On foreign soil: anaesthetists at the surgical multidisciplinary team meeting

ABSTRACT

Decision making through multidisciplinary teams offers an opportunity to improve perioperative care for high-risk surgical patients. While multidisciplinary team decision making is commonplace in the NHS, involvement of perioperative physicians including anaesthetists and intensivists in this process is not well established. This article presents an exemplar of anaesthetic and intensivist involvement in a joint perioperative upper gastrointestinal cancer multidisciplinary team meeting at the Royal Surrey County Hospital in Guildford, UK. It is hoped that this model example and critical analysis will assist others who are interested in improving perioperative shared decision making in their units.

The Royal College of Anaesthetists' document *Perioperative Medicine: The Pathway to Better Care* raises the possibility of using a multidisciplinary team approach to improve perioperative care for high-risk surgical patients (Royal College of Anaesthetists, 2015). While this document suggests that anaesthetists already attend multidisciplinary team meetings in hospitals providing specialist cancer surgery, it does not provide any examples. Furthermore, it is the authors' experience that in practice there are many challenges to overcome in achieving reliable anaesthetic attendance at a 'surgical' multidisciplinary team meeting.

Multidisciplinary teams are now well established in both surgical and medical specialties and indeed are considered almost a mandatory part of comprehensive cancer management pathways (Dhesi, 2013; NHS England, 2015). However, the emphasis of discussions at these meetings is centred around the nature of the treatment to be offered, its feasibility and timely delivery. Hence the decisions tend to be binary (i.e. whether to offer the treatment modality under discussion or not). In a letter, Kasivisvanathan et al (2016) argued for a shift in emphasis to include considerations such as optimization of comorbidities, prehabilitation, timing of surgery, specialist referral, planning for perioperative problems and postoperative care planning. They also argued that the use of less invasive and less extensive treatment modalities should be considered if appropriate, and suggested that a perioperative physician (such as an anaesthetist) may have a key role to play in such a setup. It is the authors' experience that there are few practical examples of these types of 'perioperative multidisciplinary team'.

This article presents an exemplar of anaesthetic and intensivist involvement in the upper gastrointestinal cancer multidisciplinary team at the Royal Surrey County Hospital in Guildford, UK which has been in place since 2015.

The perioperative multidisciplinary team model

The model developed by the Royal Surrey County Hospital involves a session added on to the beginning of a pre-existing weekly, regional, teleconferenced upper gastrointestinal cancer multidisciplinary team meeting. This is a half-hour session, once in a 4-week cycle, starting at 7:30am and attended by anaesthetist(s), a representative of the cardiopulmonary exercise testing team, an intensivist, upper gastrointestinal surgeons, upper gastrointestinal clinical nurse specialists, surgical fellows and the upper gastrointestinal multidisciplinary team coordinator(s).

An agenda is sent out by the multidisciplinary team coordinator the week preceding the meeting, with details of the patients to be discussed. This list can be populated by any stakeholder via an email to the multidisciplinary team coordinator with a request for inclusion, with priority being given to patients being prepared for surgery post-neoadjuvant chemotherapy. The agenda has a standard (Microsoft Excel chart) format that details the stage within the treatment pathway, any potential problems previously identified, and the dates of cardiopulmonary exercise testing undergone or awaited. The intention of the detailed agenda is to give time for attendees to prepare for the meeting allowing for a more targeted discussion.

The meeting starts promptly at 7:30 am and begins with the clinical nurse specialists briefly outlining the first patient's pathology and treatment plan. This is followed by the cardiopulmonary exercise testing team representative summarizing the patient's comorbidities and cardiopulmonary exercise testing report and the key issues identified. Anaesthetic and critical care input is then taken followed by a discussion by all parties as to the next steps for the patient in question. For the typical patient approaching surgery, the following decision outcomes are typical:

- Surgery to proceed as planned
- Surgery to proceed with modifications to perioperative care
- Surgery deferred pending further investigation or review of medical issues
- Surgery considered inappropriate and patient referred for alternative management (including palliative care).

If any preoperative action point is identified, the action is formally allocated to a member of the multidisciplinary team. Minutes are recorded and circulated to all multidisciplinary team members the same day to be approved and filed.

In the authors' experience, bringing all members of the perioperative team together in a single forum has provided a number of benefits (*Table 1*).

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Critical analysis

Using a structured analysis, this article now considers the performance of the multidisciplinary team, with the intention that this might help others interested in establishing a perioperative multidisciplinary team in their units.

Taylor and Ramirez (2009) used a set of consensus domains in a national survey judging the effectiveness of cancer multidisciplinary teams. The main domains deemed important in the assessment were structure, clinical decision making, team governance, and professional development and education of team members. To this list should be added the domain of 'patient-centred care or patient involvement' – a key component in shared decision making. The model was assessed using these domains with a self-assessment style similar to that used in the survey questionnaire.

