

Multidisciplinary team meetings in cancer care:

A qualitative study of the role of status hierarchies in the decision
making process

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Declaration

I, Isla Grace Wallace, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

Isla Grace Wallace

Abstract

Background

Multidisciplinary teams (MDTs) are the established model for managing cancer care in England. Weekly MDT meetings bring together different healthcare professionals with diverse knowledge and expertise in order to facilitate patient-centred decision making. However, little consideration has been given to the role of status hierarchies in the decision making process in these teams.

Aim

The aim of this PhD is to explore the way that status hierarchies between healthcare professionals unfold during the decision making process in cancer MDT meetings, and to identify factors that inhibit or facilitate multidisciplinary discussion. It also considers approaches used by lower status groups to contribute during meetings.

Methods

A qualitative study was undertaken of four MDTs: one gynaecology, one skin and two haematology cancer MDTs. This involved thematic analysis of data from non-participant observation of 122 MDT meetings and 26 semi-structured interviews with professionals and patients.

Findings

Higher status professionals (medical and surgical consultants) played a dominant role in all four cancer MDTs. Although lower status professionals (specialist nurses and junior doctors) contributed much less frequently, they were more likely to participate in complex cases, for example when patients had limited treatment options. Multidisciplinary discussion was influenced by team size, seating arrangements, the approach to presenting cases for discussion, and the behaviours of both higher and lower status individuals. Higher status individuals provided support for lower status contributions when they demonstrated inclusive leadership

behaviours. In turn, lower status individuals contributed successfully by sharing information, asking questions, providing practical suggestions, framing contributions in medical or surgical terms, and using humour. These approaches prompted discussion, influenced treatment plans and facilitated teamwork.

Conclusion

This study enhances understanding of the approaches that can be used by MDTs to capitalise on the relevant knowledge and skills of all team members when making decisions in the MDT meeting.

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List of Abbreviations

BCC	Basal cell carcinoma
CLL	Chronic Lymphocytic Leukaemia
CNS	Clinical Nurse Specialist
CT scan	Computerised Tomography scan (uses X-rays and a computer to create detailed images of the inside of the body)
ECC	Ethics and Confidentiality Committee
GFR	Glomerular Filtration Rate (to test kidney function)
GP	General Practitioner
HDU	High Dependency Unit
HS&DR	Health Services and Delivery Research Programme
IOG	Improving Outcomes Guidance
ITU	Intensive Treatment Unit
IV	Intravenous (the infusion of liquid substances directly into a vein)
IVF	In Vitro Fertilisation
MDT	Multidisciplinary team
MDT-MODE	Multidisciplinary Team Metric for Observation of Decision-Making
MDT-OARS	Multidisciplinary Team Observational Assessment Rating Scale
MDM	Multidisciplinary meeting
MRI scan	Magnetic resonance imaging (a type of scan that uses strong magnetic fields and radio waves to produce detailed images of the inside of the body)
NCAT	National Cancer Action Team
NHS	National Health Service
NICE	National Institute for Health and Care Excellence
NIGB	National Information Government Board
NIHR	National Institute for Health Research
PET scan	Positron emission tomography scan (detects radiation given off by a radiotracer as it collects in the body to diagnose and stage cancer)

PICC	Peripherally inserted central catheter (a form of intravenous access that can be used for a prolonged period of time, e.g. for long chemotherapy regimens)
PSA	Prostate Specific Antigen (a protein produced by normal cells in the prostate and also by prostate cancer cells)
SCC	Squamous cell carcinoma
StR	Specialty Registrar (junior doctor)
UK	United Kingdom
USA	United States of America

Chapter 1. Introduction

In recent years, cancer care has become increasingly complex, reflecting scientific advances in diagnosis and treatment, and increased specialisation (Mukherjee, 2011). In response, there has been a growing emphasis on teamwork as a mechanism for bringing together the different professional groups necessary to deliver quality patient care (West and Lyubovnikova, 2013). A key example of this is the multidisciplinary team (MDT). This is a model endorsed as the 'gold standard' of care for patients with cancer in the UK (Independent Cancer Taskforce, 2015), and internationally (Harrison et al., 2008, American College of Surgeons and Commission on Cancer, 2012, Ministry of Health, 2012, Prades et al., 2014).

Cancer MDTs bring together professionals involved in the delivery of care for patients with a particular type of cancer (Commission for Health Improvement, 2001). This usually includes medical, surgical and diagnostic specialists, as well as specialist nurses (NHS England, 2013, NHS England, 2014, NHS Improving Quality, 2014). These teams typically meet weekly, in order to discuss and agree treatment plans for all newly diagnosed cancer patients (Harris et al., 2014). The aim of these meetings is to ensure a uniform standard of quality care and to facilitate patient centred decision making (Department of Health, 1995, Department of Health, 2000). It is assumed that bringing together different professional groups in this way will ensure that each patient's treatment is considered from a range of perspectives (National Institute for Health and Clinical Excellence, 2003).

However, the literature on group dynamics suggests that teams are not always successful in using the knowledge and information held by different members (Mesmer-Magnus and DeChurch, 2009, Bunderson and Reagans, 2011). This is particularly salient in healthcare contexts, where there are well-established status differences between professional groups (Freidson, 1988, Larkin, 1988, Price et al., 2014). Status hierarchies have been shown to impact on levels of participation

between professional groups in healthcare teams, and specifically in the MDT setting (Atwal and Caldwell, 2005, Nembhard and Edmondson, 2006). Surgical, medical, and diagnostic professionals have been shown to dominate MDT meetings, while nursing or psychosocial professionals have more limited input (Lanceley et al., 2008, Lamb et al., 2011b, Raine et al., 2014a). These patterns of participation are potentially problematic for MDTs because information sharing and discussion amongst team members are key to the decision making process, and have been shown to improve the accuracy of medical diagnoses (Larson et al., 1998), and to increase the likelihood of reaching a decision during MDT meetings (Lamb et al., 2013b, Soukup et al., 2016a).

The specific role of specialist nurses in the MDT meeting is also important. The literature suggests that when specialist nurses are actively involved in MDT discussion, and medical and psychosocial information are integrated, this improves discussion and leads to greater satisfaction amongst MDT members (Lanceley et al., 2008, Kidger et al., 2009). In addition, nurses can act as the patient's advocate and can ensure that patient related factors are taken into account when treatment decisions are made (Amir et al., 2004, Lamb et al., 2011a, Lamb et al., 2013c).

At the same time, MDTs are under increasing pressure as demand on services continues to grow (NHS England, 2015). In practice, the number of cases to be discussed at the weekly MDT meeting means that there is little time for in-depth review of each. A recent study shows that individual discussions in MDT meetings across a range of cancer specialties last an average of 2 minutes 49 seconds (Jalil et al., 2014). In this context, achieving genuine multidisciplinary discussion, and facilitating and incorporating contributions from the full range of professional groups who attend the meeting, is challenging. This is acknowledged in the most recent national cancer strategy *Achieving world-class cancer outcomes: a strategy for England 2015 – 2020*. This strategy suggests that MDT processes should be streamlined, with less time spent on cases that can be managed according to evidence based treatment guidelines, in order to free up time for multidisciplinary

discussion of more complex cases (Independent Cancer Taskforce, 2015). However, there is little evidence to guide MDTs in making decisions about which patients to discuss in depth, or about how to facilitate multidisciplinary discussion within the team during these cases.

In this fast-paced and pressurised environment, a better understanding of the role of status hierarchies in the decision making process is crucial to ensuring that MDTs can benefit from their diverse membership when making decisions. My aim is to explore the way that status hierarchies unfold in MDT meetings, and to identify the factors that facilitate or inhibit multidisciplinary discussion. I will also explore the approaches used by lower status groups to contribute, when they do participate in discussion. In doing so, this thesis will contribute knowledge that can be used to help MDTs appropriately capitalise on the skills and knowledge of all team members when making decisions in MDT meetings.

1.1 Background to the thesis

The research I carried out for this PhD was part of a larger study of chronic disease MDT meetings. In this section I describe how this broader programme of research informed the work I went on to carry out independently for my doctoral research.

1.1.1 The NIHR-funded 'MDT Study'

Between November 2010 and November 2014 I was employed in the Department of Applied Health Research at UCL. During this time I was one of three full time Research Associates working on a mixed methods study of chronic disease MDT meetings. This study was funded by the National Institute for Health Research (NIHR project reference HS&DR 09/2001/04). An overview of the 'MDT Study' is provided in Box 1.

Box 1: Overview of the NIHR-funded MDT Study

Improving the effectiveness of MDT meetings for patients with chronic diseases

The MDT Study was led by my primary supervisor, Professor Rosalind Raine, and was guided by a project steering group composed of clinicians, academics and patient representatives.

Aims:

- to identify the characteristics of MDT meetings associated with decision implementation (whether or not treatment decisions recommended by the team were carried out), and
- to derive recommendations for improving MDT decision making for patients with chronic diseases.

Methods:

We studied 12 MDTs in cancer, heart failure, mental health and memory clinic teams in the London and North Thames area. Data were collected by non-participant observation of 370 MDT meetings. Then, medical records of 2,654 patients were reviewed to determine whether the decisions agreed during the MDT meeting had been implemented. A questionnaire on team climate was completed by 161 MDT members across the 12 teams, and semi-structured interviews were conducted with 53 MDT members and 20 patients.

The quantitative analysis investigated the influence of MDT and patient-related factors on the implementation of decisions agreed in MDT meetings. The qualitative data were used to explore possible reasons for the quantitative results, and to highlight differences between teams and disease types. The final stage of the study used these findings to generate a series of potential recommendations for improving decision making in MDT meetings.

We recruited a panel of healthcare professionals, policy makers and patient representatives with experience of MDTs in each of the disease types under study to discuss and rate these recommendations using a formal consensus development technique.

Results:

- The MDT Study found no evidence of a relationship between decision implementation and patient age or gender, or with discussion of patient preferences or comorbidities. However, decisions were less likely to be implemented for patients living in more deprived areas of England.
- The team factors associated with decision implementation were disease type (implementation was highest in gynaecological cancer and lowest in mental health) and team climate (implementation was more likely in teams with a good team climate). In mental health and memory clinic teams, an increase in the number of professional groups in attendance was associated with a reduced odds of decision implementation.
- The qualitative results were structured around 16 meta-themes, which highlighted variation in the processes, structures and the content of discussion during weekly meetings across the 12 teams studied.
- The consensus development process generated 21 recommendations for improved practice in MDT meetings, including good practice in meeting processes and functions, the content of discussions, and the role of the patient.

The full results of the MDT Study are available in the peer reviewed publications listed in Appendix 1.

As described in Box 1, the NIHR-funded MDT Study demonstrated that decision implementation was relatively high in the four cancer teams (ranging from 78 per cent to 84 per cent), particularly in comparison with the four mental health teams (65 per cent to 77 per cent) (Raine et al., 2014a). However, the existence of inequalities in the participation of different professional groups when making decisions in MDT meetings was a key theme to emerge from the qualitative component of the research. While participants emphasised the value of disciplinary diversity, they also highlighted challenges inherent in working across disciplinary boundaries. These challenges reflected status differences and contrasting professional perspectives. Cancer and heart failure teams in particular were characterised by a strong medical dominance, which was manifest both in the degree of participation and in the seating arrangements. Overall then, while the principle of multidisciplinary input was highly valued, there was some dissatisfaction with how this worked in practice (Raine et al., 2014a). I took this finding as a starting point for my PhD, exploring and extending the meta-theme generated in the original analysis by focusing specifically on decision making processes in the four cancer teams.

1.1.2 Making an independent contribution for my doctoral research

Study design and data collection

My PhD draws on data from the four cancer teams recruited to the MDT Study. I was responsible for the data collection and qualitative analysis in these teams. The exception to this was cover for the observation of meetings when I was on annual leave, which was provided by the research team. I describe my role in study design and data collection, as well as my independent analysis, in more detail in **Chapter 5**.

Developing research questions and a theoretical framework

Taking one of 16 meta-themes generated in the original analysis as my starting point, the process of developing research questions for my doctoral research was very iterative. Although the MDT Study did not focus on the issue of hierarchy in depth, it provided a rich dataset for further exploration. I spent a considerable

period of time working back and forth between existing literature and theory, the data collected, and the initial mixed methods analysis from the MDT Study. In this way, I was able to develop research questions that built on the earlier work of the study, while also ensuring that the new questions I wanted to pose could be appropriately answered by the data I had.

While doing this, I also spent time exploring the micro organisational behaviour literature to identify theoretical perspectives that could enhance my understanding of the group dynamics I had observed during data collection. There were a number of possible theoretical perspectives that could be applied in the context of cancer MDT meetings, including diversity, power, and status amongst others. However, status characteristics theory held the most resonance for me when I reflected on my observations and interviews with MDT members, particularly in relation to the lower rates of participation from specialist nurses and junior doctors. Adopting this theoretical framework for my doctoral research enabled me to explore the role of status hierarchies in the decision making process in cancer MDT meetings in much more depth than had been possible within the MDT Study.

Although this non-linear approach to my doctoral research has limitations (which I discuss in **Chapter 10**) it nonetheless reflects the journey that Edmondson and McManus (2007) describe as characteristic of field research. As Figure 1 shows, this is best viewed as an iterative process, which can involve almost as many steps backwards as it does forwards.

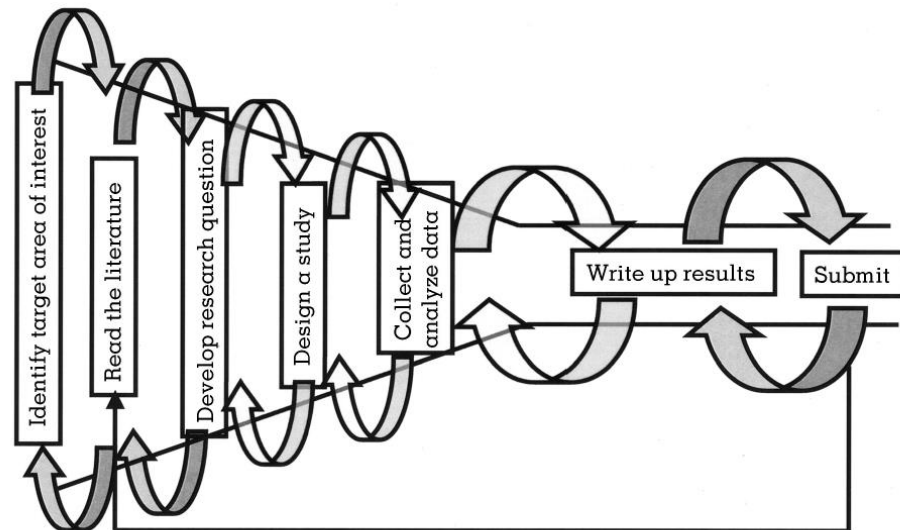


Figure 1: Field research as an iterative journey

(Edmondson and McManus, 2007)

1.2 Overview of the thesis

Following on from this introductory chapter, **Chapter 2** presents a review of cancer policy and analyses the literature on cancer MDTs. **Chapter 3** sets out the theoretical framework for the study. It draws on the literature on status hierarchies in teams, before the research questions that this thesis seeks to answer are presented in **Chapter 4**. **Chapter 5** provides an overview of the methodological approach underpinning the study, and the methods used to collect and analyse the data. Following this, **Chapters 6, 7 and 8** present the findings of the qualitative analysis, with each chapter addressing one of the research questions posed. These findings are then integrated in **Chapter 9**. Finally, **Chapter 10** sets the findings in context and discusses the implications for policy, practice and research.

Chapter 2. Review of policy and practice in cancer multidisciplinary teams

This chapter begins by reviewing the key national policies and guidance that have shaped the development of cancer MDTs in England. The aim is to establish the context within which MDT meetings operate, to clarify the goals of policy in regards to MDT meetings, and to understand the role of different professional groups in these meetings. The analysis is based on a review of policy and guidance documents identified in a search of the grey literature.

The second part of the chapter reviews the research literature on cancer MDTs. Given that the first cancer MDTs were introduced in England almost 20 years ago, a vast body of literature seeking to measure and improve the effectiveness of MDT working already exists. This literature has been systematically reviewed by others (Coory et al., 2008, Lamb et al., 2011b, Ke et al., 2013, Prades et al., 2014, Pillay et al., 2016). However, my aim is to focus on those aspects that have most relevance to the issues of participation and information sharing in MDT meetings, and to establish why this remains an important field for further study.

An overview of the search and review strategies underpinning these chapters is provided in Appendix 2.

2.1 Cancer MDTs: the policy vision

2.1.1 The emergence of a national cancer policy

Improving the delivery of cancer care has been on the policy agenda in England since the mid-1990s, when a growing awareness emerged that cancer survival rates were worse in England than in many other European countries (Haward, 2006, Richards, 2010). At this time, cancer care was largely delivered by general surgeons and physicians, who were supported by specialists (Haward, 2006). However, there

were often long waits for diagnosis and treatment, and there were inequalities in both prevalence and delivery of services (Griffith and Turner, 2004, Haward, 2006). It was against this backdrop that changes were proposed at a national level to improve cancer services (Griffith and Turner, 2004).

2.1.2 Establishing MDTs as a model of care

One of the central catalysts for change was the publication of the Calman-Hine Report: *A Policy Framework for Commissioning Cancer Services* (Department of Health, 1995). The report, which was written by an Expert Advisory Group on Cancer to the Chief Medical Officers of England and Wales, set out key principles for the organisation of cancer services (Haward, 2006). Specifically, it introduced the concept of specialist multidisciplinary teams, moving away from a model of care where clinicians had worked predominantly as individuals. These multidisciplinary teams were tasked with making joint decisions about diagnosis and treatment for individual patients (Haward, 2006). The changes proposed in the Calman-Hine Report were underpinned by a desire to ensure a uniform standard of high quality care for all patients, a commitment to the principle of patient centred care, and acknowledgement of the importance of the psychosocial aspects of cancer care (Department of Health, 1995).

Crucially, however, although the Calman-Hine report provided a framework for change, it was not accompanied by additional funding or central guidance about how the proposed changes should be implemented (Commission for Health Improvement, 2001, Richards, 2010). Initial progress was therefore inconsistent (Richards, 2010). This changed in 1999, when cancer became a key priority under the then Prime Minister, Tony Blair, in advance of the publication of the *NHS Cancer Plan: A Plan for Investment A Plan for Reform* in 2000 (Griffith and Turner, 2004).

2.1.3 Embedding MDTs as the cornerstone of cancer treatment

The *NHS Cancer Plan* was published as a comprehensive strategy for the reform of cancer services (Department of Health, 2000). It was accompanied by dedicated funding, which was allocated to improve standards in cancer care (Department of Health, 2000). The role of MDTs was extended, reflecting the policy view that they facilitated high quality diagnosis and treatment, and improved the coordination and continuity of care for patients (National Institute for Health and Clinical Excellence, 2003). To build on progress made in establishing specialist teams for the most common cancers (breast, colorectal and lung) the Plan committed to putting in place multidisciplinary teams in all cancer specialties from 2001 (Department of Health, 2000). By 2004, discussion of individual patients at team meetings was seen as a central component of the cancer pathway (Griffith and Turner, 2004), and by 2007, around 1,500 cancer MDTs had been established (Department of Health, 2007).

2.1.4 Recent policy developments affecting MDTs

2011 heralded a significant shift in NHS policy under the Coalition Government elected in 2010 (Thomas and Miller, 2013). This included considerable changes to the structure of the NHS, and a focus on reducing costs as part of a commitment to make extensive efficiency savings (Department of Health, 2010, Department of Health, 2013a). In spite of these changes, commitments to embedding MDTs in cancer services echoed those of earlier policy documents. *Improving Outcomes: A Strategy for Cancer* was published in 2011, retaining MDTs as a core feature of the Government's plans alongside a clear mandate to focus on outcomes and survival rates (Department of Health, 2011).

However, four years after the publication of *Improving Outcomes*, the Public Accounts Committee concluded that there had been a loss of momentum in the process of improving cancer services in England (House of Commons: Committee of Public Accounts, 2015). This was a view echoed in the most recent strategy for cancer services, which was published in July 2015: *Achieving World-Class Cancer*

Outcomes: a Strategy for England 2015 - 2020 (Independent Cancer Taskforce, 2015). This latest iteration of the national cancer strategy was developed by an Independent Cancer Taskforce, chaired by the Chief Executive of Cancer Research UK. The aim was to develop a five year strategy to reduce the burden of cancer overall, and to improve care for patients with cancer, with patient experience at its core (Cancer Strategy Taskforce, 2015). The strategy continues to promote the MDT model of care as the 'gold standard' in service delivery. However, it also notes that many MDTs are not operating as effectively as they should be as a result of pressures on the system.

This is also evident in the findings from the most recent National Cancer Peer Review Programme report, published in March 2015 (NHS England, 2015). The Peer Review process is a national quality assurance programme for NHS cancer services, which benchmarks MDTs across England (National Peer Review Programme, 2013). The most recent report concluded that although some teams and services achieved very high levels of adherence to the measures, there remained a group of MDTs that were significant outliers (NHS England, 2015). Of the 1,449 MDTs reviewed, only 8 per cent achieved 100 per cent compliance, with 40 per cent achieving compliance with over 90 per cent of the measures. A key issue raised in the report was the general trend of increasing workload without a commensurate increase in capacity (NHS England, 2015).

The response proposed by the Independent Cancer Task Force in relation to these challenges has been to recommend that MDT processes should be streamlined (Independent Cancer Taskforce, 2015). While guidelines for individual cancer specialties stipulate that MDTs must discuss all new cancer patients to develop an initial treatment plan, the new national strategy recommends that MDT discussions should focus more on difficult cases, where the treatment options are high risk (NHS England, 2014). The strategy does not go as far as to recommend that some cases are not discussed at all, but instead, that 'less time' is spent discussing patients who follow standard treatment pathways (Independent Cancer Taskforce,

2015). However, there is little in the way of guidance for cancer MDTs about how to manage the potentially competing demands of patient centred care *and* the greater efficiency envisaged by the recommendation to streamline MDT meeting processes (NHS England, 2013, NHS England, 2014).

2.1.5 The role of different professional groups in the MDT meeting

In addition to the national policy documents described above, MDTs are shaped by tumour specific guidelines. These guidelines document the clinical outcomes and indicators that MDTs are required to meet, as well as setting out their structure and key functions (NHS England, 2013, NHS England, 2014, NHS Improving Quality, 2014). This includes a description of the core members required to attend the MDT meeting in each specialty. For example, surgeons are requisite members of gynaecology and skin but not haematology MDTs, reflecting differences in the way that underlying conditions are treated. All MDTs however must have a quorum of physicians, radiologists, pathologists, clinical nurse specialists and an MDT coordinator (NHS England, 2013, NHS England, 2014, NHS Improving Quality, 2014). In practice, attendees include both senior (e.g. consultant doctors) and junior staff (e.g. doctors in training), who vary in terms of status and experience (Kane and Luz, 2011). At the heart of the MDT model is an assumption that each of these professional groups brings specific skills and knowledge that can enhance decision making (NHS Improving Quality, 2014).

Consultant surgeons and physicians

Consultant medical and surgical doctors use expert knowledge and skill to diagnose and treat patients (British Medical Association, 2008a), and have ultimate responsibility for the care of all patients referred to them. This is the case even if a patient's treatment is being carried out by other doctors within their team (British Medical Association, 2008b). As a result, they are often regarded as the 'key decision makers' within the healthcare environment (Price et al., 2014). However, other professionals within the MDT also have specific responsibilities and are

expected to participate actively in the decision making process (National Institute for Health and Clinical Excellence, 2003).

Radiologists

The radiology role in the MDT meeting is primarily concerned with the diagnosis, staging and management of patients, and radiologists are responsible for presenting the relevant features in any images that have been undertaken by means of a 'primary report' (The Royal College of Radiologists, 2014). This enables the team to determine the stage of the disease, or to review the extent of a patient's disease following treatment.

Pathologists

Guidelines for pathologists state that their role is to illustrate features of importance for prognosis and further management, for example by presenting slides of cells in tissue samples (The Royal College of Pathologists, 2009).

Clinical Nurse Specialists

Another key member of the MDT is the Clinical Nurse Specialist (CNS). In cancer care, these are registered nurses, with clinical expertise in a specialised area of nursing (National Cancer Action Team, 2010b). This can be a tumour type (e.g. skin cancer), treatment type (e.g. chemotherapy) or patient type (e.g. paediatrics) (National Cancer Action Team, 2010b). The role itself is relatively new, developing alongside the model of MDT working. As a result there is still variation across different specialities in the way this role is carried out (Pollard et al., 2010, Lamb et al., 2011a).

As a core member of the MDT, Clinical Nurse Specialists are expected to contribute to multidisciplinary discussion, to lead on patient and carer communication issues and to ensure that decision making incorporates holistic needs assessments (NHS Improving Quality, 2014). The contribution of clinical nurse specialists (CNS) is therefore a key mechanism for ensuring that clinical decision making is focused on

the needs, values and priorities of individual patients (National Institute for Health and Clinical Excellence, 2003, Dempsey et al., 2016).

Junior doctors

In addition, Specialty Registrars (StRs) play an active role in many MDT meetings (Raine et al., 2014a). StRs are junior doctors who have successfully completed their two year foundation programme following medical school, and who are continuing their training in a specialist area of medicine (British Medical Association, 2016). Given their status as doctors in training, they are not listed as core members of the MDT in national guidelines. This may be one reason why the junior doctor role in the MDT meeting has as yet received very little attention in the literature. In part, involving junior doctors in MDT meetings is an opportunity to deliver learning and training opportunities. However, it is also another way to ensure that patients' perspectives are included in discussions, particularly when junior doctors have had extended contact with patients either on the ward or in clinic (Sharma et al., 2009).

2.1.6 Summary: the development of cancer multidisciplinary teams

To summarise, this review of national policy and supporting guidance has demonstrated that MDT meetings are a fundamental aspect of cancer care. They are widely established and deeply embedded in the English NHS, and there are systematic processes in place to assess their performance. However, despite a huge national commitment, extensive guidelines and additional funding, there is variation in how well MDTs perform, and there is still scope for improvement. In particular, MDTs are under increasing pressure and it has been suggested that meeting processes should be streamlined in order to accommodate the increasing number of cancer cases being referred for discussion.

Table 1: Timeline of key policies and guidance relating to MDTs

	1995	1999	2000	2001	2003	2004	2006	2007	2008
National policy	<i>The Calman-Hine Report</i>		<i>The NHS Cancer Plan</i>					<i>The Cancer Reform Strategy</i>	
	Introduction of MDTs		Committed to full roll out of MDTs in all tumour types					MDT working to remain the core model for cancer service delivery	
Guidelines and measures		First Improving Outcomes Guidance (IOG) published by NICE				First Manual for Cancer Services published			Revised Manual for Cancer Services published
		Gynaecology IOG published			Haematology IOG published		Skin IOG published		
Peer review process		National Cancer Action Team established		First round of peer review (regional) - breast, colorectal and gynaecology cancers		National Cancer Peer Review programme formally established			No. of measures in National Cancer Peer Review programme reduced

	2010	2011	2012	2013	2014	2015
National policy	<i>Review of the Cancer Reform Strategy</i>	<i>Improving Outcomes: a Strategy for Cancer</i>				<i>Achieving World-Class Cancer Outcomes: a Strategy for England 2015 - 2020</i>
	Focus shifts to cancer outcomes and improvement in survival rates	MDTs to remain the cornerstone of cancer care		Cancer networks become Strategic Clinical Networks	Independent Cancer Taskforce set up by NHS England	MDTs to remain but recognition of pressures on MDTs leads to calls for improved efficiency
Guidelines and measures				Revised Manual for Cancer Services Published		
	Skin IOG updated			Gynaecology, haematology and skin Manuals revised	Gynaecology Manual revised and reissued by NHS Improving Quality	
Peer review process		Introduction of 'Clinical Lines of Enquiry', which identify key aspects that reflect the quality of a service		Introduction of 'Service Profiles', to facilitate benchmarking of MDTs across England	Peer Review Programme moves to a biennial self-assessment cycle managed by NHS England	Results of the 2013-14 National Peer Review Programme published

2.2 The functioning of MDT meetings in practice

2.2.1 Are MDTs effective?

Although the proposed benefits of MDT working feature prominently in the policy documents described above, when MDTs were initially rolled out at a national level there was no real evidence of their effectiveness (Taylor et al., 2010). Since then, 'effectiveness' has been measured in a number of different ways, and there is now a vast body of literature that addresses the issue. Studies have looked at the impact of MDTs on patient outcomes, cost effectiveness, and the quality of decision making.

Patient outcomes

Evidence of the effectiveness of MDTs in terms of patient outcomes is currently limited (Coory et al., 2008, Croke and El-Sayed, 2012), although it is growing (Kesson et al., 2012, Prades et al., 2014). One of the reasons for the ongoing debate is the challenge of evaluating effectiveness against outcomes such as survival. In part, this is because patient outcomes are affected by a much wider range of factors than MDT decision making alone (Sevdalis and Green, 2014). It also reflects the fact that there is no longer scope in the UK to conduct a randomised control study with a separate 'non-MDT' control group, because MDTs are mandatory within cancer services (Taylor et al., 2010, Sevdalis and Green, 2014).

Cost effectiveness

Given the number of healthcare professionals involved, MDT meetings are by nature an expensive resource. It has been estimated that they cost the NHS around £50 million per year, based on preparation time alone (Taylor et al., 2010). A more recent study of 52 MDT meetings across 14 different tumour types at an NHS Trust in London assessed the overall cost of MDT meetings, based on attendance of key professionals and overhead costs (e.g. heating, lighting and information technology support) (De Ieso et al., 2013). Costs were shown to range from £3,912 per MDT meeting for a melanoma MDT, to £8,490 per meeting for a Gynaecology MDT. These costs did not include the time required for core members to prepare for the

MDT (particularly pathologists and radiologists who are required to review material in advance).

A crucial question however is whether this investment is cost effective. Even if MDT meetings are an expensive resource, if they improve decision making and save healthcare professionals time in the long run by bringing together all the individuals necessary for making a treatment plan, these costs may well be justified. At present, however, the findings from existing studies are inconsistent and a systematic review of the literature has concluded that concrete evidence of cost effectiveness is lacking (Ke et al., 2013).

Quality of decision making

Despite the challenges relating to measuring patient outcomes and gaps in the evidence base relating to cost effectiveness, there is a strong and growing body of evidence that MDT meetings can positively influence clinical decision making and treatment recommendations (Croke and El-Sayed, 2012, van Hagen et al., 2013, Rao et al., 2014, Ung et al., 2014, Leff et al., 2015, Schmidt et al., 2015). Benefits that have been documented include better team performance after case discussion (Kee et al., 2007), improved adherence to clinical guidelines, more accurate diagnoses (Lamb et al., 2011b, Pillay et al., 2016), and increased screening rates for clinical trials (McNair et al., 2008).

Nonetheless, echoing the findings of the National Cancer Peer Review Programme (NHS England, 2015), studies of decision making in MDT meetings have shown that there is wide variation between teams against measures of effectiveness. An extensive number of studies have used proxy measures of decision quality to assess the effectiveness of MDT meetings. This includes the ability of teams to reach a decision the first time a patient is discussed in an MDT meeting. This is used as a measure of decision quality on the basis that delays to treatment as a result of a failure to make a diagnosis or treatment decision can have a negative impact on patient outcomes (Stalfors et al., 2007). Reported rates of effectiveness against this

measure in different cancer specialities range from 48 per cent to 74 per cent (Lamb et al., 2011b).

Similarly, implementation rates of decisions made in MDT meetings have been used as a proxy for effective team decision making (Raine et al., 2014a, Raine et al., 2014b). This measure is used on the basis that decisions are more likely to be implemented if all relevant clinical and non-clinical information has been taken into account when the decision is made. There is also considerable variation between teams in different cancer specialities in decision implementation rates. These differences are apparent across hospital trusts in England, and internationally, with implementation rates ranging from 72 per cent to 97 per cent of decisions made (Blazeby et al., 2006, Goolam-Hossen et al., 2011, English et al., 2012, Rajan et al., 2013, Raine et al., 2014b, Ung et al., 2014, Schmidt et al., 2015). Common reasons cited for non-implementation of decisions relate to a lack of information about patient centred factors such as patient treatment preference and comorbidities (Blazeby et al., 2006, Raine et al., 2014b, Ung et al., 2014, Schmidt et al., 2015, Stairmand et al., 2015). It has been suggested that this may reflect time pressures or limited multidisciplinary input, particularly from nurse specialists (Taylor et al., 2013). However, some of the variation is also likely to reflect differences in measurement, reflecting more or less stringent definitions of implementation (Ung et al., 2014).

To summarise, the variety of outcome measures that have been used to determine whether or not MDTs are effective means that the literature is heterogeneous. As a result, published reviews, including four systematic reviews, have been unable to make a definitive judgement about whether or not MDTs are genuinely effective (Coory et al., 2008, Lamb et al., 2011b, Croke and El-Sayed, 2012, Ke et al., 2013, Prades et al., 2014). Nonetheless, there is a strong body of evidence that suggests that MDTs do positively influence clinical decision making, even if this does not extend to certainty about improvements in patient outcomes. What is also clear however, is that there is still a considerable degree of variation between MDTs.

2.2.2 Decision making in MDT meetings

Understanding this variation is key to supporting improvements in MDT meetings (Lamb et al., 2014a). As a result, a number of researchers have explored the decision making process in cancer MDTs in order to understand why some are more effective than others. A series of standardised tools and checklists have been developed to assess the component parts of the MDT decision making process. These have been used to score a range of teamwork behaviours including leadership, multidisciplinary participation, and the presentation of different types of information during the meeting (Lamb et al., 2011d, Lamb et al., 2011e, Lamb et al., 2012b, Taylor et al., 2012a, Taylor et al., 2012b, Lamb et al., 2013b, Harris et al., 2014, Jalil et al., 2014, Harris et al., 2016). This reflects a growing consensus about the features of an effective MDT meeting (Taylor and Ramirez, 2009, Lamb et al., 2012a, Lamb et al., 2014a, Raine et al., 2015). A number of these tools have already been validated (Lamb et al., 2011d, Lamb et al., 2012b, Lamb et al., 2013a, Jalil et al., 2014, Shah et al., 2014), although some require further testing to confirm validity and reliability (Taylor et al., 2012a, Harris et al., 2014, Harris et al., 2016).

Application of these tools has deepened our understanding of decision making processes in cancer MDT meetings in a number of important ways. First, they have demonstrated that participation in MDT meetings varies by professional group. CNSs have been shown to participate less frequently in MDT meetings than medical or surgical team members, despite having an important contribution to make (Lamb et al., 2011b, Lamb et al., 2011d, Lamb et al., 2011e, Taylor et al., 2012a, Jalil et al., 2014).

Secondly, evaluation of MDT meetings using these tools has also raised issues about the extent to which patient centred information is shared during decision making. A study of decision making in a colorectal cancer MDT (using the cMDT-MODE checklist¹) found that presentation of information relating to patient preferences or

¹ cMDT-MODE: the Colorectal Multidisciplinary Team Metric for Observation of Decision-Making is a validated assessment tool for measuring the quality of contributions made by professional groups

psychosocial factors was poor in comparison to information on biomedical factors (Shah et al., 2014). In addition, an observational study of ten bowel cancer teams (using a tool called 'MDT OARS'²) found that none of the teams under study took patient centred factors (including demography, comorbidities, psychosocial needs or preferences) into account in all patient discussions. Instead, the majority of teams took these factors into account in less than half of the cases they discussed (Taylor et al., 2012a). Furthermore, there is some evidence that although teams generally have good insight into their performance, they can over-estimate how patient centred they are (Lamb et al., 2011d).

Data collected using these checklists have also more recently been used to investigate the influence of key factors in the decision making process on the ability of MDTs to reach a decision (Soukup et al., 2016a). Analysis of data collected from four cancer MDTs using the MDT-MODE checklist suggests that patient centred information can influence the MDT decision making process in different ways. Notably, while teams were more likely to make decisions in cases where psychosocial factors were mentioned, they were less likely to do so when information about comorbidities was shared. Similarly, nursing input during MDT discussion was associated with reducing the ability of the team to reach a decision (Soukup et al., 2016a). One of the most likely explanations for these findings is that mention of comorbidities and nursing input reflect greater case complexity, which makes it more difficult for a decision to be reached (Soukup et al., 2016a).

However, these tools have been designed to capture data on numerical scales (typically ranging from 1 to 5 or 1 to 10). As a result, they do not provide rich detail about the way in which different professional groups interact and participate in discussions. In addition, by focusing attention on decision making processes at the

and the quality of information shared during the MDT. It is based on a modified surgical observation tool.

² MDT-OARS: the Multidisciplinary Team Observational Assessment Rating Scale measures 15 observable elements of teamwork, based on characteristics of effective MDTs identified in a UK national survey of over 2000 MDT members.

level of the MDT meeting, there has as yet been little consideration of what is different about those cases where CNSs *do* contribute to discussion and when patient centred information *is* shared. There is scope therefore to further explore the complexity of the decision making process in the MDT meeting.

2.2.3 The participation of different professional groups in MDT meetings

A small number of qualitative studies, based on interviews and focus groups with MDT members, as well as observation of MDT meetings, explore these teamwork and decision making processes in more detail. Reflecting the findings described above, a common theme which emerges from these studies relates to inequalities in participation between professional groups. It has been shown that medical, surgical and diagnostic professionals tend to dominate discussion in MDT meetings. In contrast, nursing or psychosocial professionals have been shown to have more limited input (Lanceley et al., 2008, Lamb et al., 2011c, Raine et al., 2014a). Two qualitative studies of gynaecology cancer MDT meetings in the UK also suggest that even when nurses do speak up during the MDT meeting, their contributions can be overlooked by other members of the team. Observation data from these studies provide examples of nurses being ‘talked over’, (Lanceley et al., 2008) ignored, or contributing only when asked specific questions (Kidger et al., 2009).

These findings are not unique to cancer MDT meetings in England. A similar picture emerges from the study of MDT meetings in other countries. For example an Australian study of a lung cancer team concluded that despite the rhetoric of multidisciplinary, MDT meetings were predominantly a “*decision making forum for doctors*”, (p. 26) with little opportunity for genuine multidisciplinary engagement (Rowlands and Callen, 2013). This has also been found in other types of healthcare team. In the UK, nurses have been shown to be less confident about speaking up during ward round discussions, tending only to contribute in response to direct questions from medical staff (Busby and Gilchrist, 1992). Similarly, nurses have been shown to be reluctant to contribute to discussion in hospital based older people’s teams (Atwal and Caldwell, 2005).

These findings are important because CNSs have a key role to play within the MDT. A study examining 72 breast cancer MDTs in England found that a higher proportion of CNSs in the team was associated with improved clinical performance across a range of measures, as determined by existing evidence and expert advice (e.g. the percentage of patients under 70 receiving chemotherapy as first line treatment, and the number of clinical trials entered). This finding suggests that CNSs made an important contribution to the overall functioning of the team (Haward et al., 2003). This is also a view expressed by MDT members themselves. An interview study of 19 MDT members in the UK found that there was a desire among most participants for more open discussion in their MDT meetings, with greater involvement from nurses to counteract the dominance of surgeons in particular. These views were expressed by participants from different professional groups, including nurses and surgeons themselves (Lamb et al., 2011c).

The finding that discussion in MDT meetings tends to be dominated by surgical, medical and diagnostic professionals raises questions about the factors that may inhibit multidisciplinary participation. However, only a very small number of studies which have highlighted imbalances in participation go on to give any kind of insight into why these inequalities exist and specifically how they are enacted. Devitt et al (2010) use focus group data from cancer MDT members in Australia to explore the reasons allied health professionals gave for feeling inhibited in MDT meetings. This was attributed to a perceived lack of time and respect for the information they wanted to share in the meeting, and a sense that they were “*interrupting the process between medical staff members*” (p.19) (Devitt et al., 2010).

The impact of time pressures has also been noted in two gynaecology MDTs, with the fast paced, highly pressurised nature of meetings restricting holistic discussion and leaving some team members reluctant to speak up (Lanceley et al., 2008, Kidger et al., 2009). It has also been suggested that the way that discussion within the MDT meeting is framed can limit multidisciplinary discussion. This was shown to be the case for nurses when patients were introduced for discussion with a rigidly

biomedical focus. In these cases it was difficult for those with patient centred information to share to participate (Lanceley et al., 2008).

However, observation studies have also highlighted that there are specific examples of multidisciplinary discussion, even in teams where, overall, CNS participation is lower. These have shown that nurses can play an important role in leading case discussions, and challenging decisions (Kidger et al., 2009). In addition, a more recent study of a colorectal cancer MDT (based on the MDT-MODE checklist) scored cancer nurse participation as positive, in contrast with previous studies that have assessed CNS participation less favourably (Taylor et al., 2012a, Jalil et al., 2014, Shah et al., 2014). This suggests that genuine multidisciplinary discussion can be achieved, even if this does not happen consistently. To date however, there has been very limited discussion in the literature of *how* and *when* this happens, in terms of the nature of the discussion and the behaviours adopted by different professional groups in the MDT.

2.2.4 The role of patient centred information in MDT meetings

Defining patient centred care

Patient centred care is underpinned by two key components. First, it relates to treatment decisions that reflect a patient's preferences, as well as their physical and psychosocial needs (Ouwens et al., 2010). In this way it can be contrasted with disease centred care, which focuses primarily on the illness or disease rather than the individual experiencing it. The second component relates to the involvement of patients in decisions about their care (Ouwens et al., 2010). Given that patients did not attend the cancer MDT meetings I observed, the first component of patient centred care has most relevance for the purposes of this study. Although patients may have been involved in decisions about their care outside of the MDT meeting, my observation did not include the wider cancer care pathway. As a result, I define patient centredness in the context of the MDT meeting as decisions that took into account a patient's physical, social and emotional needs and preferences.

The importance of patient centred information for MDT treatment plans

Patient centred information is important in the MDT context for a number of reasons. While survival rates for cancer in England are improving (House of Commons: Committee of Public Accounts, 2015), the impact of cancer, and treatment, can have lasting effects which are social and psychological, as well as physical (Ouwens et al., 2010, Macmillan Cancer Support, 2014, Macmillan Cancer Support, accessed 4.4.2014). In this context, making appropriate treatment decisions is arguably not *“a matter of science alone”* (Mulley et al., 2012) (p.1). Policy makers, healthcare professionals and patients themselves therefore regard patient centred information as central to the decision making process (Barry and Edgman-Levitan, 2012, Lamb et al., 2014b).

The importance of treating each patient as an individual, and as a person with distinct treatment and support needs, is a key theme in current policy documents, ranging from the NHS Constitution, to cancer specific policy and practice guidelines (National Institute for Health and Clinical Excellence, 2003, Department of Health, 2013b, Independent Cancer Taskforce, 2015). A national survey of 2,054 MDT members also indicates that there is agreement amongst healthcare professionals about the importance of this information to the MDT decision making process. Over 90 per cent of respondents to this survey agreed that patient preferences, demography, comorbidities, psychosocial and supportive issues should always be considered by the MDT (Taylor and Ramirez, 2009). In addition, focus groups with cancer patients suggest that information about physical and psychosocial needs is perceived as critical to making appropriate decisions in the MDT meeting (Lamb et al., 2014b). This does not negate the importance of biomedical information (e.g. pathology), because patients themselves recognise that without this teams would be unable to make a decision (Lamb et al., 2014b). Nonetheless, there is broad agreement that it is important for clinicians to take patient centred information into consideration alongside the biomedical information necessary to diagnose and treat cancer.

One of the reasons so much emphasis is placed on the role of patient centred information is that it can be fundamental to making decisions that reflect the needs and specific circumstances of each patient (Jalil et al., 2013). For example, if decisions about treatment are based solely on a patient's chronological age, without knowledge of their fitness for treatment, frailty, or existing comorbidities, there is a risk that patients will be under, or over, treated. Either outcome is undesirable: while more intensive treatment can prolong survival, it can also impact significantly on quality of life due to the burden of side-effects (National Cancer Intelligence Network, 2015).

There may also be social circumstances that potentially impact on the treatment that patients are willing, or able, to accept. For example, a patient with cancer who has caring responsibilities may refuse treatment with a specific chemotherapy drug if the side effects will impact on their ability to continue providing care to a loved one. Alternatively, a patient who is afraid of hospitals may not attend scheduled treatment appointments if supportive psychosocial care is not provided alongside the cancer treatment. If treatment plans do not accommodate patient centred information of this nature when it is relevant therefore, it may not be possible to implement the decisions agreed by the MDT (Blazeby et al., 2006, Wood et al., 2008, Raine et al., 2014b).

Mechanisms for incorporating patient centred information into MDT treatment plans

In practice, patient centred decision making in the MDT meeting requires someone in the team to hold information about patients' views, comorbidities, personal circumstances, and support needs. It also requires that this information is shared, and incorporated into the decision making process. As noted previously, the contribution of CNSs is seen as a key mechanism for integrating this type of information during multidisciplinary discussion (National Institute for Health and Clinical Excellence, 2003). This is because CNSs are responsible for assessing patients' holistic needs and identifying high risk patients who are likely to need

ongoing monitoring and complex care plans (National Cancer Action Team, 2010b, Macmillan Cancer Support, 2014).

In addition, CNSs often spend longer periods of time with patients than other members of the MDT, for example during extended consultations or regular visits on inpatient wards (Sweeney and Tapper, 2006, Kelly and Masterman, 2011). In a series of focus groups, cancer patients themselves described the CNS as the “*easiest person to talk to*” in the MDT (Lamb et al., 2014b) (p. 4). The role of CNSs in discussing and sharing information on psychosocial concerns, including social and emotional wellbeing is also well recognised by other professionals, including surgeons, radiologists and oncologists (Catt et al., 2005). As a result CNSs may be more likely to hold patient centred information, and may be better placed to identify patients’ concerns than other members of the MDT (Amir et al., 2004, Lamb et al., 2013c).

