Royal College of Physicians | National Mesothelioma Audit | MESOTHELIOMA UK Supporting People With This Asbestos Cancer

National Mesothelioma Audit organisational audit report 2019

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1 Executive summary

The UK has the highest worldwide incidence of mesothelioma, with approximately 2,700 new diagnoses per year. Rapid access to appropriate diagnostics, treatment, information and support are important to patients and carers. This audit, funded by Mesothelioma UK, was commissioned to obtain an accurate and up-to-date picture of mesothelioma multidisciplinary team (MDT) services across the UK, and to identify any variation in access to specialist services and treatments for mesothelioma patients.

All known MDTs (174) across England, Wales, Scotland and Northern Ireland were invited to take part in the audit, of which 125 (72%) MDTs actively participated in the study. Variation was identified across all participating MDTs in the access to services offered to mesothelioma patients.

Overall, 17 MDTs self-identified as providing specialist mesothelioma services, managing over 25 new cases per year.[1]

Comparing service provision across all participating MDTs, patients who were referred to one of the 17 specialist mesothelioma MDTs appeared more likely to benefit from access to a mesothelioma-specific clinical nurse specialist 53% (9/17) vs 14% (18/125) and on-site access to mesothelioma clinical trials 88% (15/17) vs 33% (40/121).

2 Recommendations

1 Each cancer alliance in England and equivalent healthcare regions in Wales, Northern Ireland and Scotland should ensure that all mesothelioma patients have regional access to local anaesthetic thoracoscopy and insertion of intrapleural catheters (page 7).

2 All MDTs to routinely perform tissue biopsy, when pleural cytology is suggestive of malignant pleural mesothelioma (MPM), and record histological subtype (page 7).

3 Each healthcare region should ensure that mesothelioma patients have the opportunity of a referral to a specialist mesothelioma MDT, defined as a provider discussing at least 25 new cases of mesothelioma each year.[1] All peritoneal mesothelioma patients should be considered for referral to the national peritoneal MDT (page 14).

4 All specialist mesothelioma MDTs should consider using teleconferencing to support meeting attendance by key members, including palliative care and mesothelioma CNS support and to facilitate real-time feedback with MDTs who have referred patients (page 15).

5 All specialist mesothelioma MDTs should have a clear referral pathway including a referral pro forma (page 16).

6 All specialist mesothelioma MDTs should review the need for a palliative care representative to be included in their quorate for an MDT, in line with the NHS mesothelioma service specification[1] (page 16).

7 All specialist mesothelioma MDTs should routinely record patient referrals to clinical trials and trial information including trial name and start date / completion date (page 17).

8 All MDTs should review their organisational alignment to the British Thoracic Society (BTS) mesothelioma guidelines, seek opportunities for peer review and actively participate in future National Mesothelioma Audit (NMA) audits (page 23).

3 Introduction

The UK has the highest worldwide incidence of mesothelioma, with approximately 2,700 new diagnoses per year. This cancer most commonly affects the pleural membrane in the chest but can more rarely affect the pericardium, the peritoneal membrane in the abdomen or the tunica vaginalis in the male testis. Mesothelioma is considered to be incurable, although anti-cancer treatment options are available. Rapid access to appropriate diagnostics, treatment, information and support are important to patients and carers.

The National Lung Cancer Audit (NLCA), part of the NHS England National Clinical Audit and Patient Outcomes Programme (NCAPOP), is commissioned by the Healthcare Quality Improvement Partnership (HQIP). Following a recommissioning process in 2014, the audit has been delivered by the Royal College of Physicians (RCP), but mesothelioma was not included in the project specification. A partnership between the RCP and Mesothelioma UK has secured the future of the National Mesothelioma Audit (NMA). Two such NMA reports have been published to date and a third is planned for publication in 2020.

Standards of care are closely linked to the resources available, and to the way that services are organised. In addition, for a relatively uncommon cancer such as mesothelioma, access to specialist multidisciplinary care is crucial. NHS England has previously outlined their commissioning expectations for mesothelioma and recommended the establishment of specialist mesothelioma multidisciplinary teams (MDTs) which should manage a minimum of 25 patients per year.[1] In addition, the British Thoracic Society (BTS) clinical guideline recommends that clinicians should 'consider referring malignant pleural mesothelioma cases to a regional mesothelioma MDT'.[2]

In order to better understand whether these recommendations are being adopted this organisational study set out to obtain an accurate and up-to-date picture of mesothelioma MDT services across the UK, and to identify and address any variation in access to specialist services and treatment for mesothelioma patients.

