On Record Keeping at Multidisciplinary Team Meetings

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Abstract

This paper explores issues related to record keeping at multidisciplinary medical team (MDT) meetings. Based on questionnaire and interview data with MDT members of various specialities, roles and teams, the information priorities for inclusion in a MDT meeting are identified. The utility and need for records after the meeting is discussed, and methods for gathering the information considered. Concerns are expressed that real-time data gathering at the meeting takes more time and risks turning the meeting into a group form-filling group. The value of interactive discussion among multidisciplinary peers is restated. The difficulties identified are discussed in the context of design implications for record-keeping at meetings. The role of records as a co-ordinating mechanism for tasks conducted after the meeting is emphasised, The dichotomy of having a record of a i) detailed prescriptive treatment plan, or ii) detailed diagnostic information with little treatment plan articulated, is explained.

1. Introduction

Multidisciplinary team meetings (MDTMs) have become an integral part of hospital work systems and patient care pathways (PCPs). The MDTM forum fulfills a number of important functions in patient care, namely the integration of clinical findings with laboratory results and radiological images to achieve an agreed diagnosis (by consensus), as well as planning and co-ordinating the treatment approach for an individual patient. There are also important education and professional development functions satisfied in the meeting process.

A typical case discussion is characterised as having two main tasks: i) agreeing a diagnosis by consensus and ii) deciding on the best next step in patient's care. In agreeing the diagnosis, the clinical staff present the patient's history and their findings on examination. This account is followed by the radiologist and pathologist who describe their findings and their interpretation. These three modalities (sometimes called the 'triple approach') of investigation are correlated, and a definitive diagnosis is agreed by consensus. Once the diagnosis is established, the management plan is agreed, which can be a combination of treatments such as chemotherapy, radiation therapy or surgery given singly or in combination. More accounts of this process are given in [3, 6]. Cases are often not straightforward and investigations may need to be repeated, or additional tests undertaken before either the diagnosis or treatment plan can be fully decided.

As the practice of MDT meetings as a mechanism for implementation of clinical practice guidelines (CPGs) has developed, so too has the need for record keeping systems. It has become an accepted standard, for instance, in the United Kingdom for data to be entered into a database in real time at MDTMs, by a non-medical team member [5]. The data entry screen is projected onto a plasma screen, or large screen display using an overhead projector. This allows all those present to be able to review the data being entered and request corrections where necessary. While there are clear benefits in terms of the quality of information gathered in this setting, some reservations have been expressed too and the system of work has *not* been implemented to date in the hospital on which the study presented in this paper is based (St James's Hospital, SJH). Among the expressed concerns and challenges, are fears that the dynamics of the discussion would focus on the data entry and that the quality of the discussion would deteriorate, i.e. that the meeting would become a 'form-filling exercise'. The most articulated concern however is that more time would be needed to check data entered and correct any misunderstandings. Recent years have witnessed a marked increase in the numbers of patient cases being discussed and there are time pressures on meetings and schedules. So far it has not been possible to implement such change within this setting, and teams have not been enthusiastic or motivated to make radical change to current practice.

1.1. Current practice

It is in the context of popular practice elsewhere (outlined above), and an identified need to improve record-keeping at MDT meetings that this study was undertaken. This research seeks to investigate the data that required to be gathered at MDTMs, the purpose and use of that information and to identify what is desirable and necessary.

Practices have been evolving over recent years at SJH. Before the MDTM became formally established team members took personal notes for later reference. Once hospital policy declared the MDTM as central to clinical practice it became necessary to generate a formal record of the discussion for inclusion in the patients paper chart. Each team developed a paper form to be completed and filed in the patient's chart for reference. Teams designed forms to suit their individual needs, often colour-coded. Some teams designed highly specified forms with tick boxes for particular items of information such as the TNM stage. Check boxes could be found for T1, T2, T3 and T4, for example, and it was a task assigned to one of the team members that the relevant box would be checked when the decision was made at the MDTM. Some teams choose to have open text boxes to allow free expression of comments related to diagnosis and treatment plan agreed. Thus a minimum dataset emerged for record-keeping at MDTMs.