Of course, CNSs are not the only members of the team with patient centred information. Consultant doctors may also be aware of patients’ comorbidities and preferences, or of psychosocial concerns (Lamb et al., 2013c). Junior doctors may also have spent time consulting patients explicitly either on the ward or in clinic and be able to act as their advocate in the MDT meeting (Sharma et al., 2009). The participation of CNSs in the MDT meeting is not therefore the only way to ensure that decision making is patient centred. Nonetheless, given the findings about lower rates of participation among CNSs, it is perhaps unsurprising that patient centred factors have also been shown to play a less central role than disease centred information in MDT meetings (Kidger et al., 2009, Taylor et al., 2012a, Shah et al., 2014).

Barriers to incorporating patient centred information into MDT treatment plans

The literature suggests that there are a number of potential explanations for limited discussion of patient centred information in MDT meetings. First, it is possible that

this reflects a lack of time in the MDT meeting, which can create barriers to raising psychosocial or other patient centred information (Schofield et al., 2006).

Secondly, it may also be the case that at the point at which a patient is initially discussed, *none* of the members of the MDT have extensive knowledge of the patient (Raine et al., 2014a). Although it is regarded as best practice for at least one member of the team to have met the patient before an MDT discussion (Lamb et al., 2014b, Sarkar et al., 2014), in reality there are practical barriers to achieving this (Raine et al., 2014a). The pressure to diagnose and treat patients within waiting time targets means that many MDT discussions take place at a very early stage of a patient's treatment pathway. In this context, patients may not yet know their diagnosis, or be in a position to articulate the factors that they think may impact on their treatment (Taylor et al., 2014). This situation is further exacerbated for MDTs that receive referrals for a specialist opinion from surrounding teams. In these cases, the receiving MDT is reliant on relevant information being included in the referral, which may not include patient centred information (Taylor et al., 2014).

While this is problematic if it impacts on the extent to which teams are able to make patient centred decisions, it is also possible that differences in the frequency with which patient centred information is raised in MDT meetings reflect appropriate judgements by MDT professionals about when this type of information is most relevant to the decision (Raine et al., 2014b). It may be that patient centred factors are only brought into discussion in those cases where it is likely to influence a decision. If this is the case however, it raises important questions about the factors that trigger the sharing of this type of information, and the approaches used by MDT members to ensure the information is integrated into a treatment plan.

2.3 Chapter Summary

Based on review of both policy and literature on MDT meetings, it is clear that at the heart of the MDT model in England is a desire for an equal standard of high quality care for all patients. Diversity of input is seen as fundamental to a patient

centred decision making process, and specific professional groups are expected to bring unique knowledge and skills to MDT discussion. However, this is dependent not only on team members holding information, but also on exchanging and integrating this information during the decision making process in an environment that can be hectic and time pressured. MDT meetings are reliant therefore on collaboration between people with different skills, expertise and professional backgrounds. This makes the role of “*human factors*” on MDT decision making particularly salient (Sevdalis and Green, 2014) (p. 2).

A theme that has emerged consistently from the literature on MDTs relates to medical and surgical dominance in MDT meetings. This is reflected both in the limited contributions from CNSs in particular, and in the content of discussions, which have been shown to emphasise disease centred information. The evidence suggests that this has the potential to be problematic, given the central role of CNSs in providing patient centred information and the importance of this information to the decision making process. However less is known about the factors that underpin these patterns of participation, and there has been little consideration of the specific mechanisms that inhibit or facilitate multidisciplinary discussion in MDT meetings. There is therefore a need to explore the participation of different professional groups, specifically those who have been shown to contribute least frequently (notably CNSs and StRs) in the decision making process, and to better understand the role of patient centred information during MDT discussions.

Chapter 3. Status hierarchies in team settings

This chapter presents the theoretical framework underpinning this study. It begins by outlining definitions for the key terms used, before drawing on theoretical and empirical literature on status hierarchies predominantly from the field of micro organisational behaviour. In doing so, it considers the impact of status hierarchies on individuals and teams, reviews the key principles of status characteristics theory, and considers the potential implications of this for cancer MDTs.

Micro organisational behaviour is a sub-discipline of organisational behaviour, which has been heavily influenced by social psychology (Thompson, 2003). Research on micro organisational behaviour focuses on individual or small group dynamics within an organisational context (Thompson, 2003). This includes the study of decision making and the impact of status on small groups or teams (Thompson, 2003, Piazza and Castellucci, 2013). These theoretical perspectives on status have not yet been applied in the context of cancer MDTs. In fact, a striking feature of the literature on cancer MDTs is that there has been very little explicit use of any theory to underpin the research that has so far been conducted (Lamb et al., 2013c). The purpose of drawing on the theoretical and empirical literature on status is to facilitate a deeper understanding of the decision making process in MDT meetings.

3.1 Definitions: status, hierarchies and teams

3.1.1 Status and hierarchy

The concept of status spans a number of disciplines. While it has traditionally been of interest to social scientists, more recently it has emerged as a key concept in management and organisation theory (Piazza and Castellucci, 2013). In this context, the focus has shifted from the role of status in a wide range of social situations, towards the impact of status on markets, organisations and, most importantly for this study, small groups or teams (Piazza and Castellucci, 2013).

Although status appears to be a relatively intuitive concept there has been a great deal of debate in the literature about the most appropriate way to define and operationalise the term in the context of empirical research (Piazza and Castellucci, 2013). In part this is because status is often correlated with other concepts, including power, or position in a hierarchy of authority. However, status can be distinguished from these concepts because it is conferred on the basis of contributions to the common good and implies the granting of respect and esteem. Thus, deference to those with higher status is not an obligation, as it might be in a relationship based on power or authority (Pearce, 2011).

For the purposes of this study, I define status as having characteristics that are deemed to be more or less desirable within the context of a specific group (Berger et al., 1983). This makes status a relative concept, where characteristics that are desirable in one context may not necessarily be in another (Cohen and Zhou, 1991). A hierarchy emerges when different evaluations of status within a group lead to the “*rank ordering of individuals*” (Anderson and Brown, 2010) (p. 57).

Status within teams can be measured in a number of different ways (Piazza and Castellucci, 2013). This includes ‘peer rating’ of status, most often used in experimental settings (Bendersky and Hays, 2012), measuring indicators of award or recognition (Marr and Thau, 2014), or the assessment of core individual characteristics such as age, gender or professional group (Bloom, 1980). For this study, I adopt the latter measure, and use healthcare profession as an indicator of status within MDTs. This is an approach that is well established in the study of healthcare teams (Bloom, 1980, Lichtenstein et al., 2004, Nembhard and Edmondson, 2006, Satterstrom et al., 2014). It is particularly appropriate in the context of MDT meetings because of the historical and clearly defined differences between the healthcare professions which make up these teams. These separate professional identities have arisen over decades, and are consolidated by variations in the nature and length of training, the process of socialisation into a specific profession, and differences in legal registration and levels of autonomy in practice

(Hudson, 2002). The strength of these professional identities means that status differences between professional groups in healthcare are distinctive and well recognised (Nembhard and Edmondson, 2006).

3.1.2 The status hierarchy in healthcare teams

Modern medicine sits at the apex of the professional status hierarchy in healthcare, as an archetypal profession with a special status even amongst other professions (Freidson, 1988, Filc, 2004). As rated by members of the public, patients and medical professionals themselves, surgeons are accorded the highest rank, followed by medical, then diagnostic doctors including pathologists and radiologists (Shortell, 1974, Hinze, 1999, Norredam and Album, 2007). Nurses have been ranked below all of these groups, at the lower end of the healthcare professional status hierarchy (Shortell, 1974, Stein et al., 1990, Nembhard and Edmondson, 2006). Greater patient involvement and the emergence of stronger roles for nurses have led to recent changes within the healthcare setting (Kenny and Duckett, 2004, Stein et al., 1990). Nonetheless, in practice, doctors are still the key decision makers in the healthcare arena (Battilana, 2011, Price et al., 2014).

This hierarchy is particularly stable because it has legitimacy, reflected in the nature and levels of expertise held by doctors, based on scientifically established knowledge and their ability to cure disease and to relieve pain (Radcliffe, 2000, Filc, 2004). It also reflects the lengthy education and training pathways required to qualify (Hudson, 2002), as well as the legal responsibility doctors hold of a duty of care to their patients (Sidhom and Poulsen, 2006). In contrast, nurses have less autonomy (Price et al., 2014), and nursing knowledge is often grounded in 'patient knowledge' (Stein-Parbury and Liaschenko, 2007). This emphasises the importance of understanding the experience of disease from the perspective of an individual. It has been argued that this type of knowledge is less privileged in the healthcare setting than the objective measures that underpin the biomedical approach to diagnosis and treatment adopted by doctors (Coombs and Ersser, 2004, Stein-Parbury and Liaschenko, 2007).

I use the clear distinctions between professional groups to determine status within the MDT meeting. Accordingly, surgeons, medical and diagnostic doctors will be classed as high status within the MDT, and Clinical Nurse Specialists (CNSs) will be classed as lower status. The role of junior doctors in MDT meetings has been given little consideration in the literature to date. However, reflecting their position as doctors in training, and the literature from other types of healthcare team - for example teams in intensive care units (Reader et al., 2008) - I have also classified junior doctors (namely Specialty Registrars) as lower status on the basis that they have yet to gain the knowledge and expertise held by consultant doctors within the team.

This dichotomous distinction between high status (consultant surgeon, medical or diagnostic doctor), and lower status (CNS or StR) is consistent with the application of status used in other studies of healthcare teams (Nembhard and Edmondson, 2006, Battilana, 2011, Weiss et al., 2016). Although there may also be differences in status within professions, according to their specialty (for example depending on the type of cancer they treat) (Album and Westin, 2008), the advantage of this approach was that it enabled me to accommodate the differences in composition between teams.

3.1.3 Cancer MDTs as ‘teams’

The label of ‘team’ has been applied extensively, both in the academic literature and in practice. As a result it has been argued that there are risks to the indiscriminate application of the term (West and Lyubovnikova, 2012). Traditional definitions emphasise the importance of clear membership, interdependence in the team task, and the presence of shared goals, embedded within a wider organisational context (Cohen and Bailey, 1997, Lemieux-Charles and McGuire, 2006, Bosch et al., 2009).

Cancer MDTs share many of these features. They are defined in national guidelines as the group of different healthcare professionals who contribute to the decision

making process for patients discussed at the weekly meeting. A prescribed list of core members must demonstrate their commitment to the MDT by attending at least two thirds of weekly meetings over the course of each year (NHS England, 2014, NHS Improving Quality, 2014). MDTs also have a shared goal of making treatment plans for patients with cancer, and they operate within the organisational context of NHS Trusts.

In other respects however, MDTs are more dynamic than the type of teams described in traditional definitions. For example, although the shared team task of treatment planning is a key feature of the weekly team meeting, outside of this levels of interdependence between professional groups are in practice often limited (Opie, 1997, Mickan and Rodger, 2000). Attendance of core members at MDT meetings can also be variable (Lamb et al., 2011c), and guidelines specifically allow for members to attend only part of each meeting (NHS England, 2013). Other 'extended' members (including StRs) may attend meetings regularly, but only on a short-term basis, or they may attend more sporadically but over a longer period of time (e.g. consultants from another specialty who attend to provide expert input in certain cases) (NHS Improving Quality, 2014). Nonetheless, there is a growing recognition of the value in studying these more dynamic types of team as they become more common, not just in healthcare, but also in other fields such as aviation and emergency response teams (Wageman et al., 2012, Bienefeld and Grote, 2013).

3.2 The impact of status hierarchies on individuals and teams

The existence of status hierarchies within healthcare teams is important because a number of studies have demonstrated that the relative status of group members affects a variety of outcomes, both at the level of the individual and at the level of the team.

3.2.1 Individual level outcomes

For individuals, high status has been associated with a range of benefits, from financial rewards to greater social influence and higher self-esteem as well as subjective wellbeing (Levine and Moreland, 1990, Pearce, 2011). In contrast, the performance of low status team members is often undervalued. For example, low status members may be evaluated less favourably than higher status members of a team even if they have given equal input (Weisband et al., 1995).

3.2.2 Team level outcomes

Efficiency

At the level of the team, functionalist perspectives of hierarchy suggest that status hierarchies can help groups to make better quality decisions, by ceding control to the most competent team members (Anderson and Brown, 2010). It has also been argued that clearly defined and stable hierarchies also mean that interaction within teams becomes more predictable and less uncertain, supporting efficient decision making within the group (Halevy et al., 2011).

Information sharing

However, status hierarchies can also negatively affect the ability of teams to share knowledge and information, particularly information held by lower status members (Bunderson and Reagans, 2011, Bendersky and Hays, 2012). For example, lower professional status has been found to negatively influence beliefs about how safe it is to speak up or contribute to improvement efforts in neonatal intensive care teams (Nembhard and Edmondson, 2006).

This is problematic because information sharing is a key feature of effective teamwork, in part because it increases the likelihood that relevant information will be taken into account when making decisions (Lemieux-Charles and McGuire, 2006, Mesmer-Magnus and DeChurch, 2009, Schippers et al., 2014, Hewitt et al., 2015). Specifically, sharing information held by only a minority of team members has been shown to improve the overall accuracy of medical diagnoses made by clinical teams

(Larson et al., 1998). Better presentation of information and better contributions from all professionals during MDT meetings also increases the likelihood that a team will reach a decision (Lamb et al., 2013b).

3.3 Status characteristics theory

An important strand of theory which has explored issues relating to status in a team context is status characteristics theory. This body of work considers the way in which status differences affect participants' expectations of one another and how this translates into inequalities in interaction amongst team members (Berger et al., 1972, Berger et al., 1980, Ridgeway, 2001). This may be particularly salient in the context of multidisciplinary teams where, as has been shown, inequalities in participation between groups in MDT meetings are well documented.

3.3.1 Overview of status characteristics theory

Status characteristics theory was developed in order to explain the behaviour of teams working on a specific task, with a shared goal (Nijstad and van Knippenberg, 2012). The theory proposes that in this environment individuals will rely on status characteristics to assess the relative competence of other group members. In turn, these evaluations will determine a status hierarchy which is reflected in the way the group interact (Berger et al., 1972, Berger et al., 1980).

Status characteristics can be *specific* characteristics that are directly relevant to the task the team is working on, for example educational background. They can also be *diffuse* characteristics which provide information about an individual's general aptitude, which is presumed to affect competence on a range of tasks. Examples of diffuse status characteristics can include gender, age, ethnicity or professional occupation (Berger et al., 1972, Lichtenstein et al., 2004). Status characteristics and the corresponding expectations of competence are relative, both to the task and to team members. For example, gender may be a status characteristic in one team, and influence the way members of the group interact. However, individuals in

another team may not have different expectations of team members based on their gender (for example because they do not think it is relevant to the task) in which case it would not have an impact (Cohen and Zhou, 1991).

A key premise of the theory, and the part which is most relevant to my thesis, is that the effect of these expectations is reflected in the way the group interact: the 'power and prestige order'. This order relates to who initiates participation, who has opportunities to participate, who has influence, and how members of the group are evaluated by others (Ridgeway, 2001). In practice, this means that individuals with higher status are more likely to be listened to and have greater influence than individuals with lower status, even if those with lower status have an important contribution to make to the team's task. It also means that individuals in lower status positions will be more likely to defer to those with high status, and have fewer opportunities to participate or influence the rest of the group (Berger et al., 1972, Berger et al., 1980, Bunderson and Reagans, 2011).

If status and expertise are aligned, this may be beneficial for the decision making process. However, crucially, this order will operate regardless of whether group members' expectations are correct or not. In the context of MDT meetings, this means that if the dominance of medical professionals is explained not only by their expertise and training, but also by more general expectations about competence that are grounded in a broader social context which prizes the medical profession above others, decision making could be impaired (Lichtenstein et al., 2004). This can be illustrated by a practical example. A nurse may hold information about a patient's social circumstances, which is likely to impact on the treatment that the patient is willing, or able, to undertake. If the nurse defers to higher status members or is given limited opportunity to participate because of general expectations about the value of lower status contributions, then the decision made by the team may not be accepted by the patient. In this case, status hierarchies are likely to be detrimental to the functioning of the team.

3.3.2 Empirical evidence relating to status characteristics theory

Most early research based on status characteristics theory was conducted in experimental laboratory settings, as opposed to naturalistic settings (Berger et al., 1972, Berger et al., 1980)). This includes an experimental study by Bloom (1980) to determine the effects of status hierarchy on decision making in nursing teams in the USA. The results of this study showed that status hierarchies based on occupation did affect interaction within the groups, with lower status individuals having less influence. However, the effects of this varied according to the level of consensus amongst groups on the hierarchy within the team. These findings reflect the functionalist view of hierarchies, because where the groups developed a stable status hierarchy, more information was brought into the discussion, and decisions were judged to be higher quality (using predetermined criteria of good nursing care and as evaluated by three nursing experts). These findings led the author to conclude that some status distinctions between members of professional work teams could be beneficial for the quality of problem solving. However, this was caveated by the need for genuine differences in expertise and clarity about the role of different members, for example around information sharing.

More recently, the idea that hierarchies within healthcare teams can be beneficial for certain types of task has also been demonstrated in an experimental study of multidisciplinary teams in Sweden. The results are based on observation of 54 teams in occupational health, psychiatric care, rehabilitation and school healthcare. These results showed that tasks involving simple 'convergent' problems, which had only one possible correct solution, benefitted from the effects of hierarchy even when this led to unequal participation amongst team members (Thylefors, 2012). The dominance of certain team members was also shown to be beneficial for dealing with more complex problems, where dominance was aligned with the relevant expertise necessary to complete the task (Thylefors, 2012). Similarly to Bloom's study however, this research involved simulated team tasks, and was not based on observation of the teams in their natural environment. This suggests that some caution is required in generalising the findings to a naturalistic setting.

A relatively small number of studies have applied status characteristics theory in a naturalistic setting. In contrast to the studies described above, these suggest that status hierarchies can lead teams to overlook legitimate indicators of knowledge and expertise, and negatively impact on levels of participation and information sharing. The first attempt to test the theory of status characteristics in well-established teams was made by Cohen and Zhou (1991) using data from 244 Research and Development Teams from 29 large corporations in the USA. The authors examined the effects of status characteristics on self-reported team interaction, finding that beliefs associated with diffuse status characteristics (such as age and gender) affected levels of participation within the group. This indicates that competence and performance were not the only basis for determining the status of an individual within a team.

Similarly, Bunderson (2003) examined the association between status and performance expectations in manufacturing production teams. The results showed that in teams with unequal participation and influence, the knowledge and expertise of team members had little bearing on influence and involvement in decision making, even when their experience was directly relevant to the task of the group. Instead, influence was related not to task expertise, but to other factors such as gender and ethnicity. These factors were weaker cues in teams where influence was more evenly distributed (Bunderson, 2003, Bunderson and Reagans, 2011).

Status characteristics theory has also been applied in a naturalistic healthcare setting. A survey study of 1,025 healthcare professionals in psychiatric treatment units in the USA examined the effects of status on participation and job satisfaction within teams. The results suggested that status influenced levels of participation within the team, with higher status professionals participating more actively and being more satisfied with their levels of autonomy and with their co-workers than those with lower status (Lichtenstein et al., 2004).

Importantly however, these studies have been carried out in America, where there are many contextual differences in the healthcare system in comparison with the UK NHS. Nonetheless, it is possible to conclude from the findings of both the experimental and real-world studies, that while in some circumstances status hierarchies can lead to more efficient decision making, in others, they can lead teams to overlook legitimate indicators of knowledge and expertise.

3.3.3 Moderating status hierarchies

A number of researchers have considered possible moderators of status hierarchies in order to explain the mixed results in the literature. Although much of this research has been carried out in non-healthcare settings, it provides a starting point for understanding the factors that have the potential to moderate some of the negative effects of status that have been documented. Factors that have been identified include the length of time that a team has been working together, the task of the group, and the role of the leader. I discuss these below and consider the potential implications for MDTs.

The length of time that a team has been operating

The average length of time a team has been operating has been shown to moderate the impact of status in manufacturing production teams (Bunderson, 2003). The results from this study suggest that as group members interacted over time, they were better able to determine which members were (or were not) competent, and could adjust their expectations accordingly (Bunderson, 2003).

However, this may be less influential in the MDT setting, given the more limited collaboration outside of the weekly meeting that is a feature of these teams (Mickan and Rodger, 2000). Even if MDTs are well-established, if different professional groups essentially work in parallel outside of the meeting, this may act to reinforce boundaries and potentially undermine the ability of members to “*learn about, compare and verify one another’s task relevant background*” (Bunderson,

2003) (p. 563). It is possible therefore that status hierarchies may be more durable in the MDT setting than in other non-healthcare teams.

Team task

It has also been argued that the effects of status hierarchies will vary depending on the type of task a team is working on (Anderson and Brown, 2010, Cantimur et al., 2016). For example, if teams are making routine decisions it may be more efficient to give disproportionate control to a small number of the most competent members. In contrast, tasks that are likely to benefit from diverse sources of knowledge and information may benefit from a flatter structure that provides opportunities for all members to contribute (Anderson and Brown, 2010).

In the case of MDT decision making, teams are faced with the challenge of managing both of these scenarios. This is because MDTs must make decisions about patients whose treatment can be managed according to agreed evidence-based protocols, as well as decisions about cases which are more complex and therefore likely to benefit from wider input. As yet, there is little evidence to show how teams can manage status hierarchies in the context of these potentially competing demands.

Leadership

There is a considerable body of evidence to suggest that leadership behaviours can have an important influence on the willingness of team members to speak up in hierarchical settings (Anderson and Brown, 2010, Morrison, 2011). For example, subtle body language signals and a lack of willingness to listen can discourage contributions from team members. However, other behaviours can foster opportunities for contributions and create an environment that supports speaking up (Morrison, 2011).

A key mechanism that has recently been explored in the context of healthcare teams is the concept of 'leader inclusiveness' (Mitchell et al., 2015). This is

described as behaviour that creates psychological safety for speaking up in teams, and is concerned with encouraging participation, specifically from those whose voice might otherwise not be heard (Nembhard and Edmondson, 2006). Through this mechanism it is argued that teams can overcome the negative effects of status, by reducing perceived status differences (Nembhard and Edmondson, 2006, Mitchell et al., 2015). Lichtenstein et al (2004) also emphasise this point by arguing that effective team leaders should be able to foster open and supportive communication among members that *“prevents the hierarchical relationships that exist outside the team from being replicated within the team context”* (p.333).

More recently however, Bienfeld and Grote (2013) have argued that in teams where status hierarchies are well established and deeply entrenched, it may not be possible to completely overcome the effects of the hierarchy. Studying the effects of hierarchy on speaking up within and between aviation teams, they concluded that while leader inclusiveness mitigated or weakened some of the effects of status hierarchies, it did not overcome them completely. This has relevance to the MDT setting, where despite teams being operational in the UK since 1995, with clear ‘collective’ goals dictated at a national level, inequalities in participation are still a key feature of some teams. This raises questions about whether in this context the status hierarchy can in fact be ‘overcome’ or ‘flattened’.

Nonetheless, if leader inclusiveness can mitigate some of the effects of hierarchy this could provide a mechanism for enabling MDTs to improve participation and information sharing amongst lower status groups. To date however, leader inclusiveness has been measured using items adapted from previously validated scales, which gather the views of team members about how inclusive their leaders are (Nembhard and Edmondson, 2006, Bienefeld and Grote, 2013, Mitchell et al., 2015). These measures only capture general perceptions of inclusiveness without linking them to specific behaviours. For example, leaders are assessed by team members against statements such as *“our leadership encourages the input of members from all professionals”* (Mitchell et al., 2015) (p. 225). At present

therefore, little is known about what leaders actually do to encourage and incorporate contributions from those who are less likely to speak up. A better understanding of leadership behaviours which invite and integrate contributions from lower status individuals is crucial if MDTs are to utilise the knowledge and skills of all team members within a context where status hierarchies are well-established and are unlikely to be easily overcome.

3.3.4 The participation of lower status groups

Although consideration has been given to the role of leaders in moderating status hierarchies, less is known about the role of lower status individuals themselves. Specifically, this includes the approaches that can be adopted by lower status groups in order to participate within a hierarchical setting.

Two approaches that have previously been identified are the use of questioning and humour. A study of communication between different professional groups within a specialist palliative care setting showed that questions were used by nurses as a way to make tentative suggestions to higher status individuals in a diplomatic manner. Questions were also employed as a strategic tactic to gain control of a discussion by framing them in a way that shaped the response (Arber, 2008). Similarly, it has been shown that humour can be used by those with lower status as a means of resisting professional dominance in community mental health MDT meetings, for example by signalling dissent or resisting a course of action proposed by a higher status member of the team (Griffiths, 1998).

This existing research provides a valuable insight into possible mechanisms for increasing the influence of lower status groups in a healthcare setting. However, in practice, individuals within the MDT meeting are likely to use a wide range of approaches to participate, depending on the specific contribution to be made, and taking into account the impact of their contribution on their future credibility (Morrison, 2011). It is also conceivable that certain approaches may be less effective in particular circumstances, and when used by certain individuals or

groups. For example, the use of humour by junior doctors with less knowledge or experience than other team members may break implicit group norms, which dictate when and in what circumstances humour is an appropriate form of communication (Rowe and Regehr, 2010). To date there has been little consideration of these issues in the MDT context.

3.3.5 Applying existing solutions to MDT meetings

The research described above is useful in identifying tentative explanations for the patterns of participation and information sharing previously observed in MDT meetings. In particular, it challenges a key assumption underpinning the policy vision of MDTs – that teams will optimally share and integrate the knowledge and skills of all professional groups in the decision making process. The theoretical and empirical literature instead suggests that while status hierarchies may improve efficiency, they are also likely to complicate the decision making process by disrupting information sharing and integration. As noted above, this is likely to be problematic in the MDT setting because sharing information and engaging in robust discussion is central to the decision making process in healthcare teams (Larson et al., 1998, Lemieux-Charles and McGuire, 2006, Lanceley et al., 2008, Lamb et al., 2013b).

However, the nature of status hierarchies within MDTs - and healthcare teams more generally – means that the moderating factors identified in existing literature are unlikely to be sufficient to ‘cancel out’ the effects of status in these teams (Bienefeld and Grote, 2013). As described previously, status hierarchies in healthcare teams are well-established and have proved to be remarkably stable over time (Filc, 2004). These hierarchies are bound up in the way that professional groups within the MDT are educated and trained. Doctors in particular have been socialised to make decisions and to act decisively (Hall, 2005, Bartunek, 2011). As a result, although they may recognise the value of contributions from other professional groups in principle, in practice they may not necessarily seek or use this information when making decisions (Coombs and Ersser, 2004). In this context

there are likely to be specific challenges in overcoming the effects of the status hierarchy, and existing solutions identified in the empirical and theoretical literature to encourage lower status contributions will not necessarily transfer to the MDT setting.

It is also worth considering, in the context of medical decision making, whether attempting to cancel out the effects of status hierarchies entirely is even a desirable goal. Certain types of information may not be necessary for every single decision made in the MDT meeting - for example, psychosocial information may be relevant in some cases but may not have a bearing on the clinical decision in others (Stein-Parbury and Liaschenko, 2007). Encouraging all team members to speak up equally may therefore be an overly simplistic solution (Morrison, 2011). Bloom (1980) and Thylefors' (2012) findings are illustrative here. Unequal participation amongst those of different status in clinical teams did not negatively impact on the quality of decisions made in cases where real differences in expertise existed, and where team members had clear expectations about their respective roles. In the MDT setting, where those with the highest status are likely to be the most experienced in the treatment of disease, it is essential that these individuals have, and maintain, a key role in decision making. This is particularly true given the time pressures and calls for improved efficiency facing MDTs noted in the previous chapter.

The specific challenge in this context however, is that while some decisions may not require full participation of all members, others will benefit considerably from multidisciplinary discussion. To date, there has been little consideration in the literature of situations in which teams must simultaneously capitalise on existing status hierarchies, whilst also finding ways to minimise their effects in a subset of cases. In practice however, MDTs must be able to identify and integrate the unique knowledge and information held by lower status groups in cases that are complex with respect to the interplay between clinical and patient centred factors. They must also be able to do this even if it does not necessarily entail consistent equal participation of all professional groups. Given that opportunities to integrate the

information contributed by low status individuals may in fact be relatively rare in MDT meetings, lower status members must continually offer information or opinions, even if this does not necessarily equate to influence over decisions. In this context encouraging multidisciplinary participation is likely to be particularly challenging.

3.4 Chapter Summary

My thesis will use status characteristics theory as a framework to explore the role of status hierarchies in the decision making process in cancer MDT meetings. Status characteristics theory has not yet been applied in this particular setting. There is therefore scope to add real value to an important aspect of cancer care by enhancing our understanding of the decision making process, with a focus on the interaction between different professional groups and the contribution of lower status groups in particular.

MDT meetings also provide an opportunity to extend the theoretical literature on status by studying the decision making process of cancer MDTs in a naturalistic setting. The distinctive characteristics of MDT meetings, including the well-established hierarchies amongst professional groups, and the changing membership of the teams, offer new opportunities to explore the way teams function in situations where it is not possible – or even desirable – to moderate or flatten the hierarchy. In this context there is also scope to extend the literature in relation to the way in which teams manage the conflicting effects of hierarchy where these occur within a single meeting or encounter. This will include consideration of the role of both higher and lower status individuals, adding nuance to our understanding of what approaches are employed, how and when they are used, and the effect that they have on the decision making process.

Chapter 4: Research Questions

In response to gaps identified in the empirical and theoretical literature, my thesis will explore the role of status hierarchies in the decision making process in cancer MDT meetings. The aim is to contribute knowledge that can be used to help MDTs appropriately utilise the skills and knowledge of all team members when making decisions in MDT meetings. To do this I will address the following questions:

1. How do status hierarchies unfold during the decision making process in cancer MDT meetings?
2. What factors facilitate or inhibit multidisciplinary discussion in MDT meetings?
3. What approaches are used by lower status groups in order to contribute during MDT meetings?

Chapter 5. Research design and methods

The preceding chapters have outlined the policy context within which MDT meetings operate, and reviewed the research and theoretical literature. Together these reviews informed my research questions about the role of status hierarchies in the decision making process in cancer MDT meetings. In answering these research questions, my aim is to explore the complex social interactions and the processes that underpin decision making in MDT meetings. In order to achieve this, I have used a generic qualitative approach, focused on naturally occurring events in the setting of four cancer MDTs in England.

This chapter describes the rationale for my methodological approach and gives an overview of the research design and setting. It also outlines the specific methods of non-participant observation and semi-structured interviews used to generate data to answer the research questions posed. It then goes on to describe my analytic strategy, and the steps I took to ensure the quality and ethical conduct of my research.

5.1 Methodological approach

I adopted a qualitative approach to address the research questions posed in this thesis. A key strength of qualitative approaches is that they can provide rich and vivid accounts of an issue of interest, set within a clearly defined real-world context (Miles and Huberman, 1994, Snape and Spencer, 2009). It is therefore well suited to exploring complex processes such as decision making (Maxwell, 2005, Ritchie, 2009, Snape and Spencer, 2009). In the context of this research, adopting a qualitative approach also enabled me to explore the taken for granted knowledge and assumptions that underpinned the decision making processes in the four MDTs under study (Tracy, 2010). This is in contrast to quantitative methods where the focus is often on causation or the correlation between factors of interest (Maxwell, 2005).

There are many different methodological approaches within the framework of qualitative research (Murphy, 2001, Carter and Little, 2007, Snape and Spencer, 2009). The approaches used by health services researchers are often influenced by methodologies well-established in the social sciences, for example from sociology, anthropology and psychology (e.g. grounded theory, ethnography and phenomenology) (Thorne, 2011). These methodological approaches incorporate a range of beliefs about the nature of reality and what we can know about the social world, as well as the nature of knowledge and how we can acquire it (Ritchie, 2009, Snape and Spencer, 2009). They also shape the way in which research should be conducted, from the development of research questions to data collection, analysis and dissemination of the findings (Thorne, 1991).

However, there can be tensions between the applied nature of health services research, and these traditional qualitative methodologies. While many of the latter prioritise the development of theory, in the field of health services research, findings must add practical value in the context of complex clinical settings (Thorne, 1991, Thorne, 2008, Thorne, 2011).

As a result a number of researchers in applied fields have advocated the use of generic qualitative research (Neergaard et al., 2009, Ritchie, 2009, Kahlke, 2014). This is research that *“has not been guided by an explicit or established set of philosophic assumptions in the form of one of the known qualitative methodologies”* (Caelli et al., 2003) (p.4). Instead, generic qualitative research modifies aspects of a single established methodological approach, or integrates a series of tools and techniques from more than one (Kahlke, 2014). As described below, I adopted the latter approach, using tools and techniques that best helped me to address the research questions posed in this study.

5.1.1 Rationale for adopting a generic qualitative approach

Moving away from a reliance on a single traditional methodology is not an entirely new approach in qualitative research (Caelli et al., 2003), and has been used by

other health service researchers, for example in a study exploring collaboration in unscheduled emergency care (Cooper et al., 2007). The key benefit relates to the ability to prioritise real-world clinical issues, and to make decisions about methods on the basis of what works. This can help to avoid a preoccupation with methodology at the expense of the substance of the research, or ‘methodolatry’ (Chamberlain, 2000, Ritchie, 2009, Thorne, 2011).

In addition to these benefits, a generic approach was particularly suitable for this study because my research questions were developed after data collection (reflecting the timescales of the NIHR-funded MDT Study). Using data collected for one purpose to address a different set of research questions can result in poor methodological fit (Edmondson and McManus, 2007). This would have been particularly problematic if I had tried to apply a traditional qualitative methodology ‘post hoc’ to data collected as part of a mixed methods study. Instead, adopting a generic approach enabled me to develop research questions that capitalised on the data that had already been collected, and to build on the earlier mixed methods analysis (Raine et al., 2014a). To ensure congruence between methodology and methods I made a series of iterative decisions about which data to use from the MDT Study dataset, and how to analyse these. I also constantly reviewed whether the new questions I wanted to pose could be appropriately answered by the data I had.

5.1.2 Rationale for data collection methods

Within this framework, I used qualitative data collected from non-participant observation and semi-structured interviews with MDT professionals and patients to address the research questions posed in this thesis. Non-participant observation was an appropriate method in this context because it generated data that enabled me to explore the decision making process in detail in a naturalistic setting (Savage, 2000). Importantly, it also allowed me to consider the largely unarticulated and taken for granted dimensions of behaviour in these four teams by reflecting on who did or did not participate, as well as reflecting on what was and was *not* being said

(Tracy, 2010). In turn, the semi-structured approach used during the interviews provided me with rich data about participants' perspectives of the meetings, and the views of patients (Bloomberg and Volpe, 2012). Combining these approaches enabled me to contrast and compare what happened in practice with what was said in interviews (Savage, 2000).

Observation and interview methods have been used by other health service researchers who have studied MDT meetings (Lanceley et al., 2008, Kidger et al., 2009, Frykholm and Groth, 2011), as well as by organisational behaviour scholars to study status in real-world settings (Nembhard and Edmondson, 2006, Rivera, 2010). Although the patient perspective has less frequently been included in studies of MDT meetings, a small number of researchers have recently begun to consider this too (Lamb et al., 2014b, Taylor et al., 2014).

One of the benefits of combining these different methods within my study is that it enabled me to gain an understanding of MDT meetings from different perspectives (Barbour, 2001). The purpose of this was not to establish a more 'accurate' representation of MDT meetings, but to explore complementary perspectives in order to broaden and deepen understanding of the decision making process (Barbour, 2001).

5.1.3 Philosophical approach

This approach to combining methods reflects the critical realist philosophy that underpinned my methodological approach. Critical realism acknowledges the existence of a social world independent of individual understanding. However, it also recognises that different actors will create different interpretations of this reality (combining a realist ontology with a constructivist epistemology) (Maxwell, 2012). Research conducted from this philosophical position is therefore less concerned with determining whether participants' perspectives are valid than with a desire to understand meaning from their perspective (Thorne, 2000).

5.2 Research design

As described in **Chapter 1** this research was conducted as part of a larger mixed methods study, the NIHR-funded MDT Study. I drew on a selection of data from the MDT Study in order to explore the role of status hierarchies in the decision making process in cancer MDT meetings. This included data collected from 122 meetings of four cancer teams, 19 semi-structured interviews with healthcare professionals, and seven patient interviews. Table 2 illustrates the link between each of the methods and the three research questions posed in this thesis.

Table 2: Linking research questions and methods

Research Question	Data collection methods	Data analysis methods
1. How do status hierarchies unfold during the decision-making process in cancer MDT meetings?	<ul style="list-style-type: none"> • Non-participant observation • Interviews with MDT professionals • Interviews with patients 	Thematic analysis I
2. What factors facilitate or inhibit multidisciplinary discussion in MDT meetings?	<ul style="list-style-type: none"> • Non-participant observation • Interviews with MDT professionals 	
3. What approaches are used by lower status groups to contribute during MDT meetings?	<ul style="list-style-type: none"> • Non-participant observation 	Thematic analysis II

The MDTs were initially recruited to the MDT Study in late 2010, and I collected data between December 2010 and May 2012. Following data collection, and while conducting the analysis for the MDT Study, I began to develop additional research questions to address by means of further independent analysis as part of my PhD. I undertook this additional analysis following completion of the MDT Study in December 2013.

There were a number of decisions made as part of the MDT Study which shaped certain aspects of the research design and data collection processes that underpin my thesis. These include:

- the selection of teams
- the choice of methods
- the number of meetings observed (which was driven by the need to collect a pre-defined quantitative sample of patients discussed in each MDT meeting)
- the number of qualitative interviews conducted with cancer MDT professionals and patients (these teams made up only one quarter of the teams in the MDT Study)
- the design of the data collection tools, including the observation coding framework and the interview topic guides.

As a key member of the core research team on the MDT Study, I was involved in making many of these decisions, and in influencing the design of the data collection tools. Nonetheless, there were limitations to using these data to address different research questions – for example, some data collected during the semi-structured interviews were not relevant to the specific research questions posed in this study. However, there were also benefits, particularly in terms of having established a deep familiarity with the teams and the data. It was also useful to have worked through a previous analysis as part of a dynamic and diverse research team, as this sensitised me to a number of different issues and perspectives. I discuss the strengths and limitations of this approach in more detail in **Chapter 10**.

5.3 Research setting

The four cancer MDTs that provide the setting for this research were purposively recruited as part of the MDT Study alongside heart failure, mental health and memory clinics. The aim was to incorporate a diverse range of teams and chronic conditions, to enable issues relating to MDT decision making and the implementation of decisions to be explored. However, consideration was also given to issues of feasibility, because the data collection phase involved extended periods of observation at multiple sites.

Although the four teams were initially recruited to address the aims of the MDT Study, they also offer a useful setting for this research. A key advantage was the range of different cancer types, which provided an opportunity to explore the decision making process in MDT meetings in a number of different contexts. The four cancer teams were recruited from three hospital trusts in a single cancer network in a large metropolitan area of England. They included two haematology cancer teams, one skin cancer team and one gynaecology cancer team. These teams varied in size, the number of patients discussed each week, and the length of MDT meetings. Three of the four teams were based in teaching hospitals, while the fourth (Haematology 1) was a district general hospital (Table 3).

Table 3: Overview of the four cancer MDTs

<i>Specialty</i>	<i>Trust</i>	<i>Type of hospital</i>	<i>No. team members</i>	<i>MDT lead</i>	<i>Patients discussed¹</i>	<i>Meeting duration²</i>
Gynae	A	Teaching	28	Consultant Surgeon	35	2.5
Haem 1	B	District General	17	Consultant Haematologist	15	1
Haem 2	C	Teaching	40	Consultant Haematologist	14	1
Skin	C	Teaching	21	Consultant Oncologist	47	1.5

¹ average number of patients discussed per meeting

² approximate duration of the weekly meeting in hours

The four cancer MDTs included in the study are described below to provide context for the findings presented in the following chapters.

5.3.1 The Gynaecology Cancer MDT

Context

The Gynaecology team I observed was a specialist MDT¹ based at a large inner city teaching hospital. This meant that the team was responsible for managing all gynaecological cancers within their local area, as well as receiving referrals for patients who needed specialist treatment (e.g. for ovarian cancer) from the surrounding local MDTs.

Team composition

The team was large, with around 28 members. This included five surgical consultants in gynaecological oncology, four medical and clinical oncologists, two psychologists, three clinical nurse specialists, four pathologists, two radiologists, two research nurses, a clinical trials manager and an MDT co-ordinator. Between four and six StRs or Clinical Fellows attended each week.

The MDT Lead in Gynaecology was a consultant gynaecologist. This position rotated every three years, but only amongst the consultant gynaecologists (and not for example among the consultant oncologists). The MDT Lead chaired the meeting, although the role of Chair in this team was slightly different to the other MDTs I observed. It involved both steering the meeting and documenting decisions. These tasks were usually conducted by different individuals in other teams.

The decision making process

An average of 35 patients were discussed by the team each week. Meetings lasted around two and a half hours, making these the longest MDT meetings that I

¹ The organisation of cancer MDTs varies according to specialty. For example, while there are three levels of MDT provision in gynaecology (primary care, and local and specialist MDTs in secondary care), there are 6 levels of specialisation for skin cancer (ranging from primary care through to specialist MDT management). The rationale for these different levels of care relates to the extent to which services for relatively infrequent procedures need to be consolidated to maintain appropriate levels of clinical skills and expertise (NHS Improving Quality, 2014).

observed. Patients who required review of both radiology and pathology were discussed first and in most detail, there was then briefer discussion of new patients who had been referred to the centre, and an opportunity to discuss a small number (generally only one or two) of complex cases. The final part of the meeting was dedicated to the review of pathology results. During the meeting, the decisions made for each of these patients were documented by the MDT Lead, although they were not always summarised verbally. They were typed up and projected on a screen at the front of the room.

5.3.2 The Haematology Cancer 1 MDT meeting

Context

Haematology 1 was the only team of the four observed that was not based at an inner city teaching hospital. The team was based across two District General Hospital sites in a suburban area. Video-conferencing facilities were used to link the two sites, to enable all members of the team to participate in the weekly MDT meeting.

This MDT did not provide transplantation services, which meant that a small number of patients had to be referred on to another more specialist centre for treatment (e.g. patients requiring a stem cell transplant).

Team composition

In comparison with the other three teams I observed, this was a relatively small team. The 17 members included four consultant haematologists, a staff grade haematology doctor, a pathologist and a radiologist, two clinical nurse specialists in haematology and chemotherapy, two clinical trials practitioners and an MDT co-ordinator. In addition two or three StRs and one or two chemotherapy nurses attended each week. A consultant clinical oncologist from a neighbouring specialist MDT also attended the meeting intermittently to provide specialist oncology input. The MDT Lead, who chaired the meeting, was a consultant haematologist.

The decision making process

The weekly meeting in Haematology 1 usually lasted for around an hour, with an average of 15 patients discussed each week.

The patient list was not organised on the basis of disease sub-types, and the team discussed each case in turn, following the order in which the MDT coordinator had added patients to the list. The decisions made for each patient were initially recorded on paper by the MDT coordinator, before being reviewed by the MDT Lead and uploaded into patients' electronic records.

5.3.3 The Haematology Cancer 2 MDT meeting

Context

In contrast to Haematology 1, this team was based at an inner city teaching hospital. It had a dedicated transplant team, and received referrals from other hospitals that did not provide this level of specialised care.

Team composition

This was the largest team of the four I observed, with approximately 40 people attending the meetings. The importance of diagnosis was apparent in the number of diagnostic specialists who attended each week (around six individuals, including one or two pathologists, a radiologist, a specialist in nuclear medicine, a cytogeneticist, and a molecular biologist). In addition, there were 13 consultant haematologists, two clinical oncologists, five clinical nurse specialists, two research nurses, a clinical trials practitioner, a pharmacist, and an MDT coordinator. In addition up to ten haematology specialty registrars or clinical fellows attended the weekly meetings. Within this team, both consultants and clinical nurse specialists were sub-specialists with dedicated responsibility for haematological cancer sub-types, for example lymphoma, leukaemia or myeloma.

The meeting was chaired by the MDT Lead who was a consultant haematologist.

The decision making process

In Haematology 2 the average number of patients discussed each week was 14, and meetings were scheduled to run for an hour. The patient list grouped patients according to their disease sub-type. Decisions were recorded for each patient directly into an electronic patient record by one of the haematology specialty registrars. This information was also projected onto a screen at the front of the room for other team members to see. These notes were intermittently checked by the MDT Lead or other members of the team who would point out any errors or omissions as they were being typed up.

5.3.4 The Skin Cancer MDT meeting

Context

The Skin Cancer Team I observed for this study was a specialist skin cancer team, based in an inner city teaching hospital with a large plastic surgery unit. This meant that the team managed all skin cancer cases in their catchment area, as well as a subset of patients referred from surrounding local MDTs (e.g. those who required plastic or reconstructive surgery, or those with advanced metastatic melanoma).

Team composition

The team was composed of a consultant medical oncologist, two consultant plastic surgeons, around seven dermatologists in any one week, a dermatopathologist, a clinical oncologist, a radiologist, and occasionally a nuclear medicine specialist. There were also two or three specialty registrars in plastic surgery, one StR in oncology and one in radiology, a skin cancer CNS, a research nurse and an MDT coordinator. Although there was a wide range of disciplines, the team was smaller than the Gynaecology and Haematology 2 teams, with 21 members.

