Multidisciplinary Cancer Care

--- Pros and Cons --

by

Maricar K. Sy

MBBS III

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School of Medicine

Griffith University

1.0 Summary

Australia's health system is often criticized for being fragmented and uncoordinated. For cancer patients whose care requires continuity and collaborations from doctors across multiple specialties, the concerns about suboptimal care in this setting are hence legitimate ones.

In the last few years the demand for coordinated care has increased markedly. In light of the 2005 Australian Senate Inquiry into Cancer Services, there has been a recent push to formalise cancer care by having each patient managed by a multidisciplinary team (MDT). MDTs have been reported to improve communications between health departments, increase survival rates, reduce waiting times and provide better patient satisfaction. Today, the use of MDTs is slowly becoming routine, most notably in the field of breast cancer. For the other types of cancers, it stands on the cusp of becoming so.

The purpose of this essay is to give a review of multidisciplinary care (MDC) within an Australian context. It begins by (1) stating the need for cancer reform and introduces the concept of MDC; (2) it continues by discussing the various benefits associated with this type of management approach; (3) it presents an analysis into why potential obstacles, despite recent efforts, can impede its functioning and finally (4) a brief overview of the strategies to address this problem is included.

2.0 Cancer reform

The need for improved delivery of cancer services along with better outcomes for patients and their families has been identified as a priority by both state and federal governments. It is driven by a number of reasons. First of all, it is well known that cancer treatment is complex and challenging. The increasing level of knowledge and skills required to provide comprehensive care to patients has resulted in more specialization within the health professions (1). Although this specialization allows for in-depth exploration of issues by a specific discipline, it means that no single health care professional can meet all the multifaceted needs of a patient. Never before has the modern clinician been faced with a huge

variety of methods to image tumours, biopsy masses, stage cancers and ultimately decide upon a choice of treatment (2). This is further complicated by the existence of an increasingly sophisticated patient population, having higher expectations from the medical establishment, likely due to the accessibility of the internet and other sources. Thus, the sum of the many complexities existing in this conundrum has led to arguments for a multidisciplinary approach.

3.0 Defining multidisciplinary care

The definition of MDC remains fluid in the literature and among health professionals. However, when used in this essay, the term "MDC" will refer specifically to the cancer "team" and to the integration of services that it provides, i.e. agreeing on the diagnosis and staging of a patient's disease and coming to a consensus about the best treatment option/s. Examples of this type of teamwork outside of oncology are often seen in complex patient care areas exemplified by palliative care, geriatrics and mental health (3).

What constitutes a MDT varies from place to place and according to the type of cancer diagnosed. However, it generally includes a core team of surgeon/s, a general practitioner, a medical oncologist and a radiologist (4). Other health care workers include pathologists, nurses, palliative care physicians, physiotherapists, dieticians, social workers and occupational therapists. The MDT concept is often described as "one-stop shop." In other words, patients can attend one meeting where they are seen by various care givers (as listed above) all at once (5). Patients are not shuffled from one clinic to another, nor have to suffer multiple appointments in order to get expertise from the different specialists. This is in contrast to the traditional model of cancer care, as discussed below.

4.0 The two basic models of cancer care in Australia

In 2002, a report entitled 'Optimising Cancer Care in Australia' was produced under the auspices of the Clinical Oncological Society of Australia (COSA), The Cancer Council Australia (TCCA) and the National Cancer Control Initiative (NCCI). In it, the authors compared and contrasted the two basic models of cancer care operating in Australia - the traditional model versus the MDC approach (6). Both were found to occur in the public and

private sectors, although it was noted that MDC was much less common in the private system setting. Most commonly used across the board was the traditional model of referral, which usually took the form of a general practitioner (GP) referring a patient to a specialist (usually a surgeon) who conducts the primary intervention -- usually removal of a tumour. The initial specialist may subsequently refer the patient for opinions from other cancer specialists (e.g. oncologist) before, or after the primary intervention. This is the model for which Medicare and the private health insurance system cater for most comprehensively. Many private practitioners find that this model works quite well (7).

