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ORIGINAL ARTICLE

The educational value of the cancer multidisciplinary meeting: another COVID-19 pandemic casualty

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Abstract

Background: The COVID-19 pandemic has had a significant impact on the training of medical staff across all specialities. The impact of the pandemic on the educational experience of the weekly cancer multidisciplinary team (MDT) meeting is unclear. The aim of the study was to determine if the pandemic altered the MDT learning experience for trainees, if so how, and what practical barriers result in a negative experience. **Methods:** An anonymous online survey was designed via the platform surveyplanet.com and distributed to general surgery, pathology, oncology and radiology trainees throughout the UK. Distribution was via trainee forums, email groups and social media channels. The survey was open for completion between 1 March 2021 and 31 March 2021. **Results:** There were 138 respondents across the training specialities; pathology and surgical trainees accounted for 47.8% and 40.6%, respectively. The grades of the respondents ranged from CT1 to ST8. Before the pandemic, >50% of trainees were attending one MDT per week; most of these were face to face solely (73.9%). Almost 90% of participants agreed that the pre-pandemic MDT educational experience was positive. However, after the onset of the pandemic, attendance by most of the respondents dropped to less than once per month and participation became virtual alone in 62.3% and combined face to face and virtual in 37.7%. The trainee role in the MDT changed; 79.7% were observing only and only 59.4% agreed that the educational experience was positive. Barriers cited to attending included 33.3% of trainees being turned away and 24.6% made to feel unwelcome. Other difficulties encountered included insufficient room capacity (29.2%), inadequate technology (29.2%), being occupied with COVID related clinical commitments (10.6%) and redeployed to another department (8.8%). **Discussion:** There is overall loss of trainees' educational experience of the MDT in light of the COVID-19 pandemic. Trainees are attending fewer MDTs and in a significant number of cases, they feel unwelcome or are turned away. Common barriers to learning include inadequate infrastructure with space and technology and increased workload. During COVID recovery, recognizing the importance of trainee participation in the MDT is vital and should be supported through technology support and simulated MDT training sessions.

Keywords: *multidisciplinary team; COVID-19; surgical education; cancer care*

Introduction

The COVID-19 pandemic has had a significant impact on the training of medical staff across all specialities and this impact is ongoing worldwide.[1–8] Focus has shifted from training in specialist interests to service provision in emergency areas where COVID-19 has been most devastating. Elective activities, including outpatient clinics, endoscopy lists and non-emergent theatre cases, have been cancelled, reinstated, and then cancelled again.[8,9] Health care staff have been redeployed to new roles outside their chosen speciality. Professional development has also been stunted through the cancellation of courses, examinations and conversion to distance learning.[10] Team-based specialities have found social distancing a constant barrier to effective learning and new, virtual ways of delivering training are at the forefront.

Before the pandemic, multidisciplinary teams (MDTs) met face to face regularly to discuss cases and plan management strategies; this is considered the gold standard, particularly in cancer care.[11] Members from relevant teams gave their input and a quorate decision was made for individual patients based on individual expertise and guidance from national and international bodies. MDTs are attended by

specialist nurses, surgeons, pathologists, oncologists and radiologists. From a trainee perspective, the presence of experts in a range of specialities in a single meeting affords unique exposure to how to implement guidelines, manage complex patients and conduct inter-speciality discussions.

For surgical trainees, the Intercollegiate Surgical Curriculum Programme (ISCP) curriculum requires evidence of a trainee's ability to understand and integrate with the MDT team before certification of completion of training.[12] This is also summatively assessed through the Fellowship of the Royal College of Surgeons (FRCS) examinations, which are undertaken by surgical trainees in the later stages of training and are also required to attain a certificate of completion of training (CCT).[13] Therefore, MDT exposure throughout training is a core building block to allow smooth progression towards CCT and consultancy.

The MDT is generally considered a positive environment for learning as demonstrated by a number of small studies, particularly when trainee involvement levels are high,[14,15] however, no studies to date have reviewed the situation since the onset of the pandemic.

The MDT environment affords a range of sensory modalities to facilitate learning, including auditory, visual, verbal, social and logical (Fig. 1). Kolb's four-stage cyclical structure of learning that begins with an experience, followed by reflection, conceptualization and active experimentation can also be applied to sequential MDT attendances where trainees can gradually build sub-speciality experience through discussion of a high volume of cases and applying that to their clinical practice.[16]

Kirkpatrick's four levels of training evaluation is often used to assess the impact of training using four clear steps:[17]

1. Reaction: how did trainees feel about a learning experience
2. Learning: measuring what trainees have and have not learnt
3. Behaviour: assessing if trainees' behaviour has changed on the basis of the learning experience
4. Results: has the learning experience led to a change in outcome

MDT learning experiences can be reviewed using Kirkpatrick's technique by assessing trainee outcomes before and after MDT exposure. This is indirectly assessed in overall trainee progress reviews and completion of speciality examinations. However, development of future simulated MDT experiences should be thoroughly assessed using similar stages to ensure specific benefit of MDT learning.