Since the development of the paper forms, the hospital has been making a transition to an electronic patient record (EPR) system. Although paper charts are still in use, the EPR has become the main repository for all patient results, for ordering procedures such as radiological imaging or specialist consults. It has become necessary for the record of the patient case discussion at the MDTM to be available within the EPR system. Currently, as an interim measure, the paper record from the meeting is scanned into the EPR. Electronic forms are in various stages of development for the electronic recording of specific information into the EPR. For one of the teams this 'form' is complete and data is entered into the EPR by the team leader after the meeting.

It is an objective for the hospital to have a common minimum dataset for all MDTs and that specific team requirements would be facilitated within each MDTM record. For example, the dermatology team would like to incorporate patient images taken in Out-Patient Clinics (OPD), and an accurate smoking history is of great interest to many others.

2. Method

This study is part of a large on-going study with the multidisciplinary teams at SJH, a large tertiary care hospital in Dublin. The results reported here were gathered in questionnaire among all the members of the multidisciplinary teams in the hospital, and from follow-up interviews with a sample of the respondents. To date, over 30 one-to-one interviews, each lasting approximately 1 hour, have been conducted.

The profile of respondents is given in Tables 1 and 2. As well as having a cross-section of specialties, there was also a spread of role within each team. Members of all ranks and experience were included among the respondents.

Table 1. Questionnaire Respondents per MDT and Speciality within the MDT.

MDT		Speciality	
Head, Neck & Thyroid	30	Physician	40
Lung	34	Surgeon	49
Gynaecology	21	Pathologist	12
Breast	28	Radiologist	14
Gastro-Intestinal (GI)	40	Medical Oncologist	11
Lymphoma /Haematology	29	Radiation Oncologist	12
Skin /Dermatology	17	Nurse	22
Urology	25	Speech & Language Therapist	3
		Dietician	1
		Physiotherapist	1
		Medical scientist	2
		Data Manager	5
		Research	1
		Other (admin)	1
		Student	4
Total			178

Table 2. Interviews held with MDT members.

Role /Rank		Function	
Consultant	16	Physician	4
Registrar	2	Surgeon	8
House Officer	1	Pathologist	3
Nurse	6	Radiologist	3
Data Manager	1	Medical Oncologist	3
Student	2	Radiation Oncologist	2
Total interviewed		35	

In questionnaires, team members were asked three questions to identify the information on the important data to have recorded from a case discussion: 1) "list the three most important items of information that you value having available in the current record", 2) "list the next more critical information that you value", and 3) "what information would you *like* to have available?". This allowed a list of priorities to be generated. There was ample space for free text and respondents were encouraged to write freely.

3. Results

A recurring question in this research is "What if it were possible to exchange information, consult records, etc., or if MDT meetings could be conducted via PC from your office, without having the need to be co-located in time and place?" Or "what if the information you want, such as TNM staging, could be made available in the EPR, without the need for a meeting?" Staff are emphatic in their defense of co-located meetings and their importance, which are summarised in Table 3, despite complaints about busy schedules and the fact that there is 'never enough time' [4]. They also recognise that videoconferencing can link people who would not otherwise be able to be present, but say that it is much more preferable to be in physical attendance at the main venue for MDT meetings. They also warn that while a good discussion is invaluable, a bad meeting is a waste of time and may be dangerous. Participants place a high value on the process of discussing patient cases in a methodological way, and having the opportunity to ask questions of their peers. They like to have others' opinion explained and the opportunity to ask questions.

Table 3. Benefits of MDT meetings.

Active discussion with peers
Hearing the opinions /views, of specialist consultants
Hearing opinion from other disciplines
Seeing images and hearing the interpretation explained
Resolving conflicts in data
Integration of Clinical, Radiological and Pathology results
Discussion of treatment options
Agreeing a clear action plan
Ensuring best practice is adhered
On-going learning especially in difficult cases
Meeting fellow team members
'Catching' opportunities to bounce ideas

Issues were reported that affect MDTM performance and revolve around the agenda, the meeting itself and record-keeping, and reported fully in [4]. This paper confines itself to issues concerning record-keeping during case discussions at MDT meetings. It is through such record artefacts that professional collaboration is co-ordinated [1] post-MDTMs.

