Heads of Staff/Surgery	28
Hospital CEO	18
LIHN CEO	6
Regional Vice Presidents	5
Medical School Administration	2
Regional Planning	1

Abbreviations: CEO, Chief Executive Officer; LIHN, Local Integrated Health Network.

6.2.1. *Summary of written comments and Expert Panel responses*

Overall, the comments emphasised support for the idea of MCCs, and six respondents stated that MCCs or tumour boards were already in operation in their hospitals or regional centres. The following concerns dealt predominantly with perceived difficulties around either the implementation or the functioning of MCCs.

Concern	Panel response
Resource constraints	
Barriers to implementing successful MCCs included (a) participant time constraints, for attending a one-hour twice monthly meeting; (b) not having enough specialists in some hospitals/regions to attend each of the meetings; (c) lack of a coordinator to prepare for the MCC; and (d) a lack of information technology (i.e. videoconferencing) availability	MCCs have the potential to save time for health care providers as cases can be discussed at a pre-arranged time and place and that it was anticipated that with the publication of this Standards document, institutions will provide the personnel and resources needed for an MCC to function, such as coordinators and videoconferencing equipment
Cases to be reviewed	
A few respondents had concerns about the type and number of cases that are to be reviewed at the MCC meetings and understood the Standards to mean that all cases needed to be discussed at the MCC	Clarified in the Standards document that although new cancer cases were to be forwarded to the MCC, not all cases were to be reviewed. The Australian literature has commented that having all cases available for peer review (but not necessarily discussion) tends to lead to clinical practice being 'normed'. The Expert Panel was strongly in favour of this aspect of the document[8]
Financial compensation	
There is a need for financial compensation to encourage MCC participation	There is currently no mechanism through the Ontario Health Insurance Plan (OHIP) to specifically reimburse physicians for attending MCCs although this is being investigated; however, attendance at an MCC can qualify a physician for Continuing Professional Development (CPD) credits
Community hospitals	
Community hospitals have unique needs, especially with respect to attendees, necessitating flexible standards	The Standards were reworded to clarify that the health care professionals who attend the MCC would be appropriate for the hospital setting
Legal concerns	
There were dissenting views with regard to the proposal that MCC recommendations be entered in the patient record	The Standards were reworded to emphasise that the individual physician is responsible for discussing the MCC treatment options and conclusions with the patient, making the ultimate treatment recommendations, and entering that discussion and the final treatment plan into the medical record
Attendance	
The presence of non-physicians at the MCC would limit medical discussions of patient cases	The Expert Panel felt that the primary function of the MCC is to ensure that all appropriate tests, treatment options, and recommendations are considered for the individual patient and that non-physicians had important contributions to make with respect to this decision making process

The MCC Standards were further modified by feedback from the practitioner survey and from the PEBC Report Approval Panel. The final version has been widely circulated and made available on the CCO web site.[56]

7. MCC Standards

7.1. *Protocol or mandate*

The MCC has the following primary and secondary functions:

- *Primary function*:
  - Ensure that all appropriate diagnostic tests, all suitable treatment options, and the most appropriate treatment recommendations are generated for each cancer patient discussed prospectively in a multidisciplinary forum.

- *Secondary functions*:
  - Provide a forum for the continuing education for the medical staff.
  - Contribute to patient care quality improvement activities and practice audit.
  - Contribute to the development of standardised patient management protocols.
  - Contribute to innovation, research, and participation in clinical trials.
  - Contribute to linkages among regions to ensure appropriate referrals and timely consultation and to optimise patient care.

7.2. MCC cases

- New cancer cases, inpatient and ambulatory, and the proposed treatment plan should be forwarded to the MCC Coordinator.
- Not all cases forwarded to the MCC Coordinator need to be discussed at the MCC.
- The individual physician and the MCC Chair can determine which cases are discussed in detail at the MCC.
- Other cases (e.g. recurrent or metastatic cancer) can be forwarded to the MCC Coordinator for discussion, at the discretion of the individual physician.

7.3. Meeting format

- MCC discussions should occur at regularly scheduled intervals. Depending upon the size of the centre, the MCC should meet for a minimum length of one hour and a frequency of at least every two weeks to ensure timely prospective patient case review.
- Input should be encouraged from all members of the multidisciplinary team.
- Attendance should be recorded at each meeting and can be used for continuing professional development credit.
- The confidentiality of all information disclosed at these meetings is to be maintained by all participants.

