

# Improving the Efficiency of Breast Multidisciplinary Team Meetings

## A Toolkit for Breast Services



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# Foreword

Care by a multidisciplinary team (MDT) is regarded as the gold standard for patients with cancer. Routine review of care of all breast cancer patients at a multidisciplinary team meeting (MDTM) has been the established standard of care in the UK for over twenty years.

This has become increasingly difficult to deliver as the number and complexity of breast cancer case discussions has grown. As a result, many breast MDTMs have become increasingly bureaucratic and process driven, with limited opportunity for clinical teams to have meaningful discussion of more complex cases.

This problem has been magnified by workforce issues in disciplines that are key to the delivery of multidisciplinary breast care, in particular pathology and radiology. It is clear that action is urgently required to improve the functionality and outputs of some MDTMs and to maximise existing resources.

The disciplines involved in delivering breast MDT care have collaborated in developing this Toolkit that it is hoped will prove useful to clinicians looking to maximise the efficiency of their MDTMs.

It has been assembled using:

- existing evidence and guidance relating to MDTMs
- from the ideas of national leaders of the different disciplines involved in breast care
- from examples of effective changes inputted by individual breast MDTs

The Toolkit will be a dynamic resource for breast MDTs that will be regularly updated as new developments, guidance and examples of changes in practice arise.

It will be hosted on the Association of Breast Surgery website:

<https://associationofbreastsurgery.org.uk/professionals/clinical/breast-mdtm-toolkit/>

It will be modified to a more user friendly format, breaking the Toolkit down into topic sections that can be easily updated.

Individuals and Breast MDTs are encouraged to submit examples of changes that they have implemented that have improved the efficiency and/or quality of their MDTMs by email to: [mdtmtoolkit@gmail.com](mailto:mdtmtoolkit@gmail.com)

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# Background

## The Multidisciplinary Team

The multidisciplinary team (MDT) has been defined by the Department of Health as a 'group of people of different health care disciplines, which meets together at a given time (whether physically in one place, or by video or teleconferencing) to discuss a given patient and who are each able to contribute independently to the diagnostic and treatment decisions about the patient'<sup>1</sup>.

## The historical development of the Breast MDT

The publication of the Forrest Report<sup>2</sup> in 1986 led to the commencement of the NHS Breast Screening Programme (NHSBSP) in the late 1980s. The report recommended that 'a skilled multidisciplinary team (MDT) was an essential prerequisite of a screening service for breast cancer'. The introduction of the NHSBSP led to the development of a nationwide network of teams of designated breast specialists, and the widespread adoption of triple assessment for diagnosis in breast screening assessment. There was a requirement for regular MDT meetings (MDTMs) to be held to discuss the concordance of screening assessment findings to ensure accurate diagnosis, and for planning of breast cancer management.

At the time, this organised multidisciplinary approach to screen-detected disease contrasted sharply with the absence of an equivalent approach to patients presenting with breast symptoms. Multidisciplinary breast care gradually spread to symptomatic breast services and the triple assessment process was widely introduced in symptomatic breast clinics by the mid-1990s. The MDT approach also started to be adopted by other tumour sites.

In 1995, the Chief Medical Officers of England and Wales, formalised this multidisciplinary model of cancer care in the Calman-Hine report: A Policy for Commissioning Cancer Services<sup>3</sup>, with equivalents in Scotland and Northern Ireland.

There followed the publication of tumour site specific improving outcomes guidance, providing detailed recommendations for each of the main types of cancer. The first breast cancer guidance was published in 1996<sup>4</sup>, setting out the nature and roles expected of multidisciplinary breast cancer care teams. When breast cancer was diagnosed it became a requirement to discuss and plan management at MDTMs, mandating the additional input of clinical and medical oncologists.

Recognising the increasing complexity of cancer diagnosis and treatment, all subsequent cancer policy in the UK has emphasised the importance of specialist multidisciplinary care provision for cancer patients<sup>5</sup>.

MDT management has now become the established model of cancer care worldwide<sup>6</sup> and is fundamental to the delivery of high-quality breast care in the UK.

The principle of MDT care and regular MDTMs is sound: despite a limited evidence base regarding improvements in outcomes through MDT working and MDTMs it seems likely that the impressive reductions in mortality, improvements in outcomes and patient experience over the last 3 decades may be as much due to effective MDT care (and MDTMs) as new treatments.

There seems to be a universal acknowledgement that over and above the perceived MDTM primary function of case review, discussion and treatment planning, MDTMs also have secondary benefits including:

- Team learning and development,
- Team communication and relationship building within and between different professional groups involved in patient care,
- Improving operational efficiency of the team through review, audit and service evaluation,
- Education and learning opportunities particularly for junior staff,
- Validation of accuracy of data collection,
- Standard compliance monitoring, and
- Enhanced accrual into clinical trials.

## The need for change

MDTMs have become a victim of their own success and the expectation of what can be delivered by the MDTM in the limited time available has become unrealistic. As the population ages, cancer care has become more complex requiring more sophisticated MDT discussion. This is on a background of steadily increasing workload and time pressures generally and in breast cancer specifically<sup>7,8</sup> as a result of rising cancer incidence worldwide<sup>9,10</sup>, financial pressures on healthcare<sup>10,11</sup> and severe staff shortages<sup>12</sup>. The forum for treatment planning (i.e., the MDTM), have increasingly become focused on the process of care (documentation, standard compliance monitoring and data collection), rather than what they were set up to achieve: the opportunity for the clinical team to meet to review cases.

Consequently, MDTMs can be bureaucratic, unwieldy, and time consuming. Increasingly complex cases necessitating detailed MDT discussions may be subsumed by process requirements. This diminishes the value of the MDTM for all patients and its effectiveness for those that need it the most. The cost effectiveness of the MDTM was questioned in an observational study where only 6% of the clinic decisions were altered by the MDTM discussion, yet meetings cost over 500,000 PAs in staff time<sup>13</sup>.

The future success of breast cancer treatment and outcomes will increasingly require the thoughtful combination and sequencing of multi-modality treatments to harness the benefits and minimise the harms of modern therapies. Consequently, high calibre, focused, timely MDTMs are ever more crucial to future breast care.

## The pathway to change

Multidisciplinary care delivered by teams remains core to specialist cancer services. However, there is a need to address concerns that MDTMs are no longer fit for purpose and need streamlining and re-formatting to re-gain their core clinical function. Any changes made must preserve the quality of care and safety of patients with breast cancer.

**The 2017 Cancer Research UK Report ‘Meeting the patient’s needs: improving the effectiveness of the multidisciplinary meetings in cancer services’<sup>14</sup>** gave a powerful mandate for key stakeholders to re-define what a model MDTM should ‘look-like’. The key findings and recommendations of the report are summarised in Appendix 1.

Following publication of the report the Cancer Transformation Board and Department of Health asked Professor Martin Gore to lead a project whose aim was to transform the working of cancer MDTMs. The aim was to make them more effective and for the reforms to be within the framework set by the recommendations of the 2017 Cancer Research UK Report. This resulted in a **Proposal to Transform MDTMs** (detailed in appendix 2) being circulated that would use the following principles:

- Only patients requiring true multidisciplinary input are to be discussed
- Patients on predetermined agreed algorithms will be recorded and not discussed
- The time all members of the MDT in general and radiologists and pathologists in particular, spend on MDTM's is to be reduced

Whilst supportive of a review of MDTM's to increase efficiency and best utilise available resources, the initial feedback from the disciplines attending breast MDTMs generated a number of concerns and comments:

- All breast cancer patients deserve true prospective multidisciplinary input through discussion at a MDTM. It would not be acceptable for a patient to not be discussed at a MDTM and then retrospectively be found to have had inappropriate care following a retrospective audit.
- There are many good examples of breast MDTs being able to discuss all breast cases efficiently, ensuring good documentation and data collection. A more appropriate approach would be to gain a better understanding of those that function well and spread good practice rather than introduce mandatory selective case discussion.
- The scheduling of attendees from all disciplines, not just pathologists and radiologists, should maximise their involvement and MDTM's should run to time.
- Trusts under financial pressure may see this as an opportunity to cut Consultant PAs and save money, but not re-invest that money to support the additional administrative costs in relation to case categorisation, audit and data collection that will be required by these proposals.
- Unilateral decision making without MDTM discussion increases the risk of an individual clinician providing inappropriate care. A recurring theme in many incidents of substandard patient care is the finding of a clinician working in isolation and not engaging appropriately with MDT colleagues.

**A survey of all clinical groups attending breast MDTMs** was carried out through the relevant specialty associations and societies:

- Association of Breast Pathology: Pathologists
- Association of Breast Surgery: Surgeons and nurses
- British Society of Breast Radiology: Imaging team members
- UK Breast Cancer Group: Oncologists

The results of the surveys carried out in 2018-19 are summarised in appendix 3.

The survey results appeared to confirm that the majority of clinicians in all disciplines involved in breast care saw benefit in discussing the care of breast patients at all key points in the pathway (diagnostic breast biopsy, new cancer diagnosis, post-surgery, at recurrence of breast cancer) at an

MDTM. The survey results suggest that individual disciplines felt that they may not need to be present for all types of case discussion.

Whilst there was some support, there was also uncertainty, about the proposals for MDTM transformation. Of note, those involved most directly in clinical care (surgeons, oncologists and nurses) were less in favour of an algorithmic approach with the exclusion of discussion on some patients, than those with a greater focus on diagnosis (radiologists and pathologists).

## **The development of a Breast MDTM Toolkit**

It is likely to be possible to develop safe and efficient processes to reduce the number of cases requiring formal discussion at breast MDTMs and allow protocolisation. This will require equitable access to administrative and IT resources if there is to be widespread national introduction as well as proof of the value and safety of this approach.

Feedback from 'breast pilot' at Bart's Health in London (see Pre-MDTM Triage Meeting section) suggests that the most significant gain from the 'Triage MDTM' is to remove inappropriately listed cases (e.g. where results are not ready, where the MDTM is being used as a means for double checking results, where full MDT discussion is not required etc.), and that a minority of cases (12%) were suitable for protocolisation.

Nevertheless, it is clear that action is urgently required to improve the functionality and outputs of some MDTMs and to maximise existing resources. A single solution is unlikely to be appropriate for every breast MDTM; these vary in their frequency, caseload, setting (large teaching hospital vs small district general hospital) and model of delivery (single site vs hub and spoke).

The disciplines involved in delivering breast MDT care have collaborated in developing this toolkit that we hope will prove useful to clinicians looking to maximise the efficiency of their MDTMs. It has been assembled using:

- existing evidence and guidance relating to MDTMs
- from the ideas of national leaders of the different disciplines involved in breast care
- from examples of effective changes inputted by individual breast MDTs

# Breast MDTM Toolkit

## How to use the toolkit

Services should use the toolkit, including examples of successful changes made elsewhere, to review the specific needs and workings of their MDTM(s) aiming to improve efficiency.