At interview and in questionnaires, respondents emphasised the importance of records from MDTM discussions. The minimum information needed in an MDTM record is listed in Table 4. Team members were asked to list the most important items that should be available in a record of the discussion. The list of record characteristics was independent of speciality and all teams have similar needs. Some teams have special items that they would like recorded. For example the skin MDT requested photographs of the patient taken in OPD, and the lung and GI teams would like pictures from any endoscopy procedure(s).

Table 4. Minimum data for MDTM record.

	Frequency %
Treatment options /Management Plan	40
Pathology and Radiology Opinion /Report	11
TNM Staging	12
Patient Summary	7
Diagnosis	3
Other comment	27%

It is no surprise that the list of priorities for a meeting record can be linked directly with the outcome of the discussion, or with information such as the TNM disease stage of a cancer case that is established in the course of the discussion (listed in Table 4). However 25% of respondents made comments on items they would like in a record that represent more intangible information. Analysis of these comments betrays underlying issues with respect to meeting records that warrants discussion. The comments can be classified into i) availability of the MDTM record, ii) information on the process of the discussion, iii) patient data, iv) reliability, v) task management tool and iv) governance. These topics will be discussed in the sections that follow. The affordances required of the data are listed in Table 5.

Table 5. MDTM Record Affordances

Need to have a summary of discussion available in EPR
Should be able to gather worklists
Automatic notification response to internal consults
Should be able to gather audit information
Automatic data gathering for National repositories
Summary available for GP or referring doctors

3.1. Availability of the MDTM record

MDT members wish that a typed summary of the discussion be distributed to the team post-MDTM, and also sent to the Referring Clinician with a copy to the General Practitioner. The record should be available in the patient's EPR immediately after the MDTM, and in an audit database.

3.2. MDTM Process Record

MDTs would like more information about the names of people in attendance, their speciality, and names of those who contributed opinion to discussion. The names of the individual radiologists and pathologists who gave opinion is repeatedly raised, as well as the *reason* for, or *aim* of, the discussion. The reasoning behind decisions, particularly when a clinical practice guideline (CPG) is not being adhered to, is considered important. Input from Social Workers, Dieticians, Speech and Language Therapists, Nurses and non-consultant hospital doctors was also suggested to be included. Whether or not the discussion was held in videoconference should be noted. Other process issues include 'more clerical support', 'more time is needed', 'use microphones', 'only discuss cancer cases' were also raised when MDT members were asked about record-keeping practice.

3.3. More Patient Data

Currently patient demographics are included in the paper MDT discussion summary, with the facility for a team to enter a clinical summary. The quality of this summary varies and is dependent on the individual requesting the patient be included on the agenda, and the clinical report to the MDTM. Many people would like this summary to be improved and suggest that data entered before the meeting should provide the basis for the record afterwards (which is currently not the case.) More clinical information is desired such as co-morbidities, family history, previous staging / diagnosis, laboratory results summary, smoking history, photographs, summary of relevant previous investigations and specific tumour site were all listed. The patients psychological status as well as their preferred treatment choices should also be included.

3.4. Data Reliability and Use of Record

The importance of accurate information was repeatedly raised in comments. Having an accurate smoking history, ensuring *precise* patient Medical Record Numbers (MRN), with *precise* specimen or scan details is important, and current records are considered weak in this regard.

The response to questions on the use of records after the meeting are given in Table 6. The results show that although most staff regularly consult MDTM records in patient charts after meetings, many do not bother. For those who do consult the filed record, less than half are confident in what they read. Although some clinical staff currently review old cases that were previously discussed at an MDTM, more would like if they could conduct reviews from time to time. These occasions are usually because of a recollection

of a detail about an old case that may have a bearing on the management of a current case, or for research. These interpretations of the questionnaire responses were borne out in interviews afterwards.

