

Structure and functioning of a Multidisciplinary “Heart Team” in patients with coronary artery disease

Rationale and Recommendations from a Joint BCS/BCIS/SCTS Working Group

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1. Executive Summary

1.1 International Guidelines from both the Cardiology and Cardiac Surgery Societies have recommended the utilisation of a Multidisciplinary Team (MDT) approach to assist in guiding the management of patients with coronary artery disease (CAD). Whilst such a process is well recognised as beneficial in other areas of medicine, and also incorporated into some elements of current cardiological practice, its routine use in the context of CAD is less established. The functioning of such a “Heart Team” varies across the UK as does its composition, frequency and the type of cases discussed.

1.2 It is the intention of this document to provide guidance as to the essential components of a Heart Team in terms of how it should be structured and how it should function. This includes its attendance, scheduling and frequency as well as the type of cases to be discussed and the minimum data to be presented. Importantly, it also addresses the required managerial, administrative and technological support, systems of documentation, feedback and audit, and the degree and timing of patient/carer involvement.

1.3 It is acknowledged that working environments will differ; surgical as opposed to non-surgical cardiology centres is one such example. It is envisaged therefore that the fundamental components of this document will form a foundation upon which MDT policy for individual units may then be developed. Similarly it is anticipated that it can be used in order to identify any shortfalls in current practices, prompt those initiatives that will deliver improvement and assist to secure the necessary resources that will then allow a robust MDT process to be established.

2. Background

2.1 The publication of the NSF for CAD [1] enhanced the identification of patients with coronary disease and allowed more uniform management pathways that resulted in a commensurate increase in those patients suitable for revascularisation. This increase in activity was more pronounced with Percutaneous Coronary Intervention (PCI) compared with Coronary Artery Bypass Grafting (CABG) [2].

2.2 At the same time the medical treatment of CAD was also better defined and further supported by national guidance. Evidence-based medication with anti-platelet therapy, statins, beta-adrenergic antagonists and angiotensin converting enzyme inhibitors, was more consistently applied thereby offering a wider choice of options for patients with CAD, namely optimal medical therapy (OMT), PCI or CABG [3,4].

2.3 During this time there had also emerged a greater focus on surgical outcomes prompted by the Bristol enquiry [5] that led to the publication of individual surgeons' results [6]. The outcomes of individual PCI operators are also now in the public domain [7] and this has highlighted the need for transparency of decision making not only in terms of risk assessment using well established scores, but also with regard to appropriateness.

2.4 An additional factor is the increasing involvement of patients, their family and carers in the process by which any decision about their clinical management is made. Furthermore, patients and carer expectations, and their ability to access information from print media or the Internet, is greater than ever before.

2.5 Hence, an expansion in the volume and choice of treatment options, together with a requirement for transparency in the process that defines appropriate treatment, have led to calls for an MDT approach to guide management of patients with CAD. The Heart Team is included in European and American guidelines on myocardial revascularisation as a class 1C recommendation [3,4].

2.6 The role of the MDT meeting is firmly established in the oncology world [8-11] where it underpins the decision-making process. This approach has however been inconsistently and variably implemented for coronary revascularisation [Appendix 1]. Whilst there is no randomised study demonstrating the benefits of the MDT meeting, a number of observational studies in cancer care do indicate that they facilitate a better co-ordinated and uniform approach to providing optimum treatment.

2.7 Transparency of the decision-making process is paramount. The Heart Team/MDT meeting provides a forum for peer review consultations and ensures that evidence-based, 'best practice' treatment strategies are consistently followed.

3. Introduction and scope of reference

3.1 This Working Group was established acknowledging guidelines produced jointly by the European Society of Cardiology (ESC) and the European Association for Cardiothoracic Surgery (EACTS). Their recommendation was that a multidisciplinary Heart Team should discuss a strategy for myocardial revascularisation in patients with multivessel coronary disease [3].

3.2 The call for wider adoption of an MDT approach has come from a number of sources. Examples include an NCEPOD report that examined deaths following first time, isolated CABG [12] as well as from NICE recommendations for the management of stable angina [13] and the management of acute coronary syndromes [14]. A publication from the ESC has also highlighted significant variation in the application of CABG or PCI when countries are compared with each other as well as within individual countries themselves [15].