However, critics argue "...that the inherent defect of the traditional model is its dependence upon the primary doctor recognizing that further referral is necessary, either before they intervene (with the associated risk of possible loss of income) or afterwards." The danger being that the final decision is often made by a single person who may, wittingly or unwittingly, rely on their own discipline rather than consider other, more appropriate alternatives (6).

5.0 Benefits of multidisciplinary teams

Benefits of a MDT are manifold. The underlying idea is that a team ensures effective coordination and the best quality and good continuity of patient care by bringing together key professionals with all the necessary expertise. It is like the old saying that if two heads are better than one, then four or six, or an entire team is significantly better. When implemented successfully, MDTs can result in: (a) reduced patient mortality (b) reduced waiting times and improved coordination of services, (c) a wider range of more appropriate evidence-based treatment options, (d) increased recruitment into clinical trials, (e) better patient satisfaction, (f) reduced stress amongst staff and (g) reduced health costs. All of these will be briefly outlined in the following paragraphs.

Reduced mortality

Reduced cancer mortality using an MDC approach has been documented in numerous studies. A few of them are listed below. One study by Sainsbury et al investigated the variation in outcome (5 year survival) of 12, 861 breast cancer patients treated in Yorkshire,

UK. It was found that an important explanatory factor for the differences between survival rates for individual surgeons was the increased use of multiple therapies utilizing MDC, thus concluding that MDC may afford greater survival (8).

Another study published in 1994 by Junor et al investigated 533 cases of ovarian cancer and also found that patient survival rates were improved due to multidisciplinary care (9). Similarly, MDT has been proposed as responsible for better outcomes amongst patients with non small cell lung carcinoma (NSCLC). A study compared the treatment of patients with inoperable NSCLC before and after the introduction of MDT and found that the median survival in 2001 was 6.6 months versus 3.2 months in 1997 ($p<0.001$). It was suggested that the use of MDTs increased the chances of patients being promptly diagnosed which led them to receive earlier treatment resulting in better outcomes (10).

Reduction in waiting times and improved coordination of services

The above mentioned improvements in survival can be in part attributed to the reduced waiting times, and the more seamless method of care which results from a team style approach to cancer. Attendance at cancer appointments can be incredibly time consuming, and very frustrating if the various health workers are not in synchronization with each other. One patient (undergoing treatment via the traditional model) summed it up quite nicely when she said, "....It was certainly more difficult for me to move from one place to another. They [doctors/admin staff] were also always losing my paperwork etc, so they'd have to send them over again. They wouldn't know you, and ask you what you were supposed to be having done. It was a bit all over the place. I felt like I lost of time waiting around (11). "

Fortunately, faster and more coordinated treatment is one of the advantages associated with MDTs. For example, in a recent breast cancer study conducted by Gabel et al, it was found that the time between diagnosis and the initiation of treatment was significantly decreased (42.2 days versus 29.6 days; $p < 0.0008$) amongst MDC patients (12). The study pointed out that the members of the cancer team were aware of each other's roles when they provided information to patients. In other words, everyone was "on the same page," thus saving valuable time which was spent towards discussing/starting treatment earlier.

Access to more appropriate evidence-based treatment options

Another advantage of MDT meetings is how effectively this system is able to facilitate the consideration of a full range of treatment options by acting as a platform for vigorous discussion. Studies show that MDTs encourage consensus based decision making, in contrast to the conventional model where independent opinions are offered, but are often given without consensus.

In a study by Chang et al conducted in the US, treatment recommendations received by women through single or sequential consultations were compared to a second opinion obtained via a multidisciplinary panel. The recommendations from the MDTs were found to be significantly different from that of the individual physicians and interestingly, were more likely to coincide with internationally accepted standards of care. Chang's study concluded that the MDC process is able to greatly reduce the wide variations in decisions made by professionals acting independently (13).