The structure

The structure of the authors' multidisciplinary team model tallies very closely with that of a standard cancer multidisciplinary team, having been dovetailed into the start of a well-established multicentre multidisciplinary team meeting in a round-table room custom built for such a process. The lack of electronic patient records means that notes need to be physically present. The clinical nurse specialists ensure that the relevant specialist documentation relating to comorbidities is sourced from referring hospitals where possible.

The membership is well established and roles clearly demarcated. Consistent attendance from the stakeholders is assured by either the fact of their attendance at the succeeding multicentre multidisciplinary team or (in the case of the anaesthetists and intensivists) by their clinical sessions soon after. This has been facilitated by the lack of overlap with a clinical session such as a theatre list. The sessions (30 minutes every 4-week cycle) have been incorporated within job plans as practicable. An attendance register is maintained and incorporated into the minutes. The administrative staff (multidisciplinary team coordinators) are key to ensuring timely dissemination of agendas, minute taking and dissemination of minutes. The availability of two multidisciplinary team coordinators ensures cover during leave.

Clinical decision making

The caseload is variable and depends on the referral load and diagnostic–therapeutic intervals. No protocols exist to limit the caseload and there have been instances where the number of cases has made sensible discussions difficult. On these occasions, patients with imminent dates for surgery have been prioritized.

The clinical decision-making process has been the subject of criticism throughout the history of multidisciplinary teams, and the authors believe that this model is also subject to the same disadvantages referred to in the editorial by Eldridge (2012). The problems posed by patients with complex comorbidity presenting for high-risk multicompartment surgery are difficult to pin down to fixed protocols. There are often no ready answers for some of the issues posed and the decisions taken are, by and large, consensual. However, the initiation of each discussion by the clinical nurse specialists seems to ensure that a frank exchange of views occurs, and hierarchy has not been seen to be a problem.

Cardiac comorbidities feature prominently in the discussions and are often key to the decision-making process. As such, the lack of direct cardiology input at the meeting has been noted to be a key factor in delays in planning further treatment.

Table 1. Impact of anaesthetic input at the upper gastrointestinal perioperative multidisciplinary team

Benefit	Impact
Anaesthetic opinion immediately available to multidisciplinary team	Avoids delay involved in referring patient to high-risk anaesthetic clinic
'In-person' expert interpretation of cardiopulmonary exercise testing	Avoids risk of focussing on a single number (e.g. anaerobic threshold)
Advice on adjustment or initiation of medications can be made directly	e.g. beta-blocker dose adjustment, initiation of perioperative statin
Anaesthetist or perioperative physician immediately available to advise on further referral	Reduces unnecessary use of resources (e.g. echocardiography requests)
Clinical nurse and cardiopulmonary exercise testing team able to convey patient's feelings to all members of the multidisciplinary team	Improves patient involvement in decision-making process

Patient-centred care

Patient-centred care has been a key agenda item for the Department of Health since its pledge 'no decision about me without me' (Department of Health, 2010). Although there is evidence that there is improved patient experience of the oncological pathway through introduction of multidisciplinary teams, direct patient involvement in the multidisciplinary team process is controversial (Gabel et al, 1997). A study using a qualitative analysis of multidisciplinary team conversations concluded that the structure of an average multidisciplinary team presents significant barriers to patient involvement (Hamilton et al, 2016).

The clinical nurse specialists form the main point of contact for patients referred to this regional upper gastrointestinal unit. They are the members of the multidisciplinary team most likely to have an insight into the patient's views and expectations. The introduction to each patient provided by the clinical nurse specialists summarizes as much of this as possible. The time spent with the patients by the cardiopulmonary exercise testing team is also used to explore their values and preferences and to counsel them on potential risks. Thus, the cardiopulmonary exercise testing representatives at the multidisciplinary team meeting constitute a second tier to provide the multidisciplinary team with the 'evidential patient' (Hamilton et al, 2016). The surgeon, along with the

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clinical nurse specialist, takes the lead in informing the patients of the decisions arrived at by the multidisciplinary team, with obvious disagreements brought back to the next meeting.

Team governance

The relatively small-team nature of this multidisciplinary team, in conjunction with the predictable nature of the contribution from each member regarding each patient, has meant that this group has opted not to have a designated multidisciplinary team ‘leader’.