3.3 In order to understand the current status of MDT working across the UK, data has been drawn from a dedicated survey undertaken during 2012 [Appendix 1] and presented to a National Meeting [16], and from the National Cardiothoracic services Benchmarking Collaborative (NCBC). Both these sources have indicated variations in current practice. Where relevant, the guidance defined below in this document will refer to these data in order to reflect the degree of variation and so better justify the recommendations made in each of the specific areas covered.

3.4 The composition of this working group draws on representation from the key professional bodies involved (the British Cardiovascular Society, the British Cardiovascular Intervention Society and the Society for Cardiothoracic Surgery). Importantly, it also incorporates the views of patient representatives.

3.5 This document focuses on CAD and the decision-making processes involved in the requirement and modality of any revascularisation strategy. It is recognised that the emergence of other cardiac interventions, particularly related to structural disease, have already prompted the establishment of other specialised MDT processes that are now routine many centres. Thus, although this document focuses on CAD, we acknowledge that a MDT approach is encouraged in many other aspects of current cardiological practice (e.g. TAVI, as well as interventions involving the mitral valve and in Adult Congenital Heart Disease). The principles of this document should also apply to these other MDT processes.

3.6 Any attempt to define recommendations requires a balance to be struck between those that might be regarded as ideal and those that are realistically achievable because of limiting local factors. Financial, logistic, practical or geographical constraints are some examples that can obstruct a unit's ability to adopt guidelines that represent ideal practice. Nevertheless, unless such an ideal is stated it may not be possible for departments to define their own aspirations and seek the necessary support which will allow them to work towards improving practice.

3.7 This document will therefore define those requirements that should be regarded as fundamental components of an MDT process and which centres should seek to adopt initially as a minimum. Additional factors that might constitute ideal practice

are also highlighted in order to allow individual units to further develop their own processes.

4. Patient and carer involvement

4.1 It is the role of the Heart Team to provide a consensus view as to which treatment strategy is superior, this being based on the available evidence as well as the collective experience of individual specialists and their unit generally. By necessity the meeting is a technical one, involving explicit discussions about risk and prognosis.

4.2 How a patient or their representative would be able to contribute to such a forum, is unclear and most would agree that it would be impracticable for the patient or their carer to be present during those discussions.

4.3 Nevertheless, the wishes of the patient need to be accommodated in any decision making process and therefore mechanisms should be in place to allow for the patient to be informed of the MDT recommendation in a manner that allows their wishes to be taken into account.

4.4 As covered later (section 5.7), a Clinician who is familiar with the patient and their wishes, and who can thereby act on their behalf, should present their case to be discussed in the MDT. Once the MDT decision has been reached it should be that individual's responsibility to ensure that the patient is informed.

4.5 Whilst a letter or telephone call might accomplish this, it is probably more expedient to make arrangements for the clinician to see the patient and their carer or family in an outpatient setting. That would not only allow the MDT decision to be summarised in a way that can be understood by all parties, but would also provide the fundamentals of the consenting process that will be required to precede any revascularisation procedure [Appendix1].

4.6 Just as patients referred for CABG are typically seen in an outpatient clinic by the consultant surgeon who will perform the operation, consideration should be made for those referred for PCI to see the interventional cardiologist in a similar setting.

4.7 There will inevitably be cases in which the MDT discussion condenses into a position of equipoise. In such situations it is advised that the options be put to the patient and for patient to choose his/her preferred management plan. Whilst it might be debated as to which individual (surgical, interventional or one with neither expertise) might best present these options, in practice this is unlikely to be of importance. The paramount issue is that any perception of indecision should be avoided. Indeed, such a position should be seen - and expressed - as advantageous in that more than one treatment option is available.

5. Clinical composition, attendance and frequency

5.1 The overarching principles of an MDT meeting are that it is quorate, the frequency is sufficient to meet the demands of - but not so as to impede - the efficient running of a service and that the wishes of the patient are incorporated.

5.2 A robust MDT that seeks to discuss all the issues relevant to the management of patients should comprise a minimum core group of individuals with the necessary range of expertise. Together they should be able to derive a consensus view that has incorporated all the factors required to guide optimum patient management. Thus in addition to cardiac surgeons and interventional cardiologists, there should also be a non-interventional cardiologist. The subspecialty interest of such individuals should not need to be specified, acknowledging that expertise in imaging, heart failure, device therapy or electrophysiology may all add value to discussion around individual patients. This varied expertise in attendance is in keeping with the results of a UK survey that indicated that the majority of current MDT meetings are attended predominantly by consultants in these disciplines [Appendix 1].