At interview staff are reluctant to criticise their colleagues for inaccuracies in record-keeping. However they are ambivalent about consulting filed records for a number of reasons, and say that they prefer to maintain their personal records for the management of those patients for whom they are responsible. Some report a delay in reports being available in the patient chart. It was also said that it can be difficult at times to see what exactly they have to do in the electronic system, whereas they can maintain a personal list of tasks they need to complete after the MDTM, such as patients to visit, or tests to follow-up. The issue of responsibility was raised too. One said 'I know that I am responsible for this patient and, regardless of what the record says, I need to act in the best interest of the patient'. This comment was made in the context of a potentially unreliable record and the clinician's ultimate responsibility to the patient'.

3.5. Task Management Tool

Several roles at MDTMs will have tasks or responsibilities to follow-up after the meeting and currently these individuals maintain their personal notes for these tasks. Nurses, for example, may have to contact a patient to discuss aspects of their proposed therapy. Or an appointment may need to be scheduled for a radiology scan or biopsy. For senior members of the team, they need to know that the task is being undertaken by the appropriate person, and also that the task is satisfactorily completed within an appropriate time frame. Teams ask that precise details need to be stated, such as 'to be assessed by medical oncology for suitability for [*treatment*] ', or 'surgeon to discuss option of [*procedure*] with patient', or 'check if candidate for surgery'. A check box for surgery such as "☐ Surgery " is not considered sufficient. Staff would like if precise details of chemotherapy /radiation therapy regimens proposed are recorded.

3.6. Governance

Signatures and the printed name of the person responsible for an individual record was raised by several. 'Who' does 'what' by 'when' as well as feedback, or follow-up information is a concern. For discussions held in videoconference, current practice varies among teams. As a rule, the person responsible for the patient is charged with responsibility for the record. However those giving opinion who do not control the record have a concern that they will be understood as they intended, and that their opinion is recorded

correctly. The hospital has a responsibility to ensure that MDTs are functioning to standards, that CPGs are followed appropriately, that risks are minimised and patient safety is maintained. When decisions do not adhere to accepted best practice, the basis for the deviation should be recorded.

3.7. Solutions

Having a reliable record of the patient case discussion that will be available in the electronic patient record (EPR) is a priority for MDTs. Such a record is also required to serve clinical audit and quality management functions as well as providing information for national repositories such as the National Cancer Registry and Department of Health statistics. MDTMs are identified as useful fora for gathering information for a range of purposes that would otherwise need to be gathered through labor intensive processes.

Information for inclusion in the record could be validated is information were to be entered in real time at the meeting (such as the practice described in [5]). However, staff demonstrate a reluctance to implement such as system. The most articulated reason for the reluctance is the extra time anticipated that such practice would take at a meeting. It is anticipated that more time would be needed and that 'there isn't enough time, as it is'. Several draw attention of process information that should be included, and others that they will maintain their personal notes regardless. A less articulated reason appears to have a growing support, namely the medico-legal implications and responsibility which brings to light yet another problem for the MDT, namely, waiting lists and resource constraints.

3.8. Waiting Lists & Resource Constraints

When MDTs make a recommendation or a decision to undertake a procedure, it is made in the context of the biological nature of the disease, CPGs and also in the context of other work. In the current economic climate, waiting lists are acceptable, depending on the nature of the problem. For patients with a disease that has little impact on their quality of life, a waiting list may be relatively unimportant. But for the most patients, the earlier diagnosis is established and treatment commenced the better the outcome for the patient. It is not uncommon for a decision at an MDTM to discussion to run as follows: *"So, if we rule out secondaries and confirm that this is a T1 we're dealing with, we can resect this tumour easily. If, however we find secondaries in the brain, there is little we can do with this type of tumour . . . the prospects are not good . . . we will need to send him for palliative care. So - we'll get a* [radiology] *scan and review him. Hopefully he'll be good for surgery."*

In such a case a note is taken to order the radiology scan and the intention is to review the patient afterwards. After the MDTM the scan is ordered and the doctor meets the patient in OPD to discuss the plan. On meeting the patient a rapid deterioration in the patient's condition is evident. There is a waiting list for the scan and the only chance this patient has is to have immediate surgery. In such cases the surgeon will discuss the situation with the patient and may decide (with the patient) to override the advice of the MDT meeting by proceeding to immediate surgery.