Breast services will have different starting points in terms of the current efficiency of their MDTM processes. Breast services will also differ in their size and model of delivery. As a result, they will have variable requirements of the Toolkit. Some services may wish to use all sections of the Toolkit to complete a full review of their MDTM processes, others may select only those sections appropriate to their requirements.

Where examples of change that have benefited MDTM efficiency are described there may be value in contacting those services for further details.

As a general principle, where MDTs implement significant changes to their MDTM processes (eg, streamlining) it is essential that those changes are audited and monitored to ensure patient safety.

## Future development of the Toolkit

The Breast MDTM Toolkit is currently presented in a pdf format in order to allow it to be available for immediate viewing on the Association of Breast Surgery website following its' launch and publication at the UK Interdisciplinary Breast Cancer Symposium in Birmingham on 28<sup>th</sup> January 2020.

The link to the Toolkit is:

<https://associationofbreastsurgery.org.uk/professionals/clinical/breast-mdtm-toolkit/>

Links to the ABS website will also be available on the Association of Breast Pathology, British Society of Breast Radiology and UK Breast Cancer Group websites.

The contents of the Toolkit will be broken down into sections that will make it easier to view interactively on the ABS website during February 2020.

This will also allow regular update of the Breast MDTM Toolkit as new developments, guidance and examples of changes in practice arise.

The aim is for this to be an ongoing resource for use by Breast MDTs.

Individuals and Breast MDTs are encouraged to submit examples of changes that they have implemented related to any area covered in this Toolkit that have led to increased efficiency of their MDTMs. Please submit these by email to: [mdtmtoolkit@gmail.com](mailto:mdtmtoolkit@gmail.com)

These emails will be regularly monitored and the Toolkit updated accordingly.

# MDTM Organisation and Logistics

## The Meeting Room

The setting for the MDTM should be an appropriate physical environment to host the anticipated number of attendees. There should be seats for all present with good lines of sight of any projected images. Any team member expected to contribute to the discussions should be easily able to do so. The positioning of microphones at key points in the room (e.g. for the chair, presenting radiologist and pathologist, etc.) can facilitate ease of communication within the meeting room.

Where videoconference facilities are required it is important that the room set up at both the hosting site and any satellite site(s) 'dialling in' facilitates easy communication between them.

## Technology

The MDTM room should have appropriate technology for presenting information (and videoconferencing where required) for viewing by all attendees to allow the efficient running of the meeting. This is likely to include:

- radiology images
- microscopic pathology images
- the locally agreed minimum data set for each patient
- the agreed MDTM outcome record for each patient

Viewing radiology images via videoconference for illustration purposes is accepted practice, but should not be used for diagnosis.

Picture archiving and communication system (PACS) facilities should be available to enable retrieval of relevant prior examinations.

As the NHS moves to electronic patient records (EPR) it is increasingly important to have access to access all relevant IT systems during the MDTM.

Technological issues (e.g. computer system is slow or not working, difficulties connecting with other sites when using videoconferencing, etc.) are often key causes of MDTM inefficiency impeding quality of decision-making and it is important that there is adequate IT support for meetings.

## Administrative Support

The **MDT Co-ordinator** has a key role in facilitating clinically-appropriate and timely pathways for breast patients, including an essential role in co-ordinating the functions of MDTMs.

The MDT Co-ordinator should assist the MDT Lead Clinician and core members of the MDT in planning the scheduling, frequency and format of MDTMs according to local needs.

They should agree local processes that ensure that all relevant breast patients are either discussed at the MDTM or have their management pathway monitored through a streamlining process.

The support of the MDT Co-ordinator (+/- their team) is key before, during, and after the MDTM and this may include:

#### Before

- Compiling the agenda (patient discussion list)
- Circulating the agenda in advance to relevant individuals and having agendas available for MDTM attendees in the meeting room
- Ensuring case notes / electronic patient records are available for all patients to be discussed including those that may be referred to the MDT for “second opinions” from other Trusts
- Co-ordinating download or transfer of required radiology images
- Collection of histology slides and reports
- Pre-populating proformas (patient record of discussion) with known results
- The set up of video-conference links and required IT connections

#### During

- Live recording and input of patient discussion and management plans
- Operation of visual display equipment and video conferencing links
- Prompt the MDT for mandatory data items (e.g. TNM staging and performance status)
- Record attendance at the MDTM

#### After

- Circulate MDTM decision outcomes to an agreed distribution list
- Ensure that a record of the MDTM discussion and management plan is placed in the case notes or electronic patient record of each patient discussed
- Update relevant databases for data collection and for cancer tracking / waiting times monitoring
- Co-ordinating processes that inform GP’s of a patient’s breast cancer diagnosis

#### **Recommendation**

**The MDT Co-ordinator and their team are essential to the safe and efficient running of MDTMs. Appropriate training should be made available to fulfil the functions of the role. There must be adequate cover arrangements in place to fulfil these functions at all MDTMs at times of absence eg, due to leave, etc.**

The individual providing live data entry and documentation of MDT discussion and decisions at the MDTM should have appropriate keyboard, data entry and IT skills to facilitate the smooth and timely progress of the MDTM agenda.

# MDT Leadership and Etiquette

Effective leadership of the breast multidisciplinary team is an important component of a successful breast service. Good leadership in this context should not be confused with being at the top of the hierarchy - it is about providing clear organisational direction and supporting and developing team members.

However, a distinction needs to be made between the role of the Lead Clinician of the breast MDT and the individual(s) chairing the MDTM. These distinct roles may be, but do not necessarily need to be, carried out by the same individual.

The **MDT Lead Clinician** should have a job description outlining their role and responsibilities with appropriate time allocated in their job plan for that purpose. Those responsibilities will include the development and update of MDT clinical guidelines, ensuring mechanisms are in place to support entry of eligible patients into clinical trials, chairing operational meetings of the MDT, representing the MDT at relevant Trust and Cancer Alliance meetings, etc.

They have a key leadership role in overseeing the effective organisation of MDTMs according to local requirements which will include:

- the scheduling, frequency and format of MDTMs
- ensuring the attendance of required core MDT members at MDTMs
- ensuring that there are processes in place for all breast cancer patients to either be discussed at the MDTM or have their management pathway monitored through a streamlining process
- ensuring that there are processes in place for documentation and dissemination of MDTM decisions and appropriate data collection

The role of **Chair of an MDTM** is distinct from that of the MDT Lead Clinician. The primary aim of the role is to facilitate the efficient multidisciplinary discussion of the patients listed for the MDTM. The role of chair can be carried out by any core member of the MDT and does not need to be from a specific discipline. The arrangements for chair of the MDTM should be determined locally.

In smaller services a single designated chair may attend the majority of once weekly MDTMs only requiring cover for periods of leave. In large services with multiple MDTMs spread through the working week it is likely to be impractical for a single individual to chair all MDTMs.

There are a number of different options for chairing MDTMs:

- A single chair co-ordinating the meeting throughout
- A rolling chair through different sections of the meeting
- No formal chair and a process driven sequence of presentation of cases through the meeting
- 

The most appropriate of these options should be agreed according to local MDTM requirements. This is of particular importance for MDTMs involving multiple sites and tele-conferencing.

High-quality chairing skills are vital for good MDTM performance and include:

Time management: it is essential that the MDTM sticks to its allotted time. The chair can facilitate this by keeping the meeting focused and prioritising case discussion where there are more complex cases for discussion.

Facilitating discussion: the chair has an important role in encouraging contributions from all MDTM participants who should be encouraged and feel able to input relevant information to case discussions and constructively express a different opinion.

Conflict management: the inevitable consequence of enabling differing opinions to be expressed is that this can potentially lead to conflict between MDTM attendees. The chair will need skills to facilitate constructive discussion in order to reach a consensus MDT decision.

Organisational: the chair must ensure that following each case discussion there is a clearly documented management plan including potential eligibility for clinical trials. This requires the ability to summarise the MDTM discussions and document an agreed consensus MDT decision.

Leadership training courses are available and may be useful to individuals that regularly chair MDTM's to improve these skills.

### **Leadership and chairing tool: MDT-ATLAS<sup>15</sup>**

MDT-ATLAS is a tool for MDTs that measures leadership and chairing skills in MDTMs. It has been developed and validated with experts and end users to support the assessment and development of MDT leadership, which is central to the running of an effective MDT.

ATLAS can be used as an intervention on its own, or combined with other evidence-based tools to provide a more comprehensive assessment of the performance of an MDT.

The tool uses 12 domains:

- time management
- communication
- encouraging contribution
- ability to summarize
- ensuring all patients have treatment plan
- case prioritisation
- keeping meeting focused
- facilitate discussion
- conflict management
- leadership
- creating good working atmosphere
- recruitment for clinical trials

The **MDT Co-ordinator** has a key leadership role co-ordinating the administrative team to provide the necessary infra-structure to allow the smooth and efficient running of the MDTM and delivery of the required meeting outputs in terms of decision making and data collection. Training may be useful to support these skills when needed.

## **MDT Etiquette**

Whichever model of MDTM chair is used the atmosphere of the meeting and the behaviour of the MDT is important for a successful meeting. This can in part be determined by well organised MDTM processes and participants having clearly defined roles that allow the MDTM to run smoothly within the allotted time.

However, it is also important that there is equality and inclusiveness of participation within the MDTM ensuring that all professional groups feel able and do contribute to the case discussions. This is particularly important in the light of evidence showing that certain disciplines (e.g. CNS) are underrepresented in case discussions, yet they are important for the collective ability to reach a treatment recommendation<sup>16</sup>. The MDTM Chair has an important role in achieving this.

Where there are differing opinions, it should be possible to voice those constructively and there should be agreed processes for reaching consensus decision making.

There is increasing awareness of the unacceptability of bad behaviour including bullying, undermining and harassment in healthcare, which all organisations involved in the development of this Toolkit endorse. The Association of Breast Surgery has launched its' own campaign #CoreItOut – tackling undermining and bullying in the NHS.

A code of conduct, that MDT members sign up to, can be helpful in achieving appropriate MDT etiquette.

This can also include more practical arrangements such as agreed policies to avoid disruption of MDTMs e.g. mobile phones being turned off or put in silent mode, muting microphones during videoconferences to avoid unnecessary background noise, etc.

# MDTM Scheduling and Attendance

## **Recommendation**

**The number of MDTMs per week, their length and timing, their format, the number of cases to be discussed, and those expected to attend should all be determined locally according to the needs and resources of the individual breast service**

The local requirements will be determined by a number of factors which will include the size of breast service, the setting (large teaching hospital versus smaller district general hospital), and the number of staff in each discipline participating in the breast MDTM.

The following should be taken into account when planning local needs:

### Meeting duration

Careful planning is required to ensure that the duration of the MDTM is appropriate for the anticipated number and complexity of cases to be discussed.

The chair of the MDTM has a key role in ensuring that the MDTM proceeds at an appropriate pace to finished at the scheduled time by keeping the meeting focused and prioritising cases for more detailed discussion.

There is no ideal MDTM time duration but there is evidence that the quality of MDT decision making is affected by fatigue due to sequential case review over often prolonged periods of time<sup>17</sup>.