Increased recruitment into clinical trials

Providing information to patients with cancer as well as their families is one of the priorities of MDC. Handing out pamphlets, establishing telemedicine conferences etc have contributed to better informed patients and is said to have led to increased recruitment into clinical trials, simply because patients have become more aware of their options (14). Traditionally, slow recruitment into trials has always been a concern in cancer care. Surprisingly however, studies have shown that it is the resistance of doctors to divulge information and not reluctance amongst patients that is the major obstacle (15). Since MDT doctors are more likely to promote/discuss a wider range of treatment options, this may account for the increased patient involvement in trials within this setting.

Better patient satisfaction

Patient-centered care is definitely a constant theme throughout MDC. Gabel et al's study looked into the effect of MDC on patient satisfaction by comparing it to the traditional model of care by assessing patients' attitudes towards their physical and emotional wellbeing via multiple surveys (12). The authors concluded that in addition to potentially increasing

survival, an MDT approach has increased psychological benefits to the patients. This is important as patients who feel cared for, understood, listened to and given enough time are more prepared to accept their doctors' recommendation/s.

Stress amongst MDT members may be lowered

In a study of house officers, those who appreciated that they were part of a multidisciplinary team (as opposed to simply being bottom of a medical hierarchy) had far lower stress levels than those who did not. This was thought to be due to the diversity of the MDT which allowed them to seek wider support. Since we know that lower stress means better patient care, it is also likely that better teams produce better outcomes (16).

Reduced costs

MDC is also advantageous because it may reduce health costs for patients. If a comprehensive clinic visit fee is charged to the patient, there is a significant reduction in cost for the individual compared to multiple, separate clinic fees. This was evident in an analysis of melanoma patients at a clinic in the US which found that there was a US$1600 saving per person when compared with a similar group treated in the community (17).

6.0 What are the challenges?

Despite the evidence to support MDC, some practical barriers have been identified which may hinder it from working effectively. These include, (a) MDT meeting decisions/recommendations are not always implemented, (b) there are numerous medicolegal implications for team members, (c) poor team dynamics can have negative effects, (d) MDC meetings are resource intensive and cannot function properly if team attendance is poor and finally (e) rural or remote locations can make MDC implementation difficult. Each of these points is discussed below.

MDT meeting decisions are not always implemented.

In theory, whilst MDTs facilitate better discussion, it does not necessarily improve the quality of decision making overall. Decisions made at a MDC meeting are not always implemented nor are they documented consistently. A study by Blazeby et al investigated if MDT decisions are actually followed through, by examining concordance between MDT decisions and treatment implementation in the setting of an upper gastrointestinal cancer meeting. Of the 271 decisions, 41 (or 15.1%) were not implemented (discordant). Discordance almost always arose from patients receiving a more conservative treatment than that originally planned (18).

Medicolegal implications

This group decision-making forum raises an important medicolegal question: if a patient is grieved by a decision made at a MDC meeting and would like to recover damages, who would be held liable? Normally the law assigns responsibility to individuals not groups. No such case has been reported in Australia, Canada, and USA or in the UK, as of yet (19). But hypothetically speaking, the above mentioned patient would have to first establish that the doctors owed them a duty of care. In the conventional model, this would be straightforward. However in a MDT setting, it may not be as clear. From a legal perspective, most oncology meetings would be regarded as a formal referral process that gives rise to a duty of care. In a nutshell, each doctor present at a MDC meeting is individually responsible and hence, can be held accountable, for all decisions within their area of expertise.

Given this type of decision making is quite recent, many participating doctors may not be aware of their medicolegal duty. This may raise the anxiety of MDT members and could increase their reluctance to attend meetings. It also becomes very important that if a doctor feels that their opinion has not been considered appropriately in the meeting or if they disagree with the consensus, they should ensure that this is all documented. A single treatment option should thus only be offered to a patient if there is unanimous agreement between the specialists. Disturbingly, one study revealed that many health professionals are involved in major discussions without the rest of the team's knowledge. Discrepancies such as these reveal a lack of interdisciplinary awareness (19).