5.3 Although there may be some benefit in having members of other medical specialties (e.g. cardiac anaesthetists) and allied healthcare professionals (e.g. nurses) to be present at all the MDT meetings, it is recognised that this may not be practical. However, should the Chair identify such a need then, for example, in order to aid discussion of patients with complex disease, significant co-morbidity or other medical conditions, a cardiac anaesthetist may be asked to attend. Likewise should the nurse be the best patient advocate, he/she should be asked to attend.

5.4 It is to be encouraged that trainees in these core specialties and junior doctors also attend in order to become familiar with the process and derive benefit from its educational value. Other disciplines allied to medicine, e.g. nursing, pharmacy and audit staff, as well as research nurses, should be encouraged to attend given the multidisciplinary scope of the meeting and its potential educational value. Attendance by such colleagues would also enhance data collection for any proposed audit projects as well as recruitment into trials.

5.5 The meeting should be chaired by a consultant. The speciality of the chair should be rotated between surgeons and interventional/non-interventional cardiologists. The function of the chair is to ensure that sufficient time is allocated in which to discuss all cases presented, that all necessary data is available for each case and that discussion is directed towards producing a consensus view. The chair should also ensure that the recommendations of the MDT are documented and that particular issues relevant to that decision are also recorded accurately (see below). It is not the function of the chair to provide any form of "casting vote" in situations of equipoise.

5.6 The frequency and duration of meetings will vary according to local needs and the number and type of cases discussed. Survey and NCBC data suggest that in most centres this is one or two times per week and in each case lasting one to two hours.

5.7 A pivotal attendee at an MDT meeting will be that individual responsible for presenting the data on each of the patients discussed. Whilst in many cases such

information may comprise a routine account of symptoms and the results of investigations, there may also be issues specific to that patient, or patients' own wishes as well as those of their family or carers, which will also have an impact on the MDT decision. Thus in order for the process to truly be able to tailor management decisions to individual patients, someone assuming the role of the "patient's advocate" also needs to be present. In most cases it is anticipated that this would be a member of the clinical team who knows the patient and is responsible for that patient.

6. Facilities and technical considerations

6.1 A room dedicated to the MDT should be provided with adequate seating for all attendees and be sufficiently private in order to allow confidential discussion to take place. Seating should be such as to allow all members to be able to see clearly any data presented on a display screen.

6.2 Facilities should be available to display and view all cardiac imaging modalities such as coronary angiograms, CT, MRI and nuclear scan results and echocardiograms in high quality and sufficient to meet diagnostic medical standards [17]. In addition to the results of current investigations, easy and rapid access to archived images will also be required.

6.3 Acknowledging that patients from remote centres may also be discussed, the ability to transfer and display their images will also be required and access to any electronic reports should also be available.

6.4 These requirements will depend greatly on existing local Information Technology (IT) facilities and support. This support should be readily available during MDT meetings in order to address particular issues as they occur and thereby avoid delaying or postponing meetings.

6.5 IT and audio-visual (AV) expertise will be particularly necessary when meetings involve the active participation of colleagues from remote sites (see below) who are presenting confidential patient data from another, distant referral hospital. Facilities to communicate with MDT members who are off-site and to share information (images and reports) should be established using robust video-conferencing technology.

7. Administration and managerial support

7.1 A dedicated MDT co-ordinator forms an essential component of these meetings and should be present to document the personnel attending, together with the outcome and recommendations reached after discussion in each patient. Issues resulting from detailed or complex discussion may require specific recording and more exact documentation, as directed by the Chair [18].

7.2 In order to cover periods of absence, leave or sickness, two dedicated co-ordinators will be required.

7.3 The MDT co-ordinator should be notified prior to the meeting as to which patients are to be discussed. The coordinator will also ensure that all relevant investigations are available prior to the start of the meeting.

7.4 Patient information, including clinical details and the results of relevant investigations and other data such as risk scores (see below), should be documented on a dedicated MDT proforma made available to the MDT coordinator prior to the meeting. When completed to include the meeting's recommendation, it should then be signed by the Chair and incorporated into the patient's case notes.

7.5 A copy should also be retained by the coordinator in order to enable later auditing of the MDT process. Documentation would be facilitated by the use of a computer database that would allow easier analysis of attendance, frequency, duration and outcome of meetings that would assist in audit, research and the production of annual reports.