For this reason, MDTMs of long duration should be avoided. Options to achieve this include:

- the introduction of multiple shorter MDTMs
- streamlining or the introduction of a pre-MDTM triage meeting to reduce case load
- scheduling a short (10 minutes) break within a longer meeting, if that is the only feasible option<sup>17</sup>
- scheduling the attendance of participants by discipline to relevant sections of the MDTM

### Breast MDTM attendance and quoracy requirements

The core membership requirements for breast MDTs and their defined roles and responsibilities have been defined and regularly updated in UK cancer guidance<sup>18</sup>.

#### ***Core membership***

- 2 designated breast surgeons
- 2 imaging specialists
- 2 histopathologists
- 2 clinical nurse specialists
- 1 clinical oncologist
- 1 medical oncologist (where the responsibility for chemotherapy is not undertaken by the clinical oncology core member)
- 1 MDT coordinator

Current guidance states that all core members are required to show a personal commitment to attending the MDTM. They are required to attend two thirds (66%) of MDTMs.

A 'quorate breast MDTM' has been defined, where at least the following should be in attendance: 2 designated breast surgeons, 1 imaging specialist, 1 histopathologist, 1 breast nurse specialist, 1 clinical oncologist (+/- 1 medical oncologist), and 1 MDT coordinator.

There is increasing acceptance that precise definitions of 'quoracy' and membership attendance targets are unrealistic. In modern practice they restrict more flexible MDTM working arrangements and as a result they have already been abandoned by many breast MDTs. At a MDTM Streamlining Roundtable event hosted by the Department of Health in April 2019 it was confirmed that attendance and quoracy targets are no longer actively monitored. This allows local MDTs the opportunity to consider the use of more flexible MDTM working arrangements.

## Examples of flexible scheduling and attendance at MDTM's

### Staggered attendance of disciplines and individuals within the same MDTM

The 2019 'Survey of breast multidisciplinary team clinicians regarding MDTMs' confirmed that the majority of clinicians in all disciplines involved in breast care see benefit in discussing the care of breast patients at key points in their pathway. However, it also suggested that individual disciplines feel that they may not need to be present for all types of case discussion.

#### Example: Derby-Burton MDTM (Mark Sibbering)

Dividing the MDTM into defined timetabled sections with differing disciplinary attendance requirements has facilitated individuals being able to contribute to relevant case discussions without having to sit through the entire MDTM.

The MDTM is divided as follows:

- a) Metastatic
- b) Oncology discussion (including diagnostic cases identified for neoadjuvant treatment)
- c) Post-operative
- d) Diagnostic core biopsies
- e) Non-oncology discussion (mainly imaging cases e.g. MRI scans, CT staging)

Oncologists only attend for a) b) c)

Pathologists only attend for b) c) d)

Radiologists, surgeons and nurses are present throughout the meeting, but different individuals are usually timetabled to attend different sections.

## **Splitting a large weekly MDTM into two smaller MDTM's**

### **Timetabling attendance of clinicians**

In moderate to large breast services a single weekly MDTM is likely to require a very long meeting where large numbers of cases are discussed. This will usually require a large number of clinicians to attend many of whom will not significantly contribute to the meeting. In addition, cases that miss the MDTM deadline due to results not being available have to wait a further full week to be discussed which may delay clinical pathways.

#### **Example: Leicester MDTM (Kelly Lambert)**

A large teaching hospital with a breast cancer case load of over 1000 new cases per annum split their once weekly MDTM into two shorter MDTMs a few days apart (Monday and Thursday).

Clinicians and administrative staff were scheduled to attend one of the shorter MDTMs each week. This was a major challenge in terms of reconfiguration of the service and job planning.

However, the change has facilitated a major improvement through a reduction of MDTM caseload at each MDTM, increased attendance from each discipline without increasing the weekly MDTM time of individuals, allowing more flexibility to discuss cases at different points in the week when results are available and so better performance against cancer targets.

Uniform practice is ensured by the MDT lead attending their 'designated' MDT and half of the 'non-designated' MDT meetings and by cross cover of clinicians across the two parts of the MDTM.

The MDT attendance is also staggered to allow efficient use of oncology and radiology time.

## **Streamlining cases using daily pre-clinic core biopsy result MDTM's**

### **Example: Manchester MDTM (Ashu Gandhi & Anthony Maxwell)**

Daily MDTMs are held Monday to Friday between 8-30 and 9-00am prior to clinics.

These are used primarily for discussion of biopsy results from screening assessment and symptomatic clinics. The majority of cases are straightforward and it is possible to formulate clear management plans. The patients are then seen in that morning's clinic for their results.

Two radiologists review the screening assessment images prior to the meeting (taking approximately 15 - 20 minutes) with the symptomatic patients' images reviewed during the meeting.

The MDTM is attended by surgeons, radiologists, pathologists, radiographers, CNSs, research nurses, and the MDT co-ordinator. Oncologists do not routinely attend. Any patients identified as potentially suitable for neoadjuvant treatments and any complex cases are re-discussed at the weekly plenary MDTM with oncologists in attendance. Often staging investigations are requested in the interim.

The outcome from MDT discussion of biopsies from screening patients is documented on a paper proforma and also recorded by a radiologist in a radiology report immediately after the meeting, together with a summary of the imaging and pathology results. This acts as a referral letter to the surgeon for women diagnosed with cancer. The completed paper MDT proforma for the symptomatic patients is scanned into the radiology information system.

The main advantages of these frequent meetings are minimising delays in giving results and taking case load pressure off the once weekly plenary MDTM through streamlining.

## Pre-MDTM Preparation: Case Selection

The workload at breast MDTMs has evolved to include two broad categories of cases:

- Patients having diagnostic tests to confirm or exclude the diagnosis of breast cancer, where predominantly, concordance of triple assessment results is discussed
- Breast cancer patients where care is discussed at key points in the pathway to formulate management plans e.g. initial treatment, post-operative, breast cancer recurrence, etc.

This distinction between those MDT members involved in diagnosis and in treatment should be taken into account in planning cases listed for MDTM discussion and the scheduling of attendees (see MDTM Scheduling and Attendance).

## MDT Guidelines

### Recommendation

**The MDT should have guidelines for clinicians detailing discussion requirements for individual cases. These should identify those cases appropriate for routine listing for the MDTM and the required information for discussion to take place. They should also identify potential cases for any triage or streamlining processes that may be in place where case management can occur without MDTM discussion but is appropriately recorded.**

**Detailed standard operating procedures (SOPs) should be agreed to aid administrative staff in implementing these guidelines.**

It is important that members of the MDT have clarity regarding cases appropriate for formal discussion at the MDTM. Meetings can become overloaded with unnecessary discussions that could be managed and outcomes documented efficiently outside of the meeting without requiring formal discussion by the full MDT.

Examples of inappropriate use of MDTM time may include:

- to check the results of normal staging investigations
- for documenting reasons for patient management that differs from a previous MDTM decision (eg, patient medically unfit for surgery, patient declining treatment, etc.)
- for straightforward radiology queries not requiring multidisciplinary input
- to deal with correspondence and queries from GPs or other tumour site MDTs

MDT guidelines detailing cases to be routinely discussed at MDTMs will assist efficient organisation. Placing cases into categories can assist this process e.g. pre-operative core biopsies, post-operative cases, imaging discussion cases, metastatic breast cancer cases, etc.

Meeting preparation and discussion time can also be wasted by listing cases where some or all of the results required for meaningful discussion are not available. There should be an agreed process for omitting patients from the MDTM discussion list prior to the meeting when key information is not available (see Pre-MDTM Preparation: Generic).

If new processes are introduced to 'streamline' cases that previously would have had formal discussion at an MDTM, then the MDT should have guidelines that detail responsibility for checking results of investigations and ongoing case management. This is increasingly important in an era of team delivery of breast care where more than one individual from a single discipline may be involved.

## Pre-MDTM Triage Meeting

A Pre-MDTM Triage Meeting can be an effective way of reducing the number of cases requiring formal MDTM discussion. A defined smaller group of MDT clinicians may meet together with the MDT Co-ordinator at an agreed time in advance of the meeting to determine those cases that are to be listed for formal discussion, those that can be managed without formal MDTM discussion and those cases potentially suitable for management by protocolisation (see Standards of Care).

It is essential that there are processes in place for outcomes and decisions made at such a meeting to be documented and communicated to relevant members of the MDT. Where it is decided that a patient does not require MDTM discussion there should be clear documentation of any required actions and who is responsible for them.

Some MDTs have specific processes in place solely for review of concordant benign biopsy results which are still listed but not discussed at the MDTM unless a clinician, radiologist or pathologist requests discussion for a specified reason. Clear documentation of both processes and outcomes is again essential to such a process.

### Example of a Pre-MDTM Triage Meeting

#### Example: Bart's Health, London (Virginia Wolstenholme)

Bart's Health had two breast MDTMs each week across two sites. Caseloads in each of the MDTMs had been steadily increasing, impacting on workload, MDTM length, time available for individual patient discussions, etc.

One of the MDTMs introduced a pre-MDTM Triage Meeting to discuss pre-operative patients held two days prior to the Main MDTM. The Triage Meeting was attended by a consultant surgeon, a consultant radiologist and a consultant oncologist (or their covers) together with the MDT coordinator and took approximately 90 minutes. This was with a view to reducing the number of cases requiring full discussion at the Main MDTM. Live recording of decision making occurred.

Using the draft MDTM list, patients were triaged to ensure that all relevant information would be available for the Main MDTM. If results were unavailable or it was possible to resolve issues without the need for MDTM discussion this was recorded.

Some patients that fitted into specific protocols and were not listed for discussion at the Main MDTM but included on the MDTM list in a separate section for clarity.

## PROTOCOLS

*T1a/bN0 cancers: Seen on imaging, pathology confirmed, for breast conserving surgery and sentinel node biopsy. Consider clinical trials.*

*NACT: Neoadjuvant chemotherapy*

*Metastatic disease: biopsy to be arranged of suitable site. Staging with CT CAP and bone scan +/- brain imaging. Refer to Metastatic MDTM*

*T4d cancers: Clinical review, pathology confirmed, staging with CT CAP and bone scan. Refer to oncology for primary chemotherapy followed by mastectomy, no reconstruction and axillary node clearance.*

*Cancer recurrence: biopsy to be arranged of suitable site. Staging with CT CAP and bone scan. Refer to surgical team*

A risk assessment was carried out of the new process and monitoring through regular audit was introduced.

### Results of Bart's Health Pilot

<b>REASON TO MOVE OFF MDTM LIST October 2018 - June 2019</b>	<b>NUMBER</b>	<b>%</b>	
<b>PROTOCOLISATION</b>			
T1 N0 pathway	22	3.7	
NACT pathway	28	4.7	
Metastatic pathway	16	2.7	
T4d pathway	4	0.7	
Recurrence pathway	7	1.2	<b>Total 77 / 594 12%</b>
<b>DISCUSSION NOT NECESSARY</b>			
Tests not ready - defer	67	11.3	
Sort via email	33	5.6	
Could make a plan	141	23.7	
Double checking reports	82	13.8	
Other	17	2.9	<b>Total 340 / 594 57%</b>
<b>TOTAL</b>	<b>417 / 594</b>	<b>69%</b>	

On completion of the pilot, the average number of patients on the MDTM list reduced from 89 to 57. This 35% reduction in MDTM list size was achieved through a combination of protocolisation and omitting patients where discussion was either not required or delayed due to non-availability of results.