4 Mesothelioma organisational audit – phase 1

Methodology

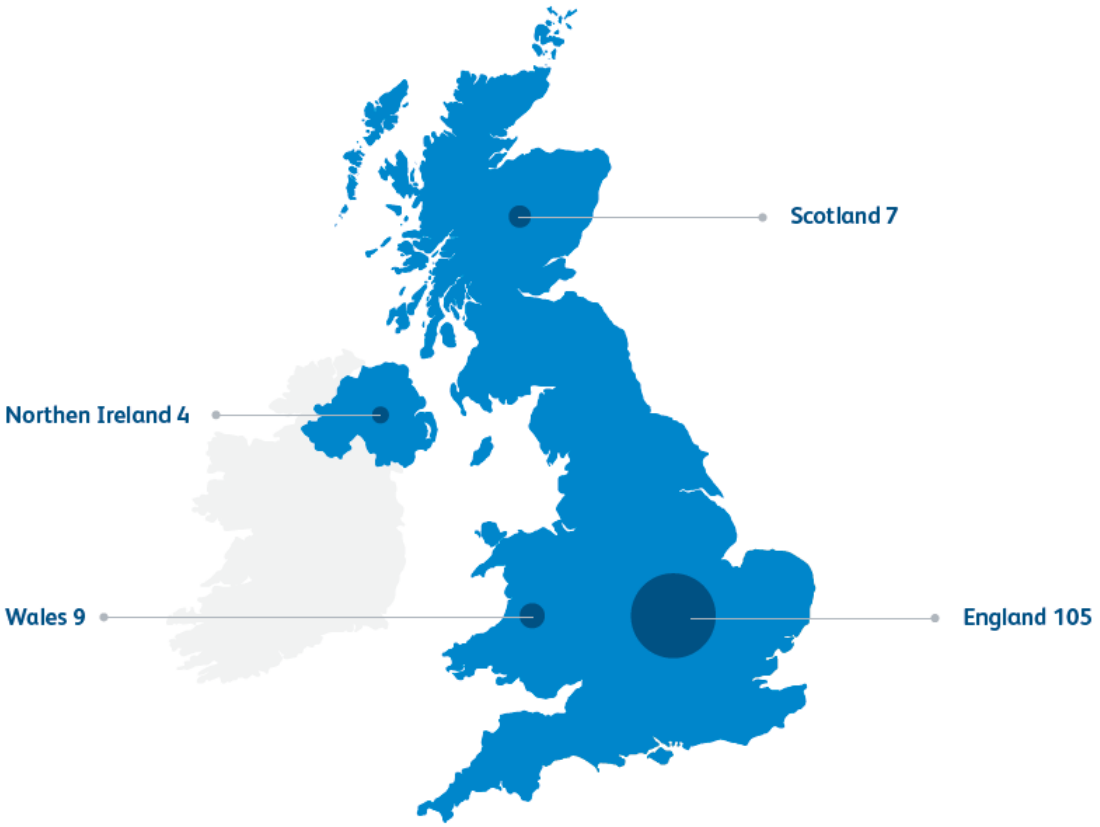
During phase 1 of the audit, all clinical leads of recognised hospital lung cancer MDTs across England, Wales, Scotland and Northern Ireland (174 in total) were contacted and invited to participate in the audit. A link to an online survey was provided, covering questions about how mesothelioma patients were diagnosed, discussed and treated locally (survey design can be found on the NMA website). Participants were also asked whether patients were referred on to regional or tertiary specialist mesothelioma MDTs. The survey remained open for 6 weeks and participation was encouraged through reminder emails from both the NMA team and Mesothelioma UK.

Results

Participation

Responses were obtained from 125/174 (72%) MDTs invited to be involved in the audit. Figure 1 shows the number of responding MDTs for each of the countries that took part.

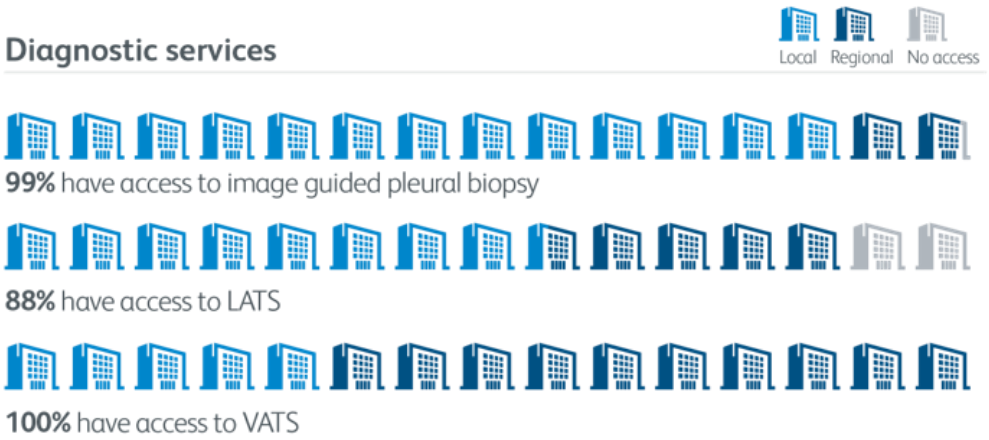
Fig 1 Responses by country



Diagnostic services

Results suggest that local services for diagnosing mesothelioma patients are set up in different ways: 13% (16/125) of providers reported running a specific pleural clinic, while 46% (58/125) used a generic lung cancer clinic to review mesothelioma patients with the remaining 41% (51/125) reporting that they use a combination of both types of clinic.

Nearly all providers, 99% (124/125), had access to image-guided pleural biopsy and 95% (119/125) had this available locally. 88% (110/125) of providers reported access to local anaesthetic thoracoscopy (LAT); only 56% (70/125) had this service available locally. All providers had access to video-assisted thoracoscopic surgery (VATS) however local availability of VATS was only reported to be available in 34% (42/125), reflecting its availability only in tertiary surgical centres.



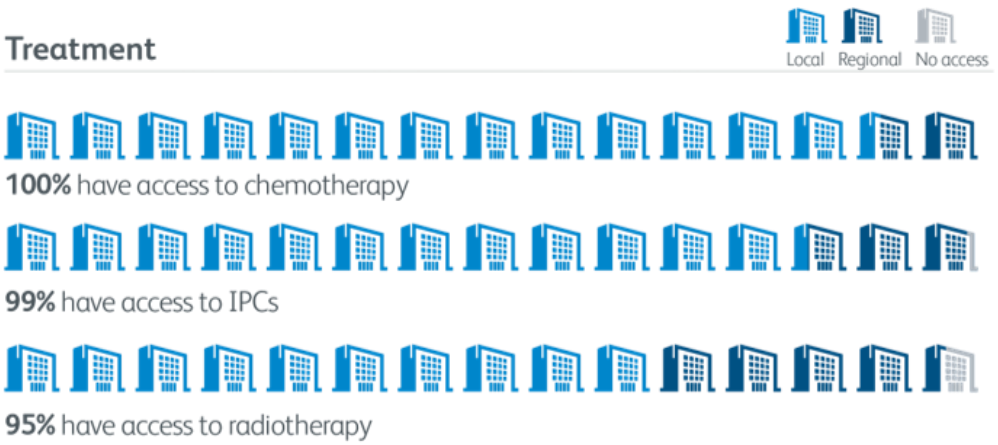
Tissue biopsy is needed to confirm the diagnosis of mesothelioma, but only 61% (76/125) of responders routinely perform tissue biopsy when pleural cytology is suggestive of malignant pleural mesothelioma (MPM). Reassuringly, 94% (117/125) of responders reported that they routinely record the histological subtype of mesothelioma, although 22% (27/125) did not routinely record the TNM disease stage. While the use of biomarkers and CT-PET are not specifically recommended in national guidelines,[2] of the 123 units that responded to this question, 21 and 27 units confirmed, respectively that they used these.