The MDT Lead was a consultant medical oncologist, who chaired the first part of the meeting covering melanoma patients. After these cases had been discussed, some of the oncology team left the meeting, although the MDT Lead and the skin cancer CNS remained. Although there was no formal chair during the second stage of the

meeting (for discussion of Squamous Cell Carcinoma and Basal Cell Carcinoma cases) the position was often filled by the consultant dermatopathologist or pathologist – a role which was periodically rotated amongst 4 different individuals who each brought their own approach.

The decision making process

The team discussed an average of 47 patients, at weekly meetings lasting for around an hour and a half. The MDT coordinator pointed out on a number of occasions that this made it one of the busiest MDT meetings in the Trust.

The patient list divided patients into three distinct groups: melanoma cases, squamous cell carcinomas (SCCs) and basal cell carcinomas (BCCs). The melanoma cases were generally discussed first, and in greater depth because *“they’re more complex. And their disease is life threatening”* (CNS, Skin, interview). Following this, there was a distinct change in the pace of the meeting when the less complex SCC and BCC cases were discussed towards the end. A long list of patients was reviewed fairly quickly with much less in the way of discussion, providing an ‘audit’ function. This was in line with the Peer Review measures for skin cancer, which set out that SCC and BCCs (with the exception of recurrent SCCs/BCC, or those that have been positively excised) did not require mandatory, formal discussion of the case by the MDT (NHS England, 2014).

The role of capturing the decisions made for each patient was delegated to whichever member of the team presented the patient, and therefore varied throughout the meeting. The decision was recorded on a paper proforma which was subsequently filed in the patient’s medical records by the MDT coordinator.

5.4 Methods

5.4.1 MDT Recruitment

Teams were initially identified by the MDT Study’s clinical co-applicants, and invited to take part by Professor Raine, the Principal Investigator (PI). This was followed by

a discussion with the lead clinician from each MDT to clarify any issues or concerns. The four cancer teams invited all agreed to participate.

Following this initial recruitment phase, I was one of three researchers who visited the teams to introduce the study at a weekly MDT meeting. I visited three of the cancer teams, while for logistical reasons another researcher introduced the study to the fourth team. After presenting the study to the teams, I provided participant information sheets at each of the meetings I attended (Appendix 3). Participants were given one week to review these. I was then responsible for gaining signed consent from all members to observe, record data from, and audiotape their MDT meetings (Appendix 4). This included the fourth cancer team, which I attended from this point forward.

Since other professionals occasionally attended MDT meetings on an 'ad hoc' basis, I displayed a printed notice at the entrance to the meeting room during every meeting that was recorded. This explained the nature of the observation and provided my contact details. It also made clear that if individuals did not wish to take part in the study their contributions would be deleted from any transcripts. Nobody requested this.

5.4.2 Data collection

I collected data from each of the four teams by non-participant observation at weekly MDT meetings, semi-structured interviews with MDT professionals, and semi-structured interviews with patients under the care of the four cancer teams I observed. A summary of the data collected is provided in Table 4.

Table 4: Summary of data collected

Team	Meetings observed	Observation period (Month/Year)	No. patients discussed	Professional interviews	Patient interviews
Gynae	18	Dec 10 – Apr 11	324	7	1
Haem 1	38	Dec 10 –Jan 12	390	5	3
Haem 2	35	Jun 11 – May 12	371	4	3
Skin	31	Dec 10 – Oct 11	384	3	0
Total	122	Dec 10 – Jan 12	1469	19	7

Non-participant observation at weekly MDT meetings

Before I began data collection I attended two MDT meetings at each site. This was to enable the team to get used to my presence and to pilot the quantitative data collection tools used for the MDT Study. Following on from these ‘pilot’ meetings, I collected non-participant observation data at 122 weekly MDT meetings (these were consecutive with the exception of weeks where I was unable to attend, for example due to annual leave). On four occasions out of 122 meetings the observation data were collected by another Research Associate, Caoimhe Nic a Bháird, on my behalf.

During observation I made free-form field notes, audiotaped the meetings and collected data on who attended the meeting and their profession. I also collected quantitative data on each of the patients who were discussed during the observation period using an observation proforma.

Field notes

My field notes were initially free-form, and recorded significant events and interactions that I observed. Within 24 hours of each meeting, I organised these according to a qualitative observation coding sheet (Appendix 5). This was designed in collaboration with clinical co-applicants and patient advisors for the MDT Study prior to the start of data collection. It was based on an adaptation of an Inputs-Process-Outcome model (McGrath, 1964, Cohen and Bailey, 1997, Lemieux-Charles and McGuire, 2006). It included sections on the meeting environment (e.g. the size of room and seating arrangements), mention of national or local policies, features of the team and task, levels of participation, and mediators of team processes and

outcomes. This provided a framework to map out features of the meeting context and decision making processes.

Audio recordings

Following each meeting, I re-listened to the audio recordings within 24 hours, adding further information to my field notes and documenting the timing of key events on the recording for future reference.

Attendance data

MDT co-ordinators in each of the teams provided me with 'sign in sheets' that were used to record attendance at each meeting. I used this to augment my observation field notes on meeting attendance and profession (e.g. at the beginning of the observation period when I was not familiar with all the team members, or when a new member attended a meeting).

Quantitative data

I used a standard proforma to collect quantitative data on each of the 1469 patients discussed during the observation period (Appendix 6). This proforma was initially developed by the clinical co-applicants for the MDT Study, but was subsequently amended based on feedback from me and another Research Associate following the pilot phase. Quantitative data collection included information on patient features such as diagnosis, comorbidities and whether patient preferences were mentioned during the discussion. I also used the proforma to record discussion features (e.g. whether the presenter was questioned), and decision features (e.g. the decision made by the team).

These quantitative data will not be described in detail in my PhD analysis, but they will be used to provide background information on patient and team characteristics as an additional source of context.

Interviews

Interviews were carried out at the end of the observation period to avoid sensitising teams to the primary outcome measure for the MDT Study. This was decision implementation (whether or not teams implemented the decisions made during the MDT meeting) and the aim was to minimise the impact of the observation on the behaviour of MDT members. Participants were informed that the study was related to the decision making process, but they were not given specific details of which aspects.

Interview topic guides

In collaboration with the other research associates and under the supervision of the Principal Investigator on the MDT Study, I drafted topic guides for the MDT professional and patient interviews. These were based on reviews of the literature and the research aims of the MDT Study. We revised these based on emerging issues identified during non-participant observation and suggestions from the MDT Study steering group.

The MDT professional interview topic guide included open-ended prompts about how different professional groups interacted in the team, and the information needed to make a decision, in addition to questions about things that did not get discussed enough in the meeting (Appendix 7). I piloted the interview topic guide with a clinical co-applicant from the MDT Study and amended it on the basis of their feedback.

The patient topic guide covered issues such as whether patients were aware of the MDT meeting, and what issues they believed should be considered when the MDT was making decisions about their care (Appendix 8). This topic guide was piloted by another researcher with two patient representatives and amended on the basis of their comments.

Sampling and recruitment of MDT professionals

I used purposive sampling to select participants for interview. This is an approach commonly adopted by qualitative researchers when the emphasis is on exploring different accounts of the issue of interest (O'Reilly and Parker, 2013). For this study, my aim was not to generate a representative sample, but to intentionally incorporate the views of a diverse group of MDT professionals and patients and to explore these in depth (Barbour, 2001). I therefore selected MDT professionals on the basis of professional group, seniority, and level of participation in the MDT meeting as these issues were most salient to the decision making process, and to understanding interaction between team members. A summary of the number of interviewees from each professional group and team is presented in Table 5.

Table 5: Number of interviews by professional group and team

<i>Profession</i>	<i>Gynae</i>	<i>Haem 1</i>	<i>Haem 2</i>	<i>Skin</i>	<i>Total</i>
Surgeon ¹	3	-	-	0	3
Medical doctor ²	-	2	1	2	5
Diagnostic doctor ³	1	1	1	0	3
Psychologist	1	-	-	-	1
CNS	1	1	1	1	4
StR	1	1	1	0	3
Total	7	5	4	3	19

¹ includes Consultant Gynaecologists and Plastic Surgeons

² includes Consultant Haematologists, Dermatologists, and Oncologists

³ includes Consultant Radiologists, Pathologists, and Nuclear Medicine

I approached interviewees after observation for each team was complete. This was done either in person or by email, and individuals were provided with an information sheet and consent form. While I recommended we arrange a one hour appointment, the interviews lasted on average around 38 minutes, ranging from 20 minutes (when a clinician was called away) to 64 minutes.

The interviews were all conducted at the place of work of the participants and were audiotaped. Information sheets were provided in advance, and written consent obtained on the day of the interview (Appendix 3 and Appendix 4). I wrote

reflective field notes following each interview, including comments on setting, the main issues discussed, and areas to follow up in subsequent interviews.

Sampling and recruitment of patients

I also used purposive sampling to select patients under the care of the four cancer teams for interview. To increase the likelihood that interviewees would still be under the care of the team at the point of interview, I initially selected the thirty patients who had been most recently discussed by each team at the end of the observation period. I purposively sampled from this group in terms of disease type, gender and age.

There were five exclusion criteria for the patient interviews, which are detailed in Box 2. I used medical records to assess patients against criteria 1 to 3, and asked a clinician in each team to highlight any cases where they thought the interview would present a risk to the patient or to the interviewer (criteria 4 and 5). These patients were not approached for interview.

Box 2: Exclusion criteria for recruiting patients to interview

Exclusion criteria:

1. Non-English speaker
2. Not living in England
3. No longer under the care of a participating team
4. Clinician deems a risk to interviewer
5. Clinician deems too vulnerable for interview

Following this, I asked the lead clinician or a Clinical Nurse Specialist in each team to contact the selected patients in the first instance, as this was a condition of our ethics approval. These clinicians were asked to provide patients with a study information sheet and consent form, and to seek permission for a researcher to contact them directly to discuss the study further. Patients who agreed to be contacted were telephoned, either by me or by another member of the research

team, to confirm participation, address any questions they had, and arrange the interview.

Patient interviews took place in the hospital or at the patient's home and were audiotaped. The length of the interviews ranged from 21 minutes to 67 minutes, with an average time of 34 minutes. As with the professional interviews, information sheets were provided in advance (Appendix 9), and written consent obtained on the day of the interview (Appendix 10). I wrote reflective field notes directly after each interview I conducted (I recruited and interviewed 4 of the 7 cancer patients included in this sample). We also trained and supervised two Masters students and a medical student to conduct the remaining patient interviews.

There were some specific recruitment challenges for the patient interviews. Initially, the plan had been to conduct 24 interviews with patients under the care of the four cancer MDTs. However, strict time constraints and deadlines imposed by the MDT Study meant that this figure was revised, and it was agreed with the funders that a total of 20 patient interviews would be conducted across the 12 teams recruited (i.e. including mental health, memory clinic and heart failure MDTs). In addition to this, the need for clinicians in each team to generate the initial contact with each patient meant I had less control over the process, and was reliant on busy clinicians taking time out of their schedule to introduce the study to patients on my behalf. As a result of these factors, only seven cancer patients were recruited and interviewed from three of the four teams I observed (there were no patient interviews conducted with patients under the care of the Skin team due to time constraints).

However, despite the small numbers these interviews provide an opportunity to explore an alternative perspective - both to the views of MDT clinicians, and to the data I captured during observation (O'Reilly and Parker, 2013). For example, the patient interviews gave an insight into patients' views about what information they shared with different team members, and who they felt should best represent their views in the MDT meeting. For this reason I have decided to include it in my

analysis, whilst being mindful of the limitations inherent in such a small number of cases.

5.4.3 Data management

A key challenge in qualitative research is to manage and make sense of the large volumes of data collected (Bloomberg and Volpe, 2012). In the section below I set out how I managed, organised and analysed the data described above in order to generate and interpret my findings. I followed the same key principles of data management, coding, and thematic analysis to generate findings to answer all three of the research questions posed in this study. However, I initially addressed research questions one and two separately from research question three.

Observation data

As noted above, the period of observation was determined by the need to continue collecting quantitative data for the MDT Study until we reached a predefined sample size of 330 patient discussions per team. I collected qualitative data for the duration of this period, which meant that I had full audio recordings and field notes from 122 cancer MDT meetings. This equated to around 175 hours of audio, and nearly 1,500 individual patient discussions.

Given this volume of data, it was not practical to transcribe all the meetings verbatim. As other researchers have described, quiet talk and background noise can obscure dialogue (Bucholtz, 2000). I also had to contend with overlapping speech, when members of the MDT either talked over each other, or in some instances, conducted entirely separate conversations between different groups at the same time.

Another challenge in this context related to the fact that a key area of interest for my research was to explore the contributions and participation of low status individuals. By their very nature, these interactions were at times difficult to capture in a written transcript because they tended to be less vocal than higher

status members of the team. For example, when CNSs or junior doctors whispered to other colleagues rather than voicing their opinions out loud, or where they would get the attention of another team member immediately before the meeting started to share information or get a key point across. This information was not always picked up by the recording and it was therefore not possible to transcribe these sorts of interactions.

To deal with these challenges, I used a combination of approaches to manage and analyse the qualitative observation data. This included using my field notes, transcribing a selection of audio data, and working directly from the audio files. Each of these approaches has advantages and disadvantages. By using all three I aimed to overcome the disadvantages that any one approach might pose when used on its own (Tessier, 2012).

Field notes	Transcript with audio file	Working directly from audio files
<ul style="list-style-type: none"> • <u>Advantages</u> • Fast • Cheap • Records initial thoughts • <u>Disadvantages</u> • Not replayable • Loss of information (overly simplistic) • Lack of reliability 	<ul style="list-style-type: none"> • <u>Advantages</u> • Audio can be replayed • Helps distance researcher from the field • Researcher can focus on the details • Keeps data fresh • <u>Disadvantages</u> • Time consuming • Transcripts contain errors • Some information remains difficult to translate into text 	<ul style="list-style-type: none"> • <u>Advantages</u> • Fast • Keeps information throughout the analysis process • Closest to the original event • Voice of the participant • <u>Disadvantages</u> • Loss of data during the coding process • Reliability questioned

Figure 2: Advantages and disadvantages of qualitative data recording methods (adapted from (Tessier, 2012))

Observation field notes

I used my field notes to capture interactions that were not easily recorded or transcribed, for example, non-verbal cues. My field notes were also useful because they captured my initial thoughts while they were still fresh (Tessier, 2012). They

also gave me a manageable overview of the entire dataset, which I was able to use to identify specific instances of interest to return to on the audio or transcripts.

Observation transcripts

As mentioned above, it was not feasible to transcribe all 122 meetings verbatim. Instead, I used a process of selective transcription (Emerson et al., 1995, Frykholm and Groth, 2011). This meant I had to decide how many and which meetings (or parts of meetings) to transcribe. When considering how much transcription to undertake, I took as my starting point my existing levels of familiarity with the observation data I had collected. As part of the MDT Study I had previously:

- attended 118 out of 122 meetings in person
- written up field notes for each meeting within 24 hours of attending
- re-listened to the audio recording of all meetings at least once
- selectively transcribed, coded and analysed a subset of meetings for the MDT Study (64 of the 122)
- participated in analytic conferences with five other researchers. This involved listening to audio files from a selection of meetings and discussing the coding and analysis process.

My main concern therefore was to capitalise on my familiarity with this extensive dataset, while at the same time, giving myself the opportunity to look at these data in a new light, and with different questions in mind. When I began analysis for my PhD therefore, I started by transcribing verbatim one meeting from each of the four teams. This had two purposes. First, it was an opportunity for me to re-immers myself in the data, which I had collected 18 months previously. Secondly, by having a full transcript from each team I was better able to consider differences in participation and influence throughout each discussion and for the duration of an entire meeting. For example, the detailed review of each full transcript enabled me to follow through cases from initial presentation to subsequent discussion and the final decision. This provided me with opportunities in my analysis that review of my

field notes alone could not – for example, to explore the features of case presentations that led to input from lower status members versus those that did not.

I chose to transcribe meetings from the first month in which I had observed each team, when my field notes were the richest. This enabled me to produce a more detailed transcript as I could refer to my field notes throughout the process (for example, where it was not clear from the audio who said what). I also chose meetings that I felt best reflected the ‘norm’ for each team, for example, where key members were in attendance and processes were followed as usual.

In addition to the verbatim transcript of four meetings, I also used a process of selective transcription (Emerson et al., 1995, Frykholm and Groth, 2011). Selective transcription was an approach we had used as part of the MDT Study, to enable us to manage the large volume of qualitative data collected (Raine et al., 2014a). I utilised the same approach for my PhD, although for the purposes of this study I used different criteria to select sections for transcription.

In order to address research question three, I theoretically sampled cases from the full dataset where a CNS or StR had contributed to discussion. This was possible because these individuals in all four MDTs spoke up much less frequently than others. To identify these cases I coded my field notes for any reference to these contributions during the MDT meetings. I then re-listened to the relevant section of audio file and transcribed those sections of audio that illustrated the lower status contribution, with the following exceptions. I did not transcribe references from my field notes that were:

- general observations only (e.g. *‘the CNS is the most likely to mention patient preferences, although she often does this very quietly’*)
- about a *lack* of participation (e.g. *‘StR did not present any cases today’*)

- related to processes other than decision making (e.g. those that focused on teaching and learning)
- there were also a small number of cases that could not be transcribed because the audio quality was poor (e.g. when someone was talking very quietly) – in these cases I relied on my field notes as it was easier to hear during the meeting itself than when listening back to the audio.

This generated a total of 88 selective transcripts across the four teams, with 43 discussions involving CNSs and 30 selective transcripts with discussions involving StRs. 15 selective transcripts contained input from a combination of lower status groups (Table 6). These selective transcriptions enabled me to undertake a closer analysis of discussions that were most pertinent to research question three across the full observation dataset (Frykholm and Groth, 2011).

Table 6: Selective transcripts by team and lower status group

<i>Team</i>	<i>CNS only</i>	<i>StR only</i>	<i>Both CNS and StR</i>	<i>Total</i>
Gynae	10	5	2	17
Haem 1	4	10	6	20
Haem 2	5	13	2	20
Skin	24	2	5	31
Total	43	30	15	88

Working directly from the audio file

I used a software package called ExpressScribe to listen to the audio files from the meetings. This software allowed me to move back and forth through the files quickly and easily. Using my field notes as reference, I was able to return to specific dialogues of interest and to listen to these sections repeatedly. I could then transcribe these sections, add more detail to my field notes, or write analytic memos. This approach enabled me to retain much of the contextual data, such as tone of voice, which can get lost in the process of transcription (Crichton and Childs, 2005). I also found that listening to the audio files helped me to remember specific events more vividly (Crichton and Childs, 2005).

Interview data

I also used field notes, transcripts and the original audio files to analyse data from the professional and patient interviews. However, the professional and patient interviews were 'easier' to transcribe because they involved only two individuals (the participant and me). In addition, they were conducted in quiet rooms which provided ideal conditions for audio recording (in contrast to the large and often noisy rooms where MDT meetings took place). As a result, I used professional transcription agencies with experience of health research and medical terminology to transcribe all 26 interviews verbatim. I reviewed each of the completed transcripts against the audio file in order to check the quality of the transcription, and to ensure that all identifying information had been removed to protect the anonymity of participants (McLellan et al., 2003, MacLean et al., 2004). Re-listening to the audio files in this way also gave me an opportunity to further familiarise myself with the data (Patton, 2002).

Organising the observation and interview data

I imported all my field notes and transcripts into Nvivo V.10. This software enabled me to manage the large volume of data more easily.

5.4.4 Data analysis

In order to analyse the data to answer my research questions, I used the principles of thematic analysis described by Braun and Clarke (2006) (Figure 3). This approach fitted well in the context of the generic qualitative methodology I adopted for this study because of its theoretical flexibility (Braun and Clarke, 2006).

In the sections below I describe in more detail the data I drew on for the analysis and the process I followed. In reporting this process it is important to point out that although it is presented as a series of stages, in reality it was much more iterative. During the analysis I moved back and forth between strategies to explore the data, developing and refining codes, and abstracting higher level themes. This continued

as I wrote up my findings, reflecting the messy and complex nature of qualitative analysis (Barbour, 2014).

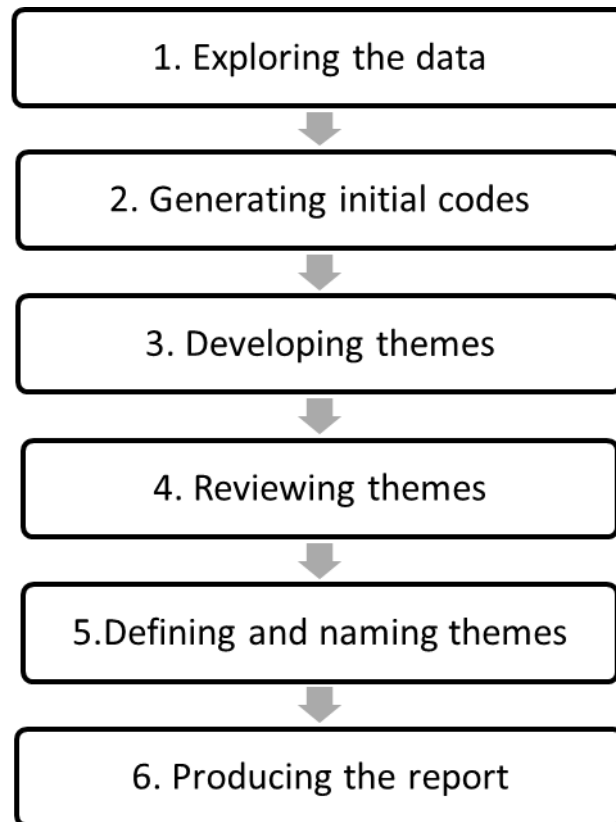


Figure 3: Phases of thematic analysis (adapted from (Braun and Clarke, 2006))

Exploring the data

In the first phase of analysis I explored the data by reading through my entire dataset, and adopting a number of different strategies to familiarise myself with the data (Table 7). Using these approaches while coding prevented the process from becoming too mechanical (Bazeley, 2013).

Table 7: Strategies used to explore the data

Technique	Description	Examples
Shifting sequence	Reading through transcripts in a non-linear way (Dey, 2005)	<ul style="list-style-type: none"> Reading observation transcripts 'backwards' – starting at the bottom and working up, rather than always starting with the cases discussed first by the team
Writing as you read	Recording analytic thoughts as they arise (Bazeley, 2013)	<ul style="list-style-type: none"> Writing memos: scribbling in the margins of paper copy transcripts and field notes to record thoughts and reflections
Questioning	Asking questions of the data (Dey, 2005, Bazeley, 2013)	<ul style="list-style-type: none"> Asking: what's interesting? Why is it interesting?
Making contrasts and comparisons	Exploring similarities and contrasts between data sources (Bazeley, 2013)	<ul style="list-style-type: none"> Looking for deviant cases
Counting	Simple counting in order to avoid the risk of anecdotalism (Barbour, 2014)	<ul style="list-style-type: none"> Carrying out simple counts of who said what and exploring the context using the Nvivo matrix coding query function
Reflexive coding	Interrogating and challenging each code created (Bazeley, 2013, Barbour, 2014)	<ul style="list-style-type: none"> Using memos to record definitions of codes and how used Conducting a trial run to see if I could answer my research questions from the codes created. Are there any gaps that need filling?

Following this, I conducted two separate thematic analyses of the data I had collected. The first thematic analysis (Thematic Analysis I) addressed research questions one and two by exploring the role of status hierarchies and the factors that facilitated or inhibited multidisciplinary discussion. This analysis was based on the observation and interview data. The second thematic analysis (Thematic Analysis II) addressed research question three, and was initially based only on the selective transcripts from the observation audio files. Conducting this analysis separately enabled me to focus solely on the approaches used by lower status groups to contribute to the MDT meeting using relevant extracts from across the whole dataset.

Thematic Analysis I

Generating initial codes

The first phase of coding I undertook for Thematic Analysis I was both inductive and deductive (Langley, 1999, Dey, 2005). This meant that some codes were grounded in the data, while others were drawn from relevant literature and my theoretical framework. Using this inductive and deductive approach I continually expanded and refined the coding framework (Dey, 2005, Barbour, 2014).

My coding framework covered the four full meeting transcripts, observations from all 122 sets of field notes, the observation audio files, the professional interview data, and the patient interview data (i.e. all data, except for the selective transcripts of lower status contributions). Having a single coding framework for these different datasets meant that I was able to consider key issues from different perspectives throughout the analysis process. This enabled me to undertake a process of complementary triangulation, using different types of data to gain a more nuanced understanding (Moran-Ellis et al., 2006). For example, I could explore features of the initial case presentation based on my observations and the views of professionals within the team, as illustrated in Table 8.

Table 8: Integration of datasets during the analysis process

Code	Illustrative quotations
Initial case presentation	<p>Observation transcript: <i>Consultant Haematologist: So the next one is [name of patient] who is an elderly gentleman that I saw with an isolated significant large sub mandibular lymph node, no other systemic symptoms and actually, remarkably fit and well for his age past history of prostatic carcinoma which he had major surgery on er in 1993 and he now has zoladex but his PSA is normal (Haematology 1)</i></p> <p>Observation field note: Consultant Haematologist 1 presented most of the patients, although StR1 presented a couple, as did the Consultant Pathologist towards the end (Haematology 1)</p> <p>Interview transcript: <i>Chemotherapy CNS: it is usually the doctor who has seen them in the clinic that presents that patient to the rest of the team (Haematology 1)</i></p>

During this phase of the analysis, I reviewed my initial coding framework alongside excerpts of data and my research questions with my supervisors. This provided an opportunity for me to reflect, and to be challenged on, my approach to coding. I reached a stage where no new codes were generated by review of the additional material following analysis of the four full meeting transcripts, and a selection of interview transcripts from both patients and professionals. The field notes and audio files therefore provided me with a wider pool of examples to draw on for my analysis, but the key codes emerged from the meeting and interview transcripts.

Developing and reviewing themes

Building on my coding framework, I grouped my codes into broader categories to develop an initial set of themes. For example, codes such as ‘provides information’, ‘interruption’ and ‘introduces new topic’ all seemed to represent attempts to participate in the meeting, so I grouped them under a theme titled ‘initiating participation’.

Defining and naming themes and producing a written report

Braun and Clarke (2006) describe these as two separate stages. The first (defining and naming themes) is presented as the stage at which the essence of each theme is defined. The second is described as beginning once a set of themes are “*fully worked out*” (Braun and Clarke, 2006) (p. 23). Instead, I found that these stages were heavily intertwined. It was through the process of writing that I was able to achieve clarity within each theme and to determine the most appropriate names for these. In practice, this meant that my themes continued to develop as I wrote, and my writing developed as my themes became clearer and more well-defined.

The final overarching themes from Thematic Analysis I are presented in Box 3 below. A full list of the sub-themes and codes is presented in Appendix 11. Themes I and II are discussed in detail in **Chapter 6**, and Theme III is discussed in detail in **Chapter 7**.

Box 3: Themes from Thematic Analysis I

- I. The decision making process in MDT meetings
- II. The effects of status hierarchies
- III. Multidisciplinary discussion

Thematic Analysis II*Generating initial codes*

I created a second thematic framework based only on the 88 selective transcripts from discussions that involved lower status contributions in the 122 MDT meetings observed. This formed the basis of the analysis for research question three. I used a hybrid inductive and deductive approach to generate two sets of codes: ‘outcome codes’ and ‘strategy codes’.

Outcome codes

I initially reviewed each of the 88 discussions to deductively identify successful contributions. I made a decision about whether a contribution was successful or not based on the content of the selective transcripts themselves. My focus was on the effect of a contribution on the decision making process, rather than the quality of the decision itself. For example, contributions made by a lower status individual that prompted further discussion or influenced the clinical decision made by the team were deemed to be 'successful'. Where the outcome of a contribution was unclear I used the quantitative dataset from the MDT Study to ascertain what decision had ultimately been implemented as a way of determining if a contribution had been incorporated into the final treatment plan or not.

Following this I generated inductive codes to explore the way in which a contribution was successful. I grouped these codes into three themes linked to the decision making process, as illustrated in Table 9.

Table 9: Final themes and codes for successful contributions (outcomes)

<i>Theme</i>	<i>Codes</i>
Prompts discussion	<ul style="list-style-type: none"> • Prompts others to share expertise • Raises awareness of an issue with the team • Determines logistics of treatment
Influences decision	<ul style="list-style-type: none"> • Acts as patient's advocate • Ensures a decision is made • Influences a clinical decision • Influences practicalities of treatment delivery
Facilitates team work	<ul style="list-style-type: none"> • Promotes social cohesion • Supports higher status decision

Strategy codes

I then generated another series of inductive codes based on the approaches being used by lower status groups to contribute in successful cases (Table 10).

Table 10: Final themes and codes for successful contributions (strategies)

<i>Theme</i>	<i>Codes</i>
Asking questions	<ul style="list-style-type: none"> • Asks questions
Framing	<ul style="list-style-type: none"> • Psychosocial frames from medical perspective • StR provides clinical rationale for discussion
Providing a practical alternative or solution	<ul style="list-style-type: none"> • Proposes an alternative solution (<i>specifically challenging another suggestion</i>) • Proposes solution to a problem facing the team
Sharing information	<ul style="list-style-type: none"> • Provides clinical information • Provides information about patient as a person
Using humour	<ul style="list-style-type: none"> • Uses humour

I discussed the development of this coding framework with my Departmental Qualitative Research Group. I presented a selection of data extracts to the group, before facilitating a discussion about different interpretations of the data. I found this process helpful in stimulating my thoughts at an early stage of coding.

Developing and reviewing themes

At the end of this stage my coding framework was composed of a series of 'strategy' and 'outcome' codes, which I explored in Nvivo using the 'Matrix coding query'. This enabled me to explore each of the approaches used by lower status groups to contribute in relation to the different outcomes, as illustrated in Figure 4.

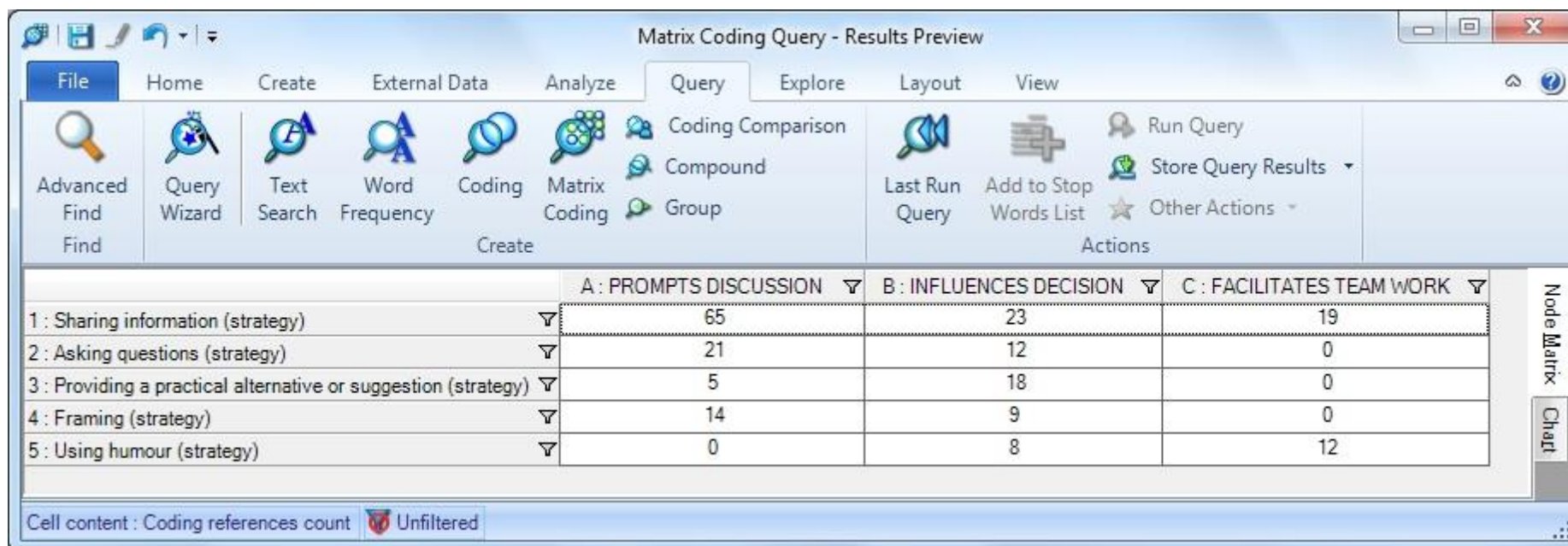


Figure 4: Matrix coding query: strategy and outcome codes Thematic Analysis II

Defining and naming themes and producing a written report

In line with my approach for Thematic Analysis One, I continued to develop themes through the process of writing. I discussed these themes with my PhD supervisors as my analysis progressed to further clarify and refine them. The final thematic framework incorporating the three outcome and five strategy themes is provided in Appendix 12.

5.4.5 Analytic Integration

As noted above, I used a form of complementary triangulation when conducting the first thematic analysis, actively drawing on different sources of data throughout the process to gain alternative perspectives for individual codes and themes. However, I also undertook an additional level of integration at a later stage in the analysis (Moran-Ellis et al., 2006). As I moved from description of my results to interpretation and explanation I reviewed the findings from Thematic Analysis I in light of Thematic Analysis II.

This involved considering how the key team and decision making characteristics identified in Thematic Analysis I could further shape my interpretation of the strategies used by lower status individuals to contribute (as identified in Thematic Analysis II). To do this, I summarised the data relating to each team from Thematic Analysis I, (specifically, data on specialty, team structure – including size and seating arrangements – decision making processes and leadership). I used these summaries to group teams according to their shared characteristics. This resulted in a series of different groupings for each of the key characteristics. I then compared and contrasted each grouping with the patterns of lower status contributions identified in Thematic Analysis II. For example, I grouped the two Haematology teams together and compared them to Skin and Gynaecology in order to consider the role of specialty on patterns of lower status contributions. In turn, I grouped the two largest teams (Gynaecology and Haematology 2) and compared them with the two smaller teams (Skin and Haematology 1) in order to explore the role of team size on patterns of lower status contributions.

This process of analytical integration provided a means of furthering my interpretation across all three findings chapters. The results of this analytic integration are presented in **Chapter 9**.

5.5 Reflections on the role of the researcher

Reflexivity is an important concept in qualitative research because of the role of the researcher in the data collection and analysis process (Miles and Huberman, 1994). It is therefore important to explicitly consider the motives and biases that may have had a bearing on the assumptions I made during data collection and analysis (Bloomberg and Volpe, 2012). These reflections provide important contextual information for a qualitative research study (Caelli et al., 2003).

5.5.1 Reflections on the non-participant observation process

My interest in health services research stems from my experience of working as a service improvement manager in the NHS. I was therefore familiar with the 'world of the hospital' and with working alongside clinicians in a busy environment. However, I am not a clinician, and had little experience of working directly with patients, or with complex medical terminology.

Observing a clinical decision making forum as a non-clinician brought challenges and advantages. It meant that I was able to observe with a fresh pair of eyes, and was not limited by prior experience of 'normal' behaviour in these meetings. Ferlie (2001) argues that from this position researchers are better placed to resist capture by vested interests in the field. However, the first few weeks of observation in particular were challenging. Nevertheless, the rapid pace of meetings, complex medical terminology, seemingly endless new faces, and new images in the form of pathology and radiology presentations, did eventually become familiar as the observation period continued. I used my field notes to record this transition and to remind myself of my earlier thoughts and questions to keep myself stimulated and engaged.

5.5.2 Reflections on the interview process

The ability to set the agenda in qualitative interviews can place a researcher in a position of power relative to the interviewee (Allmark et al., 2009). However, in the context of this research I was conducting interviews as a junior researcher without a clinical background, with clinicians who were exceptionally busy, with many being senior and influential in their field. In light of this, I turned to the literature on conducting elite interviews, in order to gain insight into the different dynamics likely to be generated by these interviews. Issues that were particularly salient ranged from strategies to gain access, negotiating the power dynamics during the interview, and reflecting on and adapting my interview style as I gained more experience (Morris, 2009, Harvey, 2011, Mikecz, 2012). I used field notes and listening back to the audio recordings of the interviews to reflect on this process. This also gave me the opportunity to work on strategies to develop my interview technique, for example reminding myself to use silence or non-verbal cues more effectively to encourage interviewees to open up and expand on relevant issues.

My experience of conducting the professional interviews contrasted quite sharply with my experience of conducting the patient interviews. I had anticipated the challenges of interviewing some of the more senior clinicians in particular, and had a body of literature on elite interviewing to draw on to provide me with strategies to manage this. However, this was the first time I had interviewed people who had been so acutely unwell and it was difficult on a far more personal level. The focus of my questions related to quite practical matters around the way decisions had been made about treatment and care. I found some of these questions incongruous in light of the very honest descriptions provided of the way that cancer had impacted directly on these individuals and their families. The insight I gained was even starker when contrasted with the very clinically focused meetings in which decisions about these patients were made.

As detailed above, there were practical reasons that meant that I was not able to conduct as many patient interviews as initially planned. However I feel strongly that

the insight that I was able to gain from these interviews has an important role to play in the overall narrative of MDT meetings. It provides a reminder that each and every 'case' presented and discussed is much more than just a disease to be treated. It provides an opportunity to consider the views of a small number of patients on what is now a critical part of the cancer pathway, even if there remains scope for further exploration of these perspectives. Given that the aim of conducting semi-structured interviews was to explore in depth a range of views – and not to be representative of a larger population - the small number of interviews does not in itself invalidate the views expressed in these (O'Reilly and Parker, 2013).

5.6 Strategies to establish rigour

While generic qualitative research provides a useful, pragmatic approach to addressing real-world clinical problems, its value can be undermined unless careful consideration is given to rigour (Cooper and Endacott, 2007).

Although there is widespread consensus amongst quantitative researchers about the fundamental role of the concepts of validity, reliability, and generalisability, there is much debate about how best to establish quality, or rigour, in qualitative research studies (Caelli et al., 2003, Tracy, 2010, Reynolds et al., 2011, O'Reilly and Parker, 2013). Some approaches advocate the measurement of quality in terms of the outputs of research, for example the use of checklists to document the application of specific techniques such as triangulation, or multiple coding. In contrast, other approaches emphasise the need for quality to be embedded at each stage of the research process, through reflexivity and 'methodological awareness' (Reynolds et al., 2011).

For the purposes of this research, I worked within the framework proposed by Caelli (2003). This framework focuses on ensuring quality throughout the research process, and has been developed for researchers who adopt a generic qualitative approach. It is based on four key elements: the need to articulate beliefs about epistemology and ontology, the assumptions and motives of the researcher that

underpin a study, to ensure congruence between methodology and methods, and to record the criteria used to establish rigour. These are described in Table 11 alongside details of where I have addressed each of the key elements within this chapter. Following this I discuss the specific quality criteria I used to establish rigour.

Table 11: Caelli's (2003) framework for credible generic qualitative research

<i>Element of Caelli's framework</i>	<i>Description</i>	<i>Approach adopted</i>
The 'analytic lens' used to explore data	The beliefs about epistemology and ontology which have shaped a study	I adopted a 'critical realist philosophy' for this study, incorporating a realist ontology with a constructivist epistemology (see p. 67)
The researcher's theoretical positioning	The motives, assumptions and personal history that lead a researcher to a particular area of interest, and which subsequently shape the approach taken to a study	There were a number of factors that shaped the approach taken to this study, primarily my prior experience of working as a manager in the NHS, my role in the MDT Study, and my choice of theoretical framework (described in Chapter 3). I provide a reflective account of the way in which my background influenced some of the key aspects of the research on pp. 98-100.
Congruence between methodology and methods	The tools used to collect and analyse the data must fit with the broader methodological approach underpinning a study	I used a generic qualitative approach, which required me to make a series of iterative decisions about which methods were most suitable to address the research questions posed in this thesis. I describe this process in the section on 'Rationale for the methodological approach' on pp. 65-66.
Strategies used to establish rigour	The approach taken within a study to demonstrate its quality and credibility	In this thesis I use the concepts of credibility, dependability, and transferability. I discuss these quality criteria in the section below on pp. 103-105.

5.6.1 Quality Criteria

In this thesis I use the concepts of credibility, dependability, and transferability in place of validity, reliability and generalisability (Bloomberg and Volpe, 2012). The approaches I used throughout the duration of the study to enhance its credibility, reliability and generalisability have already been described in this chapter, at the point at which they were most relevant. However, they are briefly summarised below to illustrate the overarching approach I adopted to establish rigour.

Credibility

Credibility is closely related to the concept of validity, which is used in quantitative studies to demonstrate that findings accurately represent the world being studied (Bloomberg and Volpe, 2012). Given the interpretative nature of this research, the concept of credibility is more meaningful. In this context, credibility relates to whether my analysis of the MDT decision making process matches with the perceptions of those being studied (Bloomberg and Volpe, 2012).

A key aspect of establishing credibility in qualitative research is founded on recognising the biases or pre-conceptions you bring as a researcher to your study (Bloomberg and Volpe, 2012). I have already described my theoretical positioning, and the process of using reflective field notes during data collection to record my thoughts, actions and decisions relating to data collection and ideas for analysis. In addition, strategies such as re-listening to the audios of my interviews enabled me to reflect on my approach to data collection to track emerging thoughts and perspectives.

I also engaged in analytic meetings, initially during data collection as part of the MDT Study, and subsequently with my supervisors and departmental qualitative methods group when conducting the analysis. These meetings challenged me to think about the data from a range of different perspectives, and provided an opportunity to review and discuss my emerging ideas with other experienced researchers and clinicians. This encouraged me to reflect on my existing

preconceptions and expectations during the data collection and analysis processes (Maxwell, 2005).

Another way in which I have endeavoured to establish credibility is through my deep immersion in the field. As described previously, I collected data over a period of a year, attending a total of 126 meetings (including 8 meetings where I piloted the data collection forms, and excluding those attended by Caoimhe Nic a Bháird) across the four sites. This extended period of time in the field gave me a solid grounding from which to conduct my analysis.

In addition, I collected data from a number of sources, including observation and in-depth interviews with professionals and patients. I used these different sources of data to consider issues from more than one perspective, adopting a 'complementary' approach to triangulation (Moran-Ellis et al., 2006). Although I did not undertake a formal process of member checking, the interviews were carried out following the observation period in each team. This meant that they provided me with an informal opportunity to reflect on my interpretation of the observation data.

Dependability

While reliability is a key concept in quantitative research, the premise that research findings can be replicated is less central to a good qualitative study (Maxwell, 2005). However, it is important that qualitative research is dependable, in the sense that it can be demonstrated that the findings are consistent with the data collected (Bloomberg and Volpe, 2012).

In order to ensure the dependability of my findings, I have endeavoured to create a clear audit trail of data collection and analysis through detailed description of my methods. I have included my coding frameworks in Appendix 11 and Appendix 12 as well as detailing the steps I took to analyse the data and produce my findings. In writing up my results I have extensively used quotes and sections of transcript to

illustrate key points (Tracy, 2010). Although I did not assess inter-coder agreement, the analytical meetings I attended to discuss my coding framework provided scrutiny of the processes I was following during the analysis.

Transferability

While the concept of generalisability is central to quantitative research, this research is based on observation of a small number of purposively selected teams, and interviews with a relatively small number of professionals and patients within these teams. The approach I took to selecting cases, which is characteristic of qualitative research, means that the empirical findings produced are not generalisable to a wider population (Small, 2009). However, this does not mean that learning cannot be transferrable (Small, 2009). My goal is therefore to address the extent to which my findings, in the context of the four MDT meetings I have observed, can transfer to another setting or context (Bloomberg and Volpe, 2012).

One approach I have adopted to address the transferability of my findings is to present my findings using rich description (Bloomberg and Volpe, 2012). In this way I hope to encourage the reader to identify a sense of shared experience that enables them to apply these ideas in a different context (Tracy, 2010). To aid this process, I have also provided detailed information about each of the four teams recruited to the study in the Research Setting section on pages 71 to 75. This background information provides important contextual information to enable readers to determine whether they can transfer findings to their own setting (Bloomberg and Volpe, 2012). I consider this issue further in **Chapter 10**.

5.7 Ethics and research governance

The ethics and research governance permissions for this thesis were gained as part of the MDT Study. The initial application for ethics approval was therefore completed by the Principal Investigator for the MDT Study, although I was responsible for gaining approval for minor and substantial amendments from the East London Research Ethics Committee during the study (10/H0704/68).

The Principal Investigator also gained approval from the National Information Governance Board (NIGB) Ethics and Confidentiality Committee (ECC) (NIGB; ECC 6-05 (h)/2010), under Section 251 of the NHS Act 2006, to process patient identifiable information without consent.

Authorisation to process patient identifiable data without consent was granted because it was not feasible to gain consent from every patient in advance of being discussed in an MDT meeting. In total, 2654 patients were discussed across the 12 teams during the MDT Study, including 1469 patients from the four cancer teams. Although the cancer MDTs generally compiled lists of patients to be discussed each week, these changed right up until the start of the meeting and some patients were discussed who were not on the list at all. It was therefore not possible to contact all individual patients in advance of the meeting, or to give them a reasonable length of time to make an informed decision about participating in the MDT observation component of the study.

Given that I had access to an extensive body of sensitive, identifiable patient data, I had to be particularly aware of issues relating to data protection, confidentiality and ethics for the duration of the MDT Study and my PhD. This placed particular obligations on me as a researcher to safeguard the data. I completed training in research governance and information governance, and established contacts at each of the Research and Development Departments for the NHS Trusts recruited to the study. This initial contact was made when I submitted my Research Passport in order to gain access at each site. The Letters of Access that were subsequently issued set out the local information governance processes I was required to follow when collecting data from each of the teams.