7.6 An electronic version of the MDT proforma will also facilitate the subsequent circulation of the MDT discussion and its outcome to all relevant stakeholders such as the patient, the referring Cardiologist, the patient's General Practitioner and the cardiac surgeon.

8. The type and range of cases to be discussed

8.1 Defining which cases should come to a formal MDT meeting is notoriously difficult. Many factors will underlie such a process and their complex interplay means that they cannot all be captured in a list of pragmatic criteria. An ideal might be that all cases, in which the possibility of any form revascularisation is considered, should be discussed in a MDT forum. This policy might be seen as impractical however and in some circumstances might even delay or otherwise jeopardise ideal patient care.

8.2 Some centres are currently working with systems that routinely incorporate ad hoc or follow-on PCI in elective cases undergoing diagnostic angiography. Such an approach has both advantages (e.g. a single patient admission, one arterial puncture and one invasive radiographic procedure), as well as disadvantages (e.g. issues with the validity consenting process prior to the procedure when the exact nature of any intervention is unknown).

8.3 The ESC/EACTS guidelines for myocardial revascularisation refer to cases that should undergo Heart Team discussion and provides a basis for any recommendations. When reviewing these criteria, it is clear that they highlight particularly the presence of obstruction of the left main stem (LMS) or the proximal segment of its left anterior descending (LAD) branch, particularly if this is a component of triple vessel disease. Anatomical patterns of disease in which CABG may confer prognostic advantage will form an important proportion of cases to be discussed [3,4].

8.4 Some patients undergoing investigation with coronary angiography may proceed directly to PCI without formal discussion, so called *ad hoc* or "follow-on" cases. This applies particularly to urgent or emergency situations and is therefore recommended in haemodynamically unstable patients. Examples include addressing the culprit

lesion in patients presenting with acute ST segment elevation myocardial infarction (STEMI). It also applies to non-STEMI patients presenting with an acute coronary syndrome (ACS) and who have stabilised clinically, in which the pattern of coronary disease is not felt to be complex or present high risk for PCI, and does not conform to a combination of disease (described above) and in which CABG should also be considered [3,4].

8.5 An ad hoc approach may also be applied to elective cases with single or double vessel disease acknowledging the guidance above. A decision to proceed to PCI in such cases should take into account the validity of the consenting process and consideration as to whether CABG in such circumstances might confer prognostic - as well as symptomatic - advantage [3, 4]. An explanation for proceeding in such a situation should be documented in the case notes.

8.6 An additional and important aspect of a systematic MDT approach is its value in recruiting patients into research studies. As the number of elective cases has fallen there is less opportunity to consider whether individual cases might be suitable for ongoing trials into revascularisation techniques or modifications of medical therapy. The MDT forum allows such patients to be fully discussed in a forum in which more consideration can be given to recruitment into ongoing research programmes.

9. Minimum data discussed and method of presentation

9.1 Cases should be presented to the MDT by a member of the clinical team who is not only familiar with the patient's clinical and investigational data, but is also aware of - and can represent - the wishes of the patient and his/her family or carers.

9.2 In addition to basic patient demographics, other minimum data should comprise the clinical presentation and severity of symptoms, together with the source of referral. The results of any stress investigations, the coronary anatomy and an assessment of left ventricular performance, are also essential elements [19].

9.3 Associated medical conditions, particularly if they are known to confer additional risk for either PCI or CABG, should be itemised in order to calculate a formal score for either approach. Whilst a number of risk scores are available, individual centres should decide upon which ones they feel should be used for both revascularisation modalities and document them during the MDT meeting. The most commonly used system for CABG in the UK is the modified logistic Euroscore [<http://bluebook.scts.org/>] or Euroscore II [20].

9.4. The SYNTAX score is also being increasingly incorporated into MDT discussion [21]. Whilst this does not quantify procedural risk for PCI it nevertheless represents an individual's burden of disease and therefore a surrogate for the procedural time, contrast volume and number of stents that might be anticipated if PCI were to be recommended. Indeed, high SYNTAX scores are seen as a valuable discriminator in cases in which PCI and CABG are both feasible, and may then sway the consensus view in favour of surgery.

9.5 Where possible, patient data, test results and images should be displayed on a screen of sufficient size and in sufficient quality to enable all attendees to appreciate

the data and thereby be able to properly contribute to the discussion. All relevant information should be made available to the MDT coordinator prior to the meeting either on a hard copy proforma or electronically; in either case this information can then be displayed.