Aim

The impact of the pandemic on trainee educational experience of the weekly cancer MDT meeting is unclear. The aim of the study was to define if the pandemic has altered the learning experience. If so, how, and what practical barriers led to a negative experience.

Methods

An online questionnaire was designed using the platform surveyplanet.com, and UK-based trainees in general surgery, pathology, oncology and radiology were invited to complete the survey. Distribution was via trainee forums, email groups and social media platforms. The survey was open for completion between 1 March 2021 and 31 March 2021. All responses were anonymous. The survey was designed to assess pre-pandemic experience, post-onset pandemic experience, specific barriers to a positive MDT educational experience and consensus on the use of simulated MDT training. The full questionnaire is shown in Appendix 1.

Results

During the 1-month period when the survey was open, 138 participants submitted a response with representation from all of the training specialities mentioned earlier. However, pathology and surgical trainees constituted 47.8% and 40.6% of respondents, respectively (Fig. 2).

Fig. 3 shows the range of training grades surveyed; 69.6% the respondents were in a speciality training programme (ST3-8). The remainder were core trainees (CT1/2; 15.9%) and clinical fellows (3.0%).

Colorectal cancer MDTs were the most commonly attended at 30% followed by breast cancer (17.5%), upper gastrointestinal cancer (10.8%) and hepatobiliary cancer (10.8%) (Fig. 4).

Before the pandemic

before the onset of the pandemic, 58% of the trainees surveyed were attending at least one MDT per week, of which 73.9% were entirely face to face. The trainees had active roles in the MDT in 97.1% of cases, including preparing, presenting or documenting outcomes. The MDT was considered to be an excellent positive educational experience by 88.4% of respondents.

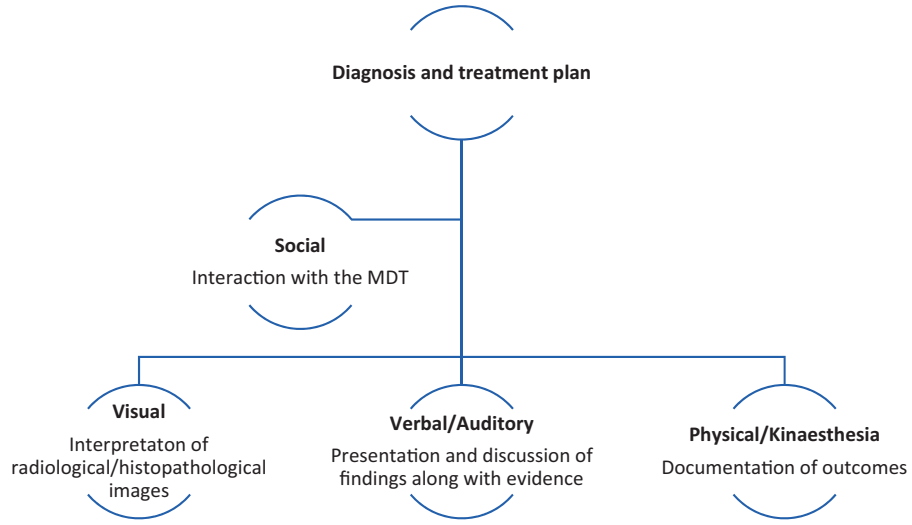

Figure 1. Multidisciplinary team learning opportunities.