Other practical steps I used to safeguard the data included using a password protected dictaphone to record the meetings, and transferring all data collected on to a secure and encrypted server at UCL immediately on my return from each meeting or interview. Paper notes (e.g. fieldnotes) were stored in a locked filing

cabinet at UCL, with restricted swipe card access to the room. Electronic and paper files were only accessible to researchers working on the MDT Study.

As data were collected, patients, MDT professionals and teams were assigned unique identifiers. In addition, before analysing the data, I reviewed my fieldnotes and meeting transcripts, as well as the interview transcripts to ensure that these were fully pseudonymised. It was not possible however to pseudonymise or anonymise the audio files.

At the end of the MDT Study, all identifiable data were transferred to a secure online data portal: the UCL 'data safe haven'. This is a technical environment for storing and handling sensitive data securely, which meets the ISO27001 standard for information security management and conforms to the requirements of the NHS Information Governance Toolkit. Access to the data safe haven meant that I could complete analysis for my PhD remotely, in a secure and safe manner. All analysis that involved identifiable data (e.g. listening to audio files) conducted outside of UCL premises was carried out within the data safe haven.

Informed consent was gained from all MDT professionals involved in the observation and interviews, and from patients who took part in an interview. Participants were given plain English information sheets detailing the purpose of the study, and clarifying that they were under no obligation to participate, and that they could withdraw at any time. For the patient interviews it was made clear that although a healthcare professional involved in their care would be aware that they had been invited to participate, they would not see any information collected as part of the interview. The steps I would follow in ensuring that information collected would remain confidential were also outlined. In addition to presenting this in the information sheet, I also explained the key points verbally at the beginning of each interview before discussing any questions participants had, in advance of signing a consent form.

Participants were also reminded at the end of the interview of the purpose of the study and what would happen to the information they had shared. They were also given my contact details, the contact details of the Principal Investigator, and for a local complaints manager. Participants were encouraged to use these if they had any questions or concerns following the interview, although none did.

5.8 Chapter Summary

This chapter has articulated the rationale for the use of a generic qualitative research methodology to answer the questions posed in this thesis. It also described the research setting and introduced the four MDTs under study as a means of setting the context for the findings chapters. It documented the collection of data from four cancer MDTs, which included observation of 122 MDT meetings, interviews with 19 healthcare professionals and seven patients. It has also described how these data were managed and thematically analysed to generate the findings that are presented in the chapters that follow. Consideration was also given to strategies used to establish rigour in the research process. Finally, it concluded by summarising the ethics and research governance processes that underpinned the study.

Chapter 6. The role of status hierarchies in the decision making process in MDT meetings

This chapter presents the first two overarching themes from Thematic Analysis I, using the observation and interview data from the four cancer MDTs described in the previous chapter. Theme I sets the scene by describing the decision making process in the four teams. It explores patterns of participation and influence using Berger's power and prestige order from status characteristics theory as a framework (Berger et al., 1972, Berger et al., 1980). Theme II then explores the effects of status hierarchies on the decision making process in terms of efficiency, information sharing and multidisciplinary discussion. Taken together these themes address research question one: *how do status hierarchies unfold during the decision making process in cancer MDT meetings?*

Box 4: Summary of approach to defining status in MDT meetings

The status hierarchy in MDT meetings

Chapter 3 established that there are clearly defined status hierarchies within healthcare teams. As described in that chapter, I have defined status on the basis of professional group, with consultant surgeons, medical and diagnostic doctors classed as high status, and Clinical Nurse Specialists (CNSs) and Specialty Registrars (StRs) as lower status.

Theme I: The decision making process

Across all four teams there was agreement amongst MDT members that the main purpose of the weekly MDT meeting was to make decisions about patient management. Although the meeting was also regarded as an opportunity for teaching and peer to peer learning, these were seen as secondary functions.

The pattern of decision making was largely similar across all four teams. This was the case even though the nature of decisions being made varied by specialty as a result of the different treatment modalities available. A list of patients to be discussed each week was circulated by the MDT coordinator, and used as an agenda to structure the meeting. Broadly speaking discussion of each patient involved an initial case presentation and a clinical history. This was followed by a radiology presentation describing the results of imaging. For example, a presentation highlighting the relevant features on a CT scan, MRI or x-ray. A pathologist then presented slides of cells in tissue samples, in order to help with the diagnosis. Following any subsequent questions, comments or discussion, a decision was made and recorded for the patient's notes.

6.1 The power and prestige order in MDT meetings

Status characteristics theory proposes that within teams, those with higher status are more likely to initiate participation (1) and to have more opportunity to contribute (2). They are also more likely to be evaluated favourably by other members of the team (3), and to influence group decisions (4) (Ridgeway, 2001).

Applying this in the context of MDT meetings, we would expect the effects of status hierarchies to be evident in the dominance of surgical, medical and diagnostic consultants at each stage of the decision making process. In turn, CNSs and StRs would be expected to participate much less frequently, be evaluated less favourably, and to have less influence over group decisions. In Figure 5 I have mapped the four key elements of the power and prestige order against the decision making process in the MDTs I observed.

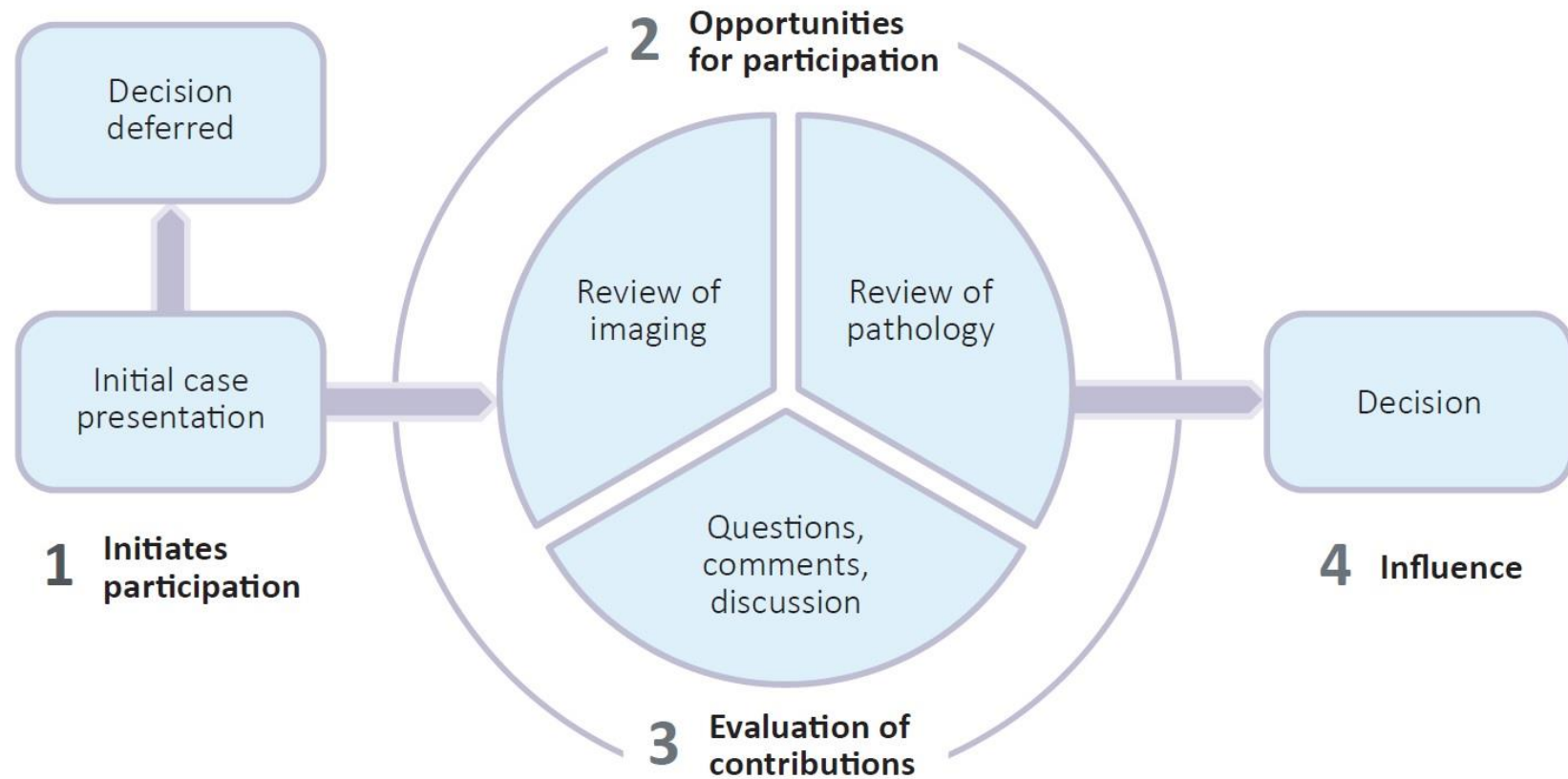


Figure 5: Key components of status characteristics theory mapped against the basic decision making process in MDT meetings

In the section below, I use this model to explore the four components of the power and prestige order. This helps to illustrate the way that status hierarchies unfolded at each stage of the decision making process.

6.1.1 Initiating participation

The first component of Berger's power and prestige order relates to the initiation of participation within a team (Ridgeway, 2001). In the context of cancer MDT meetings, a key opportunity to initiate participation was the initial case presentation of a patient. This was the point at which a verbal summary of the patient to be discussed was presented to the rest of the team, based on a patient's medical history and current disease status.

The initial case presentation

The initial case presentation for each patient was usually given by the patient's lead consultant – a haematologist, gynaecologist, oncologist or dermatologist, depending on the team in question. For new patients, this was generally the individual who had seen the patient during their initial clinic appointment. For patients already under the care of the team, presentations tended to be given by the individual who knew the patient best, given their stage of treatment:

All the discussions start with the patient history and that's given by the person who knows them best at that time. So maybe two people who know the patient very well but temporarily, you know, the surgeon may know them from a year ago and the medical oncologist has seen them now. (Consultant Gynaecologist, Gynaecology, interview)

In the Skin and the two Haematology teams it was also relatively common for StRs to deliver the case presentation to the team. However, in Gynaecology, this was less common:

If I put a patient on the MDT sheet then normally it's one of the oncologists who leads. (Oncology StR, Gynaecology, interview)

In keeping with the observation that presentations were usually given by the doctor who had seen the patient during their initial clinic appointment, CNSs were the least likely to deliver the initial case presentation in all teams. I did not observe CNSs presenting in either of the Haematology teams, although there were a small number of examples in the Skin and Gynaecology teams. In these cases, CNSs were presenting in the absence of a consultant. Alternatively, they had added a patient to the MDT list in order to bring them to the attention of the rest of the team. This provided a formal opportunity to contribute to the meeting, although this only tended to happen when a patient was being re-discussed by the team (for example where an issue had arisen following the patient's first MDT discussion):

Consultant Gynaecologist: complex cases [221016] does anyone want to talk about her?

CNS: oh yes I put her on because she phoned today she's 2 months out of her chemo for cervical cancer...she's had her post treatment MRI...but she's got a CT scan on the system and I can't see any reason why she needs it...do we want it for a specific reason?

(Gynaecology, observation transcript)⁴

6.1.2 Opportunities for participation

The second component of Berger's power and prestige order relates to opportunities to participate and patterns of participation within a team (Ridgeway, 2001). In the MDT, members had the opportunity to contribute during review of imaging or pathology, or during any subsequent multidisciplinary discussion. Importantly however, each team had a finite period of time for the weekly meeting.

⁴ Interview data are presented in italics and indented, observation data are indented only

This meant that opportunities to contribute certain types of information had the potential to impact on the time available for others.

Review of imaging and pathology

Following the initial case presentation it was common for diagnostic material to be reviewed. This provided formal opportunities for consultant radiologists and pathologists to participate by presenting their findings to the team. In all four teams there was dedicated time allocated for these contributions, reflecting the importance of diagnosis to determining the appropriate treatment plan. However, given the very technical nature of these presentations, not all members of the team were able to contribute during this stage of the MDT meeting. This was particularly the case for non-medical members:

Now I'm not a radiologist I don't have a full appreciation of how they review scans, but it seems like we have a separate radiology meeting before we can talk about anything else...There has to be a more concise way to present patients. (CNS, Gynaecology, interview)

This quote highlights the impact of time spent reviewing scans on the time available to discuss other types of information. There were however differences between the four teams in the proportion of time allocated for review of imaging and pathology during the meeting. As illustrated in the quote above, in Gynaecology some of the radiology presentations were extremely long and detailed. In part, this was attributed to the fact that the consultant gynaecologists often used the scans to visualise the surgery they planned to undertake:

Part of our MDM is actually surgery preparation time...they [consultant gynaecologists] are actually visualising what they're going to do...but it's not one of the key goals, necessarily, of what an MDM thinks it's doing, or what government thinks an MDM's doing. (Psychologist, Gynaecology, interview)

However, the view that radiology presentations went on for too long was also echoed by two of the consultant gynaecologists themselves:

All these images come on, these endless, endless scans...and you think 'if I see one more of these I'll scream'. (Consultant Gynaecologist 5, Gynaecology, interview)

In contrast, although there was dedicated time for consultant diagnostic professionals to participate in the MDT meeting in the other three teams, proportionately less time was spent reviewing images:

I try and be concise...I tend to spend more time when I think something is difficult or mature and when it is straightforward I tend to spend little time. (Imaging Consultant, Haematology 2, interview)

The presentation of imaging and pathology also provided opportunities for other members of the team to participate as well. On occasion, the pathologist or radiologist required further information to help them reach a diagnosis. In these cases it was usually the medical or surgical consultants who used their clinical expertise or knowledge of the patient to provide this information. For example, in the Gynaecology team, the consultant gynaecologists were the most likely to provide information to help with interpretation of imaging or pathology. Often, this was because they were able to explain what had happened during the surgical procedure where the tissue sample was acquired, or because they had information about the patient's clinical history that could support the radiologist's interpretation of a scan:

Consultant Radiologist: ...at some stage she must have been obstructed

Consultant Gynaecologist: yeh she had hydronephrosis [where a kidney becomes swollen as a result of urine build up]
(*Gynaecology, observation meeting transcript*)

'Multidisciplinary' discussion

Following the initial case presentation, and review of imaging and pathology, any subsequent discussion was in theory an opportunity for all professionals within the MDT to participate in the meeting. However, there were obvious differences between professional groups in terms of the frequency with which they initiated participation or made contributions. This led some interviewees to argue that there was very little genuine multidisciplinary discussion during the decision making process:

It's rarely a multidisciplinary meeting...it often consists of a surgeon talking to the radiologist or a surgeon to an oncologist. (Oncology StR, Gynaecology, interview)

Overall, in all teams, surgical or medical consultants were the most likely to initiate participation and to contribute to discussion: *"it is very doctor driven in general"* (Consultant in Nuclear Medicine, Haematology 2, interview) and *"most communication is doctor to doctor"* (CNS, Haematology 1, interview). In contrast CNSs and StRs were much less likely to participate or contribute: *"it tends to be the junior doctors [who don't speak up]"* (Consultant Gynaecologist, Gynaecology, interview), or, as one CNSs described: *"an hour of my time... without any opportunity to really contribute"* (CNS, Haematology 2, interview). In view of their specific diagnostic expertise, levels of contribution from consultant diagnostic specialists were somewhere in the middle.

These patterns of participation were apparent when it came to asking questions, to answering questions, and to giving advice in relation to a treatment decision.

Detailed coding summaries from Nvivo and a series of illustrative quotes evidencing this are provided in Appendices 13-15. For clarity, Table 12 summarises the specific patterns of high and low participation by professional group in each team.

Table 12: Patterns of high and low participation by professional group and MDT

Team	High participation*	Low participation
Gynae	Consultant Gynaecologists (highest) Consultant Medical and Clinical Oncologists	CNS StR (lowest)
Haem 1	Consultant Haematologists	CNS and StR
Haem 2	Consultant Haematologists	StR CNS (lowest)
Skin	Consultant Medical Oncologist (highest) Consultant Plastic Surgeons Consultant Dermatologists	CNS StR (lowest)

*'High' and 'low' rates are based on coding frequencies from Nvivo, in addition to observation data from field notes. See Appendices 13-15 for more detail.

Further consideration will be given to the role of CNSs and StRs in the MDT meeting in **Chapter 8**, where a more detailed analysis of the nature of their contributions and approaches used to participate will be presented.

6.1.3 Evaluations of contributions

The third key component of the power and prestige order proposes that individuals with lower status are less likely to receive positive evaluations of the contributions they make (Ridgeway, 2001). In the context of these MDT meetings, this was apparent when lower status contributions were not taken on board by a higher status member of the team or were on occasion ignored.

The observation data highlighted 23 occasions across the four teams where a contribution made by a lower status individual was not taken on board by a higher status member of the team. On some occasions this seemed to reflect a lack of

knowledge or a certain type of expertise on the part of a CNS or StR. This could be a lack of knowledge about a local treatment protocol, or a lack of medical expertise. This is illustrated in the example below when an StR suggested treating a patient using radiotherapy. In response, a consultant haematologist explained that it would be better to wait until the patient had started chemotherapy before proceeding to radiotherapy because the cancer might respond quickly without the need for both:

Consultant Haematologist 1: so what would you like to do with him?

StR: ...radiotherapy?

Consultant Haematologist 1: to what?

StR: to his rib lesions

Consultant Haematologist 1: no

StR: they're causing a lot of pain

Consultant Haematologist 1: well there's no need to irradiate them yet because sometimes they respond very rapidly to chemo

StR: because they are saying he's in a lot of pain

Consultant Haematologist 1: yeh, if they continue to be painful once he's started on his chemo you can always just do spot radiation to those but you might get away without it once he starts on chemo
(Haematology 1, observation transcript)

However, on other occasions it appeared that lower status contributions were not taken on board not because they lacked expertise, but because a higher status member of the team prioritised other types of information. An example from the observation data below illustrates a lower status contribution being ignored:

CNS: just to let you know her daughter's getting married in [another country] in January and when I saw her a couple of weeks ago she was quite upset so

Consultant Gynaecologist: [interrupts] and what sort of tumour did you say that was sorry?

Pathologist: it looks like a serous

Consultant Gynaecologist: oh right ok

(Gynaecology, observation transcript)

In this case, when the CNS attempted to introduce information about the patient's psychosocial circumstances the Consultant Gynaecologist returned the discussion back to the disease itself. Overall, the number of instances in the observation data where CNS or StR contributions were directly ignored was relatively low, with ten examples coded across the Gynaecology and Skin teams. Nonetheless, these examples were particularly noticeable during the observation given that lower status members of the team participated much less frequently than others. In addition, the interviews with MDT professionals suggested that being ignored could have an impact in the longer term on the willingness of lower status groups to contribute during MDT meetings:

Interviewer: do you feel able to speak freely [during the meetings]?

Oncology StR: no

Interviewer: and is there anything in particular that you could identify that attributes to that?

Oncology StR: ...it's general sort of atmosphere and, and the fact that you know, in the past I have been talked over and ignored

(Oncology StR, Gynaecology, interview)

The view that contributions from CNSs or StRs were ignored was raised more frequently by members of the Gynaecology team during interviews than it was in the other three teams. Three of the seven interviewees in the Gynaecology team raised this as an issue:

Quite often when CNSs say things, they're talked over, so they'll begin to say something, particularly if they raise something and then, say one of the oncologists would start to speak over them, which then makes them feel very upset and angry. (Psychologist, Gynaecology, interview)

This appeared to relate to differences of opinion about the value of specific types of information in the MDT meeting. The MDT Lead in Gynaecology expressed the view that the MDT meeting was a forum for making clinical decisions, with a limited role for patient centred information. This was attributed to time pressures:

I think it should be a clinically focused meeting. I know some of my colleagues disagree with me and think that we should give more time to psychosocial issues. In an ideal world you probably would but then the meeting would never end. (Consultant Gynaecologist, Gynaecology, interview)

This view contrasted directly with that of the CNS interviewed in this team:

I truly feel it's not just about what treatment they're going to have...I think trying to get the team to think about the, for it to be patient centred...important [psychosocial] work happens about patients that we're discussing in the MDT that I think that, in its current state there isn't the time or the capacity to do that but I truly believe that that is a very important function of the MDT. (CNS, Gynaecology, interview)

These differences of opinion are important, because they appear to have created an impression amongst the lower status individuals interviewed in the Gynaecology team that their contributions were less likely to be taken into consideration by other members of the team. This view was less apparent in the other three teams,

although the CNS in Haematology 2 attributed her reluctance to participate to the view that some contributions were seen to be less relevant than others:

I don't feel unable to [contribute]... I could go to one of the doctors after the [meeting], if I really had something I felt strongly about...I'm not frightened of doing that; I don't feel intimidated. I just think you wouldn't get very far in that meeting because I think it would be, "We haven't got time to discuss this now; we'll do it somewhere else." (CNS, Haematology 2, interview)

6.1.4 Influence

The fourth key premise of status characteristics theory is that individuals within a group who have higher status will have more influence than individuals with lower status (Ridgeway, 2001). In the context of MDT meetings, the most obvious sources of influence related to leadership and to control over the final treatment decision for each patient.

Leadership in the MDT meeting

Influence in MDT meetings extended to the way in which different professional groups took responsibility for steering discussion, and to assigning tasks to other members in the team. In this regard, the MDT Lead played a crucial role and their influence could be seen in a number of ways. First, they managed the overall timing of the meeting: *"is everything set up and ready to go?...we'll start in one minute"* (MDT Lead, Haematology 2, observation field note). Although each meeting had a fixed time, some MDT Leads were themselves late for the meeting or delayed the start time to wait for specific individuals to arrive. This was not the case in all teams, however. Haematology 2 was the exception. In this team, meetings started and ended on time almost every week.

Secondly, the MDT Leads also decided on the order in which patients would be discussed, and controlled the length of time spent on each case: “*can we move on?*” (MDT Lead, Haematology 2, observation field note). The MDT Lead also made decisions about which cases (if any) to defer: “*put her back on for next week*” (MDT Lead, Skin, observation field note). In this way they exerted considerable influence over the decision making process. In all four teams, the MDT Lead was a surgical or medical consultant.

The MDT Leads were also most likely to issue directives or requests to other members of the team, although not exclusively. Other consultants also gave instructions or asked lower status team members to follow up an action on their behalf:

One of the surgeons had added a patient to the list this week, and had told the pathologist that it was urgent. However he didn't turn up to the meeting to present the patient. The pathologist was frustrated because she said she had spent ages chasing this. There was then a humorous discussion which ended with one of the plastic surgery registrars being 'sent down to theatre' to find the surgeon in question and pass on the message that the pathologist was not happy. (Skin, observation field note)

Less frequently, directives or requests within the MDT meeting were also made from one consultant to another:

Consultant Gynaecologist 1: did you speak to the pathologist?

Consultant Gynaecologist 2: eh she didn't pick up the phone shall I try her again?

Consultant Gynaecologist 1: try again
(Gynaecology, observation transcript)

In contrast, I did not observe CNS or StR members making requests of the consultants in any of the teams.

Treatment plan decision making

Reflecting the patterns of participation described above, medical or surgical consultants were also those most likely to make the final treatment decisions in all four teams:

Consultant Haematologist 1: I think she needs a biopsy...the reason I'm saying that is if she's got transformed disease in that shoulder that's progressive then a transplant would be futile

Consultant Haematologist 2: ok...biopsy

Consultant Haematologist 3: yep biopsy

(Haematology 2, observation transcript)

This reflected the specialist knowledge and expertise held by these professionals, as well as their legal duty of care and professional accountability to patients (Sidhom and Poulsen, 2006). These are key factors in understanding the influence of these groups on the treatment plan.

In contrast, the input into treatment plan decision making provided by radiologists and pathologists was largely restricted to information provision. Reflecting their areas of expertise, this information related to diagnosis, or to suggestions about the need for further investigations. While the information they provided was prioritised because it was seen as essential to decision making, they were very rarely involved in the final decision about patient treatment:

At the meeting I tend to just give input on the scans I review... I don't know enough about patient management to interact...I would say maybe repeat MRI or repeat this PET...but I wouldn't give any

recommendation for treatment decisions. (Imaging Consultant, Haematology 2, interview)

This was true also of the CNSs and StRs who were generally not involved in making the final treatment decision. This was the case even when they had initiated participation by presenting a case during the meeting. This is perhaps illustrated most clearly by an example from Haematology 2, where a junior doctor presented a patient for discussion and asked for a review of the patient's PET scan. When the imaging consultant presented the PET report however, he turned and spoke directly to the consultant in charge of the patient, rather than responding to the junior doctor who had presented the case.

6.2 Explanations for higher participation and influence

In a clinical decision making forum, there are clearly obvious potential explanations for the predominant influence of consultant medical or surgical doctors. Some of these have already been noted above - in particular, the fact that medical and surgical consultants have a legal responsibility of a duty of care to their patients (Sidhom and Poulsen, 2006). They also have the clinical training and expertise to make decisions about treatment in the healthcare arena:

The clinicians are very strong, very knowledgeable, very skilled experts in their field whether it be surgery or oncology. (CNS, Gynaecology, interview)

The importance of the knowledge and expertise of these individuals was also illustrated in a small number of examples when key individuals were missing from the meeting, and decisions made by lower status members of the team (for example StRs) were subsequently overturned:

When we hit that summer period, and we had lots of consultant away at the same time. I think we had sub-optimal meetings and um, un-robust decisions were made. We just brought them back...because I felt...the patients weren't discussed properly. It was obvious...there was nobody senior enough there to make proper decisions. (CNS, Skin, interview)

However, the MDT Lead in Haematology 1 challenged what he saw as the expectation from other team members that he should take the lead in making all the decisions. This was particularly an issue when he did not know the patient. He argued that his medical expertise was not the only important source of information. Instead, he argued that there was a role for CNSs and StRs who had met the patient to contribute more actively:

I think sometimes there is too much emphasis on what do those that are particularly involved in haemato-oncology think the decision should be, rather than a more generalised input...actually I think if I sat there and said nothing there would be, I may be wrong, but I have a feeling there would be an unearthly silence until I say well, this is lymphoma so we should be thinking along these lines. Rather than the person who saw the patient actually saying "I think the patient would be able to cope with x chemotherapy, I would be interested to know what other members of the group think". (Consultant Haematologist 1, Haematology 1, interview)

Overall then, the influence of higher status members of the team on the decision making process reflected their specialist knowledge and expertise. However, the point made by the MDT Lead in Haematology 1 was a reminder that this did not necessarily need to be at the exclusion of other members of the team.

6.3 Explanations for lower participation and influence

There are also potential explanations for the lower rates of participation and influence observed amongst lower status groups. First, for StRs this was because, as doctors in training, they did not always have the requisite knowledge or familiarity with local protocols to make decisions. During one interview, an StR pointed out that he simply did not have the experience or evidence base to contribute to the decision making process. He described attending the MDT meeting in order “*to get an opinion*” (StR, Haematology 2, interview). This was attributed to a natural order in which consultants were the experts and should therefore make the decisions. The view that StRs were not necessarily in a position to make decisions in the MDT meeting was also echoed by the CNS in Skin:

I think sometimes it's quite daunting for a new reg [StR] to come in and be in charge of making decisions...because they don't always know [what patients should be offered], which is a bit tricky. (CNS, Skin, interview)

Secondly, for CNSs, who unlike junior doctors have completed their specialist training, and are in many cases vastly experienced, lower rates of participation at times reflected the stage at which a patient was being discussed. New patients were not always known to all members of the team. As a result, CNSs were at times limited in the amount of information they could share. This is illustrated in the example below from the Gynaecology team, during discussion of a patient with a new diagnosis of cancer who had previously been undergoing IVF treatment. The patient had been so upset by her diagnosis that she had left the hospital before her appointment with the CNS:

Consultant Gynaecologist: they've had two IVF and, you saw her [CNS]?

CNS: I tried to see her but she was really upset and she didn't want to talk...she just went, I literally said hello my name is [CNS]

Consultant Gynaecologist: but you can you can touch base later

CNS: I can, I can try

(Gynaecology, observation transcript)

In this case the CNS was provided with an opportunity to contribute. The fact that she had not been able to meet with the patient before the MDT meeting however meant that she was not in a position to provide further information.

Nonetheless, a lack of knowledge or a lack of information were not necessarily the only reasons for lower levels of participation amongst CNSs and StRs. A third potential explanation was that some individuals were reluctant to speak up, even when they had a contribution to make. This may in part reflect individual differences in confidence or personality. However, it is worth pointing out that for junior doctors, not only were they less experienced than other clinicians within the team, but they were often also the newest members. This meant that they had to develop their clinical expertise as well as to learn how the meetings worked and to develop confidence to contribute according to the group norms. A consultant gynaecologist argued that the MDT meeting could be intimidating for this group in particular:

A lot of the junior staff feel inhibited about putting their views forward.

And when they do sometimes they have very good ideas. But they don't always speak. (Consultant Gynaecologist 1, Gynaecology, interview)

The potential implications of this were illustrated in an example provided by an StR in Haematology 1, who referred to a situation where one of her StR colleagues had not spoken up at the MDT meeting. This was despite having reservations about a

decision made by a consultant haematologist to refer a patient for palliative care after their second line of chemotherapy (instead of trying an alternative treatment):

My colleague who put him forward was quite surprised but didn't question it there...she was quite surprised at that [decision not to continue chemotherapy] because you wouldn't necessarily do that with a patient in that situation. You'd normally try third line or something else or get a second opinion so that was quite strange. But then it [the decision] was changed. So after a few weeks this particular consultant who said that then contacted me to start investigating him [the patient] and then doing all sorts. (Haematology StR, Haematology 1, interview)

In this example, the StR had not challenged the decision made by a consultant, even though she believed that the patient would tolerate a third line of chemotherapy. This case was described as a one off. However it suggests that a failure to speak up by those with knowledge about a patient's ability to cope with treatment can impact on the appropriateness of a treatment decision. In this case, even though the decision was subsequently changed, it potentially delayed the start of treatment by a number of weeks.

A reluctance to speak up during the meeting was sometimes hinted at in the observation data as well, although of course it is particularly challenging to identify and interpret the *absence* of a behaviour using observation data alone (Dyne et al., 2003, Schwappach and Gehring, 2014). However, this could be inferred from certain behaviours, for example in the Skin team the CNS often whispered relevant information directly to a consultant who would then share it with the rest of the team, rather than speaking to the whole room. Similarly, I observed StRs in Haematology 2 and Skin, who were responsible for recording decisions made during the meeting, on occasion leaving the form blank rather than interrupting to seek clarification on the decision.

Theme II: Exploring the effects of status hierarchies

In the section above, the power and prestige order described in status characteristics theory provided me with a framework for exploring the decision making process in MDT meetings. This demonstrated the central role of higher status surgical, medical and diagnostic consultant members of the team at each stage of the decision making process. In the next section I go on to explore the effects of these patterns of participation and influence on two key elements identified in my theoretical framework: efficiency and information sharing. Following on from this, I consider the circumstances in which the four teams engaged in multidisciplinary discussion, which included contributions from lower status members of the team.

6.4 Efficiency

As described in my theoretical framework, functionalist perspectives of hierarchy suggest that status hierarchies can improve decision making by giving disproportionate control to the most competent team members (Anderson and Brown, 2010). In the context of MDT meetings, this suggests that the dominant role of higher status members could be beneficial if it enables teams to capitalise on medical, surgical and diagnostic expertise to make treatment decisions quickly and efficiently. It is not possible using the qualitative data I collected for this study to determine if limiting discussion to higher status groups impacted on the quality of decisions made. However, it is possible to consider the impact of limiting discussion to a subset of team members on perceptions of efficiency of the decision making process during the MDT meeting.

6.4.1 The importance of efficiency for MDT decision making

Table 13 illustrates differences between teams in the duration of meetings, and the number of patients discussed each week.

Table 13: Summary of structural features of MDT meetings by week

Team	No. pts discussed (average)	No. pts discussed (range)	Meeting duration (average)	Meeting duration (range)
Gynae	35	24-45	140 mins	105 – 160mins
Haem 1	15	7-27	61 mins	10 – 90 mins
Haem 2	14	5-41	57 mins	14-82 mins
Skin	47	23-64	87 mins	58 – 130 mins

In spite of these differences, efficiency was an important issue in all teams due to time pressures during MDT meetings. In part, this reflected the number of cases to be discussed in the time allocated. This often created a sense of urgency:

We try to get through quite a large number of cases in quite a short period of time, and compressing that into 90 or so minutes is always a problem. (Consultant Oncologist, Skin, interview)

This was accentuated by a pervading sense of pressure from factors external to the meeting. This included reference to national pressures such as waiting time targets. It also included local pressures related to bed shortages, insufficient theatre lists, or other clinical commitments such as a busy clinic following the meeting. This could add pressure to finish the meeting on time:

[The clinic following the MDT meeting] is going to be awful as well I can warn you in advance that [the clinic this morning] was heaving...I mean I was stuck with a man trying to usher him out standing up trying to push him out the clinic room.

(Consultant Haematologist, Haematology 1, observation transcript)

Efficiency was a practical way to manage the often lengthy list of patients. If cases presented in the earlier stages of the meeting took a long time to discuss, this impacted on those patients presented at the end. As it was, there was often less time to discuss patients presented towards the end of the meeting. In all teams,

with the exception of Haematology 1, I observed some discussions being curtailed at the end of a meeting as time ran out:

We're at time now, can we just breeze through the last five [patients]. (Consultant Haematologist, Haematology 2, observation field note)

Haematology 1 appeared to be an exception to this because there were fewer patients to discuss than in Gynaecology or Skin. Although both Haematology teams discussed similar numbers of patients, the MDT Lead in Haematology 1 let the meeting run on as long as necessary and often went over time. This did not happen in Haematology 2.

Efficiency however, was not just important in terms of controlling the amount of time spent on each case. It was also a mechanism for maintaining focus and concentration amongst the team when meetings ran on for a long time:

You can't go on for three hours...to grind on you know and I'm sure you have to say the discussion at a quarter to six is less robust than at quarter past three...so what happens to the poor patient at quarter to six you know? (Consultant Gynaecologist 5, Gynaecology, interview)

Given these pressures, patterns of participation that reflected the status hierarchy were a way of capitalising on medical, surgical and diagnostic expertise. This enabled teams to make a considerable number of treatment decisions quickly and efficiently.

6.4.2 Minimising 'unnecessary' discussion

Patients with a new diagnosis of cancer formed the largest group of cases in all four teams. This reflects the National Peer Review programme requirement for MDTs to

review all of these patients in the weekly meeting (NHS England, 2013, NHS England, 2014, NHS Improving Quality, 2014). In practice, decision making in these cases was largely characterised by a series of information exchanges between higher status members of the team. There was often little in the way of discussion or interaction with the full range of professionals who attended the meeting: *“often it is, at times just rubber stamping things rather than a proper discussion”* (MDT Lead, Consultant Haematologist, Haematology 1, interview).

The influence of medical and surgical consultants in these cases could be instrumental in actively curtailing or limiting discussion in a bid to save time and ensure that all cases could be discussed:

[StR] was presenting a patient for discussion in the meeting today when he was interrupted by one of the Consultant Haematologists: *“we just need to discuss him very briefly”*. (Haematology 2, observation field note)

Although it was not explicitly articulated in this instance, a key rationale for curtailing discussion, and allowing higher status groups to dominate in these cases, was the view that discussion would be unlikely to change the treatment plan. In some cases this was for practical reasons – for example if treatment had already been initiated, or if the information needed to make a decision was missing:

Consultant Haematologist 2: *it’s a very unremarkable CT scan so I just thought as we don’t either have any clinical information and [Consultant Haematologist 1] isn’t here...it seemed pointless to discuss*. (Haematology 2, observation field note)

In other cases it was argued that for most patients the decision agreed during the meeting was likely to be the same decision that most people would have reached

“through their own knowledge base or an informal chat in clinic” (Consultant Haematologist, Haematology 1, interview). From this perspective there could be *“too much information”* (Consultant Haematologist, Haematology 1, interview) for cases that were straightforward to manage.

Overall, the proportion of patients that MDT members believed benefited from an in depth discussion was small, with these discussions happening *“occasionally”* (Consultant Dermatologist, Skin, interview) for the *“minority of patients”* (Consultant Medical Oncologist, Skin, interview). In the Gynaecology team a consultant gynaecologist estimated that:

There will maybe be 5% of patients who actually end up having a long discussion that branches off into other things but most people are fairly snappy, you know, the decision has already been made, we’re just confirming that it’s the right thing to do. (Consultant Gynaecologist 2, Gynaecology, interview)

This was largely because many patients could be managed according to standardised evidence-based protocols. These protocols set out clear processes for the treatment and management of a specific disease type:

[To] work up someone with suspected ovarian cancer isn’t that difficult and so...in that sense you can argue that much of the approach is really about logging patients and rubber stamping decisions and stuff. (Oncology StR, Gynaecology, interview)

In both Skin and Gynaecology, medical and surgical consultants within the team had been involved in developing treatment protocols for their cancer specialty, providing a clear example of status aligning with expertise:

During the period I've been working here, protocols have been written for treatment of various cancers but they've been written by the medical members of the team; medical and surgical members of the teams themselves. (Psychologist, Gynaecology, interview)

In cases where patients could follow an agreed treatment protocol therefore, many clinicians did not think that there was a need to debate the treatment plan. Limiting discussion in these cases to higher status members of the team was a way to streamline discussion to free up time for cases that were more challenging or complex. Some argued that there was scope to triage patients in this way even more explicitly. One suggestion was to reserve the meeting *only* for those cases that required genuine multidisciplinary discussion:

In order to really think about one or two cases in depth, you can't review every single case. And that's the conundrum, that, as a circle that can't be squared. (Psychologist, Gynaecology, interview)

However, as noted above, the National Peer Review Programme still requires all new patients to be reviewed in the MDT meeting for discussion of an initial treatment plan (NHS England, 2013, NHS England, 2014). This was acknowledged by the MDT Lead in Skin:

Peer review demands that these patients need to be discussed...the fact is by law you have, well by peer review, you have to do it. (Consultant Oncologist, Skin, interview)

To summarise, prioritising medical, surgical and diagnostic expertise meant that MDTs were able to review a considerable number of cases in a relatively short period of time. Underpinning these decisions with evidence based protocols was a way of ensuring consistency and promoting equality of treatment for patients.

Reflecting functionalist views of hierarchy, this appeared to be a way of maximising efficiency in the decision making process by capitalising on the status hierarchy (Anderson and Brown, 2010).

6.5 Information sharing

However, curtailing discussion also had the potential to undermine the benefits that could be gained from a multidisciplinary approach to decision making, and not everyone agreed that their team achieved the right balance between efficiency and patient centred discussion. The need to review all cases could mean that there was less time for patient centred information to be shared and discussed:

You have nothing about the woman herself actually, that's all been bleached out. And part of that is definitely efficiency, just to get through...in the old days [in the MDT meeting], you would actually talk a lot more about the women themselves. (Psychologist, Gynaecology, interview)

A second key effect of status hierarchies identified in my theoretical framework related to a team's ability to share and integrate information, which has implications for the quality of decisions made in healthcare teams (Cohen and Zhou, 1991, Larson et al., 1998, Lanceley et al., 2008, Bunderson and Reagans, 2011, Bendersky and Hays, 2012). Taking this as a starting point, the following section explores the nature of information sharing in the four MDTs under study. It begins by presenting the views of members themselves about the levels of information shared in MDT meetings, before exploring the types of information held by different team members, with a particular emphasis on lower status groups. It then considers the potential implications of lower rates of participation and influence amongst lower status groups on the sharing of patient centred information about preferences and psychosocial factors.

6.5.1 Reflections on levels of information shared in the MDT meeting

In all four teams, and across professional groups, interviewees outlined the advantages of having access to the range of opinions that MDT meetings facilitated. This was particularly important because the weekly meeting was often the only opportunity that different professionals had to come together:

It's quite clear that the MDM's [multidisciplinary team meeting] very precious... the fact that you've got all these people together and all these minds. And they don't come together at any other point. (Psychologist, Gynaecology, interview)

This dedicated time to share information and opinions with those from other professions was seen as highly valuable. However, the dominance of higher status members in the MDT meeting meant that in some cases the information held by lower status members risked being overlooked:

What worries me about the MDT is not that it has bad decision making but that it's sub-optimal because it doesn't make an effort to structure and include all the bits of information. (Oncology StR, Gynaecology, interview)

Of the 19 healthcare professionals interviewed, 12 suggested that there were issues that were not discussed enough during the MDT meeting. Of these, ten individuals (across the four teams) cited issues that were not directly related to the disease itself, including social factors, patient preferences and psychosocial issues:

It is mainly psychosocial things because of the real focus on decision making, so I think probably that's the side of things that has slipped over the years. (Consultant Gynaecologist 2, Gynaecology, interview)

This also included comorbidities:

I think sometimes there are cases where people haven't actually necessarily found out that much about the patient's comorbidities. There have been a couple of occasions where I've noticed them actually so I suppose with that other example [I mentioned earlier] of the rather frail man I don't think that was quite taken into account. (StR, Haematology 1, interview)

Sharing a wide range of information, both disease focused and person centred information, was described as being essential to good MDT decision making:

That's why the best MDTs have pathologists, radiologists, oncologists, surgeons and also specialist nurses...because all of those people bring different things into the mix so the good MDTs work very well because they will, pathologically they have this disease and radiologically they have this stage and clinically they have these symptoms and psychosocially this is their context and all of those things matter in then thinking about treatment. (Oncology StR, Gynaecology, interview)

The view that there was scope for a wider range of information to be incorporated during some discussions in the MDT meeting was articulated by interviewees in the two Haematology teams and the Gynaecology team: *"I think some people need more of an opportunity to speak"* (Consultant Gynaecologist, Gynaecology, interview). Importantly, however, it was not seen as necessary for every professional group to share information during every single discussion in the MDT:

I don't think that everyone's sitting in a circle and saying, "Has nursing got anything to say? Has the dietician got anything to say?" I don't think it needs that; we do do lots of those things as well in other

meetings, but I do think that sometimes there could be perhaps more inclusion of other professions. (CNS, Haematology 2, interview)

6.5.2 Patient perspectives on the role of MDT members in their care

In order to better understand the effects of status hierarchies on information sharing in the MDT meeting, it is useful first to explore the different types of knowledge held by different professionals within the MDT.

The patient interviews gave some insight into the relationship that patients had with professionals involved in their care within three of the four teams (with the exception of Skin cancer, where as described in **Chapter 5** no patients were interviewed). Exploring these relationships provides one way of identifying the types of information that different professionals potentially held and could share in MDT meetings.

Medical or Surgical Consultants

As would be expected, and in keeping with the patterns of participation already described, all seven patients interviewed identified a consultant as the main person responsible for their care. The patients from both Haematology teams named consultant haematologists from the MDT as their main point of contact, the team member they saw on a regular basis, and the individual that coordinated their care:

[I asked] who do I go to that's ultimately responsible for getting me better and you know, so they said well that's [Consultant Haematologist], and that played out...she's the person that I would go to...she's the person sort of directing, the deal for...my overall care. (Patient 111308, Haematology 2, interview)

One patient who had been an inpatient during treatment under Haematology 2 described seeing her consultant haematologist regularly on the ward “*they always*

came around every day" (Patient 111368, Haematology 2, interview). In contrast however, a patient from Haematology 1 said the consultants only tended to see patients when they were first diagnosed, when a decision needed to be made, or "*when things have become serious*" (Patient 161212, Haematology 1, interview). In Gynaecology the one patient interviewed had not seen a consultant oncologist at her clinic appointments for 18 months, following the decision to start her on chemotherapy:

Patient's husband: that's the only thing I thought, you know, after sort of 18 months maybe the next few months [I'd like to] try and see [Medical Oncologist]...it's so comforting to know that the top man's...still involved

Patient: yeah but you are seeing you are seeing people that are working with him...and he really while I'm while I'm keeping reasonably well...you know, that's how I feel about it. (Patient 221333, Gynaecology, interview)

These differences in levels of contact between consultants and patients were also evident in the professional interviews and the observation data. Some consultants had detailed knowledge of specific patients and their circumstances or preferences for treatment. For example a consultant haematologist in Haematology 2 reported that he insisted on seeing all his patients in clinic. He contrasted this with other consultants who only saw a patient once before delegating this task to StRs. Consultants in the Gynaecology and Skin cancer teams were quite open about knowing very little about a patient's circumstances, or their preferences for treatment for example:

Sometimes we won't know what the patient's underlying issues are but [CNS] will. (Consultant Gynaecologist 2, Gynaecology, interview)

The patient interviews also highlighted that doctors were not always aware of the factors that were of concern to patients, or likely to influence their decisions about treatment. A patient from Haematology 1 illustrated the potential for doctors to be unaware of a patient's views. In this example, the patient noted how it had been difficult on at least one occasion to raise issues about her treatment with the consultant, because of a lack of time and privacy:

I didn't see Dr [Consultant Haematologist] every single time I was in there, and that's fair enough but...I [saw] another doctor one day and she just came over and sort of knelt down and just said oh how you doing der de der and that was it and I felt like there was things that I probably would have said to her, had I been into a private room, rather than being in like the day-care room where everybody is in the room. It's a sort of open forum, I thought that that was a bit, you didn't get your chance to sort of say right I'm experiencing this, is that normal or, you know I kind of felt, urgh, I didn't really want to talk about things in front of everybody. (Patient 161379, Haematology 1, interview)

This patient also suggested that while some doctors did get to know their patients well, other doctors were not necessarily of the same mind set:

Some doctors might just think oh well, that doesn't matter, first and foremost it's the treatment that we need to do. (Patient 161379, Haematology 1, interview)

Some of these differences in levels of contact with consultants seemed to be a reflection of the nature of the disease and the treatment that patients received. For example some patients were treated during long inpatient admissions, while others received outpatient chemotherapy, radiotherapy, or one-off surgery. Regardless of this however, all patients were aware that there were professionals other than the

consultants involved in their care, and all knew that decisions were made by a multidisciplinary team:

I know Dr [Consultant Haematologist] did mention that to me early on...that people get together on a, I don't know, it was like a Monday or something...and discuss the case...she said..."we'll all get together and have a discussion and make sure that this is the right route for you".
(Patient 161379, Haematology 1, interview)

StRs

When patients did not see their lead consultant, the other groups mentioned most frequently were StRs and CNSs. In the teams where patients were interviewed, interviewees described seeing registrars on a regular basis during their treatment:

From a doctor's standpoint...it was largely, it was really almost always [StR], you know, I had other doctors, but I would see him you know, two thirds of the time...so for me, say we built up a rapport and a trust.
(Patient 111308, Haematology 2, interview)

This view was reiterated by an StR in Haematology 1, who explained that in their team StRs were responsible for reviewing patients in advance of every cycle of treatment. This was to make sure that patients were well enough to undergo treatment, and to flag up any issues that had arisen previously: *"we then bring it forward at the MDT"* (Haematology StR, Haematology 1, interview).