10. MDT considerations and functioning in non-surgical cardiology centres

10.1 Multidisciplinary meetings should occur regularly in both the surgical centre and in each non-surgical cardiology centre within any region. The demand for a regular forum in a non-surgical cardiology centre not only requires a surgeon to travel to that unit, which is time consuming, but also has the disadvantage of involving and therefore relying upon, a single surgeon.

10.2 These constraints can be overcome by teleconferencing facilities, provided the technology is robust, reliable and of high quality. Such facilities exist in the UK and can permit the Heart Team in a surgical centre to involve multiple non-surgical sites at the same time. A virtual MDT in this way can incorporate several members of the surgical centre team. It also allows for the Heart Team to be “attended” by high volume PCI operators from other units, who will have experience in complex cases, and thus make additional contributions to any case discussion.

10.3 Any teleconferencing facilities should support the viewing of multimodality imaging such as angiography, echocardiography and CT/MRI and are preferable if those involved can have “face-to-face” contact.

10.4 Documentation of the decisions made by the Heart Team should be consistent with those made in the surgical centre and be available electronically both locally and in the surgical centre. An effective chair is important at each end to ensure open and democratic engagement. Core membership should be agreed and an audit of attendance should be recorded. There should be a written policy of which cases should be discussed.

11. Timing and integration into job planning

11.1 The MDT forum is a pivotal requirement in the management pathway and is therefore a component of the planned activity that reflects direct patient care. Nevertheless data from a UK survey and from NCBC comparisons suggested that although MDT meetings were held within “office hours” in the majority of units sampled, they were only incorporated into consultant job plans in 60% of respondents [Appendix1].

11.2 Dedicated time should be committed and agreed by managers and Clinical Directors in order for consultant staff to attend a sufficient proportion of MDT meetings and thereby ensure consistency of decision-making.

11.3 It is recognised that some cases may present urgently or as an emergency and require a more rapid discussion that may involve both interventional and surgical input. Most centres can work flexibly and be responsive enough to allow this important process to occur, the nature and results of which should be documented into the case notes.

12. Documentation, feedback and audit of outcomes

12.1 It is a fundamental requirement of this process that the recommendations reached by consensus and after discussion, are documented and signed off by the Chair. This ensures transparency. This record should be filed into the case notes and also if required a copy may be stored for later analysis during audit.

12.2 There will be cases in which the decision-making is not straightforward and in such circumstances the MDT documentation should attempt to capture the essential elements of that discussion in order to further justify any decision reached. The role of the Chair is also important here in guiding the MDT coordinator in documenting the outcome as accurately as is necessary.

12.3 The accurate recording and documentation of discussion will be particularly relevant in complex cases that might present increased risk for either CABG or PCI. Evidence that a preceding discussion has been undertaken amongst a group of specialists, has been comprehensive and has considered all necessary information, will then provide sound justification and support for the intended procedure.

12.4 In addition to making recommendations regarding the requirement and mode of revascularisation, the MDT should also provide a view as to whether this should take place during the current hospital admission (if the patient has presented with an acute coronary syndrome), at an early juncture after discharge or as an elective case on a routine waiting list.

12.5 Feedback is important in order to demonstrate that the process is robust. Units should therefore ensure that a system is in place that follows up the cases discussed and correlates their eventual management with original MDT recommendation. Any aberration from the original outcome should be brought back to the MDT for discussion [22]. In addition there should be a system in place that reviews those patients undergoing either PCI or CABG without MDT discussion in order to ensure that this was appropriate. Such processes can provide educational value as well as informing any future decisions in similar patients.

12.6 Some units have tested the reproducibility of the MDT using the re-presentation of cases already discussed to examine whether the Heart Team outcome then differs from the original recommendations [19]. Whilst this is an area of research interest, there is data to suggest that a proportion of outcomes are indeed different. This is to be expected given the dynamics of group discussion and the variability in attendance. It is usually in cases in which there is genuine equipoise and in which more than one management plan would be acceptable. Whether such an approach, if routinely adopted, may help to validate an individual unit's MDT process, remains to be seen.

12.7 It is acknowledged that there may be instances where the Clinician delivering the final decision of the MDT (e.g. PCI or CABG) may not have been part of the MDT discussion and does not share the MDT decision. In such instances, this should be documented in the patient's medical records and the patient re-discussed at the earliest convenient MDT meeting to avoid delays in treatment.