7.4. Team members

- Each MCC should have a designated Chair and a Coordinator (with designated backups) responsible for overall conference management and the individual meeting process.
- A representative from medical oncology, radiation oncology, surgery/surgical oncology, pathology, diagnostic radiology, and nursing should be present to provide the complete range of expert opinions appropriate for the disease site and appropriate for the hospital.
- An MCC meeting should be attended by clinicians and other health professionals who are directly involved in the presented patients' care.
- In those hospitals that do not have all the needed specialists in-house, linkages can be made through teleconferencing or videoconferencing so that participants from multiple hospitals and specialties can meet together in a 'virtual' MCC.
- Other MCC participants will be determined by the patient case(s) presented at a meeting and can include the primary care physician; social services, pharmacy, nuclear medicine, genetics, dentistry, nutrition therapy, physical/occupational therapy, pastoral care, pain/palliative care, mental health, clinical trials, and data management representatives; and fellows, residents, and other health care students.
- Industry representatives (or members of the general public) should not attend the MCC, in order to maintain patient confidentiality and ensure unbiased case review.
- Patients or their representatives should not attend the MCC, to ensure unbiased case review.

7.5. Roles and responsibilities

- *Individual physicians or delegate*:
  - Responsible for discussing the treatment options and conclusions, as discussed at the MCC, with the patient and making the ultimate treatment recommendations.
  - Commit to attend MCC meetings and to send new cancer cases from their practice, as well as any other cancer cases (e.g. recurrent cancer) that would benefit from discussion by the MCC.
  - Responsible for forwarding new cancer cases to the MCC Coordinator and communicating the relevant patient information, including radiology and pathology, and the specific issue to be discussed by the multidisciplinary team, prior to each meeting.
  - Responsible for presenting the patient case at the MCC (or sending a delegate to present) and maintaining patient confidentiality.
  - Responsible for providing expert opinion from their area of expertise.
  - Responsible for entering the MCC recommendations, the physician–patient discussion regarding the MCC recommendations, and the patient's final decision about their treatment into the medical record.
- *Multidisciplinary Cancer Conference Chair/Facilitator (may or may not be a physician)*:
  - Accountable to the head of the hospital cancer program.
  - May delegate/rotate the running of the MCC and other responsibilities.
  - Responsible for
    - * The actual running of the MCC.
    - * Ensuring that all forwarded cases that have been selected for presentation are discussed within the allotted time.
    - * Encouraging the participation of all MCC members.
    - * Ensuring that patient confidentiality is maintained by reminding participants of privacy issues and permitting only appropriate attendance.
    - * A designate should be assigned in case the Chair is unavailable.
- *Multidisciplinary Cancer Conference Coordinator (usually not a physician)*:
  - The key individual who ensures the continuity of the MCCs.
  - Responsible for the administrative management and individual meeting functioning. The following roles and responsibilities include those that can be specific to the Coordinator or that can be delegated to other core members or associated support staff:

  - * Meeting – preliminary organisation:
    Create the list of patient cases, based on the cases forwarded by individual physicians.
    Book meeting, set up meeting room, and ensure availability/functioning of all necessary equipment.
    Notify all core members, invite guests, and post in-hospital meeting notice.
    Ensure that all relevant up-to-date patient information, particularly slides and all imaging (including related electronic imaging), are entered in the computer prior to the meeting.
    Track minimum data requirements, such as how many cases were forwarded to and how many were discussed at the MCC by disease site.
- – A designate should be assigned in case the Coordinator is unavailable.

7.6. *Institutional requirements*

- MCC Coordinator – an essential individual, the ‘glue’ that ensures the continuity of the MCC.
- Dedicated meeting room with adequate facilities.
- Projection equipment for displaying X-rays and pathology slides.
- Secure, interactive computer systems with
  - Scanning, storing, and computer-generated image display capabilities.
  - Videoconferencing and teleconferencing equipment.
  - Information technology (IT) support.

7.7. *Terms of reference for the multidisciplinary cancer conference*

Each participating institution should have in place a written protocol, encompassing the following:

- The MCC mandate specific to that institution.
- The health care professional membership, including the core members and disciplines and their roles and responsibilities.
- Meeting format, frequency, time length, and attendance.
- Communication flow.
- How patient confidentiality will be maintained in the selection and review of patient cases and the maintenance of patient case files.

Conflict of interest statement

None.

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