CNSs

All patients interviewed mentioned that a CNS had also been involved in their care. For patients under the Haematology 1 team, this involvement extended to detailed discussions about treatment and potential side-effects:

She [chemotherapy CNS] was the one I sort of interacted with quite a bit with regards to my care and she would give me like sort of advice on all, guidance as to what was going to happen and you know, sort of any side effects and things like that, what I might experience. (Patient 161379, Haematology 1, interview)

The supportive role of the CNS was acknowledged by all three of the patients interviewed in this team. In addition, the more regular interaction with a CNS was also mentioned by patients in Haematology 2. They described contacting their named CNS for day to day issues relating to their treatment, or in between appointments with their lead consultant:

The Clinical Nurse gave me her email address so if I have a non-urgent problem or if I, or if I even if I have an urgent problem I don't know, erm, but if I have a non-urgent problem I just send her a note saying, you know, what is happening about this or when...is this going to happen and she will get back to me on that. (Patient 111359, Haematology 2, interview)

The importance of the CNS as a key link between the patient and the MDT was reiterated in the professional interviews. An StR in the Haematology 1 team noted that the involvement of CNSs in the process of administering treatment meant that they had a key role to play in the MDT meeting. The reason given for this was that CNSs had a more up to date and detailed insight into the patients being discussed by the team, and how well they were coping with treatment. CNSs themselves also described having a different rapport with patients:

We can tend to present a side of a patient that maybe others haven't heard or, or been aware about...there's a group of people that don't feel confident and will disclose information to you that they haven't felt, for

whatever reason, they've been able to talk to their doctors about...and maybe if we weren't there and nobody else had known about these discussions then their voice wouldn't be heard. (CNS, Gynaecology, interview)

This view was reflected by other professionals as well:

That's where I think that to a degree the clinical nurse specialist role is crucial to that meeting...because often they [CNSs] have a more personal discussion with the patient and maybe a wider understanding of the patient's life. And the impact that decisions may have on that patient's life. (Consultant Gynaecologist 1, Gynaecology, interview)

6.5.3 The role of patient centred information in the MDT meeting

As illustrated in the previous section, although lower status individuals were not the only members of the team to hold patient centred information, StRs and CNSs often had more regular and frequent contact with patients than others. As a result, they were more likely to have detailed knowledge of patients being discussed in the MDT meeting. Given the lower rates of participation and influence of these groups described previously, this had potential implications for the nature of discussions in the MDT.

To consider this further, the next section goes on to explore the role of patient centred information in MDT meetings, focusing specifically on information about patients' treatment preferences, and their psychosocial wellbeing.

Information about patient preferences

The most common patient preferences that were shared in the four teams related to whether or not a patient wanted any further tests or treatment, as well as specific preferences for one modality of treatment over another (for example a

preference for surgery instead of radiotherapy). When shared, this information could have an important influence on decisions made by the MDT:

Sometimes it's quite apparent the patient has stated that they don't want treatment X or whatever. They don't want surgery or they don't want chemotherapy. And that obviously strongly influences what the MDM is there to decide. So yes the short answer is if a patient preference is known beforehand, or we have some idea, then that is useful information. (Consultant Medical Oncologist, Skin, interview)

However, overall, information about patients' treatment preferences was rarely mentioned in any of the four MDTs. The frequency ranged from between 5 to 8 per cent of the 2,356 cases presented across the teams during the observation period (Table 14).

Table 14: Discussions where patient preferences and psychosocial factors were mentioned in the MDT meeting

Team	No. cases presented during observation*	Cases where patient preferences mentioned**	Cases where psychosocial factors mentioned***
Gynae	621	50 (8%)	60 (10%)
Haem 1	550	31 (6%)	65 (12%)
Haem 2	511	35 (7%)	58 (11%)
Skin	674	32 (5%)	29 (4%)
Total	2356	148 (6%)	212 (9%)

* Includes cases where the same patient was discussed at multiple meetings

** There was very little overlap between mention of patient preferences and psychosocial factors – both were mentioned in the same discussion in less than 2% of cases in all four teams (ranging from 8 cases in Skin to 15 cases in Gynaecology)

***Variables included mention of a patient's: caring role; disability; English proficiency; marital status; relationship with service; whether in residential care; difficult social or economic circumstances; social support; and a free text variable on social support

In light of the findings that CNSs and StRs were most likely to hold information about patient preferences, but least likely to participate, these figures are perhaps unsurprising. It is likely therefore that to some extent the figures reflect the effects

of the power and prestige order, which prioritised contributions from higher status medical and surgical consultants.

However, the influence of status is not the only potential explanation for the fact that preferences were only mentioned in around one in twenty cases. First, although information about patient preferences was most likely to be presented by a CNS, lower status members of the team were not necessarily the only individuals in the group who had access to this information. There were occasions in all four teams where information about a patient's preferences was raised by a medical or surgical consultant who also knew the patient:

[Consultant Haematologist] certainly mentions her patients' wishes when she knows them. And I would hope we [the CNSs] would if we knew them, and they would affect a treatment decision. (CNS, Haematology 2, interview)

In addition, patients with a new diagnosis of cancer formed the largest group of cases in all four MDTs. This meant that in practice patient preferences were not always known at the time of the weekly meeting. In fact, there were occasions when no one in the team had met a patient being discussed. In these cases there was little scope for patient centred information to be shared, regardless of the status hierarchy:

They're [patient preferences] not really discussed that often. So sometimes that's perhaps because...a lot of the reviews are before the patient's known well or has been met, so perhaps the patient's views are not known. (CNS, Haematology 2, interview)

Furthermore, there were also a range of views about the extent to which patient preferences *should* influence decision making in the MDT meeting. These

differences were apparent both within teams and professional groups, as well as amongst patients. This is illustrated in an example from the observation data from Haematology 2. During discussion of a patient, the team were informed by the StR presenting the case that the patient had refused a bone marrow test and did not want any further investigations or treatment. One consultant haematologist emphasised that the patient's wishes should be respected. However, another consultant haematologist argued that the team had a responsibility to make the best clinical decision. In this case he proposed that this would be to recommend further assessment and treatment, in spite of the patient's stated wishes. It was this latter view that was documented in the MDT record, although the MDT Lead suggested that the issue was discussed further outside of the meeting.

The view that patient preferences should be considered outside of the meeting, was also expressed by both patients and professionals. During the interviews, a range of professionals across all four teams articulated the view that the MDT meeting was not the final decision making arena. Instead, the patient was seen as the individual responsible for making the final decision about treatment outside of the meeting, particularly if there was more than one option. Again, this reflected the fact that in some cases, teams were discussing management options before they had had conversations with the patient about possible treatment. At this stage, patients' views and preferences were not necessarily known by anyone in the team. It was argued that in these cases discussions involving patient centred factors should happen after the MDT meeting instead:

I think...patient input in terms of what they would like, comes up subsequent to the MDT and is between that person and the clinician seeing them...and actually I am not sure that is a decision for the MDT to be involved in. (Consultant Haematologist, Haematology 1, interview)

However, as noted previously, the MDT meeting was often the only point in time at which all professional groups came together. Given that certain members of the team are more likely to hold patient centred information than others, if this is not shared during the meeting there is a risk that it will not be shared at all. This is further complicated by the fact that the extent to which it is desirable to discuss patient centred factors in the MDT meeting is in itself a patient preference. Some patients themselves emphasised the importance of making the best clinical decision, almost irrespective of their preferences. This was particularly the case for patients who had been very sick:

When she [Consultant Haematologist] says something to us we just say to her well you're the boss...and she laughs but that's how we feel...there's no point in going and seeking an expert opinion and then just going and turning your back on it...we accept their advice so therefore really we don't need to say anything [about our preferences]...because we, perhaps it's a bit glib to say we follow blindly but we sort of do. (Patient 161212, Haematology 1, interview)

However, other patients saw information about patient preferences as an essential part of decision making:

What's the saying, a happy patient is a healthy patient...you have to take their preferences into consideration because, you know, a lot of it obviously is your mental outlook and if you're...more comfortable with what's going on, you know, chances are you'll do better right, and so you definitely have to try...I mean, it has to be part of the equation there's no doubt about that. (Patient 111308, Haematology 2, interview)

Overall then, information about patient preferences was shared relatively infrequently, reflecting the lower rates of participation amongst CNSs and StRs

across the four teams. However, although consideration of patient preferences was sometimes seen as a way to make the best decision in the context of a specific patient, this was not necessarily seen as desirable, or feasible, in every case presented in the MDT meeting. This was because patient preferences were not always known at the time of the initial discussion, and because some patients and professionals wanted the MDT to focus on making the best clinical decision. In addition, there were potentially other points outside of the MDT meeting where this information could be discussed.

Information about psychosocial factors

Similarly, psychosocial information about a patient's social circumstances or wellbeing, information that gave a sense of the patient as a person, was also relatively rarely mentioned in any of the MDT meetings. The frequency of this ranged from between 4 to 12 per cent of the 2,356 cases presented across the teams during the observation period (Table 14, p. 144). As with information about patient preferences, this information was not always known at the time of an MDT discussion. Again, when it was known, it tended to be shared by a CNS.

The quantitative data show that psychosocial information was least likely to be mentioned in the Skin team (in only 4 per cent of cases presented). However, this was not raised as an issue of concern in the professional interviews, either by higher or lower status individuals. Although the MDT Lead and the CNS acknowledged the limited time to discuss psychosocial factors, they also argued that they were taken into account when this was necessary:

My personal feeling is that I think we don't have a time limit on a specific case. If a case is complicated and needs a lot of discussion, we take that time. So I don't actually think much is missing from the MDM. If anything probably, we already discuss things in sometimes in too great a detail. (Consultant Medical Oncologist, Skin, interview)

In contrast, the frequency of psychosocial factors being mentioned in the MDT meeting (in 10 per cent of cases) was more of a concern amongst some of the interviewees in the Gynaecology team. In this team, a range of professionals (including a CNS, an oncology StR, a consultant gynaecologist and a psychologist) expressed the view that the meeting no longer gave a sense of the patient as a whole. It was argued that this made it more difficult for the team to make decisions centred around individual patients, and in the words of one consultant gynaecologist, risked the team making poor decisions:

Because they're not sitting with a patient really really really battling to see whether what would be the best treatment in this particular, in this particular patient's context, sometimes decisions are bad actually.
(Consultant Gynaecologist 5, Gynaecology, interview)

The consultant gynaecologist caveated this with the conclusion that bad decisions were relatively rare. It is also important to acknowledge that the MDT meeting was not the only forum for discussing patients holistically “*I think there's other places to discuss these things as well*” (CNS, Skin, interview). Nonetheless, it again highlights the different views about the extent to which this type of information should be shared in the MDT meeting.

6.6 Multidisciplinary discussion

The analysis above suggests that there are certain circumstances in which the input of lower status members of the team can be instrumental in the decision making process. This was particularly the case when lower status members held information about a patient's treatment preferences or their psychosocial circumstances. However, based on the views of both professional members of the MDT and some patients, it did not appear that this type of input was essential in each and every case. What then, were the circumstances in which the information

held by lower status members of the team was incorporated during the decision making process?

During MDT meetings there were two overarching scenarios that were likely to prompt multidisciplinary discussion that included contributions from lower status members of the team. These were cases where patients had limited treatment options, and cases where there were concerns about a patient's ability to cope with treatment. These scenarios are discussed below, alongside the views from MDT professionals about the extent to which they believed multidisciplinary involvement was appropriately encouraged (or not).

6.6.1 Patients with limited treatment options

There were cases in all teams where multidisciplinary discussion was triggered when a patient had limited options for further treatment because of the extent of their disease: *"it's pretty grim"* (Consultant Haematologist, Haematology 2, observation transcript), or because their disease had recurred:

For relapse patients it [multidisciplinary discussion] is quite useful because when you get to relapse there is not necessarily one definite way of doing it. (Consultant Haematologist, Haematology 1, interview)

Almost by default, if a patient needed to be re-discussed at the MDT meeting because they had not responded to treatment or because their disease had recurred, the case was likely to be complex:

You know, it's not like you have a new patient, you treat them, they're gone, it is very much an on-going care package for them and that gets more complex as time goes by...the ones who stay, stay because they're complicated. (Consultant Gynaecologist, Gynaecology, interview)

In these cases, there was often no “*right or a wrong, there isn’t a best way of treating them*” (Consultant Gynaecologist, Gynaecology, interview). Knowledge of the patient and their preferences therefore became increasingly important. It was also more likely that at this stage this information was known by a member of the team:

There are instances where sometimes there are relapses, so the patient is already relatively well known. (Consultant Haematologist, Haematology 1, interview)

An example from the observation data illustrates how in these circumstances, the contribution of lower status members of the team could be instrumental in ensuring that the clinical decision reflected a patient’s circumstances:

Consultant Medical Oncologist: against my better judgement I think that if they want to go to [another Trust] for a second opinion I will [refer them]

CNS: I think that’s a good idea...they’ll [his family] take him off privately anyway

Consultant Medical Oncologist: ok so I might as well facilitate it and just offer it (Skin, observation transcript)

In this case, the CNS was able to use her knowledge of the patient’s family in order to persuade the consultant that referring a patient for a second opinion was indeed the best course of action, even if he did not think it would change the end result. In another example from Haematology 2, a CNS reminded the team about a patient’s previous reaction to a chemotherapy drug. In doing so, she altered the practicalities of the way treatment was to be delivered. The MDT Lead explicitly acknowledged the value of this contribution, and asked the team to ensure that treatment was not initiated on a Friday:

Consultant Haematologist 1: I'd propose consideration of an autologous stem cell transplant

CNS: [Consultant Haematologist 1] I think she's a lady who reacted to ritux [chemotherapy treatment] although she didn't actually get admitted

Consultant Haematologist 1: ...that's a very important point to document thank you

Consultant Haematologist 2: so not on a Friday afternoon but

Consultant Haematologist 1: not on a Friday and early in the day
(Haematology 2, observation transcript)

6.6.2 Concerns about a patient's ability to cope with treatment

Other factors that made a decision more complex, and more likely to benefit from multidisciplinary discussion, included situations where patient factors were likely to impact on the team's ability to deliver treatment. This included elderly or 'frail' patients, and vulnerable patients.

Elderly or frail patients

Lower status contributions took on particular importance during discussion of patients described as 'elderly'. In reality, these were often discussions about the physical frailty of a patient, because there did not seem to be a specific age at which the term elderly was consistently invoked. For example, in Haematology 2, the term elderly was ascribed to a 72 year old. In the Haematology 1 team, chemotherapy treatment was ruled out for an 'elderly patient', aged 87, as it was felt to be too much for them to cope with given their physical frailty. However, during the same meeting a decision was made to start a 97 year old patient on chemotherapy.

Regardless of these differences, the age or frailty of a patient was often a key consideration in making a treatment decision:

It may be difficult because maybe the person is older or they have a comorbidity...So yes, ideal treatment would be x and I will try to facilitate...by saying "do you think they are fit enough for this?" Often we see that with the review of patients, so where they have had a response to treatment. We try to decide how much more treatment to give them. There is often a lot more input there from the nursing staff, you know how have they been coping, what do you think or we've had these problems... (Consultant Haematologist, Haematology 1, interview)

However, it was an area where there could be disagreement between professionals. For example, in Haematology 2 a decision was made to follow recommended evidence based protocols by requesting a PET scan for an 81 year old patient [this is a type of scan used to diagnose and stage cancer]. This decision was challenged by a consultant haematologist in the team. He argued that even if the scan highlighted disease, they would not treat the patient with further chemotherapy given her age: *"to spend all this money!"* (Consultant Haematologist, Haematology 2, observation field note). However, the patient's lead consultant responded by saying they were following international guidelines *"that are not ageist"* and refused to back down (Haematology 2, observation field note).

In this example, there was no input from other professional groups within the team. However, it is in these cases where decisions are not clear cut that there is perhaps greatest benefit to be gained from including input from lower status members of the team. Where there is a lack of certainty about a patient's ability to cope with treatment, knowledge of the patient in question and their physical wellbeing could be instrumental to making an appropriate decision. This is particularly true where

an over-reliance on evidence based protocols could run the risk of over-treating or over-investigating. As one consultant dermatologist noted:

In this MDT like setting, I think you know protocol driven medicine...sometimes it can be quite black and white. So patient has X, we need to do Y, whereas actually if you did nothing it would probably be fine. And a lot of the cases here I think there is a tendency to over-treat and over-investigate sometimes. (Consultant Dermatologist, Skin, interview)

This view was echoed by a CNS in Haematology 1, who highlighted the need for careful consideration to be given in these cases: *"I do sometimes worry about...where we draw the line"* (CNS, Haematology 1, interview). An StR in the same team also described the need *"to be a bit careful...with what you're exposing elderly and delicate patients to"* (Haematology StR, Haematology 1, interview). For these reasons, lower status input could be instrumental in the decision making process, whether the decision was to deliver intensive treatment or to provide only supportive care. This is illustrated in the example below from Skin, where the CNS played an instrumental role in shaping the decision for a 97 year old patient:

Consultant Medical Oncologist (MDT Lead): well first of all how fit is this lady?

Surgical StR: she is 97

CNS: she is 97

Consultant Medical Oncologist (MDT Lead): well let's not be let's not be ageist [laughing]

CNS: that's pushing it a bit

Consultant Medical Oncologist (MDT Lead): how fit is she?...

CNS: she's 97 she is her age...leave her alone

(Skin, observation transcript)

Subsequent review of this patient's medical records indicated that the patient had indeed been 'left alone', and had not undergone the tests and investigations that had initially been proposed by the Consultant Medical Oncologist.

Vulnerable patients

Lower status contributions were also important during discussions where concerns had been raised about a patient's vulnerability. Vulnerability could relate to a patient's ability to cope with news about their prognosis, or to mental health issues that impacted on their ability to understand what was happening. Vulnerability was also an issue where there were concerns about patients who did not have family or carers readily available to support them through treatment. In all of these cases, there were examples where the contribution of lower status members was instrumental in helping the team to reach a decision. In one example, a consultant gynaecologist was visibly affected when the pathologist reported that a very young patient, who was described as not doing well psychologically, had metastatic disease. When given the news about the patient's poor prognosis the consultant responded by hitting the table and exclaiming, "*fuck you are joking*" (Consultant Gynaecologist, Gynaecology, observation transcript). In this case, contributions from both the CNS and the clinical psychologist ensured that the appropriate psychosocial support would be in place for the patient at their next clinic appointment:

Psychologist: so can I just check when she'll know [about the spread of her disease]

CNS: she's coming back on the 4th...will you be around?

Psychologist: yeh perhaps. She's your [patient] isn't she [to

CNS]?...Are you around on Tuesday [the 4th]?

CNS1: yeh I think she'll need it from what I can gather

Psychologist: yeh I'm happy to be around

(Gynaecology, observation transcript)

Multidisciplinary discussion also occurred in a small number of cases where a member of the team wanted to make others aware of a vulnerable patient. During one meeting of the Haematology 1 team, a young patient was described by a consultant clinical oncologist as being completely and utterly shell-shocked after being told he only had three to six months to live. The oncologist reported finding the patient staring at the ceiling with his mouth open after being told that they had exhausted all chemotherapy options. The CNS, consultant haematologists and the oncologist were all actively involved in this discussion, and it served to raise awareness amongst the team of the specific psychosocial needs of this patient.

In other cases (specific to the two Haematology teams), lower status contributions were also important when there was disagreement or uncertainty about whether a patient was able to cope with the treatment involved in a stem cell transplant. Due to the very intensive nature of this treatment, discussion often included reference to a patient's social or psychological circumstances. This was particularly the case if a patient was deemed to be vulnerable. There were a number of examples where CNSs were able to contribute information that was used to help the team reach a final decision in these cases. In one discussion in Haematology 2, a consultant queried whether a patient with alcohol dependence would be able to comply with therapy: *"is he able to do that?"* (Consultant Haematologist 7, Haematology 2, observation transcript). It was the CNS who responded:

*He messes around but he understands...I don't think he drinks that excessively when he goes [to the pub from the ward] he does go but.
(CNS, Haematology 2, observation transcript)*

These examples illustrate that in cases where a patient's vulnerability was a concern, lower status contributions could be instrumental in helping the team to reach a decision. They were also important in ensuring that patients were provided with the support they needed following this.

6.7 Chapter Summary

This chapter began by using status characteristics theory as a framework to explore the patterns of participation and influence in the decision making process. This illustrated that medical and surgical consultants were more likely to initiate participation, had more opportunities to participate, were evaluated more favourably, and had more influence than lower status members of the team. In contrast, some lower status groups reported being reluctant to contribute, and in a small number of cases their contributions were not taken on board or were ignored by higher status members of the team.

Potential explanations for these patterns of participation reflected the legal responsibilities of consultant doctors with a duty of care to their patients (Sidhom and Poulsen, 2006), as well as their extensive clinical training and expertise. In contrast, StRs - as doctors in training - did not necessarily have the knowledge or expertise to make clinical decisions in the MDT setting. In addition, for CNSs, if they had not met the patient being discussed they were unlikely to hold information that they could share with the MDT. These explanations suggested that lower rates of participation from lower status groups were not necessarily in and of themselves problematic, even if they had the potential to be in certain circumstances.

Building on this analysis, Theme II explored the effects of these patterns of participation and influence on efficiency and information sharing, and considered the circumstances in which multidisciplinary discussion took place. Reflecting the literature on functionalist perspectives of hierarchies, teams appeared to capitalise on the expertise of higher status individuals in order to make a considerable number of decisions quickly and efficiently. Limiting discussion in this way to a subset of higher status members could minimise the amount of time spent on discussion that was unlikely to impact on the treatment plan. Using evidence based protocols to make these decisions was a way of ensuring consistency and promoting

equality of treatment for patients. This freed up time to spend on cases that were more challenging or complex.

However, in other cases, it was shown that medical and surgical expertise was not the only important source of information for decision making. Team members valued the MDT meeting as an opportunity to bring together a diverse range of professional groups. Nonetheless, multidisciplinary discussion which included the full spectrum of professionals was potentially challenging for MDTs to achieve. This was because of the finite period of time in the MDT meeting. This meant that opportunities to share certain types of information could impact on the time available for other contributions. This was compounded by the fact that there was some disagreement amongst MDT professionals about the appropriate balance between efficiency and more holistic multidisciplinary discussion in the MDT meeting context.

In spite of these different opinions, it was possible to identify a subset of cases where the knowledge held by lower status groups was incorporated into the decision making process. In all four teams this reflected the nature of the relationship between lower status groups and patients. These relationships meant that CNSs and StRs were often more likely than other members of the MDT to hold patient centred information. Specifically, this included information about patient preferences and psychosocial factors.

Information about patient preferences was important because doctors were not always aware of patients' views. Discussing patient preferences during the meeting could therefore enable the team to more fully consider the benefits and drawbacks of different treatment options. Information about psychosocial factors was important because it enabled the team to consider whether the recommended treatment was appropriate given a specific patient's context. It was argued that without this information there was a risk that poor decisions would be made.

Overall, however, multidisciplinary discussion, which involved lower status groups, was not seen to be necessary or desirable for every case. Instead, it occurred in certain circumstances. This included cases where patients had limited treatment options as a result of the extent of their disease or the fact that it had recurred. It also included cases where there were concerns about a patient's ability to cope with treatment. This was more likely for patients who were elderly or frail, for patients deemed to be vulnerable in some way, as well as for haematology patients being considered for a transplant. In these cases the knowledge held by lower status members of the team could be instrumental in making sure that the clinical decision agreed by the MDT reflected the context of a specific patient's circumstances. Lower status contributions were also a way to counteract the risk of over-treating or over-investigating a patient if evidence based protocols were rigidly followed.

Chapter 7. Factors that influence multidisciplinary discussion in MDT meetings

This chapter presents the third overarching theme ('multidisciplinary discussion') from Thematic Analysis I, which was described in **Chapter 5**. It explores the factors that reinforced the effects of the status hierarchy, and therefore limited the contributions of lower status members of the team. It also explores the factors which moderated the effects of the status hierarchy, and facilitated contributions from lower status members of the team. In doing so it addresses research question two: *what factors facilitate or inhibit multidisciplinary discussion in MDT meetings?* It considers the three factors identified in the analysis that played a role in all four teams in either inhibiting or facilitating contributions from lower status groups. These are: the impact of the physical layout of the meetings, the leadership style of the MDT Lead, and the way that a case was presented to the team.

In light of the findings from the previous chapter, it is evident that factors that limit contributions will not necessarily be problematic. However, understanding the processes that facilitate or inhibit multidisciplinary discussion is important if teams are to appropriately use the knowledge and information held by members in a time pressured environment. This is particularly relevant in cases where lower status groups hold unique information. If MDTs are to incorporate this information during the decision making process then they must be cognisant of the range of factors that can influence multidisciplinary participation.

7.1 Seating arrangements in the MDT meeting

Although there were some differences in the layout of the meeting rooms between teams, all four had the same essential components. These were designed to support the decision making process. The MDT meetings were held in slightly darkened rooms, either windowless or with closed blinds, to facilitate viewing of imaging.

Chairs were ordered in rows, facing forwards towards large screens. These screens were used to present radiology images, pathology slides and in some teams an electronic proforma for each patient discussed. The lecture style set up prompted one CNS to comment: *"I suppose it's like being at school"* (CNS, Skin, interview).

In all teams, people generally sat in the same place each week, almost to the point where this became a ritual:

When [Consultant Surgeon 1] arrived at the meeting this morning, one of the plastic surgery registrars was sitting on the right hand side of the room. This prompted [Consultant Surgeon 1] to make a joke about how the plastic surgeons always sat on the left hand side: 'it's the rule!' The registrar then moved further along the row to the left, which made everyone laugh. (Skin, observation field note)

In all teams, diagnostic consultants sat at desks at the very front of the room surrounded by the specialist equipment needed to display their findings. In Haematology 2 and Gynaecology, the MDT Lead sat alongside them, separating themselves from the remainder of the group but achieving a direct view of the room and other team members. In Skin and Haematology 1 the MDT Lead sat with the rest of the team facing the front of the room.

It also became apparent that these seating arrangements were highly symbolic. Higher status groups generally sat towards the front of the room and lower status groups further back. In Gynaecology and Haematology 2, the front two rows of seats facing the screens seemed to have particular significance and medical and surgical consultants appeared markedly reluctant to sit further back if the front rows were already full: *"I'm not sitting at the back!"* (Consultant Oncologist, Gynaecology, observation transcript). This was also evidenced in specific

behaviours, for example a consultant gynaecologist pulling up an additional chair from the row behind to sit at the front, even though this made space in the front row very tight. The opposite was also true however, with some appearing equally reluctant to sit in the front row. During one meeting of Haematology 2 the room was completely full, with the exception of two seats in the front row. Although these were empty, two StRs had chosen to remain standing at the back of the room.

The interviews highlighted that there were a number of practical reasons for these seating arrangements. At the front of the room it was easier to see the radiology imaging and pathology slides being presented, and this clinical information was more relevant to some members of the team than others. For example, as noted previously, consultant gynaecologists often used radiology imaging to visualise the surgery they were planning. In addition, it was suggested that some individuals wanted to sit at the back, where they could be inconspicuous and “*drop off to sleep*” (Consultant Radiologist, Gynaecology, interview field note). Although this did not appear to be the case for most, one of the CNSs in Haematology 2 pointed out that there was no need for her to sit right at the front. This was because she only needed to pay attention to a small group of patients in her particular sub-specialty.

7.1.1 The importance of being ‘visible’

Overall, discussion in all teams was much more likely between individuals sitting at the front of the room, with “*maybe a bit of infiltration from the back*” (CNS, Gynaecology, interview). As a result, the seating arrangement of the MDT could at times inhibit contributions from certain professional groups. In part, this was because those sitting towards the back of the room were not directly visible to those in the front rows. This could exclude them from discussion:

If you're the last one in and you're sat right at the back...you really don't feel that you're a part of the discussion. So I think it does have an effect.
(CNS, Gynaecology, interview)

This was accentuated by the fact that in all teams it could be difficult at times to hear everything that was being said, particularly because some members of the team spoke very quietly, and the rooms were large:

You can't hear what people are saying in the front two rows sometimes because they talk quite quietly and they're talking forward and you're sort of excluded a bit straight away. (CNS, Haematology 2, interview)

Although these views were articulated by lower status members, they were acknowledged by higher status members too. One consultant gynaecologist described the impact of the physical environment on the ability of the team to engage all its members:

If you just bang on, you're whispering to each other about this and that and the other and [consultant oncologist] says 'well if it's 3A let's do protocol B5' and then somebody else mumbles, you think okay well that's showbiz. But I mean, we haven't really used the MDT to kind of open up to a discussion. (Consultant Gynaecologist, Gynaecology, interview)

The impact of seating arrangements on contributions was most pronounced in the two largest teams, Haematology 2 and Gynaecology, where the room was often full. Competition for physical space and the opportunity to contribute during the meeting was therefore more apparent. In both these teams it was relatively common for other professionals who were not formal members of the team to attend the weekly meeting. This largely happened on an ad hoc basis, for example to give or seek advice about a specific patient, or to agree on treatment across specialty boundaries. As a result, in Haematology 2 and in Gynaecology, attendance at meetings could be very high (with up to 40 people present), and it was difficult at times to know who everyone was:

I don't know, some people speak up I don't know who they are sometimes. I am not sure if they are registrars or specialist nurses sometimes or technicians. (Imaging Consultant, Haematology 2, interview)

It was also relatively common for medical students, visiting academics or other interested parties to attend meetings in Haematology 2 and Gynaecology as observers without participating in the discussion. This further accentuated inequalities in participation, because while there was wide input from a core group of members, around a third to half of those in the room in these two teams did not contribute to discussion at all, or did so only very occasionally. This was in marked contrast to the smaller Haematology 1 team, and the Skin cancer team, where although there was not necessarily equal participation, most individuals contributed to discussion in some way or another most weeks.

7.1.2 Attempts to change or challenge seating arrangements

In both of the larger teams (Haematology 2 and Gynaecology), some time prior to the observation, there had been attempts to change the layout of the meeting in order to make it more inclusive:

We did use to try sitting in a circle for our clinical MDT and nobody really liked that very much either, to try and encourage different people to contribute [laughs] for about two weeks. (CNS, Haematology 2, interview)

However, as the quote implies this approach was not seen to be very successful. The Gynaecology team had also encountered practical difficulties in changing the meeting layout, partly because it meant moving the chairs at the start and the end of the meeting, and because of the need to display the imaging and pathology material. The size of the team was also cited as a factor:

I mean if you had smaller numbers and I'm not saying that we should be booting people out but you can kind of see how a circle or some kind of round discussion would be more effective. (CNS, Gynaecology, interview)

Despite facing similar issues, and previously having tried the same solution, during the observation period there were differences between these two teams in how professionals responded to the lecture style seating arrangements. In Haematology 2, there were no examples of lower status members challenging the established seating arrangements, and this was reflected in the view of one CNS:

We all buy into it; we [the CNSs] all go and sit at the back and they [the consultants] go and sit at the front. And we don't have to do it like that; we could mix it up a bit. (CNS, Haematology 2, interview)

In contrast, the Lead CNS in Gynaecology often emulated the behaviour of the consultant gynaecologists and oncologists, and encouraged the other CNSs to do the same:

*I think we need to be sitting at the front to be visible and to have a presence and if you have to put yourself on the front row in between two clinicians to be part of the discussion well then that's what we have to do...we always sit on the first or second row. No further back! [laughs]
Or grab a chair and pull them forward. (CNS, Gynaecology, interview)*

Although these different approaches may to a certain extent reflect individual styles or personality traits, there were also differences in the structural arrangements of the CNS teams. In the Gynaecology team, the three Clinical Nurse Specialists worked closely with a psychologist. The interview data suggested that there was a conscious effort within this team to actively work together as a 'psychosocial' group

and to develop specific strategies to make sure they were able to participate during the meeting and to get their contributions heard:

The idea was that we would have an hour at the beginning of the meeting where it would be pure...psychosocial, then we'd come together for our discussions [in the MDT meeting]...So the idea was that the nurses would sit on the front row, they wouldn't sit at the back, get there on time, sit on the front row. (Psychologist, Gynaecology, interview)

As illustrated in the quote above, the underpinning support of the psychologist appeared to be important in encouraging the CNSs to work together in a coordinated way:

What I see my job is trying to get the, to get the psychosocial staff to translate their work into a way that is heard. (Psychologist, Gynaecology, interview)

Having this additional source of support and leadership appeared to play a role in encouraging the CNSs in this team to challenge the seating arrangements. In contrast, there was no mention of an equivalent grouping of psychosocial staff in Haematology 2. In this team a psychologist did not attend the MDT meeting, and each CNS represented a different sub-specialty, responsible for specific groups of patients. There was therefore a less noticeable sense of a 'team within a team' within the Haematology 2 MDT meeting.

In contrast to these teams, the seating arrangements in Haematology 1 and Skin were less contentious. This may have been as a result of the smaller size of the teams, because it meant there was less need to compete for space. The size of the rooms used by each of the teams were roughly similar, so in the smaller teams

there were often a number of empty seats, both at the front and the back of the room. This meant that lower status members of the team did not appear to 'displace' higher status members of the team if they sat near the front of the room. For example, in the Skin team the CNS sat in the front row, alongside the MDT Lead. This arrangement allowed the CNS to regularly contribute bits of information to the MDT Lead (although this was often done quietly, and directly to the MDT Lead rather than to the group as a whole). The CNS did not view this as an attempt to challenge the status hierarchy and seemed unfazed by the seating arrangements:

We all sit in the same place every time. I don't think it makes...it's just how it goes. (CNS, Skin, interview)

Nonetheless, regardless of whether or not this was an explicit strategy, by emulating the behaviour of higher status members the CNS was able to create opportunities to contribute given her close proximity to the MDT Lead.

7.1.3 Summary

The seating arrangements in MDT meetings generally reflected the patterns of participation described in the previous chapter, with higher status members in all teams sitting towards the front of the room. There were some practical reasons for this. However, the seating arrangements appeared to have a particular impact on the contributions of lower status members in the larger teams, where there was more competition for space. In this context, when lower status members sat at the back of the room it was more difficult for them to contribute, either because they were not directly visible to others or because it was difficult for them to hear what was being discussed.

Attempts to challenge the established seating arrangements were made by the CNSs in the Gynaecology team, who, with the support of a psychologist, used their physical placement in the room to increase their visibility. The CNS in Skin also

appeared to emulate the behaviour of higher status members of the team by sitting in the front row alongside the MDT Lead. This seemed to be important not only because it could help to create opportunities to contribute, but also because of the symbolic importance of being seen to be part of the 'discussion'.

7.2 The leadership style of the MDT Lead

As discussed in my theoretical framework, leadership style can play a key role in moderating the effects of hierarchy on a group (Anderson and Brown, 2010). Inclusive leadership behaviour can overcome the effects of status hierarchy if leaders invite and appreciate contributions from lower status groups (Nembhard and Edmondson, 2006). However, those in positions of leadership can also exacerbate anxiety about speaking up in healthcare teams by inhibiting open discussion (Edmondson, 2003). Subtle body language signals and a lack of willingness to listen have both been identified as leadership behaviours that can make team members reluctant to contribute (Morrison, 2011).

The previous chapter highlighted the influence of the MDT Lead over the decision making process. In this section I will use the observation and interview data in order to explore and contrast the different styles and leadership behaviours adopted by the MDT Leads in the four teams. The aim is to consider the role of leadership style on the participation of different professional groups during MDT discussion.

7.2.1 Efficiency without structure: the Gynaecology MDT meeting

The meeting atmosphere

During observation, the decision making process in the Gynaecology MDT could appear hectic, with numerous things happening at the same time. This included separate conversations happening simultaneously between different groups, or people answering their mobile phones during meetings. It was notable that higher and lower status members of the team reported very different views from each

other when asked to describe the atmosphere, ranging from “*nurturing*” (Consultant Gynaecologist, interview) to “*dysfunctional*” (Oncology StR, interview).

The role of the MDT Lead

In the Gynaecology team the MDT Lead was a consultant gynaecologist, and was very obviously concerned with efficiency, and ensuring the meeting proceeded at a pace that would enable the team to cover the large number of patients that had to be discussed each week:

When [MDT Lead, Consultant Gynaecologist] came in [to lead the MDT], she wanted efficient [sic]. She wanted to finish on time; get it done. And she made it very efficient. (Psychologist, Gynaecology, interview)

During the meeting this style was apparent in the way that the MDT Lead moved rapidly between cases, and fitted in additional cases at every opportunity: “*let's squeeze in a new one here rather than wait*” or “*next!*” (MDT Lead, Consultant Gynaecologist, Gynaecology, observation field notes). The result was that the MDT meeting was very fast paced, and there were often several different things happening at the same time. One consequence of this was that it could be difficult to follow the thread of discussion:

*Sometimes when we get impassioned, everybody is speaking at once and some of the detail is lost in that...I suppose it has to do with chairing.
(MDT Lead, Consultant Gynaecologist, Gynaecology, interview)*

As this quote illustrates, the drive for efficiency in this team was often coupled with a lack of structure. For example, the MDT Lead did not always clearly delineate the transition between patients, at times moving on to the next case while others continued discussing the previous patient. This made it difficult to keep track of which patient was being discussed. One implication of this was that it could limit

the ability of other members to contribute as they were either 'too late' to influence the decision that had already been recorded or they missed the beginning of the next discussion:

Sometimes I feel that there's a group of whoever still talking about a patient the chair has moved onto the next patient so...you wonder whether a decision has been made. And that can be quite difficult at times because you're trying to listen to two conversations or say so what is happening with Mrs X before we go on to Mrs Y. (CNS, Gynaecology, interview)

Another consequence of this was that it made it easier for contributions from lower status members of the team to be ignored or marginalised from the discussion. This was recognised by both higher and lower status members of the team:

The people who are at the meeting are generally very happy to discuss things and get involved in discussions but there are sometimes junior people who know the patient well, or the psychosocial members of the team who will know the patient very well and they don't often get the opportunity to talk because it's seen to be sort of leading off the point and not necessarily being a treatment decision, it's a bit more touchy feely, sort of thing and the MDT is not so open to that, mainly because of time. (Consultant Gynaecologist, Gynaecology, interview)

From a CNS perspective, this led to a feeling that their contributions were not valued by other members of the team:

I think sometimes you feel that the discussion tends to move on when you're still trying to get a point of view across. So you, the importance of

what you're trying to say is lost. And there sometimes seems a, a disinterest in what you're trying to say. (CNS, Gynaecology, interview)

Overall then, the MDT Lead's approach to chairing, which emphasised efficiency, coupled with a lack of structure, often appeared to accentuate the effects of the status hierarchy in this team. This in turn led to a sense of disengagement amongst some lower status members of the team:

[CNS] said very clearly to me quite often: 'what am I doing with two and a half hours sitting in there, to say two sentences which then aren't listened to'? (Psychologist, Gynaecology, interview)

This was compounded by the fact that in this team the MDT Lead was not only responsible for chairing the discussions each week, but also for recording the discussion and subsequent decision made for each patient. The Gynaecology team was the only team of the four I observed where the documentation of decisions was undertaken by the MDT Lead and not delegated to another member of the team. The rationale for this was to ensure the accuracy of the information recorded, particularly when pathology or radiology results had to be summarised in a brief way: *"if you have a non-medic doing it, they quite often get it wrong"* (Psychologist, Gynaecology, interview). However, it was also noted that this could result in a *"trade-off between documentation and real discussion"* (Psychologist, Gynaecology, interview). This view highlighted the tension between the chairing role, which could potentially encourage multidisciplinary discussion by facilitating contributions, and the documenting role, which focused on capturing and recording information.

7.2.2 Efficiency with structure: the Haematology 2 MDT meeting

The meeting atmosphere

During observation, the decision making process in the Haematology 2 meeting appeared to be markedly professional and purposeful. In part this reflected that fact that unlike the other MDTs I observed, nearly all meetings started on time or within a minute or two of the agreed start time. They also only ran over the allotted time on a handful of occasions. During case discussions, members took turns to speak (unlike in Skin and Gynaecology where there was often more than one discussion happening at the same time), and left the room to answer their mobile phones. However, there were occasional glimpses of humour. Members of this team described the meeting atmosphere as “*lively*” (StR, interview), “*competitive*” (Consultant Haematologist, interview) and “*professional*” (CNS, interview).

The role of the MDT Lead

The MDT Lead for Haematology 2, a consultant haematologist, also prioritised efficiency when chairing the MDT meeting. This was demonstrated by a clear commitment to start and end the meetings on time. However, the obvious drive to run the meeting efficiently did not manifest itself in the behaviours described in the Gynaecology team. Instead, efficiency was combined with a very structured approach, where cases were clearly introduced and decisions and key points of the discussion were often summarised before the team moved on to the next case. In addition, the mood in the meeting tended to be very focused. Although immediately prior to the meeting there would be lively conversation, as soon as the MDT Lead indicated that the meeting was to start, there was generally only a single discussion at any one time.

In this way, the chairing style of the MDT Lead avoided some of the issues described above, and cases were generally clearly presented, with little or no overlapping talk and contributions were very rarely ignored. However, the emphasis on efficiency

was still very apparent, for example when the MDT Lead explicitly curtailed a discussion:

Consultant Haematologist (MDT Lead): I wanted to record [patient] as a new follicular lymphoma going on rituximab maintenance but I don't think we need to discuss that patient. (Haematology 2, observation transcript)

As has been noted previously, in some instances it was argued that there was little need to discuss all cases in depth in the MDT meeting. In the example above, the MDT Lead curtailed discussion of a patient who was already scheduled to begin treatment. In this case, it is arguable that a further discussion in the MDT meeting would have been academic. Furthermore, in contrast to this, in other cases, the MDT Lead did make explicit requests for comments or disagreements. He also frequently checked if the rest of the team were content with the MDT's proposed treatment plan before moving on to the next case. This was achieved by the use of question, such as: *"is there anyone unhappy with the management plan?"* or *"Would anyone else like to record anything on the management plan for [patient]?"* (MDT Lead, Consultant Haematologist, Haematology 2, observation field notes). This participative style was welcomed by two other consultants in the team during interviews, and was attributed with enabling a good balance to be achieved between efficiency and engaging the rest of the team.

However, in addition to these positive views about the MDT Lead's chairing style, it was apparent from the observation data that discussions in this meeting often had clear boundaries and focused on urgent medical or clinical issues. Phrases such as *"is there a pressing clinical need to do that [discuss a patient]?"* could therefore undermine the contributions from lower status groups with different types of information to share. As one CNS remarked:

You're not invited to contribute and the pressure on time is such that sometimes you just think it's not worth it because somebody's going to say, "oh, they need a transplant or they're dead." (CNS, Haematology 2, interview)

Verbal signals encouraging contributions were therefore not necessarily interpreted by all members of the team in the same way. This was particularly the case for those with psychosocial information to contribute:

The meeting is...it's medical...there are different disciplines of medicine who contribute but I don't think it's multi-professional...there isn't much nursing input invited...we give it on the rare occasions that we may think it's strongly required. But I think...I would find it more satisfying if, when they're known or when they're relevant, the more social or the other bits of what that treatment would mean to a patient are included in the discussion. I know times a factor but it's very medical centric the meeting. (CNS, Haematology 2, interview)

On one level therefore the MDT Lead was able to foster an environment which encouraged medical and diagnostic professionals to participate by using verbal cues and providing a clear structure to the meeting. However, the focus on medical issues and repeated reminders about efficiency had the potential to create a perception that there was a lack of willingness to incorporate certain contributions, notably psychosocial contributions, which were more likely to be made by CNSs.

7.2.3 Structure without efficiency: the Haematology 1 MDT meeting

The meeting atmosphere

Based on the observation data, decision making happened in a relaxed and friendly atmosphere in Haematology 1, and members appeared to get on well with each other. Immediately before and after the meeting I often overheard conversations

about family, hobbies, holidays and so on. The sense of an open and cohesive team was echoed by the participants I interviewed, although one senior consultant haematologist described a sense of “*us and them*” between the consultants who made most of the decisions and the rest of the team.

The role of the MDT Lead

As in Haematology 2, in Haematology 1, the MDT Lead was a consultant haematologist who also brought a degree of structure to the meeting. Discussion followed the order of the patient list agreed in advance, and members of the team largely waited their turn to speak. As a result, there were very rarely separate and overlapping conversations – the focus during the meeting was on the patient being discussed at that point. Some members would on occasion quietly answer their mobile phones during the meeting, but this was done discretely and caused minimal disruption.