This change enabled the two MDTMs to be amalgamated and now all Bart's Health cases are triaged under a single MDTM. The benefits have included less time spent in MDTM's, shorter preparation time for radiologists and pathologists, and more MDTM time to discuss complex cases.

# Streamlining MDTMs

In January 2020 NHS England and NHS Improvement issued guidance for Cancer Alliances for 'Streamlining Multi-Disciplinary Team Meetings'<sup>19</sup>.

<https://www.england.nhs.uk/publication/streamlining-mdt-meetings-guidance-cancer-alliances/>

This refers to the process of introducing Standards of Care as a routine part of MDTMs to stratify patient cases into those which require full multidisciplinary discussion in the MDTM, and those cases which can be listed but not discussed in the MDTM, as patient need is met by a Standard of Care.

A **Standard of Care** (SoC) is a point in the pathway of patient management where there is a recognised international, national, regional or local guideline on the intervention(s) that should be made available to a patient.

A process is described for:

- the development and sign off of SoCs by the relevant Cancer Alliance, and the Medical Director and Lead Cancer Clinician at Trust level.
- the introduction of a process for triage agreed at Trust level with roles and responsibilities set out for: referring clinicians, those involved in reviewing cases, and the MDT Chair.
- the introduction of an audit process to ensure that all information is captured and scheduled for review at appropriate intervals

SoCs should focus on those points in the pathway where there is clear clinical consensus on the treatment or care that a patient should receive.

SoCs should be reviewed by Cancer Alliances annually or when there is a change to best practice in national or international guidance or clinical trial findings, whichever comes first. This ensures that they are up to date in relation to the latest guidance, published data and national and international opinion on standards of care.

With the streamlined approach, patients are to be stratified by their consultant, or triage group, at the appropriate point of referral to the MDTM, to either:

Patient on a SoC (no discussion)      **OR**      Patient requires discussion for any given reason

All patients remain accounted for through inclusion on the MDTM list. No patient should be removed from oversight of the MDTM or responsibility of the MDTM.

Patients listed "not for discussion" must have a completed agreed minimum data set.

If there is any doubt, any queries on a patient, or new information becomes available in advance of, at, or after the MDTM then the patient should be discussed at the MDTM; this could include psycho-social needs.

The MDTM should undertake a regular audit of patient cases not discussed in relation to the appropriateness of patients receiving a SoC and their outcome.

## Streamlining workload tool: MDT-MeDiC<sup>20</sup>

MeDiC is an evidence-based and expert-driven tool that gauges the complexity of cancer MDT cases. MeDiC has been developed specifically to help MDTs streamline their processes aiming to improve the efficiency of their MDTMs.

MeDiC can be used to improve cancer MDM-working through case selection and prioritisation. For example, cases can be ordered by complexity with more complex cases receiving MDT discussion, and those that are less complex treated according to pre-defined guidelines and/or discussed in a smaller 'straightforward-case' MDM.

MeDiC has been validated extensively across a number of tumour types including breast cancer and is intended to be used by clinicians, administrators or researchers. MeDiC provides a solution for MDTs looking to streamline their meetings without compromising quality for those cases that benefit from a multidisciplinary approach.

MeDiC can be used in conjunction with other tools, such as MDT-MODE, or MDT-QuIC as part of a comprehensive MDT-streamlining strategy (see MDT Tools).

For further information on scoring, please get in touch with Tayana Soukup: [tayana.soukup@kcl.ac.uk](mailto:tayana.soukup@kcl.ac.uk)

## Pre-MDTM Preparation: Generic

**All of the required information to allow appropriate MDTM discussion of an individual patient should be available**

### **Recommendation**

**There should be an agreed process for omitting patients from the MDTM discussion list prior to the meeting when key information is not available e.g. if pathology results are incomplete/not available or radiology is not yet performed or reported. This could be a pre-MDTM triage meeting.**

Information required for MDTM discussion for an individual patient should include clinical findings, radiological imaging and/or histology results, and other patient-centred information that may alter clinical management such as co-morbidities, history of previous cancer, significant family history of cancer, preferences, psychosocial status, etc.

Many services have agreed timelines for the presentation of pathology results at the MDTM, e.g. core biopsy histology results taken on 'x' date, result will be discussed at 'y' MDTM and the patient will have follow up arranged at 'z' clinic OR operation on date 'a', will have post-operative histology discussed at 'b' MDTM and the patient will have follow up arranged at 'c' clinic.

These timelines can be assumed to apply unless the MDT Coordinator is informed in advance of the meeting, for example by pathology. It is important that these timelines are clinically relevant but achievable within the constraints of the pathology department. A balance also needs to be struck between the timely notification of unreported results, so that alternative arrangements can be made with the patient, and unnecessary postponements causing delays. Of note, specimens (particularly core biopsy samples) can be reported quite close to the time of the MDTM.

If a patient requires multiple results to allow adequate MDTM discussion, all of the results should be available before MDTM discussion to avoid multiple discussions.

Where patients have had care transferred from another health care provider for subsequent management, prior to the MDTM discussion, checks should be made to ensure that all of the relevant information (clinical, imaging, pathology, etc.) has been received and reviewed as appropriate to facilitate full MDTM discussion. Similar checks should be made when intra-hospital MDT referrals are received from other MDTs or clinicians. The specific reason for discussion and supporting information should be provided before the case is discussed.

The use of a proforma to be completed for Breast MDT referrals can be an effective method of checking that all required information is received. This was recommended in the 2017 CRUK report 'Meeting the patient's needs: improving the effectiveness of the multidisciplinary meetings in cancer services'<sup>14</sup>

*"MDTs should require incoming cases and referrals to have a completed proforma with all information ready before discussion at a meeting."*

The proforma could include:

- *Patient demographics*
- *Diagnostic (radiological and pathological) information*
- *Patient fitness and co-morbidities; history of previous malignancies*
- *Results from a Holistic Needs Assessment, if available*
- *The patient's preferences (if known)*
- *The rationale for requiring MDT discussion*

### **Suggestion**

**A proforma for incoming cases and referrals with all information completed before discussion at an MDT meeting can be valuable. This could be a requirement for external referrals and intra-hospital referrals (from another MDTM). It could also be used selectively for more complex or routinely for all case discussions.**

## **Older Patients with Breast Cancer**

Available randomised evidence confirms that use of primary endocrine therapy (PET) in preference to initial surgery in women aged 70+ years with ER+ early invasive breast cancer (EIBC) may lead to inferior outcomes.

There will be instances where diminished patient cognition, medical fitness or the presence of frailty or limited life expectancy, suggest surgery is not the preferred pathway. PET may be appropriate in these circumstances in full transparent discussion with the patient and their family and carers.

Deferred surgery following a defined period of PET for a specific reason such as tumour downstaging, medical optimisation which is protocol based or involvement in approved clinical trials is reasonable, but the use of PET for fit patients or those with relatively minor co-morbidity outside these circumstances is discouraged.

The NABCOP project team has devised a simple, pragmatic single A4 sheet assessment aid for completion in all breast cancer patients 70 years and over which would further inform the patient discussion at the Diagnostic MDT:

<https://www.nabcop.org.uk/resources/fitness-assessment-tool/>

The individual component parts of this form are mandatory, returnable data items on every Trust's COSD returns from May 2020. Each MDT Lead should ensure that there are mechanisms in place for recording of this frailty/mental test assessment form for all relevant patients.

## Cases should be appropriate for MDTM discussion

### Recommendation

**Local breast MDT guidelines should agree which cases are appropriate for MDTM discussion and for the process for a case to be added to the appropriate meeting at the correct time**

The MDTM should not be used as a forum for checking routine results.

A process for updating the recorded MDTM outcomes with additional information where further MDT discussion is not required should be considered to free up MDTM capacity.

## Disciplines require adequate time for agreed pre-MDTM preparation

### Recommendation

**Where there is a requirement for a discipline to carry out agreed pre-MDTM preparation this must be adequately reflected in job plans, in addition to recognition of the time required for MDTM attendance. The time requirement should be determined locally.**

## Pre-MDTM Preparation: Pathology

Where a pathology report will not be completed in time for a scheduled MDTM, a local process should be agreed to inform the MDT Coordinator in a timely fashion so that the patient discussion can be moved to a later MDTM and re-arrangement of patient clinic appointments made. As per NHSBSP guidance, provisional/preliminary and verbal reports should not be issued as routine practice; cases should not be discussed at the MDTM if not complete.

Current Quality Assurance Guidelines for Breast Pathology Services in the NHS Breast Screening Programme<sup>21</sup> state the following

### ***“Multidisciplinary Team Meetings”***

- *Attendance at routine multidisciplinary case management meetings by a pathologist providing a service to the breast screening unit is mandatory.*
- *Pre-MDTM case review practice is variable and should be adapted to local circumstances.*
- *This need not be the sole responsibility of the lead breast pathologist.*
- *There is no mandatory requirement for pathology slide review prior to MDT meetings, but this is regarded as good practice.*
- *The local MDT pathologist is best placed to select any cases they feel may benefit from slide review, based on knowledge of the Unit’s breast screening data (e.g. B3 rates), experience of colleagues (e.g. new consultants or locum staff) and other local circumstances.”*

The same principles should be applied to symptomatic breast cases.

### **Slide Review**

#### **Suggestion**

**There is no mandatory requirement for pathology slide review prior to MDT meetings, but this is regarded as optimum practice. Ideally review of slides and reports should be carried out for all biopsies and resection. Such pre-MDTM slide review does not necessarily require re-examination of every slide from a case. Slide review may be performed at a specified time before the MDTM (individually or as a group) or consistently through the working week.**

### **Showing slides at the MDTM**

#### **Suggestion**

**There is no mandatory requirement for showing histopathology (and cytology) slides at the MDT meetings, but this is regarded as good practice as it facilitates clinical understanding and clinico-pathological correlation.**

Histopathology departments must have adequate resources and support staff to get the cases ready in time for the MDTM, e.g. to retrieve slides from file or arrange for slides to be transported to the MDTM site, arrange cases in the relevant order, etc as well as for the histopathology slide review and attendance at the MDTM. It is the responsibility of the Trust to ensure adequate equipment is available and processes are in place to overcome any logistical challenges, if any, for slide review and for slide demonstration at the MDTM.

## **Pathology Pre-MDTM Preparation Survey**

Pathologists were asked their views (n=144 respondents) via the Association of Breast Pathology, the Royal College of Pathologists and participating pathologists of the national EQA scheme.

The full results are shown in appendix 4. They show that three quarters of pathologists have time allocated in their job plans for MDTM preparation. The vast majority of pathologists (96%) carry out some form of pre-MDTM case review. Three quarters of pathologists would deem it good practice to review both slides and reports if time was made available in their job plan and/or logistical issues were overcome.