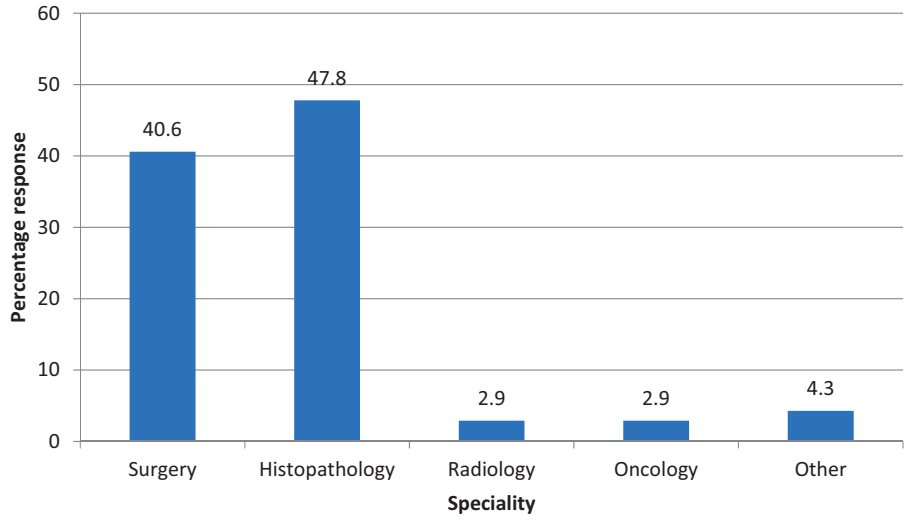

Figure 2. Trainee specialities at the time of the survey.

After onset of the pandemic

After the onset of the pandemic, attendance dropped to once per month or less for 59.4% of trainees. Participation became virtual alone in 62.3% and combined face to face and virtual in 37.7%. The trainee role in the MDT changed to observing only in 79.7% of cases. Only 59.4% of trainees agreed that the educational experience was positive;40.6% disagreed that the experience was positive (Fig. 5).

A third of the trainees had been turned away from an MDT meeting (33.3%) and an additional 8.7% specifically chose not to comment on that question. A quarter of trainees described being made to feel unwelcome or uncomfortable attending MDTs during the pandemic and a further 7.2% preferred not to comment on this question.

Difficulties cited in attending the MDT were insufficient room capacity (47.8%), inadequate technology (47.8%), busy with COVID related clinical commitments (17.4%) and redeployment to another department (14.5%) (Fig. 6). Only 26.1% of the respondents said they encountered no difficulties attending the MDT during the pandemic.

With regard to a simulated MDT training experience, 59.4% of trainees thought this would be helpful. Trainees suggested several ways to improve the MDT experience during the pandemic besides reverting to face to face meetings. These suggestions included:

- Adequate office space with appropriate technology to allow trainees to attend

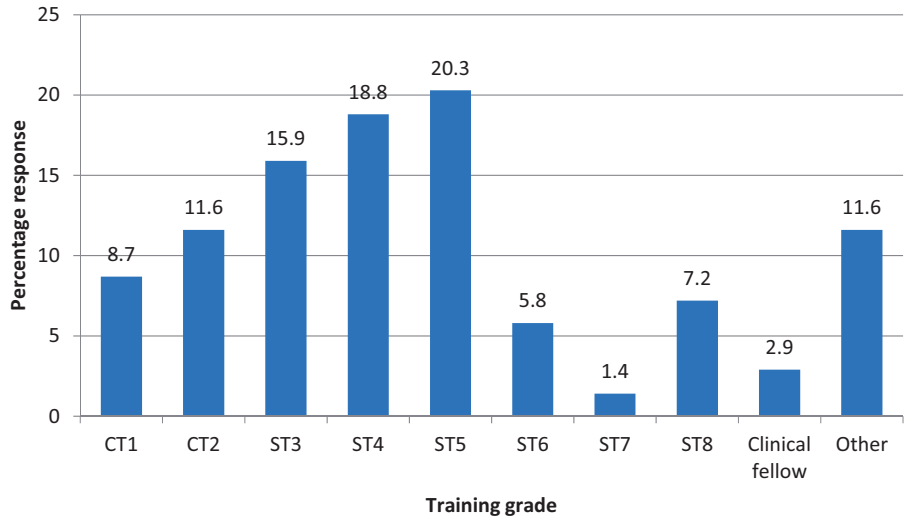

Figure 3. Trainee grade at the time of the survey.