In this team, the MDT Lead actively sought contributions from the rest of the team, demonstrating an inclusive style of chairing: “*I said I'd bring it to see what everyone else thought*” (MDT Lead, Consultant Haematologist, Haematology 1, observation field notes). In addition, he frequently provided openings for alternative viewpoints: “*should we do that, [does] everybody agree?*” (MDT Lead, Consultant Haematologist, Haematology 1, observation field notes). As a result, most members made a contribution during the meetings, even if only briefly. This was particularly noticeable in this team compared with the others because there were fewer members to contribute overall.

In addition, the participative style of leadership created a sense that members of the team were receptive to the contributions of others. In contrast to the Haematology 2 and Gynaecology teams, this view was also shared specifically by a CNS during interview: “*I think everybody is prepared to listen to everybody's point of view*” (CNS, Haematology 1, interview). In part, this seemed to reflect the MDT

Lead's willingness to spend time on each case, and specifically the openness amongst the consultant haematologists to considering and including the CNSs and StRs during the meeting. This was a view the MDT Lead expressed during interview, but it was also apparent during the observation. As the example below illustrates, this was manifest in subtle behaviours, which provided direct openings for lower status members of the team to contribute. This included higher status members of the team directly referring to lower status members of the team either by name, or through the use of body language. For example, during discussion of a patient with a renal and haematological cancer, the MDT Lead engaged the CNS by turning to her and asking if she remembered another patient with a similar diagnosis. In this way, the MDT Lead used a more targeted approach to soliciting contributions, using both verbal and non-verbal cues to do so.

In addition, a willingness to listen was also suggested by the time that was allowed for considering issues that were rarely discussed at length in Haematology 2 meetings. In the case illustrated below, the Haematology 1 team spent a considerable period of time discussing the practicalities of the clinic appointment, to ensure that the patient in question had the appropriate support in place to give informed consent. It was very rare to hear this kind of discussion in Haematology 2 (although it may have occurred outside of the meeting):

Consultant Haematologist 4: [Consultant Haematologist 3] do we need to see him with his family [StR] was saying...

Consultant Haematologist 3: I think it would be sensible to get a relative up because I'm not convinced that he entirely follows he says yes to lots of things and he really doesn't seem to completely comprehend...so potentially I could go and see him on Thursday

Consultant Haematologist 1: yeh we could leave it at that if it's all planned that his family are coming with him on that date

Consultant Haematologist 3: I didn't know if they were but if they are

StR: yeh they are

Consultant Haematologist 1: and then we'll schedule for next Tuesday [CNS]? Just a CHOP [chemotherapy]

Consultant Haematologist 3: remind me [StR] and I'll try and just pop down and see him next, on Thursday then

StR: yeh he's on the list so I'll remind you yep

(Haematology 1, observation transcript)

Overall then, this style of participative leadership appeared to create an environment in which contributions from all professional groups were welcomed and valued. However, there were some drawbacks to this more open approach. At times the meeting could appear to be slow and inefficient. The MDT Lead rarely curtailed discussion even when it appeared to lose focus, or when discussion went "round in circles" (CNS, Haematology 1, interview). Long pauses and silences often created a sense of delay and a considerable amount of time was spent during the meeting searching for the information needed to make a decision. A number of the team mentioned during interviews that the meeting could be better organised, and argued that it was the MDT Lead's role to move discussion on more quickly. Even the MDT Lead himself acknowledged that there was scope to run the meeting more efficiently:

I think some of the very simple things could be hammered out quicker. On our busy days you can, it depends on who is presenting. Somebody has seen the patient and there is too much information for what is a very simple problem. And you could just say "this is the diagnosis, early stage CLL, watch and wait" and everybody says "absolutely fine" and you don't need to know how they presented and what their comorbidities are because it is all irrelevant. (MDT Lead, Consultant Haematologist, Haematology 1, interview)

In addition, the inclusive approach adopted by the MDT Lead during the meeting was not always in itself sufficient to encourage lower status members of the team to contribute to discussion. Even in this team, the MDT Lead argued that there was scope for greater CNS involvement (although this view was not expressed by the CNS interviewed in this team):

Sometimes there's less input - the nursing input, whether they think patients are able to cope with the treatment. (Consultant Haematologist, MDT Lead, Haematology 1, interview)

Although the emphasis on efficiency in the Haematology 2 and Gynaecology teams appeared at times to inhibit lower status contributions, analysis of the MDT Lead's approach to chairing the Haematology 1 meetings suggests that there are also some benefits to keeping the meeting focused and purposeful. In addition, it has indicated that a willingness from the MDT Lead to incorporate the views of lower status members of the team is not necessarily in itself sufficient to ensure multidisciplinary discussion.

7.2.4 Diffuse leadership: the Skin MDT meeting

The meeting atmosphere

Based on the observation data the Skin MDT meeting appeared to have a relaxed and friendly atmosphere. In part, this was because meetings regularly started late, and attendees tended to appear at different times throughout the meeting, with others leaving early. This reflected the view of the MDT Lead that people should not have to sit in on parts of the meeting that were not relevant to them.

The observation data also demonstrated that there were good relationships between members of the team across the different specialities, and there was often a lot of humour during the meeting. It was notable that this was the only team where all the key words used by interviewees to describe the atmosphere in MDT

meetings had positive connotations, including “*respectful*” (CNS, interview), “*friendly*” (Consultant Medical Oncologist, interview), and “*cordial*” (Consultant Dermatologist, interview).

The role of the MDT Lead

The Skin MDT meetings were not easily categorised by assessments of ‘structure’ or ‘efficiency’. In part, this was because there were distinct parts to the meeting and the style of leadership varied between these. While the MDT Lead, a consultant oncologist, was evidently in control during the discussion of patients with a diagnosis of melanoma, he visibly stepped back during the second half of the meeting when the team discussed squamous cell carcinoma and basal cell carcinoma cases. Although there was no dedicated chair during this period, in practice the position was often filled by one of the consultant dermatopathologist or pathologists, who each brought their own approach. This more informal arrangement meant that at times there was little central control over the meeting.

As a result it was common for subgroups to form, and for these subgroups to be engaged in separate conversations while a patient was being discussed. In some cases a decision was made between two or three individuals rather than by the group as a whole. However, overall there tended to be a wide range of participation, and in general, all specialties contributed at one point or another during the meeting. This reflected the perception of the MDT Lead, who described decision making in the MDT meeting as a democratic process, which incorporated the views and opinions of different members of the team:

The game plan that we come out with is one that generally speaking I think reflects what the opinions in the room are. (MDT Lead, Consultant Medical Oncologist, Skin, interview)

This view was also supported by the CNS, who acknowledged that while there were individuals who had a more influential role, there was scope for other members of the team to contribute as well:

CNS: People seem to listen to each other. And I think it's a fairly fair discussion. I think patients who are discussed there get a good hearing.

Interviewer: ok, and does everyone get involved?

CNS: most people do....I suppose it depends who you're discussing, no, I would say most people feel pretty comfortable at adding their... I mean it's certainly dominated by certain people, [Consultant Medical Oncologist], [Consultant Plastic Surgeon], and [Consultant Dermatologist] I would say are the major people. But you know [they] probably carry out most of the major work as well to be honest. (CNS, Skin, interview)

It was notable that the perception that there was a willingness within the team to listen to the views of others was echoed by CNSs in both Skin and Haematology 1, although not in Gynaecology or Haematology 2. As in Haematology 1, the MDT Lead in Skin adopted a number of specific behaviours that appeared to create an impression of willingness to listen. First, his physical positioning signalled a desire for engagement. Although he sat in the front row, he was very dynamic, swivelling round during discussions and maintaining eye contact with those behind him as well as the diagnostic consultants who sat at the front of the room. He verbalised his desire for an inclusive forum which incorporated the views of the whole team during interview:

I think the things that work well for the Skin MDM in particular are that I think it's quite a friendly meeting. So there's a good, open atmosphere. So people can feel free to express their views. I think there's good, how shall I put it, involvement by all parties so people do feel free to give

their opinions, ask questions. And I think that's important. (MDT Lead, Consultant Medical Oncologist, Skin, interview)

This more open approach to decision making was emphasised by the fact that in this team responsibility for recording the decision for each patient was devolved to the individual who had presented the case:

Everyone has a responsibility to present their patient and the responsibility for taking down or for following up the management decisions. (Consultant Dermatologist, Skin, interview)

A commitment to open decision making was also apparent in the MDT Lead's approach to questioning, and he often explicitly sought consensus or alternative perspectives from other members of the team using phrases such as: "are you happy?", "do you want me to...", "alright is that agreed?" or "is that ok?" (MDT Lead, Consultant Medical Oncologist, Skin, observation field notes). While some of these behaviours were also evident in Haematology 2, a key difference was that in Skin, there were also specific prompts provided for the CNS in particular to contribute, either with verbal or non-verbal cues:

Consultant Medical Oncologist (MDT Lead): [Patient] is a chap who we are tee-ing up for the Avast trial so this is a staging CT scan head chest abdo pelvis, past history of melanoma. Where was his primary? [physically turning to CNS]

CNS: it was on his leg

Consultant Medical Oncologist (MDT Lead): yeh on the leg

CNS: he had a groin clearance and positive nodes

(Skin, observation transcript)

As this example illustrates, contributions from the CNS were not restricted to psychosocial information, but also incorporated general information about a patient's disease, or the treatment they had received to date. When prompted by the MDT Lead, the in-depth knowledge spanning both clinical and patient centred information held by the CNS enabled her to participate in discussion even where the focus was on clinical issues.

The leadership style adopted by the MDT Lead could therefore be seen to create a sense of respect for the information provided by the CNS. These contributions were also followed up by the MDT Lead on a number of occasions with explicit agreement or support, adding to the impression that they were valued:

CNS: I think they need a discussion at least about radiotherapy first because that's what they are focused on at the moment

Consultant Medical Oncologist (MDT Lead): ok so do that first ok
(Skin, observation transcript)

This tended only to happen for the melanoma cases however, and not for the large number of squamous cell carcinoma and basal cell carcinoma cancer cases discussed by this team in the second half of the meeting. As noted previously, the approach to these cases was different and often emphasised the diagnostic aspect of decision making, with limited input from lower status members of the team. This reflected the lower risk of these cancer cases, in comparison with melanoma cases:

I mean some of them [basal cell carcinomas] are horrendous, but it's rare...in the world of cancer they're not massively, I mean it's important that they are treated, but there are very few that are actually serious.

(CNS, Skin, interview)

This meant that during the second half of the meeting when these cases were presented there was much less discussion, and there was more emphasis on efficiency: “*come on, let’s crack on*”, “*come on!*” and “*ok, whatever*” (Consultant Dermatopathologist, Skin, observation field note). In this context there was little time spent discussing how or why a specific decision had been made. This may have been a clinically appropriate and efficient approach to decision making for lower risk cases. However, what is interesting is the contrast between discussion of these cases and melanoma cases, which illustrates the importance of leadership behaviour on contributions from lower status members of the team. In Skin, this was particularly the case for the Plastic Surgery StRs, who were not necessarily familiar with the protocols used by the MDT, and had less experience of the decision making process:

I think it’s quite tricky for the plastics registrars if they haven’t got consultant guidance. Because especially for the likes of me, who you know, attends 90% or whatever of the meetings. I’ve heard the discussion so many times I sort of know what they are going to say.
(CNS, Skin, interview)

One StR described how difficult it was to follow what was happening in the meeting, particularly when he was not familiar with the patient he was required to present. When decisions were made rapidly, without an explanation of the protocols or the rationale behind them, some of the StRs in the team visibly struggled to keep up with proceedings. This contrast is interesting because it highlights that it is possible to adopt a different approach - and encourage more or less participation amongst lower status groups - within the same meeting.

7.2.5 Summary

The importance of leadership behaviour as a moderating factor on the effects of status hierarchies was highlighted in my theoretical framework. The analysis above

builds on this by demonstrating the range of different leadership behaviours evident in the four teams I observed and considering their role in terms of multidisciplinary discussion.

In the Gynaecology team where an average of 35 patients were discussed over a period of over two hours, the MDT Lead emphasised the importance of efficiency. However, when combined with a lack of structure in the meeting this meant that lower status groups could at times feel marginalised from discussion.

In Haematology 2, although there were far fewer patients to discuss (and a correspondingly shorter meeting), the MDT Lead also prioritised efficiency in the meeting. Although a clear structure and focus during discussions meant that individuals were not ignored during the meeting, the priority given to clinical (as opposed to patient centred) information meant that verbal cues from the MDT Lead were not necessarily interpreted in the same way by different members of the team. The meeting was described by a CNS in this team as a clinical meeting, which provided little opportunity for nursing input. This suggests that a seemingly inclusive behaviour, in this case, general requests for contributions from the MDT Lead, was not necessarily sufficient on its own to encourage lower status groups to contribute.

In contrast, in Haematology 1 and Skin, the MDT Leads adopted a more inclusive style of chairing. Specifically, this included directly referring to lower status members using both verbal and non-verbal cues as a way of soliciting contributions. However, in Haematology 1 when the MDT Lead did not curtail discussion even when it appeared to lose focus, or when time spent searching for information resulted in silences or pauses during the meeting, this led to perceptions of inefficiency. It is important to note that although the average number of patients discussed and the average length of meetings in Haematology 1 and 2 were similar, these average figures mask variation in individual discussions and between

meetings. This is reflected in the fact that the range of patients discussed by Haematology 1 was narrower than in Haematology 2, but the range of meeting duration was wider.

The style of leadership displayed by the MDT Lead in Skin highlighted that it was possible to adopt different leadership styles within the same meeting. In Skin, the team discussed an average of 47 patients over a period of around an hour and a half. This meant prioritising efficiency at some points but facilitating contributions from lower status groups at others. However, a key difference between the Skin team and the others was the obvious clinical differences within the case mix, between melanoma cases and squamous cell carcinoma and basal cell carcinoma cases. This enabled a much clearer distinction to be made between the different disease types and subsequent time spent on discussion.

7.3 Initial case presentations

Building on this analysis it is useful to return to the different types of discussion in MDT meetings that were outlined in the previous chapter. As noted, there were cases where an extended multidisciplinary discussion was not felt to be necessary because it would not alter a decision. In these instances, behaviours that accentuated the effects of the status hierarchy could be seen as a way of using time in the MDT meeting more efficiently. However, on other occasions it was important for teams to moderate the effects of the status hierarchy in order to incorporate both higher and lower status contributions. One of the clearest ways in which members signalled a distinction between these different types of cases was through the initial case presentation.

As mentioned in the previous chapter, the initial case presentation was the point at which a verbal summary of the patient to be discussed was presented to the rest of the team. It was one aspect of the meeting that was relatively open to all professional groups, higher and lower status. However, an initial case presentation

could either open up discussion, or it could serve as a means to close down or limit discussion to consultant medical, surgical and diagnostic professionals:

I mean, you can talk can't you and obviously encourage discussion by how you present the case, or you can talk and obviously discourage discussion...that's quite important because you know people do respond to these things. (Consultant Gynaecologist, Gynaecology, interview)

Although the presentation of clinical cases is a skill taught from an early stage of medical education (Olaitan et al., 2016), the way patients were presented in the MDT meeting varied between teams. It also varied within teams, depending on the individual presenting and the issue for discussion. Three categories were identified in the analysis:

- 1) cases where there was no formal presentation
- 2) case presentations where the emphasis was clearly on the clinical features of the disease or treatment, and
- 3) case presentations which adopted a holistic perspective that incorporated information about both the patient as a person and their disease.

To give an indication of the frequency of these different types of presentation, Table 15 provides a summary of presentation type based on the transcript of a single full meeting from each of the four teams. The analysis presented in the text below the table draws on these data, as well as data from the field notes of all 122 MDT meetings observed, and the professional interviews.

Table 15: Frequency of case presentation type

	Number of presentations	No formal case presentation	Clinically focused case presentation	Holistically focused case presentation
Gynae	31	7 (23%)	22 (71%)	2 (6%)
Haem 1	13	2 (15%)	10 (77%)	1 (8%)
Haem 2	11	1 (9%)	8 (73%)	2 (18%)
Skin	39	9 (23%)	25 (64%)	5 (13%)

7.3.1 No formal case presentation

During the observation period, in a small proportion of cases in each team, patients were raised for discussion in the meeting without any sort of formal case presentation. This was more likely to happen in the Skin and Gynaecology teams than in either of the Haematology teams. Where there was no formal case presentation, this was often because a patient had previously been discussed by the team, or because no active treatment was required (or treatment had already been initiated). In the Skin cancer team for example, basal cell carcinoma cases were not always preceded by a formal case presentation, particularly when this involved the routine reporting of a complete excision (the removal of skin tissue with a margin that is clear of disease):

Consultant Dermatopathologist: This was a curette defined excision she also had a fibro-epithelial polyp shaved off

Consultant Dermatologist: this is the right nasal labial fold

Consultant Dermatopathologist: ...it says here right cheek

Consultant Dermatologist: ok...any tumour in it?

Consultant Dermatopathologist: no

Consultant Dermatologist: ok so likely complete...there was no tumour in that

Consultant Dermatopathologist: correct

[the team move on to the next patient]

(Skin, observation transcript)

As illustrated in this example, the patient's name was not verbalised, although the dermatologist described the procedure undertaken. Following this it was established very quickly that there was no tumour in the specimen and the team immediately moved on to the next patient.

In cases such as these the treatment protocol was for patients to be routinely followed up as a matter of course: they did not need further surgical treatment if the lesion had been successfully removed. In addition, as noted above, basal cell carcinoma cases were usually less serious than melanoma cancers, and were therefore dealt with much more quickly during the MDT meeting.

In both Haematology teams the two full observation transcripts and field notes from all meetings indicated that the absence of a formal case presentation was the exception rather than the norm. For example in one case in Haematology 1, there was no initial presentation given as the team realised immediately that the scan due to be reviewed was not ready. Although a brief discussion subsequently took place about whether or not the patient in question should proceed with her scheduled chemotherapy, the formal presentation of the case and review of the scan was deferred until the following week.

There were some exceptions to this in the Gynaecology team however. In this team the lack of a proper case presentation was specifically cited as a barrier to participation during the interviews, particularly in cases where other members of the team did not know the patient being discussed. In these cases, the lack of a presentation was seen to be problematic because it was then very difficult for other members of the team to contribute to the decision making process in a meaningful way:

The biggest problem from my point of view is that I often don't know all of the patients...[and] unless you know the background to the case well it's very difficult to disagree. (Oncology StR, Gynaecology, interview)

This impacted on multidisciplinary discussion more generally, and was not limited solely to lower status professionals. However, as one consultant gynaecologist noted, if the team genuinely wanted to gather opinions from the full range of professionals in the team, it was essential to make an effort to include everyone, starting with a clear presentation of each case:

They're [consultant gynaecologists] not mindful of the fact that many people don't know the patient at all, that if you want people to be involved you have to make an effort to involve them. (Consultant Gynaecologist, Gynaecology, interview)

At times, this reflected the practical realities of a specialist MDT receiving referrals from other MDTs in the surrounding area. This was because in some cases no one in the team had met the patient when they were being discussed:

Consultant Gynaecologist 1: oh this is this lady who oh god she's got something to do with [a doctor at another Trust]...he's been texting me asking me what's happening I said I'm sure she's got a plan so she's having her surgery tomorrow so...I don't know why they were all getting anxious about it

Consultant Gynaecologist 2: a VIP or?

Consultant Gynaecologist 1: I don't know I didn't meet her in clinic...I think we should we should meet these new patients, I feel.

Just so we know what is going on

Consultant Gynaecologist 2: yeh, absolutely

(Gynaecology, observation transcript)

However, it is worth noting that in the other teams – including the other specialist MDTs in Skin and Haematology 2, which received external referrals from surrounding MDTs - if a patient was not known to anyone present, discussion was usually either deferred, or reference made to the patient's clinical notes to provide some sort of context for a discussion.

In the main then, lack of a case presentation could be seen as an attempt to minimise the time spent in the MDT on cases where there was little need for extended discussion, for example the routine reporting of pathology results or where there was no active treatment required. In the Gynaecology team however, there were also occasions where lack of a case presentation was seen as a barrier to multidisciplinary discussion because it excluded those who did not know a patient from contributing.

7.3.2 Clinically focused case presentations

It was much more common across all teams for cases to be introduced with a summary of the clinical aspects of the disease and the patient's symptoms:

Consultant Haematologist: this is a man who is 80 who presented with a CD5 negative lymphoproliferative disorder with 10-20% marrow involvement multiple small volume paraaortic and mesenteric adenopathy [swollen lymph nodes] and he had a spleen of 22cms he had a low platelet count which was his only cytopenia [reduction in number of blood cells] and he was given rituximab mono-therapy [chemotherapy] I think 2 years ago in May 2009 which had little impact actually on the eh it improved it from about 60 he was going to have an elective procedure to about under 100 the main issue had been that he had new hepatomegaly [enlarged liver] and a scan was organised by the hepatobiliary surgeons.
(Haematology 2, observation transcript)

As illustrated in this particular example, in contrast to the cases where there was no formal presentation, a clinically focused case presentation provided clarity about the disease and a focus for discussion. Cases presented in this way often clearly framed the issue for discussion as medical, surgical or diagnostic: *“so this is just really reviewing her most recent MRI”* (Consultant Medical Oncologist, Gynaecology, observation transcript).

This type of case presentation was common for patients newly diagnosed with cancer, and who were being presented to the team for the first time or early in their treatment pathway. In this context, using the initial case presentation to focus discussion on key medical, diagnostic or surgical issues could help the team to maximise efficiency by prioritising input from those with the relevant expertise. This left little scope for those with patient centred information to contribute. However, this was not necessarily always seen to be problematic:

There are some occasions when people bring genuine questions. “What should we do?” “Where should we go next?” “I wondered if”. But those are less common. And that’s not necessarily a bad thing, I think you know, most of our treatment is relatively protocol driven. (Oncology StR, Gynaecology, interview)

In the majority of cases presented in this way, therefore, there was little or no input from CNSs and StRs. However, although the majority of clinically focused case presentations did not lead to contributions from lower status members of the team, there were occasions in all teams where they did. There were a number of behaviours adopted by higher status members of the team which made this more likely. In some cases, a higher status member signalled the challenging nature of a case during the initial presentation, using words such as: *“unusual”* (Consultant Gynaecologist, Gynaecology, observation transcript), *“complicated”* (Consultant

Haematologist, Haematology 2, observation transcript), or “*strange*” (Consultant Medical Oncologist, Skin, observation transcript).

This signalling appeared to provide an opening for multidisciplinary discussion, including an opportunity for lower status members of the team to contribute. In these cases, the information shared tended to relate to a patient’s disease or treatment pathway (rather than necessarily patient centred information per se). In contributing this type of information, lower status groups were able to act as a collective memory or knowledge source for the team. In doing so they could help to facilitate the decision making process:

Consultant Gynaecologist: ...she’s a little bit unusual we discussed her last week...it was all very complicated but she’d been to see [another doctor]...she said he said that she was normal so they came back here she said and so that’s so I’ve asked for the pathology actually to come down because it’s a little bit unusual and I think we should look at it here...I think we were hoping to have treatment done today

CNS: she’s had her GFR [a test used to check how well the kidneys are working] she saw the oncologist today
(Gynaecology, observation transcript)

Another way in which higher status members of the team provided openings for lower status contributions following a clinically focused case presentation was through the use of questioning. Where there was no ‘signal’ in the initial case presentation, there were a number of examples of more specific and direct attempts to elicit contributions from other members of the team later in the discussion:

Consultant Gynaecologist: so why is she an inpatient?

StR: so I think she was transferred from [another Trust] because she had a lot of ascites so I think they were just working her up
(Gynaecology, observation transcript)

This happened in all teams, and provided a tangible opening for those who knew the patient and were familiar with the treatment they had received, or were scheduled to receive. These examples illustrate that even in cases where the focus was on clinical aspects of the disease, lower status groups were able to use their knowledge to contribute to the discussion. This knowledge was not only restricted to psychosocial information. Instead, as a result of regular contact with a patient, CNSs and StRs also at times held information about a patient's disease, symptoms and treatment and tests. They were often more familiar with these details than some of the consultant members of the team.

7.3.3 Holistically focused case presentations

On a small number of occasions in all four teams a case was presented to the MDT meeting holistically, providing an overview of both the patient and their disease to frame any subsequent discussion:

Consultant Gynaecologist: she [is] rather a challenge to manage because she is very scared of hospitals and has gone away before finishing her test but she's had a long history of just feeling vaguely unwell and then presented with shortness of breath...when I saw her in clinic last week she was very symptomatic and just uncomfortable in her abdomen it felt like she had large volume ascites [accumulation of fluid in the abdomen] so we admitted her for symptom control but actually the scans showed that she didn't have a lot of ascites it was mainly omental cake [where the membrane lining the abdomen is abnormally thick] and we've done

the scans and I think we've done an omental biopsy as well so if we could look at her scans first.

(Gynaecology, observation transcript)

In this example, the consultant gynaecologist presented information about the patient's psychosocial wellbeing, describing her fear of hospitals before going on to outline her current symptoms. It is worth noting that this was still a relatively brief presentation, lasting for just under a minute.

Most holistic presentations led to multidisciplinary discussions: in this example, both the CNS and the psychologist were actively involved in the subsequent discussion. Contributions in these cases tended to be psychosocial in nature, for example relating to a patient's state of mind, their preferences for treatment, or possible sources of support for those struggling.

The smaller number of holistic case presentations is in line with the findings from the previous chapter, which suggested that full multidisciplinary discussion was not necessarily desirable, or feasible, for every patient on the MDT patient list. Instead, holistic discussion, which incorporated patient centred information, tended to be particularly important where patients had limited treatment options, or in cases where there were concerns about a patient's ability to cope with treatment. The smaller number of holistic case presentations could therefore be seen to reflect attempts to prioritise certain cases for full multidisciplinary discussion.

In these cases, a holistically focussed case presentation could frame the issue in a way that encouraged participation from lower status members of the team. In particular, a signal from a higher status member was one way of providing an opening for these contributions. This was evidenced when higher status members explicitly sought advice from others in the team: *"now this is an interesting case I'd value your views"* (Consultant Clinical Oncologist, Gynaecology, observation

transcript). This approach provided openings for lower status members to contribute:

CNS: she just finds it extremely difficult I think she thinks by having treatment she's doing something for herself
(Gynaecology, observation transcript)

There were some exceptions to this however. In two haematology cases (one from each team) information about the patient as a person was shared during the case presentation in order to emphasise the *lack* of other symptoms or problems: “*previously very fit and well, active, went to the gym three times [a week]*” (StR, Haematology 2, observation transcript), or “*there was nothing in the history...he's a mountain biker, does spinning classes*” (Consultant Haematologist, Haematology 1, observation transcript). In these cases, the aim of sharing information about the patient appeared to be to emphasise their strengths in relation to treatment. It was therefore perhaps unsurprising that in these cases the initial case presentation did not lead to wider multidisciplinary discussion.

The other exception where a holistic case presentation did not lead to input from lower status members of the team – even when there was an explicit prompt from a higher status member of the team – was when a lower status member of the team had not met the patient in question:

Consultant Gynaecologist 1: it [a mass identified on the scan] needs out

Clinical Oncologist: it's very suspicious

Consultant Gynaecologist 2: I've seen her again today but she's really reluctant to have surgery

Consultant Gynaecologist 3: is she? [sounds surprised]

Consultant Gynaecologist 1: ...is she symptomatic?

Consultant Gynaecologist 2: she is symptomatic she's had long standing left sided pain and it was just getting worse

Consultant Gynaecologist 1: ...which, who's she under which one of you has seen her [to the CNSs]?

CNS: I'm not sure I haven't seen her

Consultant Gynaecologist 1: ...does she need to see one of our psychology colleagues to help her with her decision making?

Consultant Gynaecologist 2: no she's signed a consent form today I had a chat with her

(Gynaecology, observation transcript)

In some cases therefore, a consultant was the only member of the team who had met the patient. In these cases, they provided the patient centred information both during the initial case presentation and then subsequently throughout the discussion. Overall however, it was more common for lower status members of the team to provide this kind of information in response to a holistic case presentation.

7.3.4 Summary

To summarise, there were different approaches to the initial case presentation and this appeared to have an impact on the extent to which lower status members of the team contributed to the subsequent discussion. In general, the lack of a clear case presentation made it more difficult for anyone in the meeting who had not met the patient to contribute constructively to the decision making process. This was not always necessarily problematic, for example, in cases that could be managed according to evidence-based protocols. However, in the Gynaecology team the failure to present a case properly was attributed with impairing multidisciplinary discussion, and making it more difficult for CNSs and StRs to contribute.

A clear clinical or holistic initial case presentation could ensure that everyone in the meeting was aware of key issues relating to the decision that needed to be made. It also seemed to enable teams to prioritise the contributions of particular groups by signalling the nature of the issue to be considered. In the examples observed, it was more likely that a holistic case presentation would draw in contributions from CNSs or StRs than a clinically focused presentation would. Nonetheless, a clinically focused presentation did not necessarily exclude contributions from lower status members of the team. Similarly, a holistic presentation did not guarantee their input. Specific behaviours from higher status members of the team, including the use of signalling during a presentation, and direct questioning, also made contributions from these groups more likely.

7.4 Chapter Summary

While the literature on cancer MDTs has highlighted the existence of inequalities in participation during MDT meetings (Lanceley et al., 2008, Kidger et al., 2009, Lamb et al., 2011b, Raine et al., 2014a), much less consideration has been given to the specific factors that inhibit or facilitate contributions from lower status groups. By exploring the decision making process in these four MDTs, this chapter has increased our understanding of the way that the physical layout of the meeting, the leadership style of the MDT Lead, and the initial case presentation can impact on multidisciplinary discussion. Table 16 (p. 199) summarises the factors that inhibited multidisciplinary discussion, and the contribution of lower status groups. Those that encouraged multidisciplinary discussion are summarised in Table 17 (p. 200).

Of course, a key point already made is that for some discussions, input from lower status groups may not have made a difference to the outcome or final decision anyway. The factors described above that limited contributions from lower status groups are therefore not necessarily in and of themselves problematic.

Nonetheless, it is important to identify these factors because the literature suggests that behaviours that accentuate the effects of the status hierarchy are often unintentional. As a result, even leaders who want to encourage other team members to contribute may not behave in ways that demonstrate this (Morrison, 2011). If MDTs are to incorporate the views of lower status groups when they are important therefore, they must be cognisant of the range of factors that can potentially inhibit them.

Before concluding this chapter, it is also important to recognise that although status hierarchies clearly played an important role in the decision making process in these four cancer MDT meetings, regardless of the team environment or context, some individuals are more likely to speak up than others. This suggests that as well as status, factors such as gender, personality or disposition may also play a role in levels of participation in MDT meetings. For example, individuals who display high levels of extraversion have been shown to be more likely to speak up (Morrison, 2011, Bienefeld and Grote, 2013). In addition, some of the differences described between the four MDTs may in part reflect differences in specialty and case load, although the fact that there were such marked differences between the two haematology teams suggests that this point should not be over-emphasised. Nonetheless, in the Skin team for example it was possible to clearly distinguish between different approaches based on disease type in a way that may not necessarily be possible in other specialities.

Table 16: Summary of factors that inhibited multidisciplinary discussion

Factor	Reason for impact	Influenced by	Team
1. Hierarchical seating arrangements	Competition for space can exclude lower status groups sitting at the back of the room	Size of team	Haematology 2 Gynaecology (but challenged)
2. MDT Lead prioritises efficiency during discussion	Verbal cues suggesting a lack of willingness to listen can create a sense of futility about value of contributing	Accentuated by a lack of structure during discussion	Gynaecology Haematology 2
3. MDT Lead does not provide clear structure during discussion	Can marginalise lower status contributions	Accentuated by focus on efficiency during discussion	Gynaecology Skin (SCC and BCC cases only)
4. MDT Lead combines chairing role and documenting of decisions	Can prioritise recording information over discussion	The need to ensure accuracy of information recorded	Gynaecology
5. No formal case presentation given when introducing patient for discussion	Difficult to contribute for those who have not met the patient being discussed	Reason for discussion Which professionals have met the patient being discussed	All
6. Clinically focused case presentation used to introduce patient for discussion	Framing issue as medical, surgical or diagnostic can exclude patient centred information	Reason for discussion Signalling or questioning by higher status individual	All

Table 17: Summary of factors that facilitated multidisciplinary discussion

Factor	Reason for impact	Influenced by	Team
1. Non-hierarchical seating arrangements	Symbolic importance Creates opportunities to contribute	Size of team	Skin Gynaecology Haematology 1
2. Support for lower status groups from a third party	Can encourage lower status to work together to contribute	Role of third party (in this case Psychologist)	Gynaecology
3. MDT Lead solicits contributions directly from lower status individuals with verbal and non-verbal cues	Can indicate that contributions are welcomed and valued	Needs to be directed specifically at lower status groups	Skin (CNS) Haematology 1 (CNS and StR)
4. Holistically focused case presentation used to introduce a patient for discussion	Framing issue in order to encourage sharing of patient centred information	Which professionals have met the patient being discussed	All

Chapter 8. Lower status contributions: successful approaches

The previous two chapters have explored the way that status hierarchies unfold in MDT meetings, as well as the factors that facilitate or inhibit multidisciplinary discussion. The focus of this chapter will be on the contributions made by those who participated least in the MDT meeting. The aim is to address research question three: *what approaches are used by lower status groups in order to contribute during MDT meetings?*

In order to address this aim, this chapter presents the results of Thematic Analysis II, which was based on data from 88 case discussions where lower status groups contributed during the observation period⁵. It describes five approaches used by lower status groups to contribute: sharing information, asking questions, providing practical suggestions, framing, and using humour. It also considers their impact on three key intermediary processes identified during the analysis: prompting discussion, influencing a treatment plan, and facilitating team working. As demonstrated in my theoretical framework these processes are important because robust discussion, consideration of alternative or diverse viewpoints, and good team work, are associated with high quality decision making (Larson et al., 1998, Lanceley et al., 2008, Lamb et al., 2013b, Raine et al., 2014b).

The frequency with which these approaches were used, and their impact on decision making processes across the four teams, are summarised in Table 18. A note on the use of frequencies is provided in Box 5. This chapter will consider each of the five approaches in turn, exploring when and how they were used, and considering why they were successful.

⁵ The figure of 88 case discussions refers to unique sections of discussion, each relating to a single patient, selectively transcribed from the audio of a full MDT meeting

Table 18: Summary of approaches used and outcomes for lower status contributions

<i>APPROACH</i>	<i>OUTCOME</i>			
	<i>Prompts discussion</i>	<i>Influences treatment plan</i>	<i>Facilitates team work</i>	<i>Total</i>
Sharing information	65	23	19	107
Asking questions	21	12	0	33
Practical suggestions	5	18	0	23
Framing	14	9	0	23
Using humour	0	8	12	20

Box 5: A note on frequencies

Given the lower rates of participation amongst CNSs and StRs, the analysis for this chapter draws on a much smaller dataset than the previous two chapters. To ensure transparency, I use figures to illustrate the frequency with which I observed each of the five approaches being used. This enables me to demonstrate the patterns observed, and provide readers with a sense of scale.

However, there are limitations to using numerical data in qualitative research. The concept of frequency generally holds less importance in this context, when a single example is potentially as useful as multiple examples when the goal is to understand an underlying process (Mason, 2010). Also, the frequencies presented here are based on coded examples theoretically sampled from a larger purposive sample. In practice therefore a code assigned more frequently in one team could simply reflect differences in the amount of data collected.

Nonetheless, the differences in data collected between Skin, Haematology 1 and Haematology 2 were minimal. The exception to this was Gynaecology, where the observation period was shorter, and fewer patients were discussed overall. It is possible that lower frequencies of lower status contributions in Gynaecology could reflect the shorter observation period, albeit offset by the longer weekly meeting duration (Table 19, p. 204).

However, the shorter observation period in Gynaecology does not fully explain differences in the patterns of participation observed between the teams. While StRs in Gynaecology contributed successfully on fewer occasions than in any other team, the same was not true of CNSs. Despite the shorter observation period, CNSs contributed successfully on more occasions in Gynaecology than they did in Haematology 1 and Haematology 2 (Table 19, p. 204). This suggests that the length of the observation period, and the total number of cases discussed, were not the defining influence on the patterns of participation identified.

Table 19: Summary of observation data by team and frequency of contributions

Team	Meetings observed (weeks)	Patients discussed (number)	Meeting duration (hours)	Case discussions*	Successful contributions**		
					StR	CNS	Total
Gynae	18	324	2.5	17	5	33	38
Haem1	38	390	1	20	30	28	58
Haem2	35	371	1	20	35	10	45
Skin	31	384	1.5	31	6	59	65

* The number of case discussions selectively transcribed for Thematic Analysis II.

**Successful contributions coded within the selective transcripts only.

8.1 Sharing information

The approach used most frequently by lower status groups to contribute across the four teams was sharing information. **Chapter 6** demonstrated clear differences in levels of participation between higher and lower status groups. However, lower status groups did share information during the MDT meeting, albeit less frequently than other members of the team. From the sample of 88 case discussions where lower status groups contributed, there were 107 occasions across the four teams when CNSs and StRs shared information as a way of contributing to the decision making process⁶ (Table 18, p. 202).

This included contributions based on clinical information about a patient's disease, symptoms or treatment, and contributions based on information predominantly about the person diagnosed with cancer, including their preferences for treatment, psychosocial wellbeing, or information about their family or social circumstances. I discuss both of these approaches in relation to their impact on the decision making process in more detail below.

⁶ The number of occasions on which a specific approach was coded can be greater than the 88 discussions transcribed because one or more individual(s) could contribute on more than one occasion during each discussion, i.e. during the course of a discussion a CNS could ask questions on three occasions and an StR could ask one, giving four occasions of 'asking questions' in one discussion.

8.1.1 Sharing clinical information about a patient's disease or treatment

As the most commonly used approach to contribute in all four teams, sharing clinical information about a patient's disease, symptoms or treatment impacted on the decision making process in three ways. It prompted further discussion in all four teams, and facilitated teamwork and influenced treatment plans in Haematology 1, Haematology 2 and Skin (Table 20).

Table 20: Frequency of sharing clinical information by team and outcome

Sharing clinical information	Case discussions*	Prompts discussion	Influences treatment plan	Facilitates teamwork	Total
Gynae	17	6	0	0	6
Haem1	20	13	5	5	23
Haem2	20	15	2	7	24
Skin	31	14	4	3	21
Total	88	48	11	15	74

* The number of case discussions selectively transcribed for Thematic Analysis II

Prompting discussion

Information sharing could prompt discussion in the MDT meeting by highlighting that a lower status member of the team held unique information. This provided an opportunity for higher status individuals to seek out further information about a patient's disease or prior treatment before making a decision. To illustrate, the excerpt below follows on from a presentation by the MDT Lead of a patient with relapsed disease. The StR spoke up following this presentation to tell the team that the patient had been admitted as an inpatient earlier that day:

StR: she's actually an inpatient today she came in this morning

Consultant Haematologist 1: because?

StR: she's got a temperature...she got a call last night telling her to come in...

Consultant Haematologist 1: so she's not neutropenic?

StR: no

Consultant Haematologist 1: has she got PICC [peripherally inserted central catheter]?

StR: yeh that's come out I told them to take that out
(Haematology 1, observation transcript)

Sharing clinical information that was not necessarily known to other members of the team was therefore a way of prompting discussion as new information was fed into the decision making process. Although it was more common for StRs to share clinical information in this way, CNSs in all four teams also used this approach on 20 occasions:

Consultant Radiologist: if you look at the amount of oedema around this deposit on the right there's been an increase compared with the baseline CT of November
CNS: that's on steroids as well isn't it
Med-Onc: yeh...clinically he's deteriorating quite quickly...so I think it's really palliation
(Skin, observation transcript)

In this example, the CNS's reminder that the patient in question was on steroids emphasised the significance of the finding that the scan showed disease progression, prompting the medical oncologist to contribute information about the role of palliation. A potential explanation for the success of this type of contribution was that it provided a means for lower status individuals to act as a 'collective memory' for the team, by sharing their detailed knowledge of a patient:

I mean obviously I can't know every single patient, because there's 50 of them on the list. But...certainly the melanoma patients I meet them at diagnosis and I see them through... I generally know what's going on with them. From diagnosis through surgery, and then into oncology, possibly palliative care. Generally...I know where patients are. So I can, I can give information to discussions. (CNS, Skin, interview)

Influencing a treatment plan

In addition to prompting discussion, on 11 occasions across the 88 case discussions, information shared by a CNS or an StR resulted in a change to the treatment proposed for a patient. Some changes were relatively minor - for example a decision not to prescribe a patient a laxative alongside their chemotherapy after the team were informed by an StR that these had previously made the patient vomit. However, others were more fundamental, including decisions about whether a patient should be admitted to hospital, or whether or not to proceed with a particular course of treatment:

Consultant Haematologist: is she going to be fit to go down for her radiotherapy do you think?

StR: not the way she was today, no... she's on HDU [high dependency unit]

Consultant Haematologist: ...so if we cancel her [StR] could we say to [the Clinical Oncologist] we might discuss re-planning her to have to have radiotherapy to her kidney plus her thigh
(Haematology 1, observation transcript)

Sharing this type of clinical information was a way of raising awareness amongst other team members about a patient's ability to tolerate treatment, reflecting their physical fitness or comorbidities. This ensured that teams had up to date information when making treatment plans.

Facilitating team work

Not all information sharing contributions influenced a treatment decision or prompted further discussion. There were also 15 instances where information was shared in a way that facilitated team work.

Sharing clinical information could facilitate team work because it provided a mechanism for supporting a decision made by a higher status member of the team,

and helped to create a sense of a shared team purpose. This is illustrated in the example below, where both the StR and the CNS contributed in a way that supported the decision proposed by a consultant haematologist:

Consultant Haematologist 2: Did he have pamidronate [a type of drug called a bisphosphonate] when he came in?

SpR: he had pamidronate when he came in

Consultant Haematologist 1: ...right. We should probably continue him on IV bisphosphonate through his treatment

Consultant Haematologist 7: when would he be potentially harvestable?

Consultant Haematologist 2: so on the back of his fourth course

CNS: if he comes in next week there is a potential slot

Consultant Haematologist 7: I could see him on Monday

Consultant Haematologist 2: that's great

(Haematology 1, observation transcript)

8.1.2 When was sharing clinical information successful?

The circumstances in which sharing clinical information was a successful approach were shaped by both patient and team factors.

Patient factors

As illustrated in the examples above, and echoing findings from the previous two chapters, lower status groups were far less likely to share clinical information about patients newly diagnosed, and where they had not met the patient being discussed. Instead, StRs and CNSs were more likely to share clinical information about patients who were mid- or post-treatment, because at this stage they had often seen the patient more recently than other members of the team:

StR: so Prof she's coming to see you today at 11 o'clock...but she's still on she's been on steroids for about 10 days now

Consultant Pathologist: she's on steroids?

StR: this biopsy...was done after a week of steroids

Consultant Pathologist: ok well that could account for part of the problem

(Haematology 2, observation transcript)

Lower status groups were also more likely to share information during discussion of patients who had relapsed disease, those who were described as elderly, and those with comorbidities or psychosocial issues that would potentially impact on the treatment decision, such as an inability to give consent:

This lady's on lithium. She's not brilliant. She's very difficult to get information from. She's got very strange affect...If it wasn't for her mental state she'd be very eligible for trials, but you just can't consent her for them. (CNS, Skin, observation field note)

In order to do this however it was essential that lower status groups had unique knowledge to share. As a result, this was not an approach that could be used successfully in all cases.

Team factors

The frequency of sharing clinical information was relatively consistent across teams, with the exception of Gynaecology. In this team there were noticeably fewer instances than in the other three teams (Table 20, p. 205). As discussed previously, it is possible that this reflects the shorter observation period. Alternatively, it may reflect the presence of factors that inhibit multidisciplinary discussion, which were highlighted in the previous two chapters. It is possible that the hierarchical seating arrangements, prioritisation of efficiency by the MDT Lead and lack of structure, which characterised discussions in Gynaecology, made it more difficult for lower status groups to share information in this team than in others.

8.1.3 Sharing information about the patient as a person

In all teams, information primarily about the person, including a patient's preferences for treatment, and their psychosocial wellbeing, was shared less often than clinical information about the disease or treatment. Nonetheless, there were circumstances in which this type of information was shared, predominantly by CNSs, but also on a small number of occasions by StRs. This impacted on the decision making process in three ways: it prompted further discussion, influenced treatment plans, and less frequently, facilitated team work (Table 21).

Table 21: Frequency of sharing patient centred information by team and outcome

Sharing information about patient as person	Case discussions	Prompts discussion	Influences treatment plan	Facilitates teamwork	Total
Gynae	17	8	3	1	12
Haem1	20	6	4	0	10
Haem2	20	1	1	0	2
Skin	31	5	7	3	15
Total	88	20	15	4	39

Prompting discussion

As with clinical information, sharing information about the patient as a person signalled that a lower status member of the team held potentially relevant information. This was a way for lower status groups to establish their credibility. For example, by sharing information in a way that emphasised her experience of supporting a patient with mental health issues through a previous round of chemotherapy, a CNS in Haematology 1 was able to successfully prompt discussion about whether or not the team should proceed with further treatment:

Consultant Haematologist 1: I think the question is whether he would cope [with chemotherapy]...my recollection is he probably, he wouldn't

CNS: ...well, it's difficult because we saw him regularly throughout his [previous treatment]...and he did personality wise he improved

so much on treatment and once he was familiar with us and coming every time

Consultant Haematologist 1: because of the regular, it was probably the regular interaction

CNS: and I had a good rapport with him

Consultant Haematologist 1: ...is he ok with needles and things?