While the upper gastrointestinal multidisciplinary team in general contributes to the national upper gastrointestinal cancer audit, there has not so far been a forum to audit the outcomes from the upper gastrointestinal perioperative multidisciplinary team meeting model. This is now being addressed with local audit of the outcomes from the perioperative multidisciplinary team being assessed specifically. With all multidisciplinary team members based at the Royal Surrey site, obtaining feedback on outcomes from surgery is relatively straightforward, although obtaining feedback on outcomes of patients declined for surgery is more problematic. Such feedback has already resulted in changes in the perioperative care process. For example, the need for clarity of recommendation from cardiopulmonary exercise testing led to the introduction of check boxes in the cardiopulmonary exercise testing report about fitness, need for specialist referral or specialist investigation, and recommendation for retesting. The inconsistencies in cardiology opinions, particularly regarding recently detected atrial fibrillation, has resulted in a business case being put together for cardiology presence at the upper gastrointestinal perioperative multidisciplinary team meeting.

The multidisciplinary team meeting is also a key forum to discuss patient suitability for prehabilitation, whether as part of a research project or an existing clinical pathway. It is also a convenient setup for multidisciplinary communication regarding prospective research opportunities, particularly in relation to multicentre trials in upper gastrointestinal surgery.

Professional development and education

The authors believe that this experience of anaesthetic involvement in a cancer multidisciplinary team as a formal entity may be unique. One of the anaesthetists involved with the multidisciplinary team works closely with the Royal College of Anaesthetists in developing its perioperative medicine curriculum. This subspecialty may be the way forward for developing the skills of a future generation of anaesthetists in involving themselves in shared decision making in a formal way.

The authors’ hope is that this article may help to provide answers as to whether there have been other such models in use across the country through correspondence that inevitably follows publication. A forum of anaesthetists involved in such shared decision making could form the nucleus of continuing professional development facilitating the incorporation of the developing evidence base into the decision-making process.

Conclusions

The authors’ example of a upper gastrointestinal perioperative multidisciplinary team serves as a model of multidisciplinary team working for high-risk surgical patients in the perioperative period. In contrast to the conventional multidisciplinary team model, involvement of anaesthetists and other perioperative physicians provides an opportunity to improve shared decision making and influence patient preparation and optimization before major surgery. Critical analysis of the authors’ own multidisciplinary team model provides learning points for those considering establishing a similar service in their units. **BJHM**

Conflict of interest: none.

KEY POINTS

- Multidisciplinary team decision making is commonplace in the NHS, but few examples exist of anaesthetic or intensivist input.
- The ‘perioperative multidisciplinary team’ model has been in place at the Royal Surrey County Hospital in Guildford, UK since 2015 for patients being considered for upper gastrointestinal cancer surgery.
- Critical analysis of the performance of the multidisciplinary team model highlights the benefits and challenges associated with it.
- This model might serve to assist others interested in establishing a similar service in their units in order to improve perioperative shared decision making.

Department of Health. 2010. Equity and Excellence: Liberating the NHS. London: Department of Health (accessed 24 April 2018) https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/213823/dh_117794.pdf

Dhesi J. 2013. Setting up A Proactive Service to Make Surgery Safer for Older People. London: The Health Foundation (accessed 24 April 2018) http://patientsafety.health.org.uk/sites/default/files/resources/setting_up_a_proactive_service_to_make_surgery_safer_for_older_people_1.pdf

Eldridge P. Editorial. Br J Neurosurg. 2012 Aug;26(4):437. https://doi.org/10.3109/02688697.2012.711069

Gabel M, Hilton NE, Nathanson SD. Multidisciplinary breast cancer clinics. Cancer. 1997 Jun 15;79(12):2380–2384. https://doi.org/10.1002/(SICI)1097-0142(19970615)79:12<2380::AID-CNCR12>3.0.CO;2-N

Hamilton DW, Heaven B, Thomson RG, Wilson JA, Exley C. Multidisciplinary team decision-making in cancer and the absent patient: a qualitative study. BMJ Open. 2016 Jul;6(7):e012559. https://doi.org/10.1136/bmjopen-2016-012559

Kasivisvanathan R, Jhanji S, Waller J, McLeod AD, Rao Baikady R, Wigmore T, Gruber P. High risk multi-disciplinary process for major cancer surgery. Br J Anaesth. 2016 Nov;117(5):678–679. https://doi.org/10.1093/bja/aew326

NHS England. 2015. MDT Development – working toward an effective multidisciplinary/multiagency team. London: NHS England (accessed 24 April 2018) https://www.england.nhs.uk/wp-content/uploads/2015/01/mdt-dev-guid-flat-fin.pdf

Royal College of Anaesthetists. 2015. Perioperative medicine: the pathway to better surgical care. London: Royal College of Anaesthetists (accessed 24 April 2018) https://www.rcoa.ac.uk/sites/default/files/PERIOP-2014.pdf

Taylor C, Ramirez A. 2009. Multidisciplinary team members views about MDT working: results from a survey commissioned by the National Cancer Action Team. London: NHS (accessed 24 April 2018) www.ncin.org.uk%2Fview%3Frid%3D137&usg=AOvVaw3XdD_UASrRObrvRzS2DOpf