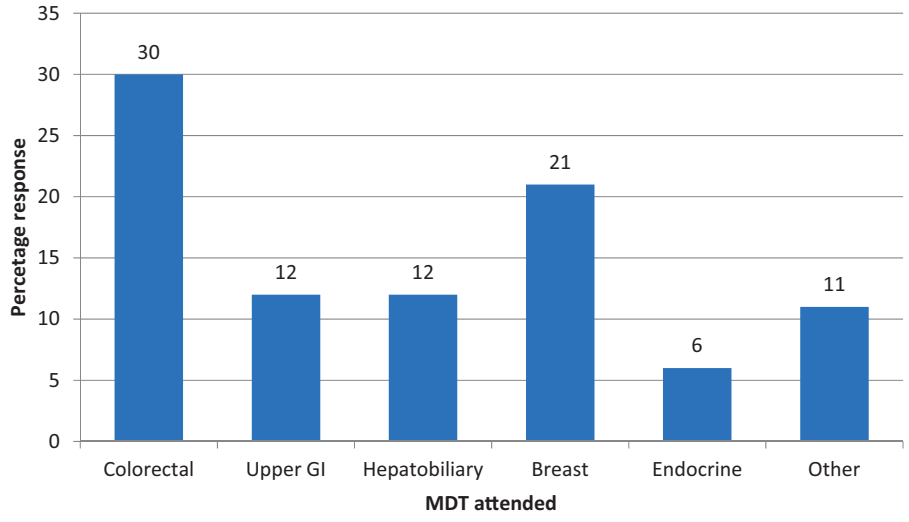

Figure 4. Multidisciplinary team specialities attending.

- Adequate notice of meetings along with case list to allow preparation time
- Encouragement from seniors for trainees to play an active role, such as presenting cases or documenting outcomes
- Mandatory MDT attendance as part of trainees' personal professional development plan

Discussion

This article describes the deterioration in trainee attendance and educational experience as a result of the COVID-19 pandemic. As in many areas of the NHS, training has taken a back seat and service provision has come to the fore. Multiple barriers continue to prevent trainees from having a positive learning experience and as the recovery from COVID-19 is a protracted journey, these factors must be addressed.

To encourage a positive trainee experience, hospitals can implement simple steps and improve certain logistics to provide trainees with the minimum requirements to allow them to attend. This can include but is not limited to adequate quiet office space, computers with speakers/headset and a regular audio/video email link to join the meeting.

Both trainees and trainers can proactively develop roles in the meeting to maximize learning opportunities. Consultant colleagues can work with trainees to treat the MDT as a

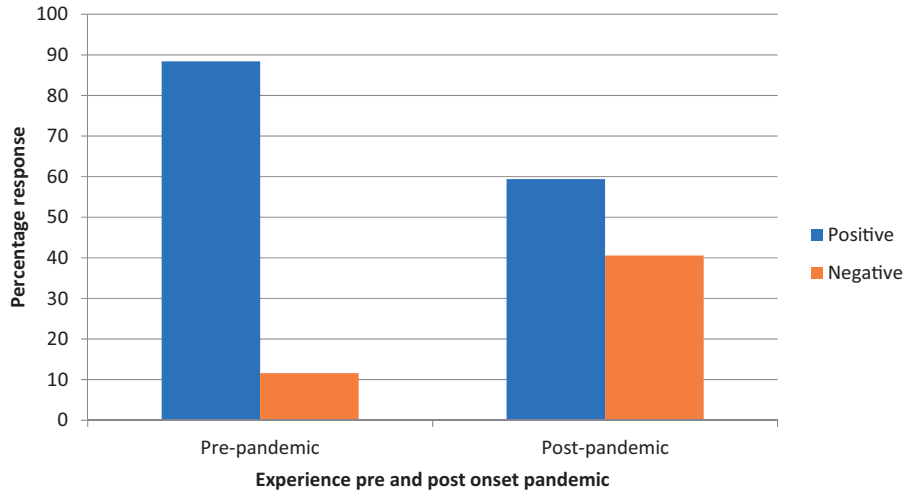

Figure 5. Percentage of trainees who agreed that the educational MDT was excellent before and after the onset of the pandemic.

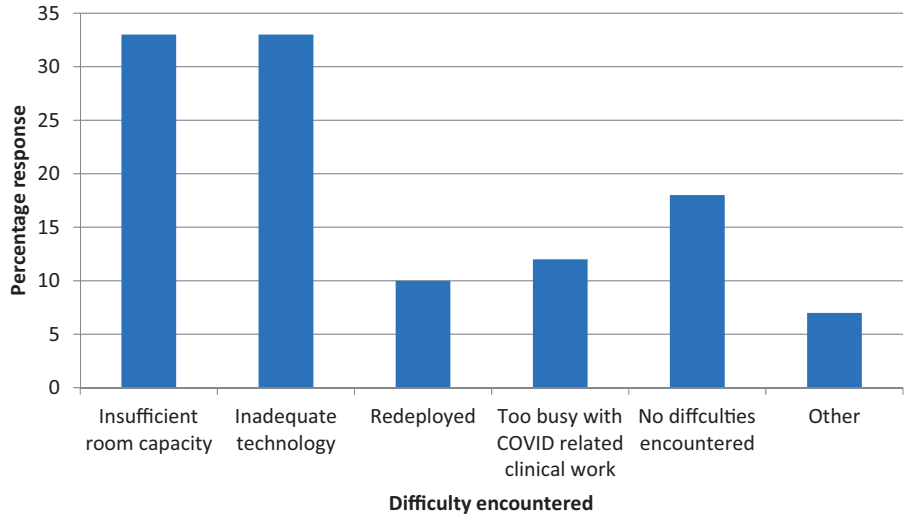

Figure 6. Difficulties encountered in attending the MDT after onset of the pandemic.

learning experience for all. Local guidelines and rota coordinators can ensure that regular MDT attendance is mandatory to improve the provision and experience of education at cancer MDTs.