CNS: well we managed every week to get a needle in him and the first few weeks we had to keep explaining why we were doing it and he sometimes would say he didn't and then a bit of convincing he was ok but generally he was fine

(Haematology 1, observation transcript)

Sharing information based on previous experience of supporting a patient through treatment, or as a result of explicitly discussing an issue with a patient prior to the MDT meeting, was a concrete way to present a different perspective to that put forward by other members of the team. This was a key mechanism for prompting further discussion.

Similarly, although they did so less frequently than CNSs, StRs also on occasion shared patient centred information in the MDT meeting. This was another way to prompt discussion when the information being shared was likely to impact in some way on the ability of the team to deliver treatment:

Consultant Haematologist: and why does she need transport?

StR: because she lives alone and doesn't have anyone to get her places

Consultant Haematologist: hmm quite complicated

StR1: yes [laughs]

(Haematology 1, observation transcript)

Influencing a treatment plan

In addition to prompting discussion, CNSs and StRs were also able to influence the decision making process on 15 occasions by sharing information about a patient's preferences or psychosocial wellbeing:

Consultant Medical Oncologist: well if the situation was a little bit more favourable we could offer her the Nicam study in January...the problem is that...it's the Asian population who are more likely to have acral melanomas but it's also the population who also tend to have language problems as well

CNS: she speaks Cantonese, that could be helpful

Consultant Medical Oncologist: yeah

Oncology StR: I'll ring the interpreters

Consultant Medical Oncologist: yeah I think to consent her for the study we will have to have an interpreter...yeah ok that's going to be challenging and then actually getting her up and down to clinic regularly is going to be challenging as well

CNS: as long as she is told when to come and she's not informed by letter she's ok

Consultant Medical Oncologist: ok [pause] when are you planning to see her again in terms of recovery from surgery?

CNS: [her next appointment is on the] 30th

Oncology StR: I remember she was on the ward about two months ago she recovered very well...

Medical Oncologist: ok...Nicam's not going to be open until January so...can we just make a note...I'll arrange to see her [then]

(Skin, observation transcript)

In this example, the information shared by the CNS and StR enabled the MDT Lead to conclude that the proposed treatment option of enrolling the patient in a clinical trial was feasible, despite the fact that the patient did not speak English. This

example also shows how it was possible for lower status groups to ensure that a decision reflected the needs and circumstances of an individual patient by providing essential context:

I've met them [the patients], I know if they live on their own, if they can't get about...I think it's more background information that helps you make a decision: would a patient be able to get in, is this treatment appropriate? How well is this patient? Should this patient be considered for such and such. I have an opinion then. (CNS, Skin, interview)

Facilitating teamwork

Finally, on four occasions a CNS (three times in Skin, and once in Gynaecology) provided information in a way that facilitated team work. This is illustrated in the example below where the team were engaged in a lengthy discussion about how to respond to a patient who was described as deeply confused and anxious. In this situation, the CNS used her knowledge of the patient to support the proposal made by a higher status member of the team and to provide reassurance that the patient was likely to be accepting of the proposed treatment plan:

Consultant Surgeon: so we're probably going to have to decide for her in a way even if that's in as much as pushing her towards [having further surgery]

CNS: I think she'd be happy with that though
(Skin, observation transcript)

8.1.4 When was sharing information about the patient as a person successful?

Patient factors

Lower status individuals shared information about a patient in order to prompt further discussion amongst the team in cases when patients had limited treatment options, or where there were concerns about a patient's ability to cope with

treatment. Sharing information also influenced decisions in cases where a patient was unlikely or unable to comply with recommended treatment, or to attend their scheduled appointments – essentially, where there were potential barriers to the team implementing their proposed treatment plan.

This type of information was also used successfully to influence treatment planning in cases where there was more than one option available for a patient. In these circumstances, knowledge of a patient's preferences could be instrumental in helping the team to choose between alternative treatments. As illustrated in the example below, the CNS's awareness of the patient's preference shaped the choice between surgery or radiotherapy:

Consultant Medical Oncologist: this is a guy with multiple cutaneous metastases...so in terms of quality of life what we've been debating is whether surgery would be a better option or whether we should be thinking about radiotherapy...

CNS: ...the patient's definitely keen on surgery if that's any if somebody can see him just to

Consultant Surgeon: ...we'll see him we can probably resect it

Consultant Medical Oncologist: ...ok so to see to see [Consultant Surgeon]

(Skin, observation transcript)

Team factors

The frequency of examples where lower status groups shared information about the patient as a person was similar across three of the four teams (Table 21, p. 210). The exception in this case was Haematology 2, where there were just two examples of StRs sharing information about the patient as a person, and no examples of a CNS doing so. The low frequency of this approach in this team is perhaps unexpected, given that there were up to ten StRs and five CNSs in Haematology 2, more than in any other team. It does however resonate with the view of the CNS interviewed in

this team, who felt that there was little time in the meeting for her contributions: “I just think you wouldn’t get very far in that meeting” (CNS, Haematology 2, interview).

However, data presented in **Chapter 6** also showed that information about patient preferences was not any less likely to be mentioned in Haematology 2 than in other teams (in 7% of cases, within the range of 5-8% observed across the teams). This was also the case for information about psychosocial factors, which were mentioned in 11% of cases in Haematology 2, again within the range of 4-12% observed across the four teams (see Table 14, p. 144). This suggests that lower frequencies of CNS and StR information sharing contributions did not necessarily in themselves mean discussions were less patient centred. Instead, it appears that the mechanism for sharing this type of information was different in Haematology 2 than in other teams, with a greater role for higher status than lower status members of the team.

8.2 Asking questions

The second most frequent approach used by lower status groups to contribute was asking questions. This was most likely to prompt discussion, but on a smaller number of occasions it also influenced a treatment plan (Table 22).

Table 22: Frequency of asking questions by team and outcome

Asking questions	Case discussions	Prompts discussion	Influences treatment plan	Total
Gynae	17	4	3	7
Haem1	20	5	8	13
Haem2	20	4	0	4
Skin	31	8	1	9
Total	88	21	12	33

Prompting discussion

Asking questions prompted discussion in two different ways. First, it could stimulate others to share expertise or opinions. Secondly, it could raise awareness of an issue not previously mentioned in the MDT, by highlighting specific patient needs.

Using questions in order to stimulate others to share information capitalised on the MDT meeting as a forum for bringing together individuals with diverse knowledge and expertise. For StRs in particular, questions were an opportunity to prompt higher status members to explicitly verbalise their expertise: “*sorry...what made her a stage IV?*” or “*is he for autograft?*” (StR, Haematology 2, observation transcript). This in turn could prompt discussion before a decision was made:

StR: what dose are we talking [about]?

Consultant Haematologist 2: ...50mg of pred[nisolone]

Consultant Haematologist 1: ...if you look at...some of the Italian studies they were planned to escalate up to 200 but when you look at the median tolerated dose it was always somewhere between 50 and 100

Consultant Haematologist 2: ...and then you wean it down so they're not actually on high dose steroids long term

Consultant Haematologist 1: yep

Consultant Haematologist 3: ok we'll give that a go thanks
(Haematology 1, observation transcript)

In addition to stimulating others to share expertise or opinions, asking questions was also an approach used by CNSs to raise awareness of an issue amongst the team that had the potential to impact on the treatment plan agreed. This could prompt further discussion and information sharing in advance of a decision being made:

CNS: how many [doses] of radiotherapy is she going to need?

Consultant Haematologist 1: [Clinical Oncologist] was going to give her five, five big doses

CNS: ...is that five fractions daily or over a course of [a longer period of time]?

Consultant Haematologist 1: one day for five days

Consultant Haematologist 4: I think she was going to have two this week and three the next week

CNS: ...because she relapses really quick, doesn't she?

Consultant Haematologist 2: ...well that thigh [lesion] doesn't go does it...within six weeks of stopping she just sprouts it somewhere else

(Haematology 1, observation transcript)

Influencing a treatment plan

Asking questions also enabled lower status groups to influence a treatment plan, although this happened less frequently than prompting discussion. In total, this approach was used on 12 occasions across the 88 case discussions, predominantly by CNSs in Gynaecology and Haematology 1.

Questioning was a way to challenge a higher status member of the team, without directly disagreeing: *"is she going to tolerate R-CHOP [chemotherapy]?"* or *"do we need to admit patients just for documentation purposes?"* (CNS, Haematology 1, observation transcripts).

It was also an approach adopted by CNSs as a way of advocating on behalf of a patient, to ensure that the decision took their needs and specific circumstances into account. For example, during discussion of a patient with relapsed disease, the MDT Lead in Haematology 1 indicated that the patient was unlikely to be suitable for transplant. However, it became clear that the patient had not yet been made aware of this. In response, the CNS used questions as a means of challenging the team to

raise the issue with the patient, in order to avoid creating unrealistic expectations about further treatment:

CNS: Why are we doing all this then?...I just think that as much as they might not be psychologically prepared you are also giving them false hope

(Haematology 1, observation transcript)

This intervention from the CNS prompted a change in the proposed treatment plan, and led to a commitment from the MDT Lead to discuss the issue with the patient in order to: *“make sure they start preparing...as best they can.”* (Consultant Haematologist, Haematology 1, observation transcript).

Although overall CNSs were more likely to influence a treatment plan as a result of asking questions, there were three occasions when an StR did so. In two of the three cases, the MDT Lead was absent, and the StR in question knew the patient well. In this context, asking questions was a way of shaping the practicalities of a treatment plan to ensure it was appropriate for a specific patient’s needs: *“Should we delay her clinic appointment if she’s not [had her scan in time]?”* (StR, Haematology 1, observation transcript).

8.2.1 When was asking questions a successful approach?

Patient factors

StRs were more likely to ask questions in clinically complex cases, for example when a patient was unable to tolerate what would be standard treatment, had complex comorbidities, or relapsed disease. In these cases, decisions were often less straightforward and questions were a mechanism for eliciting the expertise of other team members by prompting them to share their experience where treatment would not follow existing evidence based protocols:

Consultant Haematologist 5: I'm not sure that the PET is a useful intermediary because we could just biopsy the lesion

StR: and if the biopsy shows follicular lymphoma?

Consultant Haematologist 5: yeh I still don't know...if the biopsy shows follicular lymphoma what will we do...I actually personally think this is more of a clinical decision

Consultant Haematologist 2: ...you know you want to try and get as much of a clear answer rather than likeliness for this lady

Consultant Haematologist 3: I think she needs a biopsy...the reason I'm saying that is if she's got transformed disease in that shoulder that's progressive then a transplant would be futile if she's got follicular lymphoma

Consultant Haematologist 5: ok

(Haematology 2, observation transcript)

Reflecting their patient advocacy role, CNSs asked questions in cases where there was a difficult decision made during the meeting, or where there was disagreement between different members of the team as to the most appropriate treatment. Disagreements stemmed from clinical complexity, or because a patient was likely to need additional support from psychosocial members of the team as part of the treatment plan:

Consultant Gynaecologist: she should have a breast assessment given the abnormalities

CNS: how are we going to work it? ...She is really anti having the mammogram...you know it's going to be extremely difficult to get any sort of diagnosis because she is just adamant...she doesn't want ...anything done breast wise

(Gynaecology, observation transcript)

Team factors

Asking questions was an approach used by lower status groups in all four MDTs, with little variation. Although it was used successfully most frequently in Haematology 1 (on 13 occasions across the 20 case discussions), it was also used on multiple occasions in Skin, Gynaecology and Haematology (Table 22, p. 215).

8.3 Providing practical suggestions or alternatives

A third approach adopted by lower status groups was to present contributions as practical solutions or suggestions. This included suggestions that aimed to address a challenge faced by the team, as well as solutions presented as an alternative to a proposed course of action.

In contrast with the approaches described previously, making practical suggestions was more likely to influence a treatment plan than it was to prompt discussion, and there were no examples of this approach being used to facilitate teamwork (Table 23).

Table 23: Frequency of making practical suggestions by team and outcome

Practical suggestions	Case discussions	Prompts discussion	Influences treatment plan	Total
Gynae	17	2	3	5
Haem1	20	3	10	13
Haem2	20	0	0	0
Skin	31	0	5	5
Total	88	5	18	23

Influencing a treatment plan

Overall, of the 23 contributions framed as practical solutions or suggestions, 18 were successful in influencing a treatment plan (Table 23). Practical suggestions or alternatives were a way for lower status groups to influence a treatment plan in a non-confrontational manner. This approach was a way of ensuring that the treatment decision made reflected the needs of a patient without directly challenging or disagreeing with other team members. As illustrated in the exchange

below, a CNS led the Haematology 1 team towards an alternative solution in response to a suggestion from the MDT Lead that a patient be admitted to an inpatient ward for the next stage of his treatment:

Consultant Haematologist 1: I mean if we feel that actually getting him up [to clinic] with his family's going to be a struggle and it may be easier just to admit him and do it all as an inpatient

CNS: ...are they [the patient's family] coming on Thursday when he comes to the day unit do you think?

Haematology StR 1: yes

CNS: they are his family?

Haematology StR 1: yep

CNS: ...so can somebody see him on the day unit and do it all like that if they can't come up tomorrow?

Haematology StR 2: somebody [consultant haematologist 3] or whoever could dictate a letter from the MDT for the GP...

Consultant Haematologist 3: ...I mean I can do a letter

Consultant Haematologist 1: ...yeh we could leave it at that if it's all planned that his family are coming with him on that date

Consultant Haematologist 3: I didn't know if they were but if they are

Haematology StR 1: yeh they are...

Consultant Haematologist 1: ...ok excellent

(Haematology 1, observation transcript)

Key to the success of this approach was the knowledge held by an StR in the team who was able to confirm details about the patient's next appointment. The CNS was able to solicit and build on this information in order to lead the team towards an alternative solution. This led the team to agree to see the patient with his family at his next scheduled outpatient clinic, rather than admit him as an inpatient.

Prompting discussion

In five cases, providing practical alternatives or suggestions did not result in a change to the treatment plan, but it did prompt further discussion (Table 23, p. 220).

Providing an alternative suggestion was a way of raising awareness of an issue that had the potential to impact on the team's ability to deliver treatment:

Consultant Gynaecologist 1: [name of patient]

Consultant Gynaecologist 2: minor dysplasia deaf dumb...crikey

CNS: ...her nephew was there today and was signing and obviously I think there's limited capacity to actually understand that she's got cancer but she's been in hospital before and she coped extremely well she's got fantastic family support...but I was just thinking I know we've used visual aids before...so maybe we can do that

Consultant Gynaecologist 1: ...oh yes sorry I was just wondering why it sounded familiar I saw a letter from her this morning

CNS: I just thought so she was prepared sort of post operatively and things

Psychologist: yeh yeh yeh so we can look at those and we can add to them if necessary

(Gynaecology, observation transcript)

This type of contribution appeared to be successful because it enabled teams to resolve or overcome a challenging or complex situation. A common thread underpinning the five examples was the knowledge held by CNSs or StRs of the patient and their needs or circumstances. This information appeared to be critical in developing an appropriate solution or alternative course of action to enable the team to incorporate these needs into the final treatment plan.

8.3.1 When was providing practical suggestions a successful approach?

Patient factors

Practical suggestions were used most commonly when there were factors that were likely to impact on the ability of the team to implement their proposed treatment plan, including situations where family or carers had expressed strong preferences on behalf of a patient, or when there were potential communication difficulties. To illustrate, in one example from the Gynaecology team, a consultant gynaecologist had initially stated his intention to see a patient in clinic to discharge her from his care. However, the patient did not have cancer, and there were concerns amongst the team that she was being over-medicalised. Building on these concerns, the CNS made the practical suggestion ultimately adopted by the team that the consultant write to the patient instead of seeing her in clinic:

Psychologist: I think the main thing I would say is we just do not want to keep medicalising her...to bring her down from [another Trust] to here is yet another medical appointment...

CNS: ...can we write to her to tell her?

Psychologist: ...yeh exactly

(Gynaecology, observation transcript)

Team factors

Making practical suggestions was an approach used successfully most frequently in Haematology 1 (on 13 occasions across 20 case discussions). This was followed by Gynaecology (5 occasions across 17 case discussions), and Skin (5 occasions across 31 case discussions). There were no examples across the 20 case discussions in Haematology 2 (Table 23, p. 220).

8.4 Framing contributions in medical or surgical terms

The fourth most frequently used approach to contribute in the MDT meeting was for lower status groups to frame a contribution in medical or surgical terms. This

approach was used on 23 occasions across the 88 case discussions. For StRs, as medical or surgical trainees, it was not surprising that the majority of their contributions were framed in medical or surgical terms, and that they successfully prompted discussion amongst higher status members of the team by explicitly tapping into their areas of expertise.

However, the focus of this section is explicitly on two sets of cases. First, those cases where CNSs used a medical (rather than a psychosocial) rationale in order to engage other members of the team in a discussion or to influence a treatment plan. These examples were notable because CNSs were much less likely than other members of the MDT to present their contributions in this way. Secondly, cases where an StR framed their contribution in medical or surgical terms specifically in order to ensure that a decision was made for a patient and not deferred to a later meeting. This was notable because it involved a lower status member actively challenging a decision to defer made by the MDT Lead.

8.4.1 CNSs using a biomedical rationale to frame a contribution

On eight occasions CNSs were able to prompt discussion amongst other members of the team by framing their contribution in biomedical terms. This approach was used by CNSs in all four teams, although predominantly in Gynaecology (Table 24).

Table 24: Frequency of framing among CNSs by team and outcome

Framing	Case discussions	CNS prompts discussion	CNS influences treatment plan	Total
Gynae	17	5	1	6
Haem1	20	1	0	1
Haem2	20	1	1	2
Skin	31	1	3	4
Total	88	8	5	13

As mentioned above, contributions from CNSs that were framed in biomedical terms were notable because CNS were much less likely than other members of the MDT to present their contributions in this way. This reflects differences in their

training and expertise, and their role as psychosocial members of the team. As such, in these cases, CNSs were not only sharing information that was more typically shared by medical or surgical members of the team, but they were also adopting a distinctly medical frame in order to do so:

Consultant Radiologist: we've got recent imaging from here for the cervical spine which merely shows degenerative disease...there's an extensive spinal canal component in the current study which wasn't seen previously

CNS: ...she has had spinal radiation since Friday she's had five fractions and she's having the fifth fraction today. She had...fractures in T9, 10 and 11 last Monday. We were planning an autograft

(Haematology 2, observation transcript)

On five occasions, CNSs were also able to successfully influence a treatment plan by framing a contribution in medical or surgical terms. In these cases, CNSs combined their knowledge of the medical features of the case with knowledge of the patient (and their family's) wishes. For example, the CNS in Skin was able to persuade the team to make a referral for radiotherapy, in spite of the surgeon's initial reluctance to consider further treatment:

Consultant Medical Oncologist: why [is this patient on the list]?

CNS: well the reason I asked him to be put back on is...

Consultant Surgeon: ...I did his axillary clearance [surgery] in December...and you can't get any more out you're not going to get everything

CNS: no he had like 24 positive nodes didn't he with extra capsular spread...anyway his son has gone into orbit and wants him to have some radiotherapy yesterday and he's talking about going down to

pay for it somewhere...his son's just very adamant that he wants
him seen immediately
(Skin, observation transcript)

These examples illustrate how framing contributions in medical or surgical terms enabled CNSs to both stimulate discussion amongst the team, and to successfully challenge other members of the MDT. This reflects findings from the literature, which suggest that the way that a contribution is framed can be essential to its success, particularly where there is a lack of consensus within a team about the legitimacy, importance or relevance of the issue being raised (Piderit and Ashford, 2003). The interview data suggested that in the Gynaecology team at least there was an intentional strategy to improve engagement by considering how best to share information in a way that captured the attention of other professionals:

The nurses often give a lot of verbatim stuff, I mean "she's got three small children and she doesn't get on with her mother in law,"...and basically, the doctors stop listening...so the idea was when we talked about the patients [before the MDT meeting], I would say "okay, and what are you going to say in the MDM, how are you going to introduce this? You've got one sentence, what are you going to do?" And they'd prepare that and say that. (Psychologist, Gynaecology, interview)

Framing issues from a medical perspective in order to align with the priorities of higher status members of the team could therefore be seen as an attempt by lower status individuals to capture the attention of higher status members in a fast paced environment.

8.4.2 Framing: the role of StRs in ensuring a decision was made

It was relatively common for MDT Leads in all four teams to defer discussion of one or two patients each week, for example where there was information missing. However, on 10 occasions StRs challenged a higher status call to defer a decision:

I put two patients on the MDT and the last one almost didn't get discussed until I kicked up a fuss. You know, she was on the list [and] wasn't going to be discussed because of time issues and then I put my foot down and said we needed a decision. (StR, Gynaecology, interview)

The observation data illustrate the importance of the way this type of challenge was framed to its success. In the example below from the Haematology 2 team, two consultant haematologists initially attempted to delay discussion of a patient in the absence of another consultant member of the team. However, the StR was able to ensure that the discussion was not postponed by framing the issue in a way that emphasised the clinical urgency of the need to make a treatment decision:

Consultant Haematologist 1: I think given the complexity of the case we probably should wait or defer the case

Consultant Haematologist 2: do we have to make a decision this week? It's just he's really, she's very well known to him [the absent consultant]

Haematology StR: well we need to review her material today...we've got histology to look at haven't we?

Consultant Haematologist 1: ...I personally think it'd be better to do everything together but if there is a clinical pressing need I can show what I've got...

Haematology StR: well she's got rapidly enlarging lymphadenopathy and started on steroids so we need to make some treatment decision[s]

(Haematology 2, observation transcript)

As illustrated in the example above, the StR initially attempted to ensure the case was discussed by making the point that there was histology material to review. However, this was less successful than the second attempt, which emphasised the

medical rationale for making a decision immediately and prompted the team to go on and discuss the case.

Interestingly, the use of framing as an approach by StRs to contribute successfully was not distributed evenly across the teams. As illustrated in Table 25 it was most common in Haematology 2. It is possible that this links back to the point made in the previous chapter about the emphasis on efficiency that was evident in this team. It is perhaps not surprising that in this context, there were occasions when lower status members had to make an explicit case for a patient to be discussed rather than deferred to a subsequent meeting. Emphasising a medical rationale for doing so could be seen as a way to legitimately challenge a higher status member if they initially attempted to move the discussion on.

Table 25: Frequency of framing among StRs by team and outcome

Framing	Case discussions	StR prompts discussion	StR influences treatment plan	Total
Gynae	17	0	0	0
Haem1	20	0	0	0
Haem2	20	4	4	8
Skin	31	2	0	2
Total	88	6	4	10

8.5 Using humour

The fifth, and least frequently adopted approach used by lower status groups to contribute successfully during the MDT meeting was humour. Although humour was used frequently in the four MDTs overall, higher status members of the team were more likely than lower status members of the team to contribute in this way. Nonetheless, on 20 occasions across the four teams humour was also used by a CNS:

Consultant Medical Oncologist: well in that case ok I'll see her I'll try and explain it as best I can...and say that on balance we feel that we

should be trying to define the limit of her surgery because only then can we really tell her how bad the surgery's going to be

Consultant Surgeon: well don't use the word bad

[CNS laughs]

Consultant Surgeon 2: surgery is never bad it can go

CNS: extensive

Consultant Medical Oncologist: oh extensive ok [laughter] alright is that agreed?

(Skin, observation transcript)

The use of humour during the MDT meeting was described by one CNS as “*helpful*” (CNS, Skin, interview). In particular, it provided a means of facilitating team work, but it was also used as a means of influencing a treatment decision (Table 26).

Table 26: Frequency of using humour by team and outcome

Humour	Case discussions	Influences treatment plan	Facilitates team work	Total
Gynae	17	0	3	3
Haem1	20	2	1	3
Haem2	20	4	1	5
Skin	31	2	7	9
Total	88	8	12	20

Facilitating team work

On 12 occasions, CNSs facilitated team work by using humour. This could promote social cohesion by diffusing tensions, or by enabling the team to unite against a shared challenge. Humour in these circumstances promoted integration within the team, as higher and lower status individuals bonded over a shared outlet of laughter:

Consultant Gynaecologist 1: you owe me big time because who did I see this morning [patient name]

Consultant Gynaecologist 2: now I did say [loud laughter in the background] I waited and I did say she's never late I actually decided that I would see her myself

Consultant Gynaecologist 1: she [the patient] said she [Consultant Gynaecologist 2] has left! She's gone without seeing me, you'll have to see me [instead] doctor

CNS: funnily enough...on the cervical cancer training day weekend she was there and she ignored me for two days! [laughter]

Consultant Gynaecologist: doesn't she want to go to [another Trust] for her treatment? Shall we sell that to her?

CNS: we could sell it

Consultant Gynaecologist 2: well done for seeing her I do think she needs to see a dose of everybody

(Gynaecology, observation transcript)

In this example, the CNS extended the joke made initially by a consultant gynaecologist. This created an opportunity for the team to acknowledge the shared challenges they faced in managing a patient well known to the team.

Influencing a treatment plan

Humour was also used on eight occasions by CNSs when challenging another member of the team or as a way of softening a difficult message. For example, during a discussion in Haematology 1 the CNS suggested that careful consideration be given to which member of the team discussed the treatment plan with a patient following a decision not to go ahead with a transplant. The CNS laughed while conveying the message, whilst also verbally distancing herself from the criticisms by referring to the patient as being 'sensitive' and pointing out that they had 'misinterpreted' information they had been sent:

CNS: I don't know if this is right or wrong to say but they are
pernickety about who they like talking to about certain things and
I'm wondering if somebody specific needs to speak with them

Consultant Haematologist: ...who were you thinking?

CNS: ...well no I just on speaking with them I know she's had issues
with certain people nothing derogatory about anybody...[the
patient] picks up on things sometimes a bit too sensitively and gets
annoyed, because I know she had some issues with [another
consultant haematologist] at the beginning and [the consultant
haematologist] came to me and said I didn't mean to say what I said
[CNS is laughing at this point]

Consultant Haematologist: ...she also had some issues about...she
doesn't like the copy letters

CNS: she misinterpreted it

(Haematology 1, observation transcript)

Using this approach, the CNS was able to prompt the MDT Lead to agree to speak to the patient himself: *"I'm happy to do it if you want"* (Consultant Haematologist, Haematology 1, observation transcript). In two other examples humour appeared to be used to challenge the team to think differently about a case. These examples both came from Haematology 2. As was noted in **Chapter 6** decisions about whether a patient was suitable for transplant were often complex and could lead to differences of opinion within the team. On two of these occasions, CNSs used humour while contributing to the discussion:

Consultant Haematologist 1: there might be disagreement in the
room about that but the issue is that he is able to get to
appointments with great difficulty but he does come and although
sometimes he's difficult to contact by phone generally we can track
him down if we try hard enough [laughter]

CNS: well he's got better he has got better he's just very independent and quite stubborn

Consultant Haematologist 2: I can relate to that

CNS: I thought you would [loud laughter from the team]

(Haematology 2, observation transcript)

This was also reflected in the second example:

Consultant Haematologist: these patients need to comply with therapy...is he able to do that?...

CNS: ...he messes around but he understands

Consultant Haematologist 2: yeh he messes around but generally he has been compliant

Consultant Haematologist 3: he still goes to the pub from the ward though every day

Consultant Haematologist 2: he goes to the pub every day from the ward, yes [laughter]

CNS: I don't think he drinks that excessively when he goes he does go but

Consultant Haematologist 2: as his sister said he's only been paralytic two or three times since he presented in January

CNS: like most of the people in this room [this is said quite quietly but it results in loud laughter]

(Haematology 2, observation transcript)

The use of humour in both of these examples fits with the findings from other studies which suggest that humour is a mechanism that enables individuals to raise concerns or issues that they may not be able to do otherwise (Rowe and Regehr, 2010). Humour can be seen as a way of masking an underlying message, which although presented in a light hearted way, may contain a more serious point (Dean and Major, 2008). From this perspective, the CNSs' comments in these examples

could be seen as an attempt to minimise the significance of the issues that were being presented as barriers to treatment. The contributions in both examples emphasised the fact that these patients were 'like other members of the team' and could be seen as an attempt to normalise the negative descriptions of these patients' behaviours.

8.5.1 When was using humour a successful approach?

In general, humour was used by CNSs in cases where there were particular challenges facing the MDT. For example, frustrations with IT equipment or patients that the team perceived as being difficult to manage. However, as the examples above illustrate, humour was also used in circumstances where a complex decision was being made and where there were potential differences of opinion between team members. In these cases humour provided a way of expressing a different perspective without directly challenging another member of the team. This enabled CNSs to deliver a potentially difficult message in a non-confrontational manner.

Across the 88 selective transcripts from the 122 meetings I observed, it was notable that there were no examples of humour being used by StRs in the MDT meeting setting. It is not possible to use the observation data to determine the reason for this, but the literature suggests that there are implicit group norms that surround the use of humour, including the circumstances in which it can be used and by whom (Rowe and Regehr, 2010). Given their status as doctors in training it may be that StR did not think it would be appropriate to use humour when contributing during the MDT meeting - although it could also reflect differences in individual personalities.

8.6 Chapter Summary

This chapter has illustrated the key role that can be played by lower status groups in the MDT meeting, by focusing specifically on 88 cases where lower status groups contributed to the decision making process. In doing so it has identified and

described the approaches used, and considered why, and when, they were successful in influencing key processes in the MDT meeting.

Approaches used by lower status groups to contribute

Five approaches were used by CNSs or StRs to prompt discussion, influence a treatment plan or promote team work (Table 27, page 237). The most frequently used approach, sharing information, was the only approach that influenced all three of these team processes. Asking questions and framing contributions in medical or surgical terms were more likely to prompt discussion than to influence a treatment plan (and neither approach was observed facilitating teamwork). However, as a somewhat more direct approach, making practical suggestions was more likely to influence a treatment plan than it was to prompt discussion. In turn, using humour as a means of fostering social cohesion was more likely to promote teamwork, although it also influenced treatment planning on a smaller number of occasions.

Table 27 (page 237) also illustrates that StRs used a narrower range of approaches to contribute than CNSs did across the teams. It was notable for example that humour was not used by StRs, even though it was an approach adopted by CNSs in all four teams. In addition, approaches that were used by both groups were often used with different effect. For example, while it was common for StRs to ask questions as a means of facilitating discussion by prompting higher status individuals to share their expertise, CNSs were more likely to use questions as a means of influencing a treatment plan, for example by advocating on behalf of a patient.

Understanding when lower status contributions were successful

This chapter builds on the findings presented in **Chapter 6**, by providing a more detailed analysis of the context in which lower status contributions were successful.

Patient factors

As well as being more likely to contribute when patients had limited treatment options, or when there were concerns about a patient's ability to cope with treatment, a series of medical and non-medical factors were common when lower status groups contributed using the five approaches identified in this chapter.

Non-medical factors related to patients who had expressed a strong preference prior to the MDT meeting, and to patients who were deemed to be socially or psychologically vulnerable. This was also the case for patients unlikely to 'comply' with the treatment recommended by the team, as well as cases where there were likely to be difficulties in communication between the patient (and/or their family) and the wider team.

Medical factors related to patients who were brought for discussion mid- or post treatment, those with relapsed disease, or complex comorbidities that meant they were not physically well enough to tolerate standard treatment. In addition, these approaches were used by lower status groups when a clinically pressing issue necessitated a change in treatment plan or in cases where there was more than one treatment option, and there were differences of opinion between members of the team as to which was most appropriate.

Team factors

It also became apparent that there were differences between teams. To better understand these differences, the next chapter will integrate the findings from this chapter with those from Thematic Analysis I. This will enable a more nuanced understanding to be developed about potential explanations for the differences observed between teams and lower status groups.

Understanding why lower status contributions were successful

A key factor underpinning many of the successful contributions from both CNSs and StRs in all four teams was that when contributions were successful it was often

because lower status groups held unique knowledge about a patient. This knowledge was gained as a result of being the person who had seen the patient most recently, or as a result of having developed a relationship with them over time. When lower status groups were in possession of this unique knowledge they could use it to establish credibility and create opportunities to contribute by complementing the knowledge and expertise held by others.

Table 27: Summary of approaches used by lower status groups and impact of contributions

APPROACH USED	OUTCOME					
	Prompts discussion		Influences treatment plan		Promotes team work	
	<i>CNS</i>	<i>StR</i>	<i>CNS</i>	<i>StR</i>	<i>CNS</i>	<i>StR</i>
Sharing information	✓	✓	✓	✓	✓	✓
Asking questions	✓	✓	✓	✓	✗	✗
Providing practical suggestions or alternatives	✓	✓	✓	✓	✗	✗
Framing	✓	✓	✓	✓	✗	✗
Using humour	✗	✗	✓	✗	✓	✗

Chapter 9. Understanding lower status contributions in the MDT context

The previous chapter presented the findings from Thematic Analysis II, exploring the approaches used by CNSs and StRs to contribute during MDT meetings and their impact on the decision making process. In this chapter I go on to integrate these findings with those from Thematic Analysis I (presented in **Chapters 5, 6 and 7**). Thematic Analysis I explored the decision making process, the effects of status hierarchies and the factors that influenced multidisciplinary discussion in the four MDTs. Integrating these analyses by considering the patterns of CNS and StR participation in light of key MDT features provides a richer context in which to explore the contributions of lower status groups.

Table 28 maps out the team features identified in Thematic Analysis I. This chapter will explore patterns of CNS and StR contributions in relation to each of these.

Table 28: Summary of MDT features identified in Thematic Analysis I

Team feature	Key components	Location in text
Specialty	Haematology	Chapter 5 described the research setting, including the specialties under study, the size of the teams and membership
	Gynaecology	
	Skin	
Team structure	Team size	Chapter 7 described the role of seating arrangements on multidisciplinary discussion
	Seating arrangements	
Decision making processes	Power and prestige order	Chapter 6 reviewed the decision making process in the four MDTs against the key components of Berger's power and prestige order
	Initial case presentation	Chapter 7 explored the use of three approaches to introduce cases for discussion in the MDT meeting
Leadership	Prioritising efficiency	Chapter 7 identified key aspects of leadership behaviour that played a role in facilitating or inhibiting multidisciplinary discussion
	Inclusive leadership	
	Lack of structure	

9.1 Specialty and lower status contributions

The four teams encompassed three different specialties: haematology cancers, gynaecology cancers and skin cancers. There were a number of similarities between the two Haematology teams, which enables them to be grouped together and compared with Skin and Gynaecology. First, both Haematology teams had a similar case mix, and discussed a similar number of patients each week (an average of 14 and 15). Secondly, in both teams leadership was provided by a consultant haematologist, who brought a clear structure to the meeting, and it was unusual for patients to be discussed without being formally presented first to the team. A third team characteristic related to specialty which distinguished the Haematology teams from Skin and Gynaecology was the composition of membership, notably the presence of multiple Consultant Haematologists and the absence of surgical professionals (reflecting the nature of haematology cancers as diseases of the blood).

The following section will consider the role of specialty on the contributions of StRs and CNSs across the teams.

Specialty and StR contributions

Reflecting their shared specialty, there were similarities in the patterns of successful contributions from StRs in the two Haematology teams. In particular, StRs in both Haematology teams contributed proportionately much more frequently than those in Gynaecology or Skin (Table 29, p. 240).

In addition, Table 29 illustrates that StRs in the Haematology teams influenced a wider range of decision making processes than StRs in the other two teams. Haematology StRs successfully prompted discussion, influenced treatment plans, and promoted team work. In contrast, StRs in Gynaecology and Skin were only successful in prompting discussion, with the exception of one example in Skin where an StR influenced a treatment plan.

Table 29: StR contributions by team and outcome

Team	Case discussions*	Number of StRs	Prompts discussion	Influences decision	Facilitates teamwork	Total
Gynae	17	4-6	5	0	0	5
Haem1	20	2-3	16	10	4	30
Haem2	20	Up to 10	22	7	6	35
Skin	31	2-4	5	1	0	6

* The number of case discussions selectively transcribed for Thematic Analysis II

Given the similarities in disease type and caseload between the two haematology teams, it is possible that the higher frequency of StR contributions reflects the nature of the specialties involved. This fits with the profile of haematology patients, and their relationship with members of the MDT. Haematology patients are often well known to members of the team given the nature of their illness, which can extend over long periods of time, and which often involves ongoing monitoring, treatment and support (O'Connor and Townsend, 2009). For example, in Haematology 1, it was the responsibility of the StRs to review patients regularly, and in advance of every cycle of treatment.

In contrast, the surgical input that forms a core part of gynaecology and skin cancer treatment is much more likely to involve a discrete intervention at a fixed point in time during one part of a patient's cancer pathway. As a result, StRs in Skin and Gynaecology described having little knowledge of the individual patients being discussed during the meeting. This was further compounded by the high caseload of patients in the two surgical specialties. There were an average of 47 cases discussed in the Skin team each week and 35 in Gynaecology, in comparison with 14 and 15 cases in the two Haematology teams. This suggests that StRs in Haematology were more likely to hold unique information. In this context it is perhaps unsurprising that they contributed more frequently than StRs in other specialties.

Specialty and CNS contributions

However, while specialty might help to explain patterns of StR participation, it does not appear to account for differences in participation between CNSs. As Table 30

shows, there were marked differences in the frequency of CNS contributions between the four teams. The CNS in Skin contributed more frequently than CNSs in any of the other three teams. It is also notable that there were clear differences between teams in the same specialty. CNSs in Haematology 1 contributed much more frequently than CNSs in Haematology 2. CNSs in Haematology 1 also used a wider range of strategies to contribute than CNSs in Haematology 2. These differences suggest that factors other than specialty played a role in influencing successful CNS contributions.

Table 30: CNS contributions by team and outcome

Team	Case discussions	Number of CNSs	Prompts discussion	Influences decision	Facilitates teamwork	Total
Gynae	17	3	19	10	4	33
Haem1	20	2	10	16	2	28
Haem2	20	5	3	5	2	10
Skin	31	1	25	21	13	59

To understand differences in CNS contributions, it is necessary to consider what factors other than specialty differentiated the four teams. A key difference between the two haematology teams was that Haematology 2 was a specialist MDT providing transplant services, while Haematology 1 provided a less specialist level of care. In practice this meant that Haematology 1 had to refer patients on to another centre if a transplant was required. Although this happened relatively infrequently, it is possible that the lower frequency of successful CNS contributions in Haematology 2 reflected a need for greater medical input in more complex cases. However, there were other differences between the four MDTs that may better explain these patterns of CNS participation. These include the size of the team, the seating arrangements and the leadership style of the MDT Lead. Each of these factors will be considered in the sections that follow.

9.1.1 Summary of the impact of specialty on lower status contributions

The influence of specialty in terms of the nature of patients being discussed, including their diseases and the treatment required, appeared to be reflected in the

patterns of participation amongst StRs across the four teams. Specifically, StRs contributed successfully more frequently in the two Haematology teams, where they were more likely to have regular interaction with patients, than they did in Gynaecology or Skin. However, this pattern was not evident amongst CNSs, suggesting that specialty did not necessarily influence the contributions of CNS and StR in the same way. To understand these differences it is necessary to consider other factors that differentiated the four teams.

9.2 Team structure and lower status contributions

In addition to differences in specialty, there were structural differences between the four teams in their size, as well as in their physical seating arrangements. In the following section I will explore the interaction between these structural features and the contributions made by lower status groups in the four MDTs.

9.2.1 Team size

Of the four teams Haematology 2 was by far the largest, followed by Gynaecology. Both of these teams were noticeably larger than Haematology 1 and Skin. This was also reflected in team composition: Haematology 1 and Skin were not only smaller overall, but they also had fewer lower status individuals in attendance at MDT meetings (Table 31).

Table 31: Summary of contributions by team size and composition

Team	Case discussions	Size	Number of CNSs	Number of StRs	Successful contributions		
					StR	CNS	Total
Gynae	17	28	3	4-6	5	33	38
Haem1	20	17	2	2-3	30	28	58
Haem2	20	40	5	Up to 10	35	10	45
Skin	31	21	1	2-4	6	59	65

It might be expected that a greater number of CNSs and StRs would provide increased opportunities for lower status professionals to contribute, and that teams with more CNSs and StRs would therefore have a higher frequency of lower status

contributions. This would reflect both a greater critical mass of lower status individuals in the meeting, and an increase in the likelihood that at least one lower status member had met a patient being discussed.

However, the range and frequency of approaches used by lower status groups across the teams suggest that this was not the case. As illustrated in Table 31 (p. 242), overall, lower status groups contributed more frequently in the two smaller teams (Skin and Haematology 1) than they did in the two larger teams (Gynaecology and Haematology 2) – in spite of having fewer StRs and CNSs in attendance. This suggests that smaller teams, with fewer members, provided greater opportunities for lower status groups to contribute.

Nonetheless, although this pattern was evident at the level of the team, there was a more nuanced pattern of participation evident when considering CNS and StR contributions separately.

Team size and StR contributions

There was in fact little consistency in patterns of participation according to team size when considering StR contributions in isolation. Thus, StRs in the smallest team (Haematology 1) did contribute successfully more frequently than StRs in Gynaecology, which was much larger and had more StRs. However, both Haematology teams had similar levels of successful StR participation, despite striking differences in team size. Furthermore, Gynaecology and Skin, as a large and a small team respectively, both had relatively low frequencies of successful StR participation. In this context, team size did not appear to be central to the patterns of participation observed.

Instead, and as outlined in the discussion above, it appeared that the common factor underpinning patterns of StR contributions was specialty, with the most pronounced similarity being between the two haematology teams. This suggests that the features distinctive to haematology as a cancer specialty – particularly the

smaller case size and more frequent contact with patients that define the haematology StR role – may provide greater opportunities for StRs to contribute in the MDT meeting setting.

Team size and CNS contributions

In contrast, the pattern of higher frequencies of successful contributions amongst smaller teams with fewer CNSs was more distinct. This was evident in three of the four teams. To illustrate, Table 31 (p. 242) shows that the sole CNS in Skin, the second smallest team, contributed successfully more frequently than CNSs in any of the other teams, and more frequently than the five CNSs in Haematology 2 combined.

The exception to this pattern was Gynaecology. This was a large team, with the second highest number of CNSs. Nonetheless, this team had the second highest frequency of successful CNS contributions, despite having a shorter observation period than any of the other three teams and a correspondingly smaller dataset to theoretically sample from. This suggests that in this team there were other factors mitigating the effects of team size, which enabled CNSs to contribute successfully more frequently.

To explore this further, the next section considers one of the key factors that differentiated the two largest teams. As described in **Chapter 7**, the Haematology 2 and Gynaecology teams had different approaches to seating arrangements in the MDT meeting.

9.2.2 Seating arrangements

Chapter 7 concluded that hierarchical seating arrangements, where higher status individuals sat at the front of the room and lower status sat at the back, had the potential to inhibit multidisciplinary discussion. This was identified as a barrier to lower status contributions in Haematology 2, and in Gynaecology, which were both large teams where the meeting room was often at full capacity. In contrast, the

seating arrangements in Haematology 1 and Skin were less obviously hierarchical and as smaller teams there was less competition for space (Table 32).

Table 32: Summary of contributions by team and seating arrangements

Team	Case discussions	Hierarchical seating arrangements	Successful contributions		
			StR	CNS	Total
Gynae	17	Yes (but challenged by CNSs)	5	33	38
Haem1	20	No	30	28	58
Haem2	20	Yes	35	10	45
Skin	31	No	6	59	65

Seating arrangements and StR contributions

Chapter 7 also highlighted the importance of visibility in creating opportunities to contribute. This factor appeared to be less important for StRs than CNSs, as StRs did not sit in the front row in any of the four teams (except on fewer than a handful of very rare occasions, for example if they were representing a consultant member of the team who was absent). In general however, while StRs in Skin and Gynaecology sat towards the back of the room, in Haematology 1 and Haematology 2 StRs tended to sit in the middle. These differences appeared to align with the differences described above in relation to specialty, with similarities in the seating arrangements of StRs in both Haematology teams, and correspondingly higher frequencies of successful contributions than in the other two teams. In Skin and Gynaecology, where StRs often sat towards the back of the room, there were lower frequencies of successful contributions. This suggests a pattern where those sitting at the back were less likely to contribute than those sitting closer to the front. The observation and interview data described in **Chapter 7** provided an insight into why this might be the case by illustrating that it could be harder to hear and be heard in the back rows.

Seating arrangements and CNS contributions

Given the importance of visibility in creating opportunities to contribute, it might be expected that in teams where CNSs sat alongside consultant members of the team, they would have higher frequencies of successful contributions. Table 32 provides

support for this view, with the CNS in Skin – who sat next to the MDT Lead in the front row each week – having the highest frequency of successful contributions across the four teams. In contrast, CNSs in Haematology 2, who sat clustered together at the back of the room, had a much lower frequency of successful contributions than any of the other three teams.

This potential explanation is further strengthened when considering the similarities and differences between Haematology 2 and Gynaecology. As described previously, both teams were large, and higher status individuals tended to cluster in the front two rows of seats. This created a well-established hierarchical seating arrangement.

However, the evidence presented in **Chapter 7** showed that CNSs in the Gynaecology team challenged these hierarchical seating arrangements, by actively positioning themselves in the front rows, even if this meant ‘pulling a chair forward’. There was no evidence of this amongst CNSs in Haematology 2. In this context, and in spite of a shorter observation period, CNSs in Gynaecology contributed successfully markedly more frequently than CNSs in Haematology 2 (Table 32, p. 245). This meant that overall, CNSs in Gynaecology were more likely than CNSs in Haematology 2 to prompt discussion, to influence a treatment plan, and to promote teamwork. This suggests that challenging the hierarchical seating arrangements was a key mechanism for CNSs in Gynaecology to overcome some of the barriers to multidisciplinary discussion.