## **Pre-MDTM Preparation: Radiology**

The principles for pre-MDTM preparation for radiologists are set out in “Cancer Multidisciplinary Team Meetings – standards for clinical radiologists”<sup>22</sup>.

### **Recommendation**

**There should be prior review of all images by an individual with appropriate expertise and with sufficient time to provide an unhurried professional opinion for the MDTM.**

The exact time requirements will vary according to the number and size of MDTMs per week and should be determined locally.

The MDT coordinator should ensure that all imaging and reports are available to the imaging team preparing the MDTM in advance of the meeting.

For more complex cases (e.g. reviews of treatment response in metastatic disease) the specific reason for discussion and supporting information should be provided to the MDT coordinator in advance of the MDTM. The use of a standard proforma can facilitate this process.

It is unreasonable to expect the imaging team to comment on outside images without sufficient time to review the images and the reports. This should also be the case with videoconference MDTMs where imaging from networked Trusts is routinely reviewed. Ideally diagnostic quality images need to be transferred for review to the ‘hub’ by an agreed deadline prior to the MDTM. Viewing radiology images via teleconference for illustration purposes is accepted practice, but should not be used for diagnosis.

Sometimes patients will be discussed at MDTMs whose images have not been previously available for review. The number of patients to be discussed without prior review must be kept to an absolute minimum.

For patient examinations not reviewed prior to the MDTM, there are 3 possible courses of action for the MDTM radiologist:

- To decline to review the examinations
- To review briefly the examinations and pass comment, but also agree to provide a written summary report to the relevant clinician and the MDTM coordinator at some stage after the MDTM
- To decline to review the examination during the MDTM, but agree to provide a written summary report to the relevant clinician and the MDTM coordinator at some stage after the MDTM
- Postpone discussion of the patient to the next MDTM after review of imaging
- 

The MDTM radiologist should record, at the time of the MDTM, whether they have given an opinion on an examination that substantially differs from the initial report (such as an opinion that affects clinical management). In such circumstances a supplementary report should be issued.

## Pre-MDTM Preparation: Clinical Nurse Specialists

The 2017 CRUK report 'Meeting the patient's needs: improving the effectiveness of the multidisciplinary meetings in cancer services'<sup>14</sup> stresses that information about the patient that does not relate specifically to their cancer is often pivotal in planning their treatment e.g. psychosocial circumstances, information on their comorbidities, their views on treatment options, etc. "This information is often not included in discussions: just 14% of discussions observed involved such information

Interviews of MDT attendees found that Clinical Nurse Specialists (CNS) were generally regarded to be the most qualified to provide this information. However, in over 75% of the meetings observed, nurses did not speak at all. Research has also shown that, in some cases, nurses and other allied health professionals feel marginalised and report that their contribution of patient-centred information is ignored.

The inclusion of patient-centred information can also have a significant impact on clinical care, and taking such information into account in an MDT discussion maximises the chance of the recommendation being appropriate for that patient. Past research has found that 10-15% of MDT recommendations are not implemented, the patient preferring more conservative treatment, since the discussion had not considered information such as their comorbidities or their preferences."

### **Recommendation**

**Local mechanisms should be agreed for Clinical Nurse Specialists (CNS) to be able to input patient centred factors (psychological, social or physical) into the MDTM discussion and decision-making process.**

Relevant patient-centred information that may alter clinical management such as co-morbidities, preferences, psychosocial status, etc. should be available to facilitate MDTM discussion and decision-making. The CNS is often the major source of such information.

Local mechanisms should be in place to ensure that this information is best utilised.

Ideally individual patient information should be prepared in advance of the MDTM and presented by the relevant CNS at the appropriate point in the MDTM. The agreed local process for MDTM case discussion should routinely allow the opportunity for such information to be inputted by a CNS.

However, with the current move to modernise MDTM's (eg, timetabled attendance of individual CNS at MDTMs; no formal MDTM discussion of some patients placed on agreed management pathways, etc.) this may not be practical or feasible.

Local mechanisms should be agreed to ensure input of this information to the relevant MDTM discussion or streamlining decision making process. This should ensure that patients with more complex needs are both identified for MDTM discussion and have the relevant information available for that discussion. Options for achieving this may include the use of a proforma to be completed in advance by the CNS detailing relevant information to be inputted to the decision-making process.

## **Pre-MDTM Preparation: Surgery**

Specific preparation time may be required for surgeons in advance of the MDTM if they take a lead role in presenting cases or participate in a pre-MDTM triage meeting.

However, it is essential that relevant information is clearly documented and available for MDTM discussion and decision making.

This will include:

- Clinical findings and opinion in triple assessment cases.
- Additional relevant information in newly diagnosed cancer cases such as co-morbidities, history of previous cancer, significant family history of cancer, preferences, etc.
- Details of surgical procedures. These may be of particular importance in discussions relating to surgical excision margins. Clear documentation of margins where there is no additional tissue to re-excite aids MDTM discussion.

## **Pre-MDTM Preparation: Oncology**

No specific preparation time is likely to be required for newly diagnosed breast cancer cases or post-operative patients as these will usually be presented to the oncology team by other disciplines for discussion of neoadjuvant or adjuvant treatment options respectively. Newly diagnosed cases of metastatic disease are also most likely to be presented to the oncology team by other disciplines.

The likeliest scenarios where oncologists would need to prepare or provide information in advance of the MDTM are:

- Neoadjuvant treatment cases requiring MDTM discussion and review of imaging to determine post treatment surgical options.
- Metastatic breast cancer cases where discussion is required regarding treatment response. This would usually be selective on request by the oncologist (eg, for equivocal results, difficult treatment decisions, trial assessments, etc.).
- Ad hoc discussion of complex cases.

The specific reason for discussion (eg, specific imaging or histology requiring review) and supporting information should be provided to the MDT coordinator in advance of the MDTM. The use of a standard proforma can facilitate this process.

## **Pre-MDTM Preparation: Research / Trials**

The MDTM is a valuable opportunity to highlight and document the potential eligibility of a patient for available clinical trials.

This can be facilitated by a member of the research team screening the list of patients to be discussed at the MDTM in advance to identify potential patients.

# MDTM Outputs

## Attendance Records

The MDT Co-ordinator or nominated administrative staff should record attendance records of core MDT members that are available for scrutiny at a future date.

## MDTM Documentation

Real time electronic completion of data entry and documentation of MDT discussion / decisions should take place during MDTMs.

This process can be facilitated by:

- Prior entry of available histology and other relevant results in advance of the MDTM by administrative staff that can be validated at the MDTM
- Local modification of data capture software (eg, Infoflex, Somerset) to enable the use of drop-down menus of options to facilitate rapid live data entry
- Projection of the proforma for each patient so that it is visible to all present and can be checked in real time for accuracy of data entry and documentation of discussion and decisions. If this is not possible there should be a named clinical individual responsible for ensuring the information is accurate.
- Clear summarising of the MDTM discussion and any decisions made by the chair to assist the MDT co-ordinator

Relevant results, MDT discussion and decision making should be clearly documented in a **single** document. This can avoid errors due to variation in documentation of decisions when individual disciplines make separate records.

This document should be available to all relevant disciplines of the MDT following the meeting and, if appropriate, circulated to an agreed list of MDT members. A copy of the document should be included in the patient's case notes. Particular attention should be paid to the quality of record keeping (e.g. refrain from excessive use of abbreviations) – this is of paramount importance for audits and quality improvements for MDTs to ensure highest quality of care for patients.

There should be locally agreed processes for this that will vary according to local IT software and the phase of transition from paper case notes to electronic patient records in the Trust. There should also be agreed processes for required actions to be communicated following MDTM discussion to the relevant responsible individual(s).

## Patient Pathways

Relevant databases for cancer tracking / waiting times monitoring should be updated and checked for errors.

## Data Collection

Relevant databases for data collection should be updated (these vary according to locality) and checked for errors.

## GP Communication

The MDTM may be used to co-ordinate processes that inform GP's of a patient's breast cancer diagnosis.

## Data Collection

The MDTM should play an important role in ensuring timely and accurate data validation. Real time electronic completion of data entry at MDTMs displayed for attendees to validate is a major opportunity to maintain data quality. This data is hugely important for auditing services and facilitating information flows to national cancer registries.

In England, MDTs are responsible for coordinating data entry into the Cancer Outcomes and Services Dataset (COSD). This is the primary source of secondary care data for cancer patients in England used by the National Cancer Registration and Analysis Service (NCRAS).

The Scottish Cancer Registry uses electronic registration with data uploaded from hospital systems. Cancer Network Information System Cymru (CaNISC) is an online computer system that collects data from local Health Boards on cancer patients across Wales. The Northern Ireland Cancer Registry collects its' information electronically from hospital systems including the hospital Cancer Patient Pathway System (CaPPS).

It is important that MDTs have a good awareness of the items included in uploaded datasets to ensure that these are recorded as accurately as possible. Whilst they should not be expected to play a significant role in data entry (which is the administrative responsibility of the hospital) clinicians of all disciplines should be interested and involved with the data that is being recorded and uploaded to national datasets on their behalf.

A substantial amount of data that is collected locally through MDT processes and MDTMs is destined for inclusion in national datasets. For example, data submitted to NCRAS and CaNISC in England and Wales are used to provide information for the National Audit of Breast Cancer in Older Patients (NABCOP).

In order to reduce national variation of breast cancer management, some key metrics from the NABCOP data have been shared with the Care Quality Commission (CQC) inspectors, to be reviewed during Trust visits. Clearly, accurate and complete data collection and upload is going to be essential to this process.

The NABCOP Audit has already highlighted a number of routine data items that were not well recorded. These include patient contact with a Clinical Nurse Specialist, WHO Performance Status and TNM staging.

New data items will also be included in the updated COSD dataset (version 9) that comes into effect in April 2020:

- Same day triple assessment
- The Clinical Frailty Scale (CFS)\*
- The Abbreviated Mental Test Score (AMTS)\*
- Three screening clinical questions on whether a patient has any major diseases e.g. dementia, cardio-respiratory disease and cancer\*

\* NABCOP frailty assessment form: <https://www.nabcop.org.uk/resources/fitness-assessment-tool/>

The introduction of processes to streamline cancer cases to Standards of Care will increase the importance of accurate data collection to allow appropriate audit and monitoring. The following

minimum core data set (all items included in COSD) is required in order to list a patient not for discussion at the MDTM:

- Diagnosis date (specify mode of diagnosis);
- Stage (specify investigations);
- Performance status;
- Histopathological and/or cytological diagnosis;
- Co-morbidities;
- Availability of, and suitability for, clinical trial/s;
- Relevant genomic/genetic testing;
- Patient preference (if known) and/or any special circumstances that have been taken into consideration;
- MDTM recommendation and treatment pathway;
- Any additional tumour-specific tests needed to inform diagnosis.