Recommendation: Each cancer alliance in England and equivalent healthcare regions in Wales, Northern Ireland and Scotland should ensure that all mesothelioma patients have access to local anaesthetic thoracoscopy and insertion of intrapleural catheters.

Recommendation: All MDTs to routinely perform tissue biopsy, when pleural cytology is suggestive of malignant pleural mesothelioma (MPM), and record histological subtype.

Treatment services

All providers had access to treatment with chemotherapy, with this being available locally in 86% (106/123) of participating hospitals. Similarly, 99% (120/121) of providers were able to offer an indwelling pleural catheter (IPC) for management of pleural fluid, with 87% (105/121) having this available locally. The role of radiotherapy has become less prominent in recent years, since the results of clinical trials have not supported its use for prophylactic irradiation of tracts, but it has remained as an option in 95% (115/121) of providers.

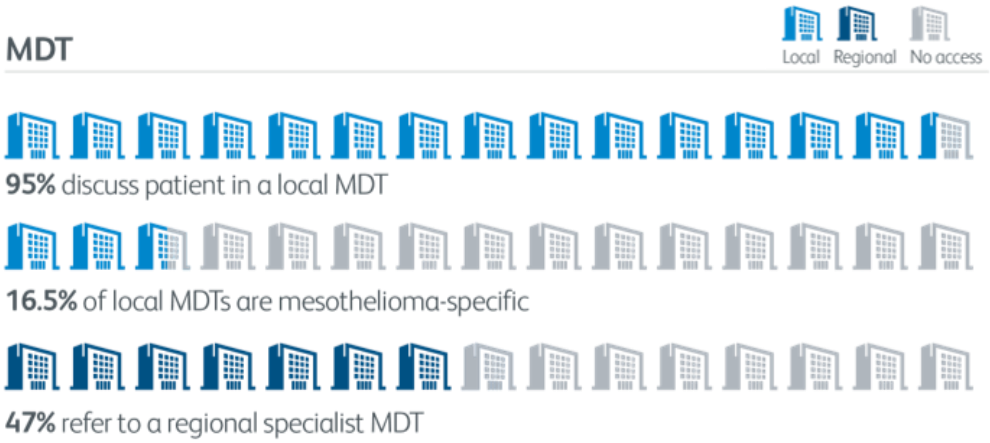


Clinical trials were only available locally in 32% (40/125) of responding MDTs but could be accessed regionally or nationally in a further 59% (74/125) with no reported access in 9% (11/125). Palliative surgical treatment was offered locally in 17% (21/121) of units that responded to this question and an additional 37% (45/121) of providers reported having access to these services; however, 46% (55/121) of providers reported having no access to this.

14% (18/125) of providers reported that a mesothelioma-specific clinical nurse specialist (CNS) carried out the role of key worker for patients but in the vast majority of cases (86%), a lung cancer CNS took on this role. 56% (70/125) MDTs confirmed that patients had access to a regional mesothelioma nurse specialist.

Multidisciplinary teams

Almost all providers 94% (118/125) discussed mesothelioma cases at a local MDT with 16.5% (20/121) self-defining their local MDT as mesothelioma-specific. Overall, 47% (59/125) of providers also referred their mesothelioma patients on for discussion at a regional specialist mesothelioma MDT.



For those providers who reported referring patients to a regional specialist mesothelioma MDT, almost half would routinely refer all cases for discussion, but other referral reasons included consideration of trials (23 providers) and surgery (9 providers).

Conclusions

The results of the phase 1 questionnaire confirmed that there was significant variability in the availability and organisation of services for mesothelioma patients. Although it may not matter whether a patient is first assessed in a generic lung cancer clinic or a specific pleural disease clinic, it is vital that the clinicians working in these services have adequate training and experience in mesothelioma, and that patients have access to high-quality and timely investigations. 12% of participating MDTs did not have any access to the key diagnostic investigation of local anaesthetic thoracoscopy, and 13% did not have local access to IPCs which can improve the control of pleural effusions and disabling breathlessness. Commissioners and cancer alliances have key roles to play in ensuring equity of access to services across a region.

Table 1 Summary of key findings from phase 1

Category	Indicator	Result	%[a]	KPI[b]
Audit participation	Participation in the organisational audit	125/174	72%	
MDT meeting	Define their MDT as mesothelioma-specific	20/121	16.5%	Yes
Referrals	Routinely refer patients to a specialist mesothelioma MDT	59/125	47%	Yes
Specialist nursing	Have a specialist mesothelioma nurse as the key worker	18/125	14%	Yes
	Have access to a regional mesothelioma clinical nurse specialist	70/125	56%	
Diagnostics	Offer local access to LAT	70/125	56%	Yes
	Offer local access to VATS	42/125	34%	
	Routinely perform tissue biopsy, when pleural cytology is suggestive of MPM	76/125	61%	Yes
Data quality	Routinely record histological subtype	117/125	94%	Yes
	Routinely record TNM disease stage	98/125	78%	
Treatment	Offer patients an IPC	120/121	99%	
	Offer patients local fitting of an IPC	105/121	87%	
	Offer patient access to regional clinical trials	74/125	59%	Yes
	Offer patients local access to clinical trials	40/125	32%	Yes
	Offer patients access to diagnostic and non-radical surgical treatment	45/121	37%	Yes
	Offer patients local access to diagnostic and non-radical surgical treatment	21/121	17%	
	Offer no-access to diagnostic and non-radical surgical treatment	55/121	45%	

[a] Result across participating MDTs

[b] Key performance indicator recommended for adoption by the NMA

IPC = intrapleural catheter; LAT = local anaesthetic thoracoscopy; MDT = multidisciplinary team; NMA = National Mesothelioma Audit; VAT = video-assisted thoracoscopy

5 Mesothelioma organisational audit – phase 2

Methodology

Using the information from phase 1, phase 2 focused on the regional and tertiary specialist mesothelioma MDTs who were identified as having patients referred to them. Mesothelioma MDT clinical leads at these centres were contacted for more information about their services, initially via an online survey which was followed up by a telephone interview, lasting 30–60 minutes, to ensure data accuracy and gain further quantitative information. A telephone interview was also conducted with the surgical lead clinician of the national peritoneal mesothelioma MDT at Basingstoke and North Hampshire Hospital.