12.8 Likewise, it may be that a patient may not wish to proceed with the MDT recommendation. In such cases, the reasons for aberration should be documented. Ideally, the MDT should be updated at the earliest appropriate opportunity of this change in decision.

12.9 It is acceptable that the MDT documentation processes (referral, MDT discussion, MDT decision and decision enactment) is done electronically if available at local Trust level.

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Summary of Recommendations

1. The patient's presence at the MDT meeting may be impracticable. Thus a Clinician should attend who is familiar with the case and is able to represent the patient's best interests and any declared wishes.
2. Facilitated by the coordinator, it should be that clinician's responsibility to ensure that the patient is advised of the MDT's recommendations.
3. In elective cases, that transfer of information should be undertaken in an outpatient setting which will also present an opportunity to initiate the consenting process.
4. In cases of equipoise, when the evidence for one management strategy is balanced by that for another, this should be discussed with the patient in order to gauge their own preference. A Clinician of any of the specialities represented at the MDT should undertake that discussion emphasising the positive aspects of having more than one treatment available, rather than giving the impression of clinical indecision.
5. The MDT should be chaired by a consultant and comprise a minimum of an interventional cardiologist, a cardiac surgeon and a non-interventional cardiologist in order to be quorate.
6. A clinical individual who is familiar with the case, and is directly responsible for that patient's care, should present the data related to each patient to be discussed.
7. MDT meetings should be held at least once per week and for a minimum of one hour.
8. MDT meetings should be held in a dedicated room that offers privacy and space for attendees.
9. Patient imaging should be displayed on screens offering diagnostic medical quality and visible to all attendees.
10. IT support should ensure that images from remote centres can also be viewed and that where necessary two-way voice communication with referral units can be accomplished during the meeting. It should be available during the meeting if required in order to deal rapidly with any technical problems.
11. A dedicated MDT coordinator should be present in order to (i) assimilate patient information prior to the MDT meeting, (ii) document attendance, (iii) record recommendations in each case and (iv) facilitate communication of that decision to all relevant parties.
12. In cases in which decision making is not straightforward the essential elements of the discussion should also be recorded.

13. The MDT recommendations, as well as any additional information where relevant, should be recorded by the coordinator and signed by the Chair.
14. Cases undergoing diagnostic angiography, in which revascularisation is considered and in which there is no clinical mandate to proceed directly to PCI, should be discussed in an MDT forum. This applies particularly to cases in which the coronary anatomy might have prognostic significance (i.e. LMS or multivessel disease in which proximal LAD obstruction is a component).
15. Cases that present high risk or complexity for PCI, and in which there is no clinical mandate to proceed, should also be brought to an MDT forum.
16. There will be occasions when clinical circumstances do not allow time for discussion in a formal MDT setting. In such cases ad hoc discussions will take place, the essence and outcome of which should be documented into the case notes.
17. Clinical data, significant co-morbidity and the results of all relevant investigations should be made available to the MDT coordinator prior to the meeting.
18. Patient data should be presented to the MDT by the clinician familiar with the patient and their wishes with regard to possible management plans.
19. A recognised scoring system should be used in evaluating the procedural risk of either CABG or PCI. In addition the SYNTAX score could also be calculated and used in order to inform the discussion as to the burden of disease.
20. The principles of MDT structure and functioning apply to non-surgical cardiology units to the same extent as they do to cardiac surgical centres.
21. MDT meetings should occur with the same frequency and timing in non-surgical centres as in surgical units.
22. In order to ensure that all relevant specialities are represented, clinicians may have to travel between units to attend meetings. If this is considered to be impractical then teleconferencing technology is recommended and should be supported by the respective Trusts.
23. MDT meetings should be scheduled during working hours.
24. Job planning for consultant staff should incorporate their attendance at MDT meetings.
25. The outcome of MDT meetings and their recommendations in each case should be documented and signed by the Chair.
26. In situations in which the discussion is not straightforward those particular elements that have led to the eventual recommendation should also be documented accurately and signed by the Chair. This applies particularly to cases that are judged to be at increased risk for either CABG or PCI.

27. Units should put in place a system in which cases discussed in an MDT are followed up to ascertain whether the recommendations made were carried out. If there is any aberration then the reasons for this should be discussed and documented.