#### **Recommendation**

**MDTs should have local processes in place to prospectively monitor the accuracy and completeness of data collection for mandatory dataset items.**

**This should include regular audits of data quality and presentation of the results to the MDT.**

## Clinical Trials

Clinical trials help to improve the quality and effectiveness of breast care. They are important not only to assess new treatments for breast cancer, but also to evaluate diagnostic and screening tests for breast cancer, methods of cancer risk reduction, breast cancer follow up, etc. They may also allow patients the opportunity to access treatments in development not yet routinely available to all patients.

Good recruitment into clinical trials is therefore essential to improving breast cancer outcomes. Recruitment often relies heavily on the treating clinician being aware of available clinical trials and this can often lead to ad hoc patterns of recruitment.

The MDTM process can be a valuable opportunity to facilitate improved recruitment into clinical trials. This may be achieved in a number of ways:

- By Increasing colleagues' awareness of clinical trials during discussions at the MDTM. One option is to have a list of available trials and their eligibility criteria available at the MDTM for easy reference.
- By formal screening of cases prior to the MDTM to identify patients eligible for available clinical trials. The research team is essential to this process.
- By documenting trial eligibility on MDTM outcome documentation to prompt clinicians to discuss these with their patients. This can also ensure that appropriate trial patient information sheets can be provided by the research team for the relevant patient consultations.

Audits comparing numbers of patients identified as eligible for specific clinical trials and whether the patient was given details of the clinical trial can be useful to facilitate these processes.

## MDT Audits

The 2017 CRUK report 'Meeting the patient's needs: improving the effectiveness of the multidisciplinary meetings in cancer services'<sup>14</sup> made recommendations regarding MDT audit:

*'It is important that MDTs review their own performance and that a culture of continuous improvement is fostered.'*

*Treatment decisions compared to MDTM recommendations should be the focus of annual audits for every MDT.*

*The MDT needs a mortality and morbidity process to ensure all adverse outcomes come back to the whole MDT rather than just being discussed in surgical or oncological silos. The primary time for this to take place should be a quarterly or biannual operational meeting. Time for quarterly operational meetings should be included in attendees' job plans.*

*These meetings could include discussion of:*

- *Analysis of patients under the care of the MDT that have missed waiting times targets*
- *30-day mortality following active treatment*
- *Uptake into clinical trials'*

There are a number of validated tools available that can assist review of MDTM efficiency and MDT performance (see MDTM Audit Tools section).

MDTs should have local processes in place to prospectively monitor the accuracy and completeness of data collection for mandatory dataset items (see Data Collection section). This should include regular audits of data quality and presentation of the results to the MDT.

Regular audit and monitoring is going to be essential as streamlining processes are introduced to improve MDTM efficiency. The MDT should undertake a regular audit of patient cases not discussed at the MDTM in relation to the appropriateness of patients receiving a SoC and their outcome.

For a patient to be assigned for no discussion at the MDTM the following conditions must be met:

- They have been seen, or the clinical circumstances otherwise assessed, by a core MDT member consultant or clinical nurse specialist (CNS)
- The minimum core data requirements have been met
- The pathology has been reported by designated persons for that tumour type
- Images have been reported by designated persons for that tumour type. Where imaging is outsourced, the reporting must be carried out by individuals agreed as suitable by the MDT.
- All other tests relevant to the decision-making have been completed
- Patient preference stated (if known) and any special circumstances have been taken into consideration. Patients should be referred to the MDTM for discussion where preference contradicts a SoC pathway.
- The SoC has been reviewed by an appropriate person or triage group, there is clarity that it is appropriate, and all of the above have been fulfilled.

# MDTM Audit Tools

In addition to **MDT-MeDiC** (see Streamlining MDTMs section) and **MDT-ATLAS** (see MDT Leadership and Etiquette section) there are a number of other validated tools available that can assist review of MDTM efficiency and MDT performance:

## MDT-MODE [decision-making and teamwork]

MDT-MODE is an evidence-based tool for the observational assessment of team work and clinical decision making in cancer MDT meetings. Since its conception in 2010, MDT-MODE has been used to assess the quality of thousands of MDT case discussions, across 6 major tumour types in over 7 countries across the globe.

MDT-MODE is designed to provide a comprehensive and objective assessment of information sharing and team behaviours, and can be used by clinical and nonclinical personnel. MODE generates a composite quality score from 13 different parameters, which can be aggregated across meetings, or compared to other metrics, such as team composition, tumour type, time per case, providing a flexible metric for assessing a number of different key performance indicators.

*Lamb B, Wong H, Vincent C, Green JSA, Sevdalis N. Teamwork and team performance in urological multidisciplinary cancer teams: Development and evaluation of an observational assessment tool. BMJ Qual Saf 2011;20:849-56.*

<https://www.ncbi.nlm.nih.gov/pubmed/21610266>

## MDT-MODE LITE [decision-making and teamwork]

MODE-LITE is a validated observational assessment tool, based on MDT-MODE, that has been streamlined for routine clinical use. The psychometric properties of the 13-domains in MODE have been condensed to 6 domains, and the 5-point likert scale reduced to 3. The result is a tool that retains the robust validity of MODE, but which is quicker and easier to use in a clinical setting.

## MDT-QuIC [discussion checklist]

MDT-QuIC is an evidence-based checklist, designed to be used to support comprehensive, patient-centered decision making in MDT meetings. MDT-QuIC has been validated with experts and end users and has demonstrated improvements in MDT quality and efficiency when used as part of a QI bundle in clinical trials. MDT-QuIC can be used either as a checklist for decision-making, or as an aid memoir for the MDT chairperson. It may also be used to structure referral documentation or the recording of MDT outcomes. This flexible tool can be used in conjunction with other tools, such as MDT-MODE, and MeDiC as part of a comprehensive MDT-streamlining strategy.

*Lamb BW, Sevdalis N, Vincent C, Green JSA. Development and evaluation of a checklist to support decisionmaking in cancer multidisciplinary team meetings: MDT-QuIC. Ann Surg Oncol 2012;19:1759-65.*

<https://www.ncbi.nlm.nih.gov/pubmed/22207050>

## MDT-FIT [self-assessment and quality improvement platform]

MDT-FIT is a web-based platform that enables individual MDTs, Trusts and networks to complete and oversee a three-stage process, incorporating self-assessment against the characteristics of an effective MDT, independent observation (using observational assessment MDT-MOT, and survey MDT-TEAM), anonymised feedback, and facilitated team discussion. The aim is to improve quality of service and benefit patient care. It facilitates team working and quality improvement at low cost and takes little time. It is also repeatable, allows issues to be prioritised and supports 'benchmarking' across teams and services.

MD-FIT allows cancer teams to self-assess against defined standards to improve functionality, and to do this anonymously so people can be empowered and honest about their team and the care they deliver. To identify what teams do well and what needs to be improved. To give teams a toolkit to prioritise areas for improvement, then the framework to develop and effect quality improvement projects. To empower team members to make differences to care with minimum investment in time away from patient care, at minimal cost.

Further information about MDT-FIT can be found here <https://www.mdtfit.co.uk/>

For MDT-TEAM see: Taylor C et al. Developing and testing TEAM (Team Evaluation and Assessment Measure), a self-assessment tool to improve cancer multidisciplinary teamwork. *Ann Surg Oncol.* 2012;19(13):4019–4027.

<https://www.ncbi.nlm.nih.gov/pubmed/22820934>

For MDT-MOT see: Harris J, Taylor C, Sevdalis N, Jalil R, Green JSA. Development and testing of the cancer multidisciplinary team meeting observational tool (MDT-MOT). *Int J Qual Health.* 2016;28(3):332–338.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5892160/>

## MDT-ORAS [observational assessment of meetings]

MDT-ORAS is an observational assessment tool based on the characteristics of effective teamwork presented below and developed by the National Cancer Action Team. MDT meetings are recorded to allow assessment using the tool.

Taylor et al. Measuring the quality of MDT working: an observational approach. *BMC Cancer.* 2012;12:202.

<https://bmccancer.biomedcentral.com/articles/10.1186/1471-2407-12-202>

## Team Climate Inventory [participatory safety, vision and team effectiveness]

Team Climate Inventory is a short questionnaire exploring team vision, participatory safety and team effectiveness. It can be used on its own or in combination with other tools presented here.

Kivimaki M, Elovainio M. A short version of the Team Climate Inventory: development and psychometric properties. *J Occup Organ Psychol* 1999;72:241–6.

<https://onlinelibrary.wiley.com/doi/abs/10.1348/096317999166644>

## Training

The General Medical Council's new curriculum standards have brought about a revision of all postgraduate medical curricula.

The GMC designed its new standards for postgraduate medical curricula Excellence by Design<sup>23</sup> and for Generic Professional Capabilities Framework<sup>24</sup>, published in May 2017, with the aim of helping postgraduate medical training programmes re-focus trainee assessment away from an exhaustive list of individual competencies towards fewer broad capabilities required to practice safely as the day-1 consultant.

This will mean significant changes that will include assessments related to MDT working.

For example, in the new surgical curriculum planned for August 2020, one of the domains is 'Capabilities in leadership and team working', where doctors in training must demonstrate that they can lead and work effectively in teams. Trainees will be assessed against the fundamental capabilities required of consultants in the working week which includes managing multi-disciplinary team (MDT) meetings.

This will require flexibility for MDTMs to be used as a training opportunity, including assessment, for trainees in surgery and other disciplines to experience and demonstrate competence in leadership and team working.

## Education

Attendance at the Breast MDTM has traditionally been an excellent educational opportunity for undergraduate medical and nursing students as well as post-graduate trainees of all disciplines.

The dramatic increase in MDTM workload over time has severely limited the time available for explanation of decision making and demonstration of interesting radiological and pathological images for educational purposes. With improvements in efficiency of MDTMs it is may be possible to improve this aspect of the MDTM in the future.

However, the MDTM remains an excellent forum for updating attendees on new advances in breast care in different disciplines as well providing updates from relevant educational meetings and conferences attended.

# MDTM's in the Independent Sector

## Association of Breast Surgery (ABS) Recommendations for a Breast Multidisciplinary Team Meeting in the Independent Healthcare Sector

### Statement of Purpose

The conviction of Mr Ian Paterson (IP) related to procedures carried out by IP in the independent sector, with many patients not receiving appropriate discussion in a fully functioning breast multidisciplinary team meeting (MDTM). The principles of an effective and functioning MDTM have been defined by the NHS National Cancer Action Team<sup>25</sup>.

ABS noted that there are no current recommendations as to what constitutes a functioning breast specific MDTM in the independent sector. This paper aims to provide such a framework.

### Background

NHS England National Peer Review Programme for Breast Cancer Measures states that “the multidisciplinary team (MDT) is the group of people from different health care disciplines, which meets together at a given time (whether physically in one place, or by video or teleconferencing) to discuss a given patient and who are each able to contribute independently to the diagnostic and treatment decisions about the patient”<sup>26</sup>.

Point 13-2B-101 indicates that a Breast MDT in the NHS should include a single named lead clinician with an agreed list of responsibilities for the breast MDT who should also be a core team member of this MDT. ABS feels that patients in the private sector should not be disadvantaged compared with patients in the NHS and as such, a robust process of MDT working and discussion needs to be in place for these patients.