Results

Twenty MDTs initially self-identified as specialist mesothelioma MDTs during phase 1 and all of these providers (100%) participated in the second phase survey. Further investigation confirmed that 17 of these self-identified MDTs met the criteria of managing at least 25 new mesothelioma cases per year within a distinct mesothelioma MDT, based on national commissioning guidance,[1] also reflected in the recent BTS mesothelioma guidelines.[2] The specialist mesothelioma MDTs identified in England (15), Wales (1) and Scotland (1) are shown in Fig 2 and Table 2.

The MDT in Basingstoke and North Hampshire Hospital (also included in Table 1) is already recognised as the national centre for the surgical treatment of *peritoneal* mesothelioma and hosts a monthly national MDT.

Fig 2 Specialist mesothelioma MDTs

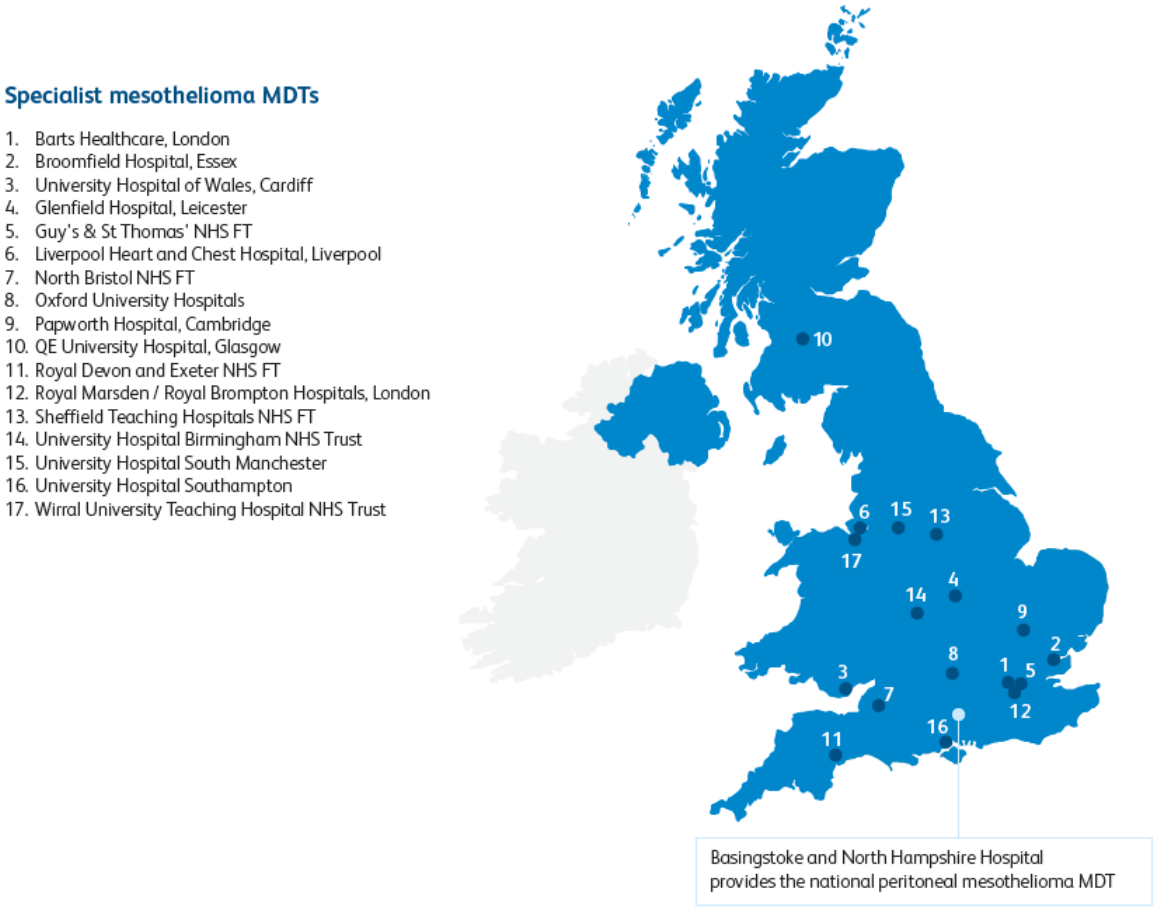


Table 2 Specialist MDTs managing > 25 new cases per year

Location	Scope	Meso MDT clinical lead specialty	Same as the lung MDT lead? (✗/✓)	New cases per year (2018)	MDT frequency	Patients (n) discussed per MDT	Relation to thoracic MDT
Arrowe Park Hospital, Wirral* Wirral University Teaching Hospital NHS Foundation Trust lung cancer and specialist mesothelioma MDT	Regional	Respiratory physician	✗	30	weekly	<5	During
Basingstoke Hospital National peritoneal mesothelioma MDT	National	Surgeon	✗	75	monthly	10	N/A
Broomfield Hospital, Essex† Essex mesothelioma MDT	Regional	Respiratory physician	✓	62	fortnightly	<5	Separate
Glenfield Hospital, Leicester East Midlands regional mesothelioma MDT	National	Surgeon	✗	200	weekly	16–20	Separate
Guys Hospital, London* GSTT lung MDT	Regional	Respiratory physician	✓	80	weekly	5–10	During
Liverpool Heart and Chest Hospital Merseyside and Cheshire	Regional	Respiratory physician	✓	61	weekly	<5	Before
Oxford University Hospitals Regional mesothelioma MDT	Regional	Respiratory physician	✗	25	monthly	5–10	Separate
Queen Elizabeth University Hospital, Glasgow Scottish national mesothelioma MDT	National	Respiratory physician	✗	N/A, est. 2019	weekly	5–10	Separate
Royal Brompton and Royal Marsden Hospitals, London Royal Brompton and Royal Marsden mesothelioma specialist MDT	National	Respiratory physician	✓	30	weekly	<5	After
Royal Devon and Exeter Hospital* RD&E	Regional	Respiratory physician	✓	25	weekly	<5	During
Royal Hallamshire Hospital, Sheffield Sheffield lung MDT	National	Clinical oncologist	✗	60	weekly	5–10	After
Royal Papworth Hospital, Cambridge Papworth mesothelioma MDT	Regional	Respiratory physician	✓	77	weekly	<5	After
Southampton General Hospital* Lung cancer MDT	Regional	Radiologist	✓	35	weekly	<5	During
Southmead Hospital, Bristol North Bristol	Regional	Respiratory physician	✗	120	weekly	<5	After
St Bartholomew's Hospital, London Bart's mesothelioma MDT	National	Surgeon	✗	293	weekly	5–10	Before