It is important to ensure that trainees have adequate time to prepare, discuss and learn from MDTs, in balance with other essential clinical commitments. Perhaps selecting certain cases and topics during MDTs for trainees to present and develop knowledge and skill in would allow an overall timely balanced MDT session.

Another way?

Simulation training techniques have been demonstrated to be extremely useful in multiple settings. There are no documented studies reviewing the value of a simulated cancer MDT, however online forums such as the ICENI Centre Controversies in Rectal Cancer series broadcasts of MDT-style discussions of difficult cases were extremely well received.[17]

Most of the trainees responding to this questionnaire would be open to attending a simulated MDT training experience, and we believe that this could be delivered across specialities either face to face or virtually. This could include preparation of cases before the session, trainees taking on different roles such as surgeon/radiologist/histopathologist/oncologist, discussing cases and the relevant literature. This would give trainees the confidence and understanding to play a more active role in cancer MDTs after the pandemic. From the

perspective of surgical trainees, development of these skills is required to obtain FRCS accreditation.

In conclusion, training has suffered since the onset of the COVID pandemic across all specialities. Trainee attendance, participation and educational experience have all deteriorated. Action needs to be taken by all stakeholders, trainees, trainers and educational bodies to ensure that MDT experiences return to pre-pandemic levels or are supplemented via simulated methods.

Study limitations

We are unable to comment on the response rate because we do not know how many trainees viewed the online survey on a variety of social media platforms, or how many trainees were contacted by each of the colleges and trainee associations involved. However, we believe that 138 responses is a good number. We acknowledge that a degree of self-recruitment bias may have had an impact on the finding of this study, i.e. those with a more extreme opinion may be more likely to respond. Sampling bias may also be present because there is variation in the response rate between specialities, which may have an impact on the generalizability of the study findings to all specialities.

Future research to define the educational value of the MDT in terms of learning theory and which aspects are most beneficial would support the development of future simulated MDT projects. Such pilot projects could then be formally assessed using a training evaluation model to demonstrate the positive impact on trainees' experience.

Conflict of interest

All authors declare that they have no potential conflicts of interest regarding this article.

Acknowledgement

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Appendix 1

	Question	Response options
1	What grade are you?	CT1-2/ST3-8/clinical fellow/other
2	Which speciality are you currently working for?	Surgery/histopathology/radiology/oncology/other
3	Which sub-speciality cancer MDT do you currently attend?	Breast/colorectal/uppergastrointestingal/hepatobiliary/endocrine/other
	Before the pandemic	
4	How often would you attend a cancer MDT meeting?	<1 per month/1 per month/1 per week/>1 per week
5	By which modality was the MDT delivered?	Face to face/virtual/combined
6	Which specialities attended the MDT?	Surgery/pathology/radiology/oncology/other
7	What was your role at the MDT?	Observe/prepare cases/present cases/document outcomes/other
8	The MDT offered excellent educational value	Very much disagree/disagree/somewhat disagree/somewhat agree/agree/very much agree
	After onset of the pandemic	
9	How often would you attend a cancer MDT meeting?	<1 per month/1 per month/1 per week/>1 per week
10	By which modality was the MDT delivered?	Face to face/virtual/combined
11	Which specialities attended the MDT?	Surgery/pathology/radiology/oncology/other
12	What was your role at the MDT?	Observe/prepare cases/present cases/document outcomes/other
13	The MDT offered excellent educational value	Very disagreeable/disagreeable/somewhat disagreeable/somewhat agreeable/agreeable/very agreeable
14	Have you ever been discouraged from attending or turned away from the MDT meeting?	Yes/no/prefer not to say
15	Have you ever felt unwelcome or uncomfortable at the MDT meeting?	Yes/no/prefer not to say
16	Have you encountered difficulties attending due to...	Insufficient room/inadequate technology/redeployed to another department/too busy with clinical COVID related activity/no difficulties encountered
17	How could the educational value of the cancer MDT be improved?	Free text
18	Do you think a simulated MDT training experience would be helpful to achieve your learning outcomes?	Yes/no/prefer not to say