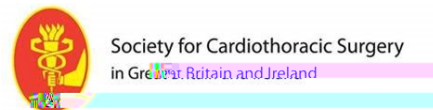


Getting the best from the Heart Team: Guidance for the structure and function of cardiac multidisciplinary meetings

A joint report from the Association for Cardiothoracic Anaesthesia and Critical Care, the British Cardiovascular Intervention Society, the British Cardiovascular Society, the British Heart Valve Society and the Society for Cardiothoracic Surgery

May 2021



1.0 Introduction

1.1 The way in which care for cardiac patients is provided has changed considerably in the last 20 years. At the turn of the century, patients were mostly under the care of a single cardiologist, who assessed the patient, made the diagnosis, and initiated treatment. In addition, the cardiologist decided if surgery was indicated. At this point, the patient was referred to a cardiac surgeon who was responsible for counselling the patient about the risks of operation.

in a constructive dialogue which facilitates decision-making by consensus. The chair i4.792 0 Td(.)Tj Td[i]-0..00

anaesthetist/intensivist for these patients. Anaesthetist/intensivist input into these discussions must form part of the MDM record. There should also be cardiac anaesthetist/intensivist involvement in feedback and audit (see below).

9.0 The role of joint clinics

9.1 Joint cardiology/cardiac surgery clinics may be required after the MDM if there is clinical
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12.0 Conclusions

12.1 It is recognised that the recommendations made in this document will require changes in the way that many cardiac units operate. Some of the recommendations are aspirational and many of them are included in the recently published GIRFT reports relevant to cardiac patients (1,2). They are all aimed at improving the quality of service that we provide to the patients under our care.

15.0 Patients for discussion*

- Patients in whom the optimal management strategy (medical v PCI v CABG) is not clear
- Patients in whom the optimal revascularisation strategy (PCI v CABG) is not clear
- Patients who have left main stem disease irrespective of Syntax score
- Patients who have two- or three-vessel coronary artery disease which involves the proximal segment of the left anterior descending artery
- Patients who have ostial disease of the left anterior descending artery
- Patients with perceived high procedural risk for PCI or CABG due to comorbidities or left ventricular systolic dysfunction
- Patients with complex coronary anatomy which causes technical issues for PCI or CABG
- Patients who have arterial access issues

*there is potential overlap between categories

16.0 Minimum dataset

- History - nature of presentation, symptoms, details of any previous cardiac interventions, comorbidities including diabetes mellitus, cerebrovascular disease, peripheral arterial disease, and contraindications to antiplatelet therapy
- Blood test results - estimated glomerular filtration rate, haemoglobin concentration
- Coronary angiography and results of invasive physiology/anatomy assessments, if undertaken
- Cardiac imaging results indicating LV function, valve function, and myocardial viability and ischaemia, as appropriate to the case
- Special patient circumstances and treatment preference

17.0 Core attendees

- MDM coordinator
- Interventional cardiologist - at least one (the norm should be two or more)
- Cardiac surgical consultant - at least one (the norm should be two or more)

18.0 Additional attendees

- General cardiology consultant
- Cardiology imaging consultant(s) (CT/MRI/echo)
- Cardiac anaesthetist/intensivist
- Cardiology and surgical trainees
- Cardiac physiologists
- Cardiology and surgical specialist nurses
- Medical students

Aortic valve multidisciplinary meetings

19.0 Introduction

19.1

21.0 Minimal dataset for initial triage

- Current symptoms & trajectory
- Medical history and comorbidities
- Up to date blood test results (full blood count and renal function as a minimum)
- Up to date echocardiogram - images and report
- Up to date invasive coronary angiogram or CT coronary angiogram images and report.
- Frailty score or comment on frailty
- Information on prognosis from other conditions

22.0 Additional dataset for multidisciplinary meeting review

- A TAVI CT (gated cardiac study, non-gated contrast aortogram from lung apices to femoral arteries) should be available for any patient where TAVI is considered as an option
- 12-lead ECG
- NT-pro BNP where there are concerns about LV function or symptomatic heart failure
- Lung function tests +/- arterial blood gases if history of lung disease
- Six-minute walk where there are concerns about functional status or frailty
- Formal assessment of cognitive function such as the Montreal Cognitive Assessment (MoCA) if there are concerns regarding cognitive function
- Patient and referrer's treatment preferences

23.0 Core attendees

- MDM coordinator
- Cardiologist with expertise in echocardiography and valve disease
- Cardiologist or radiologist with expertise in cardiac structural CT
- Surgeon with expertise in aortic valve surgery +/- TAVI
- Interventional cardiologist with expertise in TAVI

24.0 Additional attendees

- Specialist nurses – cardiac surgical and structural
- Cardiac anaesthetist/intensivist
- Elderly Care Physician
- Cardiology and surgical trainees
- Cardiac physiologists
- Medical students