Poor team dynamics

In any team which is striving to reach complex goals, differences in opinion are inevitable. It is not surprising then, that MDTs can be a great source of potential conflict. Poor group dynamics and mishandled conflicts can make a team ineffective and dysfunctional. At these times, the need of a good MDT leader is crucial. He or she must ensure that the discussion doesn't end up being a battleground when considering whose opinion is right. Lack of clarity about leadership and conflict over leadership have been shown to both negatively impact on team processes, participation, attendance and support for innovation (16).

Limited resources and poor attendance

In a 2003 study of colorectal cancer teams, 62% (102 out of 165) had difficulty running their MDC meetings due to lack of resources such as finding an adequate room to hold meetings and/or lack of clerical support (20). Another report examining teams in cancer care in each of the eight English regions, plus one in Wales, described poor attendance as a problem. Not all teams met on a weekly basis, some specialists – e.g. patholigsts and radiologists --- worked with several different types of cancer, making their time commitment especially difficult. A recent breast cancer survey reported the low attendance of medical oncologists and reconstructive surgeons at team meetings. This was attributed either to (1) staff shortages, in particularly radiology oncology, or (2) poor geographical location like in remote areas (20).

Lack of MDC in rural or remote locations

Many rural hospitals face barriers to MDC that their counterparts in urban settings do not. Rural teams were much less likely to have a communication framework in place, and most teams held meetings less frequently. It was recognized that the MDC approach may not be feasible in Australia, where surgeons/physicians may work thousands of kilometres away from the relevant treatment centre (20).

7.0 How do we enhance MDT performance?

Many strategies have been proposed in the literature to enhance MDC efficacy. A few of these are outlined below:

Ensuring appropriate facilities are utilized

Use of appropriate meeting rooms, especially those that allow a circular or horse shoe pattern of seating is recommended. Classroom rows tend to inhibit contributions from the back row (21). Employment of well organized and well trained administrative support staff is also proposed - they help minimize simple errors such as overbooking, missing slides, charts and x-rays that can increase patient anxiety but are easily preventable.

Improving MDT access to remote/rural location

Options to help overcome the tyranny of distance and isolation should be explored. Where MDC is not well established, collaborations with major centres, continuing professional development meetings and use of video and teleconferencing may supplement care where formalized discussion is lacking (16).

Promoting incentives for MDC implementation in the private system

Quality of care considerations aside, the existing private health care system in Australia does not provide a strong financial incentive for the provision of MDC. Currently, doctors cannot bill for time spent at treatment planning conferences. Patient reimbursement for medical services is governed by a Medical Benefits Scheme (MBS). Activities where there is no item number attract no reimbursement. Absent from the MBS are provisions for MDC. Inclusion of a differential item number in the MBS to provide for these consultations is proposed (6).

MDC education in medical schools

Several studies propose that learning to work in a multidisciplinary milieu should occur early in the education of the health care professional (22). Methods to teach MDC practice lends support to the PBL (problem based learning) method, a style of teaching commonly used in some Australian postgraduate medical programs, but not all. It varies greatly from traditional didactic lectures, in that it is done in small groups as opposed to individual type study. These

"teams" are normally made up of medical students with various backgrounds, e.g. pharmacy, physiotherapy, nursing, speech pathology etc, mimicking the diversity found in a real MDT and exposing young trainees to this type of environment early, thus improving communication.

Good communication: Communication difficulties lie at the heart of much medical litigation and poor team cohesion. Studies have shown that communication skills can be learned. Universities and other educational programmes have been criticized for not spending enough time educating students in this area. Incorporation into the medical school curriculum in the form of formalized tutorials which focus on mastering/fine tuning these skills has been suggested.

8.0 Conclusion

Clearly MDTs have now become an important mechanism in the delivery of cancer care. There exists strong justification and benefits for the use of MDTs in Australia - both patient demand and the medical economic environment will ensure that its use will increase in the future. Now whilst this is not a perfect system, the certain organizational elements which are critical to the success of a MDT have been identified and listed in this essay to increase awareness.

9.0 References

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