28. In addition to recommending the need and mode of revascularisation, the MDT should also indicate the priority in each case.

29. In instances where there is an aberration from the MDT decision (clinician or patient decision) this should be documented in the patient's medical records and the patient re-discussed at the MDT.

Appendix 1

Results of Heart-Team process within the UK

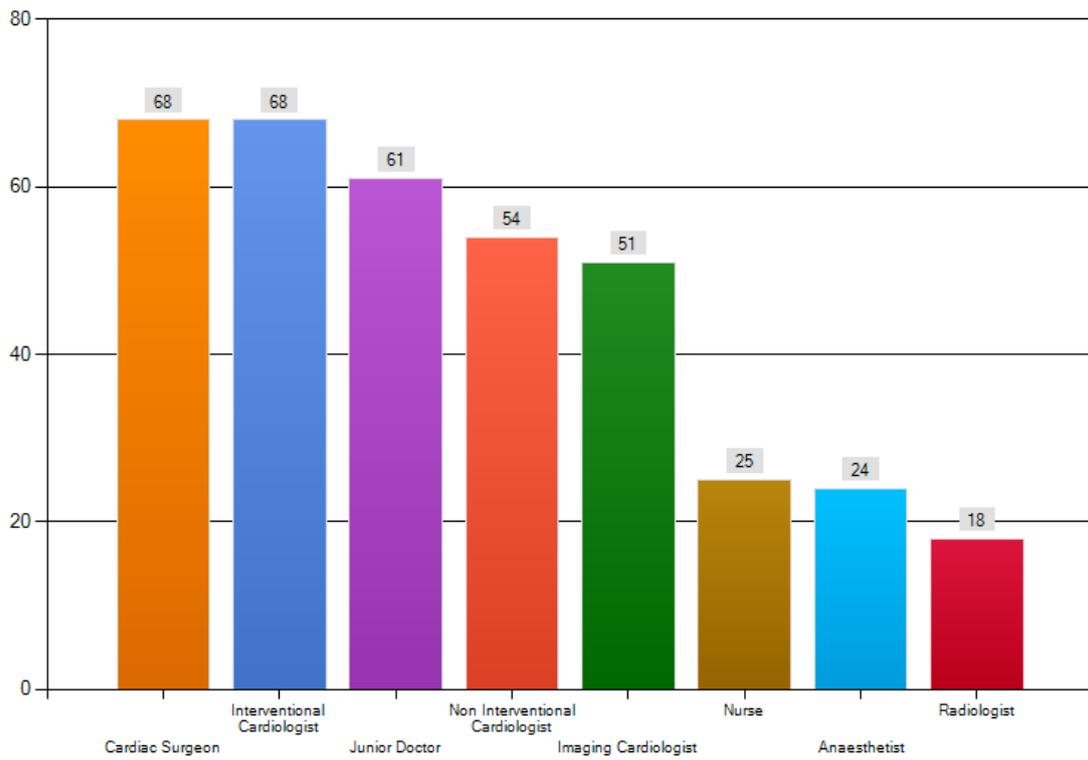
Background

- SurveyMonkey.Com
- SCTS & BCIS/BCS members – email and Newsletter
- Open for 6 months
- Feel for Heart-Team across the UK