Mitral and tricuspid valve multidisciplinary meetings

25.0 Introduction

25.1 Mitral and tricuspid valve disease predispose to increases in pulmonary venous pressure and systemic venous pressure, respectively. This can lead to breathlessness, fatigue, and peripheral oedema. Atrial dilation and atrial arrhythmia are common consequences of mitral and tricuspid valve disease. Ensuring that patients who develop atrial fibrillation or atrial flutter are treated with oral anticoagulation is an important part of their management. Diagnosis of mitral and tricuspid valve disease is usually straightforward. Assessment of lesion severity is more difficult, while differentiating primary from secondary regurgitation, and assessment of biventricular function and pulmonary artery pressure are other important considerations in management. The GIRFT report for cardiothoracic surgery identified the need to increase the rate of mitral valve repair for patients with degenerative mitral valve disease nationally (1). It is essential that patients who require surgical intervention for mitral regurgitation have access to dedicated mitral valve surgeons who have high rates of valve repair for degenerative valve disease in order to improve patient outcomes and ensure equitable care. The emergence of percutaneous technologies for mitral and tricuspid valve pathologies has increased the treatment options for patients whose surgical risk is prohibitive.

25.2 The main objective of the mitral and tricuspid valve MDM is to ensure that patients undergo a team-based evaluation which identifies the patients who are most likely to benefit from valve intervention. The MDM should function as the single point of entry for all patients under consideration for intervention to the mitral valve and/or the tricuspid valve. The mitral regurgitation pathway is differentiated into primary and secondary regurgitation. For patients who have secondary mitral regurgitation, the involvement of a heart failure specialist is essential, either as the referrer or as part of the MDM attendees.

25.3 This section is complementary to the section on mitral and tricuspid valve MDMs in the British Heart Valve Society consensus service framework document, Networked Based Care for Heart Valve Disease (9).

26.0 Proposed process

26.1 The referring clinician should ensure that all data are available for the MDM. Echocardiography and other cross-

34.0 Core attendees (for both formal and ad hoc multidisciplinary meetings)

- MDM coordinator
- Consultant Cardiologist with expertise in valve disease and/or echocardiography
- Consultant Microbiologist and/or Consultant in Infectious diseases
- Consultant Cardiac Surgeon

35.0 Additional attendees

- Consultant in General Cardiology
- Consultant Cardiologist with expertise in cardiac cross-sectional imaging
- Consultant in Cardiac Anaesthesia/Intensive Care
- Pharmacist
- Cardiac Physiologist
- Specialist nurse
- Trainees in cardiology/cardiac surgery/microbiology/infectious diseases
- Medical students

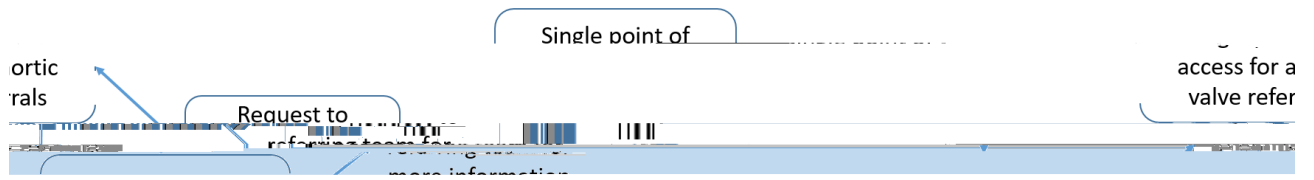
References

1. <https://www.gettingitrightfirsttime.co.uk/cardi thoracic-surgery-report/>
2. GIRFT cardiology report currently embargoed
3. [SGUH-Independent-Mortality-Review-March-2020.pdf \(england.nhs.uk\)](#)
4. Luckraza H, Norell M, Buch M, James R, Cooper G. Structure and functioning of a multidisciplinary 'Heart Team' for patients with coronary artery disease: rationale and recommendations from a joint BCS/BCIS/SCTS working group. *European Journal of Cardio-Thoracic Surgery* 48 (2015) 524–529.
5. Yeoh J, MacCarthy P. Is it time to refresh the heart team? New paradigms for shared decision making. *Heart* Epub ahead of print: doi:10.1136/heartjnl-2020-316588
6. [BCS-Future-of-Cardiology-17-Aug-2020.pdf \(britishcardiovascularsociety.org\)](#)
7. 2018 ESC/EACTS Guidelines on myocardial revascularization. *Eur Heart J* 2019;40:87-165
8. 2017 ESC/EACTS Guidelines for valvular heart disease. *Eur Heart J* 2017;38:2739-2791
9. <https://www.bhvs.org.uk/bhvs-blueprint/>
10. [National-Adult-Cardiac-Surgery-Audit-NACSA-FINAL.pdf \(nicor.org.uk\)](#)
11. [BCIS-Audit-2019-20-data-TAVI-subset-as-26-04-2020-for-web \(2\).pdf](#)
12. 2015 ESC Guidelines for the management of infective endocarditis. *Eur Heart J* 2015;36:3075–3128

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Appendix 1. Aortic multidisciplinary meeting flow chart



Appendix 2. Examples of possible triage to illustrate the aortic multidisciplinary meeting pathway

These examples are intended to illustrate potential routes through the aortic MDM pathway and are not recommendations for patient management. Please read in conjunction with Appendix 1.