University Hospital, Birmingham University Hospital Birmingham mesothelioma MDT	Regional	Mesothelioma specialist nurse	✗	81	fortnightly	<5	After
University Hospital of Wales, Cardiff South Wales regional mesothelioma MDT	Regional	Respiratory physician	✓	30	weekly	<5	After
Wythenshawe Hospital, Manchester North West mesothelioma MDT	Regional	Respiratory physician	✗	170	weekly	<5	Before
*** Discuss over 25 mesothelioma cases per year, but these cases are not separated from the lung MDT † Four local trusts hold a combined separate mesothelioma MDT**							

Location and scope

Specialist mesothelioma MDTs have been in operation for over 10 years in Sheffield and Cardiff; for over 5 years in Bristol, Leicester, Liverpool and the Wirral; and have been introduced more recently in the 11 other centres, since the NHS mesothelioma service commissioning guidelines were published.[1] At the time of audit, Northern Ireland did not have a specialist mesothelioma MDT although this is in development. Geographic coverage tended to be regional, loosely within cancer alliances for the majority of specialist MDTs, often with most referrals coming from the hospital provider at which the mesothelioma MDT was sited. However, some pathways for specialist mesothelioma surgical referral were extra-regional. When asked, all specialist MDTs were prepared to accept outside referrals and in practice receiving extra-regional referrals was routine for four English mesothelioma MDTs (Barts, Leicester, Sheffield, Royal Brompton/Royal Marsden Hospitals) in addition to the Scottish mesothelioma MDT in Glasgow and the national peritoneal MDT in Basingstoke. The most common extra-regional referral reason was for consideration of the MARS2 surgical trial,[3] but other reasons included referral for specific systemic anti-cancer therapy trials and expert pathology review.

Recommendation: Each healthcare region should ensure that mesothelioma patients have the opportunity of a referral to a specialist mesothelioma MDT, defined as a provider discussing at least 25 new cases of mesothelioma each year.[1] All peritoneal mesothelioma patients should be considered for referral to the national peritoneal MDT.

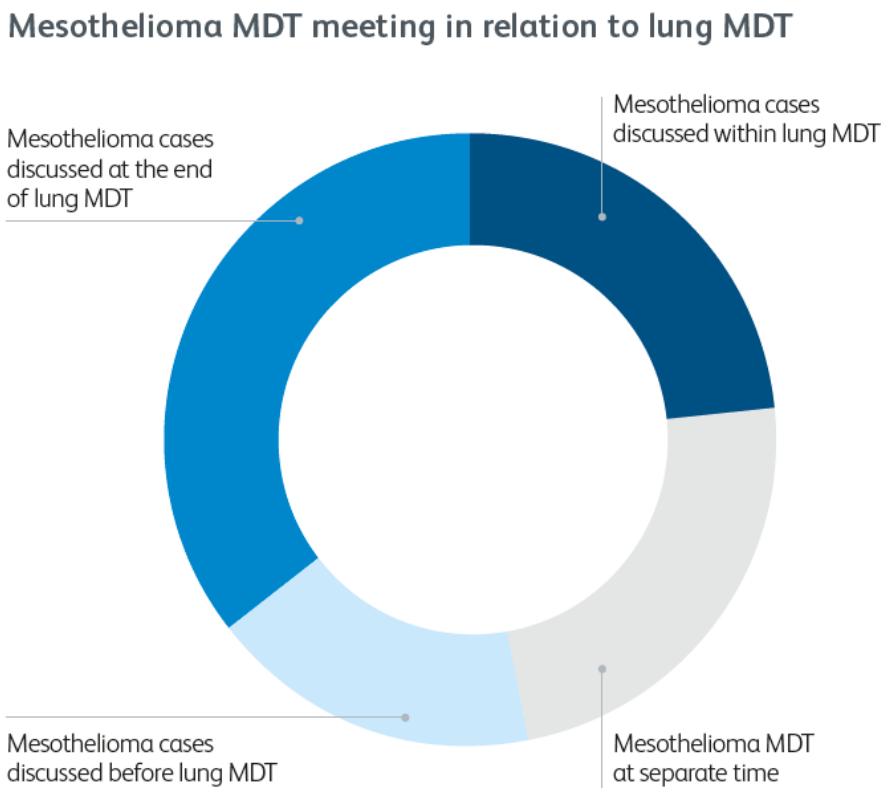
MDT meetings

The majority (13/17) of specialist mesothelioma MDTs reported meeting in association with the lung/thoracic MDT (due to the overlap of involved personnel) with 12 held weekly and 1 held fortnightly. For these 13 MDTs, linked to thoracic MDTs, mesothelioma cases were discussed at the beginning of the MDT meeting at 3 centres, at the end of the meeting in 6 centres and during the meeting in 4 centres.

The remaining 4/17 specialist mesothelioma MDTs which held meetings entirely separate to the lung MDT, met every week in Glasgow and Leicester, every fortnight in Essex and monthly in Oxford.