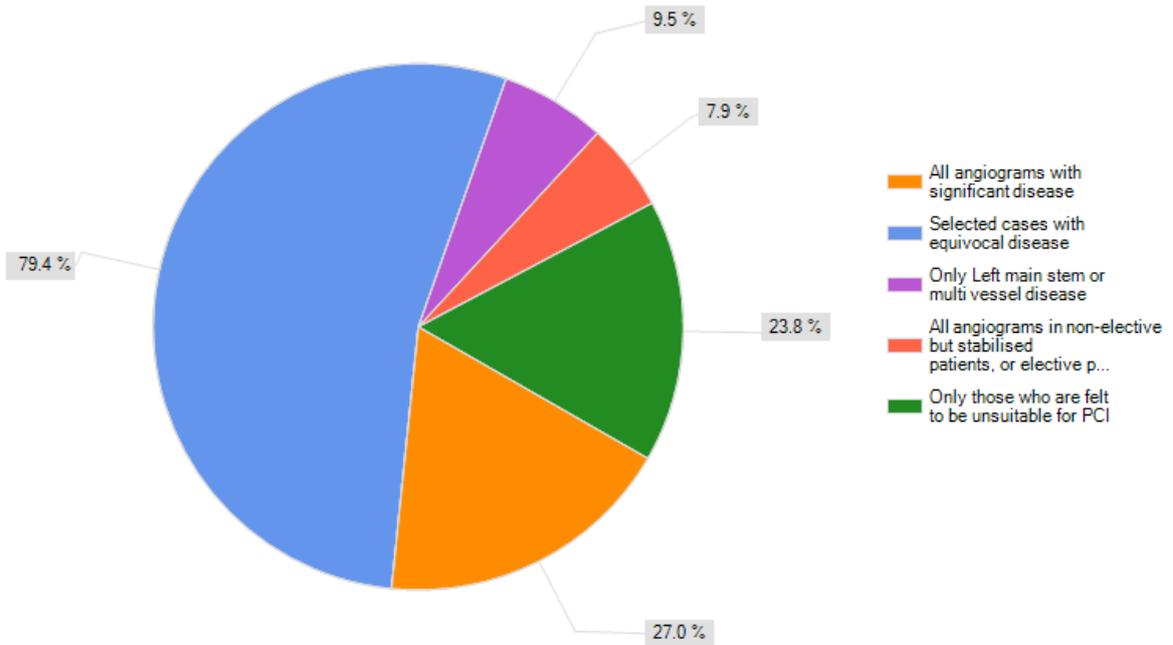
Results

- Replies from 20 Cardio-Vascular Networks
- 80% responders were cardiac surgeons
 - **Heart-Team process**
 - Once a week – 70%
 - Duration 1 hour - 80%
 - Part of Job Plan – 60%
 - During office Hours - 95%
 - Relevant patient data – 65%
 - Patient / Carer – NOT involved
 - Heart – Team process audited – 10%

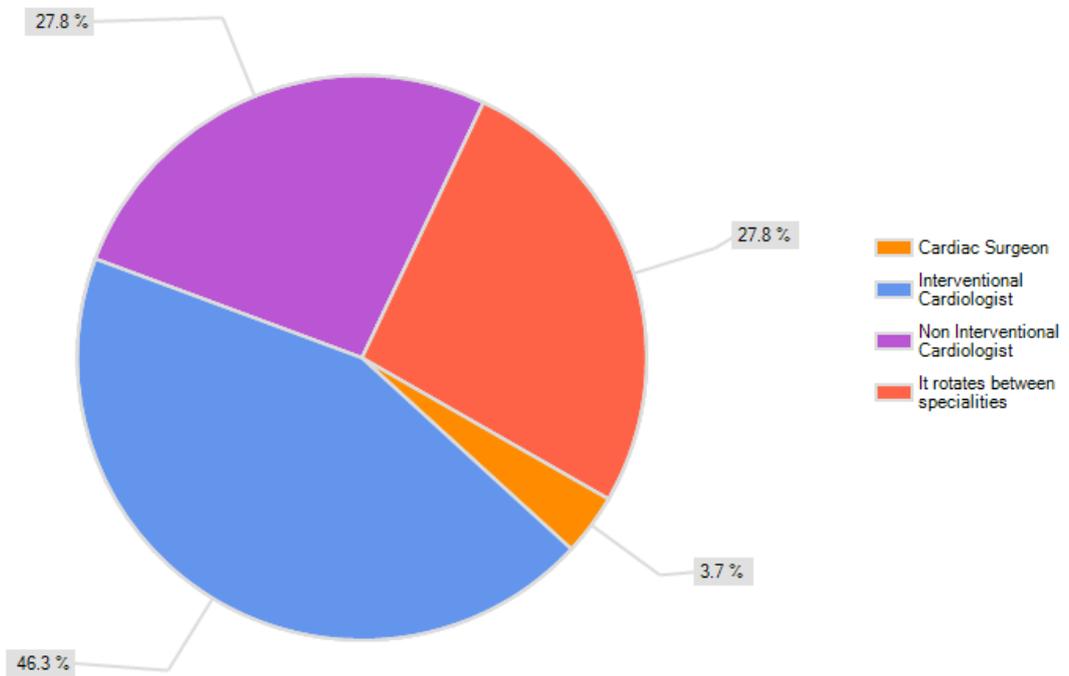
Who attends your MDT meetings? (Tick all that apply)



Which cases are discussed at your MDT meetings?



Who chairs your MDT meetings



How is the patient informed of the outcome of the MDT?