The MDT should provide the names of core team members and their cover for named roles in the team.

### Recommendations for a Breast MDTM within the private sector

The ABS recognises that many breast surgeons already discuss their private breast patients in a fully functioning NHS Breast MDTM. This may not be possible in all cases. As such, the ABS recommends that if patients are not discussed in an NHS Breast MDTM, an MDTM should be set up in the independent sector.

This MDTM should develop terms of reference and identify a “lead clinician” with responsibility for running of the breast multidisciplinary team meeting. The membership of the private practice breast MDTM should be recorded by the provider hospital and ratified by the Medical Advisory Committee (MAC). There should be an annual local operational policy meeting where MDM attendees discuss and review policies. Minutes of this meeting should be recorded with a copy available for MAC review.

It is expected that regular timetabled meetings will be held in the private sector unless there are no patients to be discussed or if it is a public holiday. The core multidisciplinary team should consist of:

- Two or more designated consultant breast surgeons. Each surgeon should have an annual surgical

workload of at least 30 treated breast cancers. In addition surgeons involved in the NHS BSP should maintain a surgical caseload of at least 10 screen-detected cancers per year, averaged over a three year period. It is expected that surgeons with low caseloads should be able to demonstrate an annual surgical workload of at least 30 treated breast cancers<sup>27</sup>.

- A consultant clinical oncologist
- A consultant medical oncologist (if the responsibility of chemotherapy is not undertaken by the clinical oncology core member)
- A breast imaging specialist;
- A consultant histopathologist (who takes part in the specialist EQA for breast cancer) • A specialist Breast Care Nurse
- MDT co-ordinator/secretary

In order for a meeting to be quorate at least one member from each discipline as listed above should be present either in person or via video link to ensure full multidisciplinary discussion before results are given to the patient. It is expected that all members attend at least 66% of meetings annually.

All patients who have undergone needle biopsy or diagnostic/therapeutic breast surgery (including risk reducing surgery) should be discussed at the MDTM. The only exceptions where breast surgery would not be routinely discussed are delayed breast reconstruction and aesthetic breast surgical procedures (unless malignancy is unexpectedly found in such a patient). Minutes of the private MDTM should be recorded and a copy placed in the patient's private notes.

**Clinical Practice & Standards Committee, Association of Breast Surgery, January 2018**

# Appendix 1

## Cancer Research UK Report (2017):

### ‘Meeting the patient’s needs: improving the effectiveness of the multidisciplinary meetings in cancer services’

#### Key findings

*MDT working is considered the gold standard for cancer patient management<sup>5</sup> bringing continuity of care and reducing variation in access to treatment – and ultimately improving outcomes for patients. However, the UK’s health services have changed significantly since their introduction in 1995.*

*There is now a timely opportunity to review MDTs and consider new ways of working. Although the challenges in each of the four nations are not identical, there is a common theme: a dramatic increase in demand, with only minor increases in capacity. For example, the cancer strategy for England contained recommendations to streamline MDT working.*

*The number of patients to be discussed in MDT meetings has grown significantly, as has the complexity of patients; due to an ageing population and the growing number of treatment options available.*

*However, the way that MDT meetings are organised has not adapted to cope with this increased demand. This has meant that MDT meetings are lasting for several hours, with only a few minutes available to discuss each patient. As a result, these discussions often only involve a few people, and often do not include information such as the patient’s preferences, comorbidities or whether the patient is suitable for a clinical trial.*

*This strain has also impacted how well the MDT can reflect on their decisions, improve their processes and learn.*

*To reflect the changing nature of cancer care and the increased demand for services, there is a need to refresh the format of MDT meetings to make them work more effectively. Recognising this, Cancer Research UK commissioned 2020 Delivery to undertake this project.*

*We do not in any way propose removing or diluting MDT working, or to return to the pre1990s era of patient care being solely managed by one clinician. We aimed instead to suggest streamlining MDT meetings and improve the quality of discussions, especially for the more complex patients who would benefit the most from the input of the full MDT.*

*Solutions will not be the same for every MDT, or every specialty. However, in several areas there is a need for updated guidance developed on a national level.*

*This research should therefore be the start of further, in-depth work to implement these recommendations.*

## **Recommendations:**

### ***There is not enough time to discuss the more complex patients***

*Recommendation 1: The UK's health services should work with NICE and SIGN to identify where a protocolised treatment pathway could be applied and develop a set of treatment recommendations for each of these, to be implemented across the UK. Every Cancer Alliance or devolved cancer network should develop their own approach based on these central recommendations. These treatment protocols should be reviewed regularly.*

*Recommendation 2: MDTs for tumour types for which a protocolised approach has been developed should agree and document their approach to administering protocols. This could include a 'pre-MDT triage meeting'. The implementation and outcomes of these protocols should be audited and reviewed by the full MDT in an operational meeting.*

### ***Current MDT meeting attendance is not optimal***

*Recommendation 3: National requirements for individual minimum attendance should be reviewed and amended where necessary, with an emphasis on ensuring all required specialties are present at a meeting. NHS England should run a series of pilots to determine optimal percentage attendance requirements. The success of these pilots should be evaluated and national guidance changed as appropriate.*

### ***The right information is often not used to inform in discussions***

*Recommendation 4: The UK's health services should lead the development of national proforma templates, to be refined by MDTs. MDTs should require incoming cases and referrals to have a completed proforma with all information ready before discussion at a meeting.*

### ***MDTs are unable to fulfil their secondary roles: in data validation, audit and education***

*Recommendation 5: MDTs should use a database or proforma to enable documentation of recommendations in real time. Ideally this should be projected so that it is visible to team members; if this is not possible there should be a named clinical individual responsible for ensuring the information is accurate. Hospital Trusts and boards should ensure that MDTs are given sufficient resource to do this.*

*Recommendation 6: each MDT should ensure that they have a mortality and morbidity process to ensure all adverse outcomes can be discussed by the whole MDT and learned from, rather than discussed in silos. The primary time for this to take place should be a quarterly or biannual operational meeting. Time for quarterly operational meetings should be included in attendees' job plans. There should be oversight from national MDT assessment programmes.*

## Appendix 2

### Proposal to transform MDTM's

In 2017 the Cancer Transformation Board and Department of Health asked Professor Martin Gore to lead a project whose aim was to transform the working of cancer MDTMs to make them more effective in the light of increasing demands on the service.

The plan was for the reforms to be within the framework set by the recommendations set out in the 2017 Cancer Research UK Report January 2017.

#### Aim of MDTM reform

MDTMs to operate more effectively in relation to:

- time
- human resource
- data collection
- decision making
- audit and bench marking to facilitate improvements in outcomes

#### Principles of the new transformed MDTMs

1. Only patients requiring true multidisciplinary input are to be discussed
2. Patients on predetermined agreed algorithms will be recorded and not discussed
3. The time all members of the MDT in general and radiologists and pathologists in particular, spend on MDTMs is to be reduced

#### MDTM functioning

1. The MDTM is the forum for a clinician to seek *multi-disciplinary/professional* advice and input about patient management including investigation, treatment, follow up, ethical and social matters, comorbidities and practical problems
2. The MDTM must not be used as an 'x-ray meeting' or 'pathology meeting'; images and histopathology are *not* 'to be reviewed' at MDTMs. Separate or sequential meetings must be set aside for such activity
3. Accountability for any intervention remains with the clinician responsible for that intervention
4. MDTM decisions are guidance for the responsible treating clinician
5. Each MDTM will have 2 lists: the first would contain the names of patients who do not require discussion because all their data has been reviewed and is available. These patients will be placed on a pre-agreed, recognised treatment algorithm/pathway. The second list consists of patients who require discussion multi-disciplinary/professional discussion
6. Patients who are not discussed but who are recorded at the MDTM will have their data, treatment and outcome regularly audited for compliance to mandatory dataset collection requirements (local and national)

7. Regular audit will evaluate the acceptability of individual clinician practice in relation to standards of care as determined by MDTM protocols and national guidance
8. The length of MDTMs should have clear limits
9. The time radiologists and pathologists spend in and preparing for, MDTMs must be regularly reviewed. All members of the MDT should engage in ways of reducing the pressure on colleagues in imaging and pathology.
10. Changes in working practice within Departments of Imaging and Pathology need to be explored including making use of resources in a network not simply within an individual Trust, digital pathology, remote reporting etc
11. MDTM processes should be part of a Trust's cancer data collection systems

#### Data and Audit

1. Audit of MDT outcomes and MDTM processes and data will be central to the assurance of standards and mandatory.
2. Audits will be frequent and repetitive in subject matter; frequent data collection lessens the burden reporting as it is less burdensome to collate data for a quarter than a 12-month period. Repeating audits will allow real time assessment of improvements or deteriorations in performance and outcomes within MDTs.
3. Some audit subjects will be compulsory because they will facilitate learning between Alliances, Cancer Centres/Units and MDTs within the same Cancer Centre/Unit.
4. It will necessary to make sure that the processes adopted by and the data generated from the transformed MDTMs are aligned to the requirements of the newly formed Data Coordination Board which has replaced the Standardisation Committee for Care Information at NHS Digital.
5. There is a clear need to transform cancer surgical coding. The new MDTMs will not do this but the systems adopted and data collected will inform future debates on the developments of new systems or the creation of sub-categories within the current systems such as SNOWMED or OPCS.

#### Advantages of the reformed working arrangements for MDTMs

1. Improve patient outcomes by making audit easier and bench marking automatic and potentially in real time
2. Improved effectiveness of the time all members of the MDT in general and radiologists and pathologists in particular, spend on MDTMs
2. Clarification of individual clinician responsibility
3. Clarity of standards of care across England

## Appendix 3

### Breast MDT Disciplines Feedback Surveys (2018-19)

#### Survey of breast multidisciplinary team clinicians regarding MDTMs

An online survey of all clinical groups involved in breast care attending multidisciplinary team meetings (MDTMs) was undertaken. Surgeons (n=154) and nurses (n=80) were contacted via the Association of Breast Surgery; Radiology team members (n=135) via the British Society of Breast Radiology (83% Radiologists); Pathologists (n=144) via the Association of Breast Pathology, the Royal College of Pathologists and participating pathologists of the national EQA scheme. Oncologists (n=202) were approached via the UK Breast Cancer Group (46% Clinical Oncologists, 46% Medical Oncologists).

The results of the survey questions are as follows:

#### Diagnostic biopsies

Should all patients undergoing needle biopsy (either at screening assessment or in a symptomatic clinic) or open surgical diagnostic biopsy be formally discussed at a MDT meeting?

%	Surgeons	Nurses	Radiologists	Pathologists	Oncologists
Yes	73	77	78	67	46
No	24	19	16	28	43
Not certain	3	4	6	5	10

Does your discipline need to be present for that discussion?