16/17 MDTs had a clinical lead who was a doctor (12 of whom were respiratory physicians) and 9/17 mesothelioma MDTs had a clinical lead who was different to the lung cancer MDT lead (Fig 3).

Fig 3 Mesothelioma MDT meeting in relation to lung MDT



The majority (71%, 12/17) of specialist MDTs discuss less than five cases per meeting, within a 30-minute timeframe, ranging up to 20 cases being discussed per week at mesothelioma surgical MDTs, over a 60–90-minute timeframe.

The number of new cases discussed per year by the specialist mesothelioma MDTs ranged from 25 cases up to 200 cases for 16/17 (94%) MDTs with the very newly established Scottish mesothelioma MDT unable to give numbers for 2018.

At present 5/17 (29%) of the MDTs regularly used teleconferencing facilities to link to referring clinicians at neighbouring trusts, with other MDTs wishing to develop or expand this aspect of their service to enable core members and local referring teams to participate.

Recommendation: All specialist mesothelioma MDTs should consider using teleconferencing to support meeting attendance by key members, including palliative care and mesothelioma CNS support and to facilitate real-time feedback with MDTs who have referred patients.

15/17 (88%) specialist MDTs discussed all non-pleural cases of mesothelioma with 2/17 (12%) centres simply referring peritoneal cases directly to the national peritoneal MDT. 16/17 (94%) centres were aware of the national peritoneal specialist service and 12/17 (71%) centres had made

referrals. It was universally acknowledged that cases of testicular mesothelioma were extremely rare, with many MDTs never having discussed a case.

Administrative arrangements

In 14/17 (82%) administrative support for the MDT was provided by the host centre's lung/mesothelioma MDT coordinator, with one centre having a specific mesothelioma MDT coordinator, one centre using a tertiary surgical coordinator and one centre having no administrative support. Just 2/17 (12%) MDTs reported receiving specific funding to set up their mesothelioma MDT.

14/17 (82%) of MDTs used a pro forma for referrals, seven specific for the mesothelioma MDT and seven using a universal thoracic MDT pro forma. The other three MDTs worked via email referrals. Information requested within mesothelioma-specific MDT pro formas included information on asbestos exposure, history of service in the armed forces, specific information on sites of prior pleural biopsy and effusion drainage, histologic subtyping, and the ability to add MDT outcome and trial recommendations to the end of the pro forma for returning to the referring trust. An example of a specialist mesothelioma MDT pro forma can be found on the NMA website.

Recommendation: All specialist mesothelioma MDTs should have a clear referral pathway including a referral pro forma.

While all 17 mesothelioma MDTs ideally wanted as much information as possible on their referrals, in particular recent CT imaging and pathology slides, during telephone discussion it was clear all referred cases would be discussed. 12/17 (71%) MDTs reported that they would re-stage all discussed cases and 11/17 (65%) of MDTs reported that they would review all histology slides with the remaining six centres reviewing histology in selected cases (for example where diagnosis of mesothelioma was uncertain) and all 17 MDTs reported mesothelioma histologic subtype.

During the telephone interview with clinical leads, all 17 MDTs viewed the presence of a respiratory physician, surgeon, oncologist, nurse, radiologist and pathologist as core membership for a quorate meeting. 9/17 (53%) centres had an attending mesothelioma specialist nurse with the other eight MDTs having pleural or lung cancer specialist nurses in attendance and 3/8 having access to a regional mesothelioma CNS although not present during the MDT.

It is of note that only 4/17 (24%) of the specialist MDTs reported including in their quorate, attendance by a member of the palliative care team, although this is considered core within the NHS mesothelioma service specification.[1]

Recommendation: All specialist mesothelioma MDTs to review the need for a palliative care representative to be included in their quorate for an MDT, in line with the NHS mesothelioma service specification.[1]

All 17 mesothelioma MDTs communicated outcomes to the originating MDT by emailing the pro forma or minutes, unless the patient was due to be seen in the centre; with the expectation that the originating team would otherwise communicate directly with the patient.

9/17 (53%) MDTs reported having undergone a peer review (some peer reviews being as a part of the lung MDT peer review) and all reported having an operational policy, annual report and work plan, although for many centres this was again in combination with their lung MDT.

Surgery

During telephone interview it was established that all 17 specialist MDTs had the facility to offer diagnostic surgical services either on-site (15/17, 88%) or at the surgical centre of the surgeon attending their MDT (2/17, 12%) with all MDTs referring patients on to MARS2 trial surgical centres for consideration of radical surgery. 3/6 MARS2 surgical MDTs also provided off-trial radical debulking surgery.

Table 3 On-site radical pleural surgery

Location	On-site radical pleural surgery within trial	On-site radical pleural surgery outside of trial
Arrowe Park Hospital, Wirral	×	×
Broomfield Hospital, Essex	×	×
Glenfield Hospital, Leicester	✓	✓
Guys Hospital, London	✓	✓
Liverpool Heart and Chest Hospital	×	×
Oxford University Hospitals	×	×
Queen Elizabeth University Hospital, Glasgow	✓	×
Royal Brompton and Royal Marsden Hospitals, London	×	×
Royal Devon and Exeter Hospital	×	×
Royal Hallamshire Hospital, Sheffield	✓	×
Royal Papworth Hospital, Cambridge	×	×
Southampton General Hospital	×	×
Southmead Hospital, Bristol	×	×
St Bartholomew's Hospital, London	✓	✓
University Hospital, Birmingham	×	×
University Hospital of Wales, Cardiff	✓	×
Wythenshawe Hospital, Manchester	×	×

Clinical trials

In addition to surgical trials, there were a range of other mesothelioma trials offered across the 17 MDTs, with 15/17 (88%) having multiple trials open locally. It was difficult for many clinical leads to come up with exact numbers of patients recruited to clinical trials during the interview, but estimates ranged from ‘several’, to ‘lots’ and to ‘over 100’.