Another scenario from an MDTM might be a decision to proceed to surgery followed by chemotherapy, on the understanding that surgery would be conducted without delay. It may happen that surgery is cancelled because of a bed shortage and the decision will need to be revised. Delays in having to have an MDT re-review these sorts of decisions are known [2] and it may be decided (against the advice of the MDTM) to give some chemotherapy to the patient while waiting for surgery.

These scenarios remind us of the medico-legal and ethical dimensions in the MDT process. These sorts of dilemmas explain why many Consultants prefer a policy of having less prescriptive, rather than more prescriptive, records and say 'the less said, the better'. Thus a dichotomy emerges between those who want detailed prescriptive instructions on the post-MDTM management of a case, and those who believe that a highly prescribed decision is unhelpful. This dichotomy also explains some of the failure in implementing satisfactory record keeping to date, and may contribute to the apparent lack of appetite for any audiovisual recordings at MDTM.

If data on waiting lists for procedures and beds were to be made available during the MDTM discussion, then the decision could be examined in the context of resources available rather than solely on the basis of the biology of the disease and patient interests. While the ethics of medical decisions being influenced by resources in healthcare is distasteful, the knowledge of the resource limitations when making decisions may influence policy to be developed or refined and resources reallocated.

An MDTM discussion is a 'snapshot in time' of a patient's health status. While staff want it to be as complete as possible for that point in time, and many want clear instructions for tasks and patient management, they also want flexibility to be able to revise the plan in the light of new information, and not to be hidebound by the MDT decision.

4. Conclusions

As the MDTM becomes a more important co-ordinating mechanism in medical work, electronic records of the MDTM have become a focal point of interest for those developing EPR systems. The MDTM discussion record is an opportunity to build a multimodal 'snapshot summary' at a point in time. This snapshot would give the clear di-

Table 6. Usage of existing MDTM records.

	Strongly Disagree	Frequency %			Strongly Agree
		Disagree	Neutral	Agree	
'I have a concern about record keeping for cases discussed in teleconference'	2.2	14.0	39.3	32.6	7.9
'I regularly consult outcome records in patient charts outside of MDT meetings'	6.7	22.5	15.2	36.5	16.9
'I am always confident of the statements that I read in the MDT outcome sheet'	3.4	16.9	25.8	42.1	6.2
'I currently review old cases that were previously discussed at an MDTM'	6.2	19.1	33.1	32.6	5.1
'I would like if I could review cases that were discussed at an MDTM in the past'	2.2	6.7	39.3	35.4	10.7

agnosis, and basis of the decision (i.e. summary test results that were used). The images on which the radiology and pathology opinion was based would ideally be included, as well as pictures of relevant endoscopy or surgical findings. The patients performance status and co-morbidities would also be recorded as well as relevant family or previous history and the patients psychological status. This snapshot would facilitate relatively easy review at later times, and help the team develop information repositories, a foundation for evidence-based practice.

The management plans agreed at MDTM should be clear, and available to all who are involved in the patient's care, as well as information on those who agreed the decision and those responsible for its execution. Worklists for MDT roles can be generated from the MDTM record and feedback on the successful completion (or not) of those tasks should be facilitated.

Provision and support of personal record keeping should be considered. If a shared record were to be generated, publicly validated, with the facility for an individual to add personal notes on their personal device and generate 'to do' lists, this would represent an ideal solution. Prototypes of this proposed solution will be evaluated in further research.

While responsibilities need to be articulated and individuals need to be accountable, the limitations of the record need to be acknowledged too. When new information is made available post-MDTM, that undermines the MDT decision there should be mechanisms for recording or revising the decision without causing undue delays for the patient.

In this paper we have drawn attention to some of the complexities underlying record-keeping at MDTMs. It is relatively straightforward to identify individual data items to be recorded. When the multitude of roles and functions that the record needs to support, as well as the medicolegal issues and ethical concerns are taken into account, the multi-dimensional nature of the problem of record-keeping becomes is more revealed.

Acknowledgments

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