%	Surgeons	Nurses	Radiologists	Pathologists	Oncologists
Yes	91	71	90	71	31
No	7	21	16	26	61
Not certain	2	8	4	3	8

#### Commentary

*For all of the disciplines involved in breast cancer diagnosis more than two thirds feel that all diagnostic biopsies should be formally discussed at a MDTM with their discipline represented. The majority of Oncologists (who are not involved in diagnosis per se) who gave an answer think that all diagnostic biopsies should be discussed but that they do not need to be represented at those discussions.*

#### Newly diagnosed cancers

Should all newly diagnosed breast cancer cases be formally discussed at a MDT meeting before commencement of treatment?

%	Surgeons	Nurses	Radiologists	Pathologists	Oncologists
Yes	89	98	90	88	88
No	10	1	6	10	11
Not certain	1	1	4	2	1

Does your discipline need to be present for that discussion?

%	Surgeons	Nurses	Radiologists	Pathologists	Oncologists
<b>Yes</b>	<b>99</b>	<b>100</b>	<b>84</b>	<b>73</b>	<b>63</b>
<b>No</b>	<b>1</b>	<b>-</b>	<b>11</b>	<b>21</b>	<b>36</b>
Not certain	-	-	5	6	1

#### Neoadjuvant Treatment

The Oncologists only were asked a supplementary question:

Does an Oncologist need to be present at a MDTM to discuss newly diagnosed breast cancer cases where neoadjuvant treatment is being considered as an option?

<b>Yes</b>	<b>No</b>
<b>98</b>	<b>2</b>

#### *Commentary*

*All disciplines strongly agree that all newly diagnosed breast cancer cases should be formally discussed at a MDTM. A large majority of all disciplines feel that they should be represented at those discussions. The vast majority of Oncologists feel that they need to be represented if neoadjuvant treatment is being considered as an option.*

#### **Post-operative cancers**

Should all breast cancer cases undergoing surgery be formally discussed at a MDT Meeting following surgery?

%	Surgeons	Nurses	Radiologists	Pathologists	Oncologists
<b>Yes</b>	<b>90</b>	<b>99</b>	<b>92</b>	<b>87</b>	<b>87</b>
<b>No</b>	<b>8</b>	<b>-</b>	<b>4</b>	<b>12</b>	<b>12</b>
Not certain	2	1	4	1	1

Does your discipline need to be present for that discussion?

%	Surgeons	Nurses	Radiologists	Pathologists	Oncologists
<b>Yes</b>	<b>97</b>	<b>100</b>	<b>59</b>	<b>79</b>	<b>85</b>
<b>No</b>	<b>2</b>	<b>-</b>	<b>24</b>	<b>16</b>	<b>15</b>
Not certain	1	-	16	5	-

#### *Commentary*

*All disciplines strongly agree that all breast cancer cases undergoing surgery should be formally discussed at a MDTM following surgery. Whilst a majority are in favour, fewer (59%) Radiologists feel that they need be represented at those discussions compared with other disciplines.*

#### **Breast cancer recurrence**

Should all breast cancer cases of recurrent breast cancer be formally discussed at a MDT Meeting?

%	Surgeons	Nurses	Radiologists	Pathologists	Oncologists
<b>Yes</b>	<b>95</b>	<b>99</b>	<b>88</b>	<b>80</b>	<b>78</b>
<b>No</b>	<b>3</b>	<b>-</b>	<b>3</b>	<b>14</b>	<b>21</b>
Not certain	2	1	9	6	1

Does your discipline need to be present for that discussion?

%	Surgeons	Nurses	Radiologists	Pathologists	Oncologists
<b>Yes</b>	<b>69</b>	<b>98</b>	<b>75</b>	<b>66</b>	<b>93</b>
<b>No</b>	<b>20</b>	<b>1</b>	<b>12</b>	<b>28</b>	<b>5</b>
Not certain	11	1	13	6	1

*Commentary*

*All disciplines strongly agree that all cases of recurrent breast cancer should be formally discussed at a MDTM. At least two thirds of all disciplines feel that they need to be represented at those discussions.*

**Proposal to transform MDTMs**

If the necessary administrative/data support was available would you be in favour of a system where only a small number of selected cases are formally discussed at MDT Meetings, the majority of cases being placed on pre-agreed, recognised treatment algorithms/pathways?

%	Surgeons	Nurses	Radiologists	Pathologists	Oncologists
<b>Yes</b>	<b>38</b>	<b>39</b>	<b>51</b>	<b>61</b>	<b>36</b>
<b>No</b>	<b>44</b>	<b>20</b>	<b>23</b>	<b>26</b>	<b>49</b>
Not certain	18	41	26	13	15

*Commentary*

*More than half of the radiologists and pathologists were in favour of the proposed system. A majority of surgeons and oncologists did not, however, support the proposed system. There were more ‘not certain’ replies (range 13-41%) for this question than for others perhaps indicative of the lack of detail regarding the proposals at the time of the survey.*

**Summary of survey results**

The survey results appear to confirm that the majority of clinicians in all disciplines involved in breast care see benefit in discussing the care of breast patients at all key points in the pathway (diagnostic breast biopsy, new cancer diagnosis, post-surgery, at recurrence of breast cancer) at a MDTM. Some survey results suggest that individual disciplines feel that they may not need to be present for all types of case discussion.

There is some support, but also uncertainty, about the proposals for MDTM transformation/streamlining. Of note, those involved most directly in clinical care (surgeons, oncologists and nurses) are less in favour of an algorithmic approach with the exclusion of discussion on some patients (less than half of those who answered with certainty), than those with a greater focus on diagnosis (i.e. radiologists and pathologists) in whom only about one quarter were opposed to this change. This is not surprising since we currently do not have an evidence-base around streamlining and how it would affect care. Until such evidence-base around streamlining is built, it is expected that those most directly involved in clinical care will approach streamlining with caution.

## Appendix 4

### Pathology Pre-MDTM Preparation Survey

Pathologists were asked their views (n=144 respondents) via the Association of Breast Pathology, the Royal College of Pathologists and participating pathologists of the national EQA scheme.

#### Do Pathologists have time allocated in their job plans for MDTM preparation at your service?

76% Yes                      20% No                      4% Not Certain

#### In your routine MDT preparation, what do you preview?

- 15% Reports only
- 15% Slides and Reports (biopsies only)
- 55% Slides and reports (biopsies and resections)
- 1% Slides and reports (resections only)
- 10% Selectively as requested
- 4% Nothing

#### Why do you NOT preview slides from all cases (both biopsies and resections)?

- 25% Don't think it is necessary
- 62% Don't have time to do this
- 13% Logistical issues (for example, MDT venue at a different site to the lab)

#### If time was made available in your job plan and/or logistical issues overcome (for example with digital pathology), do you think it would be deemed good practice to review both slides and reports?

77% Yes                      33% No

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# References

1. Department of Health. Manual for Cancer Services. London: Department of Health 2004.
2. Forrest APM. Breast Cancer Screening: Report to the Health Ministers of England, Wales and Scotland. London: HM Stationary Office 1986
3. Department of Health. Policy framework for commissioning cancer services: a report by the Expert Advisory Group on Cancer to the Chief Medical Officers of England and Wales. London: HM Stationary Office 1995.
4. Cancer Guidance Sub-Group of the Clinical Outcomes Group. Improving Outcomes in Breast Cancer. London: Department of Health 1996.
5. Independent Cancer Taskforce. Achieving World-Class Cancer Outcomes: A Strategy for England 2015-2020. London: Independent Cancer Taskforce 2015.
6. Saini KS, Taylor C, Ramirez A et al. Role of the multidisciplinary team in breast cancer management: results from a large international survey involving 39 countries. *Ann Oncol* 2012 23(4):853-9.
7. Gandamihardja TAK, Soukup T, McInerney S et al. Analysing Breast Cancer Multidisciplinary Patient Management: A Prospective Observational Evaluation of Team Clinical Decision-Making. *World J Surg*. 2019;43(2):559–566. doi:10.1007/s00268-018-4815-3
8. Soukup T, Gandamihardja T, McInerney S et al. Do multidisciplinary cancer care teams suffer decision-making fatigue: an observational, longitudinal team improvement study. *BMJ Open* 2019;9:e027303. doi: 10.1136/bmjopen-2018-027303
9. Mistry M, Parkin D M, Ahmad A S et al. Cancer incidence in the UK: projections to the year 2030. *Br. J. Cancer*. 2011;105, 1795–1803. doi: 10.1038/bjc.2011.430
10. World Health Organization. World Cancer Report 2014. Lyon: International Agency for Research on Cancer 2014.
11. NHS England. Everyone Counts: Planning for Patients 2014/2015 to 2018/2019. England: NHS England 2014.
12. NHS Improvement. Evidence from NHS Improvement on Clinical Staff Shortages: A Workforce Analysis. London: NHS Improvement 2016.
13. De Ieso PB, Coward JJ, Letsa I et al. A study of the decision outcomes and financial costs of multidisciplinary team meetings (MDMs) in oncology. *Br J Cancer*. 2013;109(9):2295-2300.
14. Cancer Research UK. Improving the effectiveness of multidisciplinary team meetings in cancer services. London: Cancer Research UK 2017.
15. Rozh J, Soukup T, Akhter W et al. Quality of leadership in multidisciplinary cancer tumor boards: Development and evaluation of a leadership assessment instrument (ATLAS). *World J Urol* 2018;36(7):1031-1038.
16. Soukup T, Petrides KV, Lamb BW et al. The anatomy of clinical decision-making in multidisciplinary cancer meetings A cross-sectional observational study of teams in a natural context. *Medicine* 2016;95(24), e3885.
17. Soukup T, Gandamihardja TAK, McInerney S, et al. Do multidisciplinary cancer care teams suffer decision-making fatigue: an observational, longitudinal team improvement study. *BMJ Open* 2018;9:e027303.
18. Department of Health. Manual for Cancer Services. London: Department of Health 2004.
19. NHS England and NHS Improvement. Streamlining Multi-Disciplinary Team Meetings – Guidance for Cancer Alliances. London: NHS England and NHS Improvement 2020.
20. Soukup T, Morby A, Lamb BW et al. A measure of case complexity for streamlining workflow in cancer multidisciplinary team meetings: mixed methods development and early validation of the MeDiC instrument. *Cancer Medicine* 2020 [in press]. Preprint available here: <https://psyarxiv.com/qzwf8/>
21. NHS Breast Screening Programme. Quality Assurance Guidelines for Breast Pathology Services. NHSBSP Publication No 2 2020 [in press].

22. Faculty of Clinical Radiology, The Royal College of Radiologists, Cancer Multidisciplinary Team Meetings – standards for clinical radiologists. Second Edition 2014.
23. General Medical Council. Excellence by Design. GMC 2017.
24. General Medical Council. Generic professional capabilities framework. GMC 2017.
25. National Cancer Action Team. Characteristics of an Effective Multidisciplinary Team (MDT). National Health Service 2010.
26. National Peer Review Programme. Manual for Cancer Services Breast Cancer Measures Version 1.1. NHS England 2013.
27. Association of Breast Surgery. Best Practise Guidelines for Surgeons in Breast Cancer Screening. Association of Breast Surgery