This may reflect the fact that recruitment to clinical trials is not reported separately for mesothelioma but is included in the overall number of ‘lung cancer’ trials. Numbers are summarised in Table 4 with 8/17 mesothelioma MDTs recruiting over 20 patients per year into a variety of mesothelioma trials.

Recommendation: All specialist mesothelioma MDTs should routinely record patient referrals to clinical trials and trial information including trial name and start date/completion date.

Table 4 Recruitment into local mesothelioma trials

Location	Local mesothelioma trials open in 2018	Recruitment to mesothelioma trials per year
Arrowe Park Hospital, Wirral	✓	unavailable
Broomfield Hospital, Essex	✓	10–20
Glenfield Hospital, Leicester	✓	over 20
Guys Hospital, London	✓	over 20
Liverpool Heart and Chest Hospital	✓	10–20
Oxford University Hospitals	✓	10–20
Queen Elizabeth University Hospital, Glasgow	✓	over 20
Royal Brompton and Royal Marsden Hospitals, London	✓	unavailable
Royal Devon and Exeter Hospital	×	unavailable
Royal Hallamshire Hospital, Sheffield	✓	over 20
Royal Papworth Hospital, Cambridge	✓	10–20
Southmead Hospital, Bristol	✓	over 20
Southampton General Hospital	✓	over 20
St Bartholomew's Hospital, London	✓	over 20
University Hospital, Birmingham	×	<10
University Hospital of Wales, Cardiff	✓	unavailable
Wythenshawe Hospital, Manchester	✓	over 20

Supportive care

Clinical nurse specialist (CNS) support for mesothelioma patients was viewed as very important and was commonly highlighted as a strength for specialist MDTs that had a mesothelioma CNS and a strong desire to appoint a CNS for those specialist MDTs without one.

Regular palliative care representation within the MDTs was often flagged as an area for improvement. 10/17 specialist mesothelioma MDTs had links to a mesothelioma-specific support group, some linked to asbestos support groups (Table 5).

Table 5 MDTS with links to mesothelioma-specific support groups

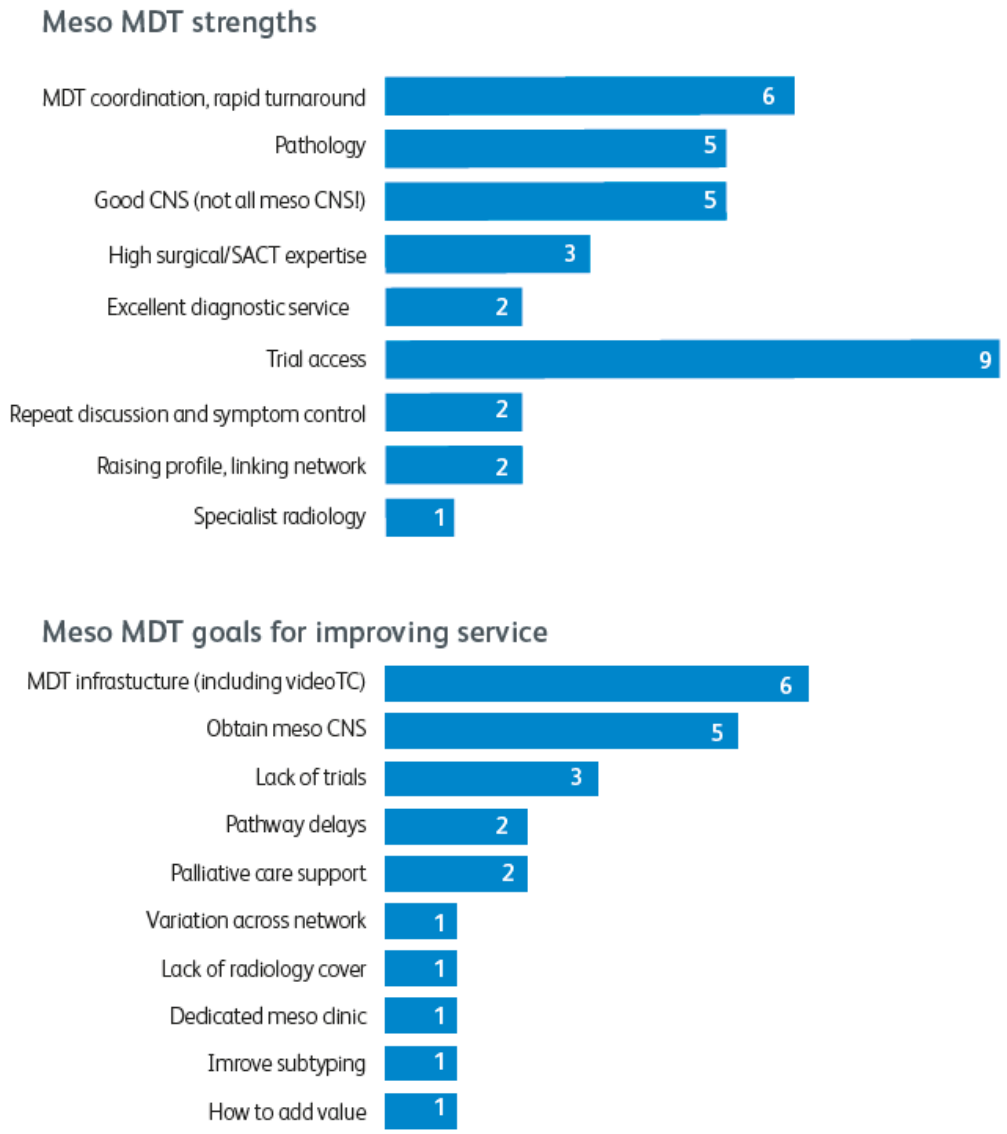
Location	Mesothelioma-specific Support group	Mesothelioma CNS at MDT	Palliative care at MDT
Arrowe Park Hospital, Wirral	No	No	
Basingstoke Hospital (Peritoneal)	N/A	Yes	
Broomfield Hospital, Essex	No	No	
Glenfield Hospital, Leicester	Yes	Yes	
Guys Hospital, London	Yes	Yes	
Liverpool Heart and Chest Hospital	No	No	Yes
Oxford University Hospitals	Yes	Yes	Yes
Queen Elizabeth University Hospital, Glasgow	Yes	Yes	Yes
Royal Brompton and Royal Marsden Hospitals, London	No	No	Yes
Royal Devon and Exeter Hospital	No	No	
Royal Hallamshire Hospital, Sheffield	Yes	Yes	
Royal Papworth Hospital, Cambridge	Yes	Yes	
Southampton General Hospital	Yes	Yes	
Southmead Hospital, Bristol	Yes	No	
St Bartholomew's Hospital, London	No	Yes	
University Hospital, Birmingham	Yes	No	
University Hospital of Wales, Cardiff	No	No	Yes
Wythenshawe Hospital, Manchester	Yes	Yes	

Strengths and weaknesses

Finally, the MDTs were asked what aspects of their service they thought were most beneficial to their patients and if they had identified particular challenges or areas for quality improvement (Fig 4). Many common themes were discussed and are illustrated in Fig 4.

The number of patients recruited to trials and the range of mesothelioma trials offered was the most commonly flagged strength of specialist mesothelioma MDT discussion, with other specialist MDT strengths including rapid turnaround of an expert second opinion, mesothelioma CNS input, pathology review and advice on surgical and systemic therapy options.

Fig 4 Mesothelioma MDT strengths and goals for improving service



Conclusions

This first mesothelioma organisational audit highlights variation in access to diagnostic services, treatment, information and support and referral to specialist mesothelioma MDTs across the country.

There is also variation in the specialist services offered by the 17 specialist mesothelioma MDTs identified including how often MDTs are held and whether they are held at a separate time from the corresponding lung MDT.

The results of the phase 2 questionnaire and telephone discussions highlight common themes of good practice but also the need to standardise specialist service provision across the country.

Compared to non-specialist providers, all 17 specialist mesothelioma MDTs have increased access to mesothelioma nurse specialist support for their patients and make onward referrals for clinical trials and radical surgery, including peritoneal surgery, if not available locally.

Regular palliative care attendance at specialist MDTs is low. The routine use of teleconferencing facilities is also under-utilised and could offer a mechanism to support meeting attendance by core members and allow real-time feedback to referring MDTs and their patients.

The majority of specialist mesothelioma MDTs discuss a small number of cases per week and are linked to the lung MDT at the same centre but there are several very large, specialist mesothelioma MDTs, often at surgical centres, which discuss up to 20 cases per week and hold their MDT entirely separately, often discussing extra-regional mesothelioma patients from beyond their cancer alliance.

Table 6 Summary of key findings from phase 2

Category	Indicator	Result	%[a]	KPI[b]
MDT meeting	Manage >25 new patients per year, within a distinct mesothelioma MDT	17/125	14%	Yes
	Hold a distinct mesothelioma MDT meeting, separate to a lung cancer MDT	4/17	24%	Yes
	Have a specialist mesothelioma nurse within the MDT	9/17	53%	Yes
	Meet on a weekly basis	14/17	82%	
Referrals	Use a specific mesothelioma referral pro forma	7/17	41%	Yes
	Regularly discuss referrals from outside their region or cancer alliance	5/17	29%	
Clinical trials	Offer patients local access to clinical trials	15/17	88%	Yes
	Refer patients to other centres for further clinical trial options, such as to surgical centres for the MARS2 radical debulking trial	17/17	100%	Yes

[a] Result across participating MDTs

[b] Key performance indicator recommended for adoption by the NMA

KPI = key performance indicator; MDT = multidisciplinary team; NMA = National Mesothelioma Audit

6 Summary

This organisational audit builds on evidence from the work of the National Mesothelioma Audit (NMA) to demonstrate that national variance exists in the provision of diagnostic services, treatments, support and access to specialist MDTs and clinical trials for mesothelioma patients.

Comparing service provision across all participating MDTs, patients who are referred to one of the 17 identified specialist mesothelioma MDTs appear more likely to benefit from direct access to a mesothelioma-specific clinical nurse specialist, 53% (9/17) vs 14% (18/125), and achieve ready access to on-site clinical trial options, including for surgical clinical trials: 88% (15/17) vs 33% (40/121).

In addition to the recommendations made throughout this report, the NMA would like to encourage all MDTs, including those not participating in this audit to review their organisational alignment to the British Thoracic Society (BTS) guidelines, invite peer review and actively participate in future NMA audits.

Recommendation: All MDTs should review their organisational alignment to the British Thoracic Society (BTS) mesothelioma guidelines, seek opportunities for peer review and actively participate in future NMA audits.

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Document purpose	To disseminate results on the findings from the National Mesothelioma Audit organisational audit, relating to the availability, structure and process of specialist mesothelioma care across the UK.
Title	National Mesothelioma Audit organisational audit report 2019
Author	Royal College of Physicians, Care Quality Improvement Department
Publication date	January 2020
Target audience	NHS staff in mesothelioma and lung cancer multidisciplinary teams; hospital managers and chief executives; commissioners; mesothelioma researchers; mesothelioma patients, their families and their carers.
Description	This is the National Mesothelioma Audit's first organisational audit report.
Related publications	National Mesothelioma Audit report 2018 (for the audit period 2014–16) National Lung Cancer Audit pleural mesothelioma report 2016 (audit period 2014) National Lung Cancer Audit report 2014 Mesothelioma (audit period 2008–2012)
Contact	**nma@rcplondon.ac.uk**

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The charity Mesothelioma UK is a national specialist resource centre dedicated to all matters related to mesothelioma. The charity provides specialist mesothelioma information, support and education and seeks to improve care, treatment and outcomes for all UK mesothelioma patients and their carers.
The charity integrates into NHS front-line services to ensure specialist mesothelioma nursing is available at the point of need. This is achieved through a growing network of specialist mesothelioma nurses, regionally based in NHS hospitals but funded by Mesothelioma UK. The charity relies entirely on donations, grants, legacies and fundraising to ensure all services are provided free of charge across the UK.
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