9.2.3 Summary of impact of team structure on lower status contributions

It was possible to differentiate between the four teams based on their size, with Haematology 2 and Gynaecology being notably larger than Skin and Haematology 1. Similarly, hierarchical seating arrangements were more evident in the two largest teams, although these were challenged in Gynaecology but not in Haematology 2. By considering lower status contributions in the context of these structural differences, it has been possible to identify some tentative explanations for the patterns of participation observed.

First, it is clear that structural factors do not necessarily influence CNS and StR patterns of participation in the same way. Team size, for example, appeared to be of particular importance to CNS contributions, with smaller teams with less hierarchical seating arrangements providing greater opportunities for CNS contributions. This is in keeping with previous research that has shown that individuals are likely to contribute more in smaller groups (Morrison, 2011). However, this was less evident in relation to StR contributions, and it was also notable that in Gynaecology (which was a large team) where CNSs challenged the hierarchical seating arrangements they contributed more frequently than CNSs in Haematology 2 where they did not. This highlights the potential for lower status groups to mitigate the effects of a large team, for example by considering their physical placement.

9.3 MDT processes and lower status contributions

In addition to the structural differences described above, teams also differed in relation to some aspects of the decision making process. **Chapter 6** described the power and prestige order in the four teams, and **Chapter 7** described different approaches to the way that cases were initially presented for discussion in MDT meetings. The following section considers the interaction between these processes and lower status contributions in the four MDTs.

9.3.1 The power and prestige order

Chapter 6 described significant similarities across the teams in relation to the power and prestige order, with lower status groups being less likely to initiate participation and receiving fewer opportunities to participate than higher status members. Lower status individuals also had less influence than surgical, medical and diagnostic consultants in all four teams. Within this framework however, there were two key differences between the teams in terms of opportunities to participate. The first difference related to perceptions amongst members of the Gynaecology team about the amount of time spent reviewing imaging and pathology, at the expense of

professionals with other types of information to contribute. The second related to differences in perceptions amongst lower status groups in the four teams about the extent to which they were able to speak freely during MDT meetings.

Differences in time spent reviewing imaging and pathology

The first difference related to the proportion of time spent reviewing imaging and pathology in Gynaecology in comparison with the other three teams. Although time spent reviewing scans was essential in enabling surgical members of the team to plan a patient's surgical treatment, the proportion of time that this took up during the meeting was raised as an issue of concern by five of the seven team members interviewed. Given the fixed period of time available each week for the MDT meeting, time spent discussing imaging and pathology impacted on the time available for other types of information. Interview data from the Gynaecology team indicated that this could exclude less experienced junior doctors and those from a psychosocial background from discussion. These views appear to be supported by the data showing that the overall frequency of lower status contributions in Gynaecology was the lowest of the four teams observed (Table 31, p. 242).

However, the shorter observation period in this team makes it difficult to draw firm conclusions about this. In addition, although the frequency of successful StR contributions in this team was low, the relatively high frequency of successful CNS contributions has already been noted. Table 31 (p. 242) indicates that CNSs were no less likely to contribute in this context than in other teams where less time was spent reviewing imaging or discussing pathology. This was the case despite the perception of team members that extended periods of time spent reviewing imaging during the meeting was problematic.

Differences in perceptions amongst lower status groups

The second difference between the teams in the power and prestige order related to reported perceptions of lower status groups, about the extent to which they felt able to speak freely in the MDT meeting. In Haematology 2, the view of the CNS

interviewed - that the meeting was a place for doctor to doctor communication - fits with the low frequency of successful CNS contributions in this team. In contrast, perceptions about the extent to which lower status groups felt able to speak up were more positive in Haematology 1 and Skin, the two teams with the highest frequency of lower status contributions. These perceptions are in keeping with some of the other characteristics that differentiated the teams, for example, seating arrangements and leadership style, which also appeared to influence levels of participation.

Again, however, the exception to this was in Gynaecology. The view was expressed by the CNS and StR interviewed in the Gynaecology team that there were limited opportunities for their contributions during the MDT meeting. This was also evidenced in the observation data when on a small number of occasions lower status individuals were ignored or talked over. In this context, the relatively high frequency of CNS contributions is unexpected. Again, this highlights that CNSs were contributing successfully in spite of the barriers documented. Notably however, this was not the case for StRs.

9.3.2 Initial case presentations

Chapter 7 identified three approaches to introducing a case for discussion in the MDT: those where there was no formal case presentation, clinically focused case presentations and holistically focused presentations. However, these approaches were used in all four teams. As a result, it is difficult to identify discernible patterns in the data at the level of the team, which may have shaped the patterns of participation observed amongst lower status groups.

Interview data from the Gynaecology team did suggest that the lack of a case presentation was a barrier to multidisciplinary discussion. This was because it could exclude those who did not know a patient well from contributing. It is possible that this is reflected in the low frequency of StR contributions in this team, although, again, it does not explain the relatively high frequency of CNS contributions. While

in Skin there were also cases discussed without a formal case presentation, this was attributed more to the specific case mix in the team, and the difference between melanoma and SCC and BCC cases. In common with the findings above, there were marked similarities between the two Haematology teams.

9.3.3 Summary of the impact of MDT processes on lower status contributions

At a high level, all four teams followed similar decision making processes, and used a mix of approaches to present cases for discussion. Differences in team processes were therefore less marked than structural differences. However, the perceptions of lower status individuals about the extent to which they were able to speak freely largely aligned with patterns in the frequency of lower status contributions. Thus, in Skin and Haematology 1, where lower status individuals interviewed provided a positive assessment of their ability to speak up freely during the MDT, there were higher frequencies of lower status contributions. Conversely, in Haematology 2, a less positive assessment from the CNS interviewed appeared to be reflected in the low frequency of successful CNS contributions. These findings are supported by literature that suggests that a key explanation for a failure to contribute in a team environment is a sense of futility about the value of speaking up (Morrison, 2011). The exception to this pattern was amongst CNSs in Gynaecology, who contributed comparatively more frequently than CNSs in Haematology 1 and 2, despite more frequent reports (from a wide range of professionals) of barriers that limited opportunities for multidisciplinary discussion.

9.4 Leadership style and lower status contributions

Chapter 7 described the leadership styles observed in each of the four teams, identifying three factors that could inhibit multidisciplinary discussion: the MDT Lead prioritising efficiency during discussion, a lack of structure, and the MDT Lead combining chairing and documenting of decisions. In contrast, when an MDT Lead demonstrated inclusive leadership behaviours, such as directly soliciting

contributions from lower status individuals using verbal and non-verbal cues, this could facilitate multidisciplinary discussion. The following section will consider these factors in relation to the contributions made by lower status groups in each team.

9.4.1 Prioritising efficiency

The MDT Leads in Gynaecology and Haematology 2 both clearly prioritised efficiency during MDT discussions. This was in contrast to Haematology 1, and partly in contrast to the Skin team, where efficiency was prioritised in lower risk SCC and BCC cases, although less so for melanoma cases (Table 33).

The overall frequency of successful contributions from lower status individuals provides some support for the view that an emphasis on efficiency could inhibit multidisciplinary discussion. As illustrated in Table 33, there were proportionately fewer lower status contributions in Gynaecology and Haematology 2 than there were in Skin or Haematology 1. Again, however, the pattern is more nuanced when considering StR and CNS contributions separately.

Table 33: Summary of contributions by team and MDT leadership style

Team	Case discussions	MDT Lead prioritises efficiency	Successful contributions		
			StR	CNS	Total
Gynae	17	Yes	5	33	38
Haem1	20	No	30	28	58
Haem2	20	Yes	35	10	45
Skin	31	SCC and BCC cases only	6	59	65

Prioritising efficiency and StR contributions

Frequencies of successful contributions amongst StRs in Gynaecology, Skin and Haematology 1 provide further evidence that an emphasis on efficiency could inhibit multidisciplinary discussion (Table 33). In Gynaecology, where efficiency was a defining feature of the MDT Lead's style, there were correspondingly low frequencies of successful contributions from StRs. In Skin, a team with proportionately low StR contributions, some StRs visibly struggled to keep up with the discussion and recording of decisions when the team prioritised efficiency in

order to progress quickly through a long list of SCC and BCC cases. In contrast, in Haematology 1, where efficiency was not prioritised by the MDT Lead, StRs had comparatively higher rates of successful contributions.

The exception to this pattern was in Haematology 2. In this team StRs had similar (and slightly higher) rates of successful contributions to StRs Haematology 1, in spite of differences in the approach of the respective MDT Leads to efficiency. It is possible therefore that efficiency was less of a barrier to StR contributions - which were predominantly information sharing contributions - in certain circumstances. For example, aside from the knowledge of patients more typically held by StRs, another factor that was common to both Haematology teams (and distinct from Gynaecology and partially in Skin) was the role of the MDT Lead in providing a clear structure during discussion. It may be the case that in this environment it was easier for StRs to share information, even when efficiency was prioritised.

However, it is also possible that StRs in Haematology 2 were adapting to the leadership style in order to ensure the success of their contributions. Table 34 and Table 35 (p. 253) illustrate the approaches used and outcomes achieved by StRs in Haematology 2 and Haematology 1. The most notable difference between the teams is that StRs in Haematology 2 were more likely to use framing as an approach to contribute successfully, than StRs in Haematology 1 (who were more likely to make practical suggestions). It is possible therefore that StRs in Haematology 2 were actively responding to the time pressured environment by framing their contributions in a way that resonated with higher status members of the team.

Table 34: Summary of StR contributions and approaches used in Haematology 2

Haem 2 (n=20)	StR prompts discussion	StR influences decision	StR promotes teamwork	Total
Sharing information	14	3	6	23
Asking questions	4	0	0	4
Practical suggestions	0	0	0	0
Framing	4	4	0	8
Using humour	-	-	-	-
Total	22	7	6	35

Table 35: Summary of StR contributions and approaches used in Haematology 1

Haem 1 (n=20)	StR prompts discussion	StR influences decision	StR promotes teamwork	Total
Sharing information	12	4	4	20
Asking questions	2	3	0	5
Practical suggestions	2	3	0	5
Framing	0	0	0	0
Using humour	-	-	-	-
Total	16	10	4	30

Prioritising efficiency and CNS contributions

Turning to consider CNS contributions, there is no clear pattern to suggest an association between an emphasis on efficiency and less frequent CNS contributions. Although the CNS interviewed in Haematology 2 directly attributed her reluctance to contribute to a perception that there was limited time during the meeting for CNS contributions, the higher frequencies of successful contributions amongst CNSs in Gynaecology and in Skin suggest that factors other than efficiency were important. This is particularly salient given that in the Gynaecology team CNSs were also contributing in an environment where there was often a lack of structure during discussion, and where the MDT Lead was responsible for chairing the meeting and documenting the agreed treatment plan. All three of these factors were identified as potential barriers to multidisciplinary discussion in **Chapter 7**.

To explore this further I will go on to consider the factors identified that facilitated multidisciplinary discussion. It is possible that inclusive leadership behaviours enabled lower status individuals to minimise the effects of these barriers.

9.4.2 Inclusive leadership behaviour

Chapter 7 identified inclusive leadership behaviours that facilitated multidisciplinary discussion, in particular when MDT Leads solicited contributions directly from lower status members of the team using verbal or non-verbal cues. This was observed in Haematology 1, and in Skin. Although the MDT Lead in Haematology 2 also sought opinions and consensus within the team, this was not targeted at, or capitalised on by, lower status groups specifically.

As illustrated in Table 36 in teams where inclusive leadership behaviours were demonstrated during the observation period there were higher levels of successful contributions from lower status groups. There was also a clear pattern between the target of verbal or non-verbal cues, and the frequency of successful contributions. This is reflected most clearly in the relatively evenly-balanced contributions of CNSs and StRs in Haematology 1, where the MDT Lead directed cues at both StRs and CNSs, but also in the higher frequencies of CNS contributions in Skin.

The relatively high frequency of CNS contributions in the Gynaecology team is again notable, given the absence of inclusive leadership behaviours evidenced by the MDT Lead. However, another important factor identified in **Chapter 7**, which was specific to the Gynaecology team, related to the support provided for CNSs by a Consultant Psychologist in the team. Although the Consultant Psychologist was not responsible for chairing the meeting, as a senior member of the psychosocial team, this provided an additional source of leadership support for clinical nurse specialists. In seven of the 10 selective transcripts where a CNS successfully contributed in Gynaecology⁷, the psychologist contributed too. It is possible that this alternative source of support and leadership is another factor that helps to explain the relatively high frequency of CNS contributions in this team.

Table 36: Summary of contributions by team and inclusive leadership behaviours

Team	Case discussions	MDT Lead solicits contributions directly	Successful contributions		
			StR	CNS	Total
Gynae	17	No	5	33	38
Haem1	20	Yes – CNS and StR	30	28	58
Haem2	20	No	35	10	45
Skin	31	Yes – directed at CNS	6	59	65

⁷ As described in Chapter Four, of the 17 case discussions selectively transcribed from the Gynaecology team, 10 contained input from CNSs only, five from StRs only and two with input from CNSs and StRs.

9.4.3 Summary of the impact of leadership on lower status contributions

This analysis has highlighted that the role of leadership on lower status contributions was complex. In part, this reflects the fact that leadership behaviours that facilitated, and those that inhibited lower status contributions, were often present within the same team. It was also evident that inclusive leadership behaviours did not necessarily benefit all professional groups in the MDT context simultaneously. Thus, apparently inclusive leadership behaviours could be directed towards specific professional groups, without necessarily extending to others. This would explain the fact that in some teams, notably Skin and Gynaecology, there were considerable imbalances in the frequency of participation between CNSs and StRs. Finally, the examples from Gynaecology also illustrate that other members of the team (aside from the MDT Lead) could play a role in countering the effects of leadership behaviours that might otherwise inhibit lower status contributions.

9.5 Team summaries

Having considered the role of team features on StR and CNS contributions across the four teams, this chapter will conclude by briefly summarising their influence within each team. It will also incorporate findings from **Chapter 8** to consider the role of lower status groups in facilitating multidisciplinary discussion.

9.5.1 Gynaecology

In Gynaecology, there was a range of factors that had the potential to inhibit multidisciplinary discussion, including large team size, a high caseload (which meant that patients were not always well known), hierarchical seating arrangements, negative perceptions amongst lower status groups about speaking up in the MDT meeting, and an MDT Lead who prioritised efficiency during discussion. This was reflected in the low frequency of StR contributions. However, it was much less evident in relation to CNS contributions. This suggests that there were important factors mitigating barriers to CNS contributions in this team, which did not impact on StRs in the same way.

The analysis provided a number of potential explanations. First, CNSs in this team adopted a wide range of approaches in order to contribute (drawing on all five approaches identified in **Chapter 8**, in comparison with StRs who adopted three). Secondly, in this team CNSs also challenged the hierarchical seating arrangements, by positioning themselves alongside consultant members of the team. In addition, an important source of leadership and support for the CNS team was provided by a psychologist who attended these meetings. There was no equivalent to this role observed in any of the other three teams under study.

9.5.2 Haematology 2

CNSs in Haematology 2 faced many of the same barriers to those in Gynaecology, including a large team size, hierarchical seating arrangements, negative perceptions of the ability of lower status groups to speak up in the MDT meeting, and an MDT Lead who prioritised efficiency. However, there appeared to be less in the way of factors to counteract these. In particular, the MDT Lead rarely directly invited contributions from psychosocial members of the team. In addition, CNSs themselves appeared less likely to challenge barriers to their participation. This was reflected in the comparatively low frequency of CNS contributions in this team, and in the narrower range of approaches used by CNSs when they did contribute (only three out of the five approaches that were evident in the Gynaecology team for example).

In contrast, for StRs, it appeared that specialty was a key influence, reflecting differences in caseload and the amount of time spent with the patients being discussed by the team as a result of the nature of their disease. There was also some evidence that StRs in Haematology 2 responded directly to cues in the environment. This included framing their contributions in medical or surgical terms as an approach to capture the attention of higher status members of the team in response to the emphasis on efficiency.

9.5.3 Haematology 1

In turn, Haematology 1 had fewer of the features identified as potential barriers to multidisciplinary discussion. It was a small team, the MDT Lead adopted inclusive leadership behaviours, and both StR and CNS reported in interview that they felt comfortable contributing and that they would be listened to. However, it was acknowledged that most communication was doctor to doctor and **Chapter 6** described how the MDT Lead expressed the view that there was scope for more contributions from other members of the team. In this context, the overall frequency of contributions in this team was not noticeably higher than in others (it was the second highest overall). It is possible that this reflects findings from the literature, which suggest that decisions about whether to speak up in a team can be influenced by implicit assumptions about whether a contribution is likely to be effective based on factors such as previous experience of team working, professional socialisation and learning (Detert and Edmondson, 2011).

Nonetheless, a key feature of lower status contributions in this team was the relatively even pattern of participation between CNSs and StRs. This was in contrast to the other teams, where there were marked differences in frequency between CNS and StR participation. As a result, it could be argued that the approach in Haematology 1 reflected a more open forum for discussion for both CNSs and StRs – one where multidisciplinary discussion was not necessarily more frequent, but where when it did take place, it did so in a way that engaged all team members in discussion.

9.5.4 Skin

Of all the teams, it is most difficult to disentangle the potential role of structural, process and leadership factors on lower status contributions in the Skin team. There are two main reasons for this. First, in this team, there were variations in processes and leadership style depending on the type of case being discussed (melanoma cases versus SCC and BCC cases). Secondly, there was only one CNS, and it is possible that the higher frequency of contributions could be a reflection of a

specific style or personality. Nonetheless, it remains the case that supportive factors such as the smaller size of the team, the non-hierarchical seating arrangements, and inclusive leadership behaviors, were evident in this team. In the context of the data from the three other teams, this suggests that these factors were also likely to have played a role in the higher frequency of CNS contributions in Skin.

9.6 Chapter Summary

This chapter integrated the findings from Thematic Analysis I and II in order to deepen our understanding of the role of specialty, team structure, decision making process and leadership factors on the contributions of lower status groups in the MDT setting. In doing so, it has demonstrated that there was no single factor that, in isolation, could fully explain the patterns of participation amongst lower status groups.

Instead, different combinations of team and individual factors appeared to be important. Team factors such as size and specialty (and corresponding differences in the nature of cases being discussed) presented challenges to and opportunities for multidisciplinary discussion. At the same time, both higher and lower status individuals played a role. Higher status individuals could provide support for lower status contributions by demonstrating inclusive leadership behaviours. In turn, lower status individuals were observed adopting different strategies to contribute as well as challenging hierarchical seating arrangements.

Chapter 10. Discussion and Conclusions

This thesis set out to explore the role of status hierarchies in the decision making process in cancer MDT meetings. Following an introductory chapter, **Chapter 2** described the policy context that MDTs operate in, noting proposals in the most recent national cancer strategy to adopt a more streamlined approach to discussing cases in the MDT meeting. **Chapter 2** also reviewed the literature on cancer MDTs, highlighting inequalities in participation between different professional groups, with limited contributions from CNSs in particular. This was identified as being potentially problematic, given their role in contributing patient centred information to the decision making process. It also became apparent that little consideration had been given to the role of junior doctors in the MDT meeting.

Chapter 3 then presented the theoretical framework underpinning the study, examining evidence of the effects of status hierarchies on efficiency, information sharing and discussion within teams. However, it was clear that existing solutions designed to encourage the participation of lower status groups, drawn from the theoretical and empirical literature on status hierarchies, would not necessarily be transferrable to the MDT setting. This was because it was unlikely to be practical or desirable to involve all professionals in every discussion.

Building on the existing policy and research literature, this thesis addressed three research questions, which were set out in **Chapter 4**. **Chapter 5** described the methodological approach taken to address these questions. **Chapters 6** and **7** used observation and interview data from four cancer MDTs to consider the way that status hierarchies unfolded during the decision making process, and to explore the factors that facilitated or inhibited multidisciplinary discussion. **Chapter 8** then sought to identify approaches used by lower status groups to contribute in MDT meetings using data from 88 cases across the four cancer MDTs.

Chapter 9 considered these approaches in light of the key team features presented in earlier chapters in order to deepen understanding of the structural, process and leadership features of MDTs on the contributions of lower status groups.

This chapter summarises the key findings as they relate to each of the three research questions posed, and considers them in light of the existing literature. It also explores the implications of the findings for my original theoretical framework, before reviewing the main limitations of the study and my approach to the research. The chapter concludes by considering the implications for policy and practice and suggests possible areas for further research.

10.1 Summary of key findings

A summary of the main findings are provided in Box 6.

Box 6: Summary of key findings

How do status hierarchies unfold during the decision making process in cancer MDT meetings?

- 1) Higher status medical and surgical consultants played a dominant role at each stage of the decision making process in Haematology, Gynaecology and Skin cancer MDTs. In many cases this promoted efficient decision making, by aligning expertise with influence. However, some CNSs and StRs reported being reluctant to speak up, and their contributions were not always taken on board by other team members.
- 2) CNSs and StRs were more likely than other members of the MDT to hold information about patient preferences, psychosocial factors, and physical wellbeing, although they only contributed in a subset of cases.

What factors facilitate or inhibit multidisciplinary discussion?

- 3) Multidisciplinary discussion was influenced by team factors, as well as behaviours adopted by higher and lower status individuals.
- 4) Specifically, factors that **inhibited multidisciplinary discussion** included large **team size**, **hierarchical seating arrangements**, a focus on **efficiency** and a **lack of structure in discussions**. Where the MDT Lead chaired the meeting and documented agreed treatment plans, this could also limit multidisciplinary discussion. In addition, the **lack of a formal case presentation** or a **disease focused case presentation** often limited discussion to consultant team members.
- 5) Factors that **facilitated multidisciplinary discussion** included **non-hierarchical seating arrangements**, **support from other team members**, and direct **invitations to contribute**, particularly from the MDT Lead. **Holistically focused case presentations** also encouraged participation from lower status groups with patient centred information to share.

What approaches are used by lower status groups to contribute to MDT decision making?

- 6) Lower status groups contributed successfully by **sharing information, asking questions**, providing **practical suggestions** or alternatives to a proposed course of action, **framing** contributions in medical or surgical terms, and by using **humour**. These approaches **prompted discussion, influenced treatment plans** and **facilitated teamwork**.
- 7) CNSs and StRs contributed successfully in cases where **medical factors** (such as relapsed disease or presence of complex comorbidities) or **non-medical factors** (such as strong patient preference or psychosocial needs), had the potential to impact on the ability of teams to deliver treatment.

10.2 Review of main findings and contributions

In the section below, I address each of the three research questions in turn, reviewing the findings in light of the existing literature, and highlighting my independent contribution.

10.2.1 How do status hierarchies unfold during the decision making process in cancer MDT meetings?

Status characteristics theory provided me with a framework to explore the role of status hierarchies at each stage of the decision making process in MDT meetings in four cancer MDTs. **Chapter 6** demonstrated that across all four teams there were striking differences in levels of participation and influence between professional groups. In particular, medical and surgical consultants were shown to play a central role in the decision making process. This finding is consistent with previous research on cancer MDTs which has highlighted lower rates of participation in MDT meetings amongst CNSs (Lanceley et al., 2008, Kidger et al., 2009, Lamb et al., 2011b), and junior doctors (Dew et al., 2014).

Much of this previous research has emphasised the negative implications of these patterns of participation (Lamb et al., 2011c, Lamb et al., 2011d, Taylor et al., 2012a). This has led to suggestions that input from specialist nurses, and consideration of patient preferences, should be included more systematically in MDT discussions, for example through the use of checklists (Kidger et al., 2009, Lamb et al., 2011b, Lamb et al., 2012b). From this perspective, challenging medical dominance equates to working towards more equal participation of all professionals in MDT meetings (Atwal and Caldwell, 2006). However, in view of the pressure on MDT caseloads, there has also been increasing interest in how MDTs can balance the need for detailed multidisciplinary discussion of some patients against the requirement to discuss large numbers of comparatively straightforward cases (Lanceley et al., 2008, Lamb et al., 2014a).

My findings add a new perspective to this debate. By drawing on a functionalist view of hierarchy I was able to show how capitalising on the status hierarchy enabled MDTs to make decisions quickly and efficiently, and in line with their peer review obligations. The observation and interview data also enabled me to show the ways in which teams streamlined discussion. In the four teams studied, this was largely done implicitly during the MDT meeting itself, for example when discussion was curtailed by the MDT Lead in straightforward cases, but encouraged in others that were more complex. Previous research into the views of urology professionals suggests that there is some support for this type of approach, particularly for patients with low risk prostate, bladder and renal cancers (Lamb et al., 2014a).

There is also tentative evidence from three focus groups that patients too, with prostate, breast, upper gastrointestinal and sarcoma cancers, also recognise the need for efficiency in the MDT meeting (Lamb et al., 2014b). This reflects the view that extensive discussion of straightforward cases is not necessarily an effective use of an expensive, and limited, resource (Chinai et al., 2013, De Ieso et al., 2013, Ryan and Faragher, 2014, Sarkar et al., 2014).

At the same time however, the hierarchical patterns of participation that promoted efficiency in the MDT meeting also had implications for multidisciplinary engagement in the decision making process. Notably, although there was wide recognition that lower status groups had a key role to play in sharing patient centred information in the four MDTs under study, some CNSs and StRs reported feeling excluded from MDT discussion. This echoes findings from previous studies, which have shown that embedded patterns of participation along hierarchical lines in healthcare teams can make it challenging for lower status groups to share information or to contribute - even when this could benefit the decision making process (Lichtenstein et al., 2004, Lanceley et al., 2008).

As noted previously, for some MDT discussions, information about a patient's preferences or psychosocial wellbeing can be fundamental to making a decision

that reflects their needs and circumstances (Jalil et al., 2013). More generally, there are also benefits for teams in encouraging holistic, multidisciplinary discussion even if this discussion does not ultimately change a proposed treatment plan. For example, sharing information about psychosocial factors can foster empathy amongst members of a team and encourage a more holistic approach to care overall (Davis et al., 2014).

The literature suggests that there are a number of potential explanations for not contributing within a team environment. Although team members may refrain from participating because they do not have an opinion to offer, or information to share (Dyne et al., 2003), other explanations include fear of negative consequences, such as damaging interpersonal relationships, a sense of futility, or implicit, taken for granted beliefs about behavioural norms within a group setting (Morrison and Milliken, 2003, Detert and Edmondson, 2011).

The impact of time constraints is also important, as evidence suggests that knowledge and information sharing decline when teams are working under pressure (Campbell and Stasser, 2006). In the MDT setting, longer case discussion has been associated with higher quality of information and team contribution (Lamb et al., 2013b), and a perceived lack of time has been reported as a barrier to the participation of CNSs and allied health professionals (Lanceley et al., 2008, Kidger et al., 2009, Devitt et al., 2010).

If, therefore, efficiency is prioritised above all else, there is a risk that cancer MDT meetings become little more than 'tick box exercises' (De Ieso et al., 2013). In these circumstances it is possible that other important elements of the decision making process, such as the judgement of other healthcare professionals, and the preferences and circumstances of individual patients themselves, will be overlooked or diminished (Blumenthal, 2004).

In light of these factors, striking a balance between efficient decision making and incorporating the patient centred contributions of lower status professionals, is likely to be an ongoing challenge for MDTs. My findings from the observation and interview data are instructive in this regard because they illustrate the specific circumstances in which lower status contributions were integrated into the decision making process in the four teams under study. In line with the findings from a previous observational study of a gynaecology cancer MDT meeting, I found that patient preferences, circumstances and support needs were more likely to be mentioned when they potentially impacted on a treatment plan, when patients had expressed a strong opinion, or when there was more than one possible treatment option (Kidger et al., 2009). In addition, my findings also suggested that these factors were more likely to be incorporated in an MDT discussion when patients had limited treatment options, or where there were concerns about a patient's ability to cope with treatment, due to age or frailty, vulnerability, or the intensity of the required treatment.

These findings add to the emerging literature which has only recently begun to consider the factors that may influence whether a case will benefit from MDT discussion or not. A handful of studies have recently been undertaken of MDTs in colorectal, urology and upper gastro intestinal cancers to identify which patients benefit most from MDT discussion. These studies identify factors common across tumour type, which challenge the current convention of discussing all new patients in an MDT meeting. In particular, it has been shown that patients with recurrent or metastatic disease are likely to benefit from a multidisciplinary discussion, either because this is more likely to change the proposed treatment plan (Rao et al., 2014, Ryan and Faragher, 2014), or because patients are likely to have a higher symptom burden and may have more complex support needs (Strong et al., 2012).

Furthermore, a study of colorectal cancer patients in Scotland demonstrates an association between improved survival (after more than 6 weeks) and discussion of patients with advanced disease in an MDT meeting, which was not evident for

patients with operable or early stage disease (Munro et al., 2015). Incorporating my findings alongside those from these previous studies, it is possible to begin identifying a series of cases that are potentially likely to benefit from MDT discussion, based on both medical and non-medical complexity. I discuss the implications of these findings for policy, practice and further research in more detail below [Section 10.5, p. 283].

10.2.2 What factors facilitate or inhibit multidisciplinary discussion?

Chapter 7 addressed research question two, by exploring the factors that facilitated or inhibited multidisciplinary discussion in MDT meetings. Drawing on observation and interview data from four MDTs it considered the physical layout of the meetings, the leadership style of the MDT Lead, and the way that a case was presented to the team.

The physical environment of the MDT meeting

The importance of the physical environment of the MDT meeting was a key theme to emerge in responses from over 2,000 MDT members to a survey in early 2009, about MDT working (National Cancer Action Team, 2010a). My findings suggest that this remains a relevant issue for MDTs, by illustrating how hierarchical seating arrangements had the potential to exclude some individuals from discussion. This was more obvious in the two largest teams (Haematology 2 and Gynaecology), suggesting that the size of the team was also important. This finding is consistent with previous research, which suggests that individuals are likely to contribute more in smaller groups (Morrison, 2011). Previous research has also shown that excessively large teams may discourage some members from participating (West and Lyubovnikova, 2013), and that large teams are associated with poorer information sharing and difficulties in communication (Borrill et al., 2000).

Other researchers have studied the optimal size of healthcare teams. This literature suggests that around 12 to 15 members is optimal for healthcare team performance (measured in terms of efficiency, quality of technical innovations, adherence to

schedules and ability to resolve conflict). Performance has been shown to decline in teams that are larger than this (Barrasa et al., 2007). It was notable that all of the team meetings I observed were larger than this, with the smallest (Haematology 1) having an average of 17 members, and the largest (Haematology 2) on occasion having up to 40 individuals present during the MDT meeting. Nonetheless, while it is unusual for teams to be this large outside of healthcare, it is not uncommon in either primary or secondary healthcare teams, or MDTs specifically (Borrill et al., 2000, Harris et al., 2014).

It is perhaps unsurprising then that my analysis suggests that issues relating to the physical environment of MDTs have still not been fully resolved. While all four of the MDTs I studied used a lecture style seating arrangement, in the National Cancer Action Team survey of MDT members carried out in 2009, only a minority of respondents (23%) agreed that this was the best approach. In contrast, 62% reported that a boardroom or horseshoe layout was better suited to facilitate effective team working (Taylor and Ramirez, 2009). However, as the examples from Haematology 2 and Gynaecology indicate, changing the physical layout of meetings is not necessarily an easy solution, and it is to a certain extent dependent on the physical space available, as well as commitment from all team members if change is to be successfully embedded.

The role of the MDT Lead

The NIHR-funded MDT Study which preceded this PhD highlighted the importance of the role of the MDT Lead for MDT meeting effectiveness. In particular, MDTs with focused and directive chairing tended to have higher rates of decision implementation than teams where the position of chairperson was rotated between team members (Raine et al., 2014a). Further analysis of the observation and interview data from these four cancer MDTs has enabled me to extend this finding by specifically identifying ways in which leadership behaviours could foster - or conversely, limit - discussion, in the context of the MDT meeting. In particular, I found that a focus on efficiency and a lack of structure in discussions could

discourage lower status groups from contributing. In contrast, leadership behaviours were most successful in encouraging lower status contributions when they were directly targeted at lower status groups.

Inclusive leadership behaviours have been observed previously in cancer MDTs. An observation study of ten gynaecology MDT meetings in England demonstrated how the use of a 'round the table' process at the end of each MDT meeting was used by the MDT Lead to provide opportunities for all team members to participate. This time was often used by nurses within the team to speak up and ask questions or to provide feedback on cases that had not already been presented (Kidger et al., 2009). My findings also highlighted examples, in both the Haematology 1 and Skin MDTs, where the MDT Leads adopted inclusive leadership behaviours. Correspondingly the interviews with CNSs in these teams suggested that lower status groups believed that there was a willingness to listen to their contributions. This was in contrast to interviews with CNSs in Haematology 2 and Gynaecology, where lower status groups reported that they struggled to make a contribution or felt marginalised from discussion. This supports previous research which has suggested that inviting and acknowledging the contributions of lower status individuals in discussion when their voices would not otherwise be heard, can help to create an atmosphere where individuals feel able to contribute freely (Nembhard and Edmondson, 2006).

Initial case presentation

The finding that there was variation both between and within MDTs in relation to the way in which cases were presented is supported by research into cancer MDT decision making in both the UK and in New Zealand. This includes differences in the extent to which an explicit reason was given for discussing the case (Dew et al., 2014), and in the extent to which a case presentation limited multidisciplinary discussion (Lanceley et al., 2008). In Lanceley's (2008) qualitative study of a gynaecology MDT meeting in England, the way a case was framed in the initial

presentation set limits on the content of subsequent discussion. This made it difficult for non-medical members to contribute.

However, while the way in which a case presentation is framed has been identified as a barrier to contributions in the MDT meeting (for CNSs in particular) in previous literature, my findings also suggest that the initial case presentation can provide positive opportunities for multidisciplinary discussion. In the four teams studied, it was shown that a holistic case presentation could be used to facilitate multidisciplinary discussion and encourage participation from lower status members of the team with patient centred information to share. These findings highlight the importance of the way discussion is framed in the MDT meeting on both the levels of participation and the extent to which discussion incorporated the physical, social and psychological needs of each patient.

10.2.3 What approaches are used by lower status groups to contribute in MDT meetings?

As noted above, lower rates of participation amongst CNSs in particular are well documented in existing research. However, in spite of calls for increased participation of CNSs in MDT meetings, there has as yet been little in the way of specific suggestions about how teams can enhance multidisciplinary engagement (Rowlands and Callen, 2013). The findings presented in **Chapter 8** begin to address this gap in knowledge by exploring a subset of cases from four cancer MDTs, where lower status groups did contribute. This has enabled me to extend our understanding of the role of lower status groups in the MDT meeting in two ways.

First, it demonstrates the potential value of lower status contributions, by highlighting their role in key processes previously associated with high quality decision making (Larson et al., 1998, Lanceley et al., 2008, Lamb et al., 2013b, Raine et al., 2014b). Secondly, by identifying five approaches used by lower status groups in these four MDTs, it provides an insight into *how* those with lower status contributed successfully, within the context of an environment with well-

established status hierarchies. This extends the findings of a small number of earlier studies, which have explored the role of individual strategies, used by nurses in particular, in order to exert influence over higher status members of the team. This includes the use of humour in community mental health (Griffiths, 1998), and breast cancer MDT meetings (Amir et al., 2004), as well as the use of questions in palliative care MDT meetings (Arber, 2008). While these earlier studies provide a valuable insight into the use of a single, specific approach to participate in the MDT context, the findings of this study suggest that CNSs, and indeed other lower status members of the MDT, use a range of different techniques in order to contribute in the context of the weekly meeting. Taken together these approaches provide a useful set of practical approaches that can be used to enhance the ability of lower status groups to contribute in the MDT meeting context.

The literature provides potential explanations for the success of these approaches. The first of these relates to the use of tactical communication. Tactical communication has been described as a way of maintaining working relationships within a team by avoiding direct confrontation, particularly where established status hierarchies exist (Hewitt et al., 2015). A number of the approaches identified in the four cancer teams in this study can be interpreted in this way, for example the use of questions or alternative suggestions to challenge other team members without being confrontational. Similarly, humour was used by lower status individuals when making a potentially 'difficult' point.

It is also possible that some lower status individuals possess particular characteristics that help to explain the success of their contributions. Previous research has concluded that CNSs who advocate successfully in the MDT meetings possess characteristics of confidence, a sense of being 'right', experience, and good communication skills. In addition, they also need to hold relevant information that enables them to contribute (McGrath et al., 2006).

This last point, about holding the relevant information, was a key theme underpinning many of the successful contributions I observed. The insight gained by nurses as a result of their greater contact with patients is well documented (McGrath et al., 2006). However, the observation data shed light on the way in which this knowledge was used by CNSs, and also by StRs, in order to influence decisions made in the MDT setting. This extends the concept of 'encountered authority' previously described in a study of cancer MDT decision making in New Zealand (Dew et al., 2014). In this previous study encountered authority was described as authority that was granted to higher status team members who had met the patient, as an additional source of authority over and above their medical or surgical expertise. My findings suggest that this encountered authority may also extend to other members of the MDT as well. This was apparent for example when lower status groups held unique information they were able to use in order to influence a treatment plan. It was also apparent in situations where more than one team member had met the patient and higher and lower status individuals had different views about whether they would be able to cope with additional treatment.

This is important in the context of a wider point that emerged in all three findings chapters: that CNSs and StRs had not always met a patient being discussed at the time of the MDT meeting. Reflecting the waiting time targets for cancer diagnosis and treatment, for many new patients, a consultant member of the team may often be the only person to have met them when they are first being discussed in the MDT meeting. This has practical implications for which cases are discussed in depth in the MDT meeting, and how much time is spent on those cases where only one member of the team has seen the patient - versus those where other team members have also had the opportunity to do so. I discuss these practical implications below in Section 10.5 (p. 283).

For those cases where patient centred information is instrumental to the decision making process, integrated findings from **Chapters 6, 7 and 8** demonstrated that

encouraging multidisciplinary discussion in the MDT meeting was a multifaceted challenge. It relied on aligning team features with the behaviours of higher and lower status groups. No single factor fully explained patterns of participation amongst lower status groups in the MDT meeting, but it was clear that specialty, team size, seating arrangements and the process of decision making were important. For higher status groups, inclusive leadership behaviours and support for contributions made by lower status individuals were also key. In turn, lower status groups could use a range of different approaches to contribute successfully, and could capitalise on the openings provided by other team members or work together to challenge established barriers. Genuine multidisciplinary discussion was more likely when these factors were combined.

10.3 Theoretical contribution

Chapter 3 presented the theoretical framework underpinning my thesis, drawing on literature from the field of micro organisational behaviour. It considered the role of status hierarchies within teams and explored the way these hierarchies could explain patterns of participation within MDT meetings. Developing this theoretical framework was a key stage in the research process, informing the development of my research questions and the choice of data I selected from the NIHR-funded MDT Study to address these (as described in **Chapter 1** and **Chapter 5**). It also facilitated my exploration of the patterns of participation and information sharing in MDT meetings at each stage of the decision making process, and enabled me to make sense of the data during my analysis and interpretation (Maxwell, 2005, Leshem and Trafford, 2007).

While the theoretical framework helped to provide coherence to this research study, any theoretical framework risks narrowing a researcher's field of vision by excluding alternative ways of framing the issue being studied (Maxwell, 2005). Three factors minimise the risk of this in relation to this study. First, the issue of status had already been identified as a meta-theme during the analysis conducted for the NIHR-funded MDT Study. The rigorous process of developing these themes,

as part of a multidisciplinary research team, with oversight from an expert steering group, and peer review of the study outputs, provided me with a strong foundation for selecting this as an area of further study. Secondly, it was clear from review of the literature that issues of status were particularly salient within healthcare teams, reflecting the strong and well-established professional identities involved. Thirdly, I also spent a considerable period of time while developing my research questions exploring a range of possible theoretical perspectives, of which status was only one. Carrying out a series of 'thought experiments' in the form of weekly assignments during a ten week course on micro organisational behaviour at London Business School challenged me to come up with a range of plausible explanations for my observations during data collection (Maxwell, 2005). It was only at the end of this process, and in light of the first two factors, that I came to my decision that there was particular value in exploring the decision making process through the lens of status.

As demonstrated in the discussion above, using status as a lens to explore the decision making process in MDT meetings enabled me to contribute to the literature on cancer MDT meetings. At the same time, applying status characteristics theory in a naturalistic setting enabled me to contribute to the theoretical literature as well. **Chapter 3** highlighted that the literature within the field of micro organisational behaviour challenged a key assumption underpinning policy on MDT meetings, that teams would optimally share and integrate the diverse knowledge of all team members. However, the existing solutions proposed in this body of literature did not reflect the specific characteristics of MDTs as a team setting.

As a result, exploring status in the MDT setting enabled me to deepen understanding of the role of status in the decision making process in two specific ways. First, by identifying the behaviours adopted by leaders to facilitate or inhibit contributions from lower status members of the team, I was able to extend knowledge of leadership behaviours in the context of a dynamic team model.

Secondly, my findings provide an insight into the role of lower status members in teams with well-established status hierarchies, where it was not possible to overcome the effects of the hierarchy at a group level. In the section below I consider the MDT as a setting for enhancing our understanding of dynamic teams, before considering these two specific theoretical contributions in turn.

10.3.1 The MDT as a setting for enhancing our understanding of dynamic teams

It was demonstrated in **Chapter 3** that MDTs fulfilled the key criteria of a team, with defined membership, a clear task that required interdependence between members, and a wider organisational structure. However it was also recognised that the MDT model was in some respect more dynamic than the traditional type of team described in much of the published literature (Cohen and Bailey, 1997, Wageman et al., 2012). The dynamic nature of MDTs became even more apparent following exploration of the decision making process using the observation and interview data. In particular it was notable that membership of MDTs was in practice relatively fluid, with changes in attendance at meetings from week to week and over longer periods of time. In all teams, junior doctors rotated between specialties every six to twelve months. This meant that they were only members of a specific team for a relatively short period of time, before being replaced by a new group of their peers. In this more dynamic model, these individuals faced the double challenge of being 'new' to the team, and being lower status than fully qualified medical or surgical consultants. In some cases this appeared to impact on the willingness of junior doctors to speak up or to share information in the MDT meeting. This added an extra dimension of complexity to the decision making process and emphasised the status differences between team members.

Another key feature that defines MDTs in healthcare is the limited extent to which collaborative work takes place outside of the weekly MDT meeting. Although the weekly MDT meeting brought individuals together with the joint task of making decisions about patient care, it was shown in **Chapter 6** that this was often the only

point at which team members came together. Although interdependence is seen as essential to any definition of a team, interdependence in these teams was essentially restricted to the weekly MDT meeting (Wageman et al., 2012). In this context, it is possible that the strong professional identities brought into the team environment are reinforced if - outside of the weekly meeting - team members essentially continue to operate in parallel (Mickan and Rodger, 2000). This has the potential to impact on the ability of members to exchange and integrate information from different sources (Mickan and Rodger, 2000, Oborn and Dawson, 2010).

Nonetheless, although these features mean that MDTs are in some respects different to 'traditional' types of team, the teams landscape has already changed rapidly in recent years (Wageman et al., 2012). In particular, stable and well defined membership is becoming increasingly rare, and the nature of interdependence has changed for many teams in response to globalisation and advances in technology (Wageman et al., 2012). In this context, and as a model which brings together diverse groups of professionals within an environment with well-established status hierarchies, MDTs are not unique. Dynamic team models embedded in hierarchical settings are common throughout healthcare, as well as in other fields, such as aviation and emergency response teams (Edmondson, 2003, Bienefeld and Grote, 2013).

From this perspective, MDTs provide an opportunity to enhance our understanding of teams by exploring how they cope in a more dynamic setting (Wageman et al., 2012). By exploring the decision making process in MDT meetings through observation and interviews, I was able to identify the way in which teams worked within an environment where it was not possible, nor desirable, to flatten status hierarchies. Instead, in this setting, teams had to capitalise on the status hierarchy in order to promote efficiency, while also facilitating and integrating contributions from lower status individuals on specific occasions, even though these individuals were less likely to contribute overall. This suggests that status hierarchies cannot be

characterised in exclusively 'positive' or 'negative' terms. Instead, they need to be interpreted in relation to the specific context in which they operate, recognising that this can vary *within* teams as well as *between* teams. This means that it is crucial to better understand the role of higher and lower status individuals in these dynamic team settings which are characteristic of MDT meetings.

9.3.2 Leadership behaviour in dynamic teams

The literature on status already demonstrates the role of leadership behaviours on the willingness of team members to participate in discussion or share information (Nembhard and Edmondson, 2006, Anderson and Brown, 2010, Mitchell et al., 2015). In line with these findings, it was shown in **Chapter 7** that within the MDT setting, leadership played a key role in facilitating or inhibiting lower status contributions. However, while previous literature has relied on high level quantitative measures of team members' perceptions of leader inclusiveness, there has been little research to demonstrate exactly what leadership behaviours *shape* perceptions of openness (Morrison, 2011).

Using observation and interview data from the four cancer MDTs to identify specific leadership behaviours that facilitated or inhibited contributions enabled me to extend this literature. Exploring the different leadership styles of the MDT Leads in these four MDTs showed that when team leaders emphasised efficiency and failed to provide a clear structure during discussions, lower status groups could be discouraged from contributing. In addition, when the MDT Lead adopted a dual role of chairing the meeting, whilst at the same time documenting agreed treatment plans, this could also limit contributions by prioritising recording of information over integration of contributions. This finding reflects the theory of dual task interference, which has previously been identified as an issue in MDT meetings when professionals are required both to chair and participate in discussion at the same time (Soukup et al., 2016b). It was also notable that general requests for contributions were not necessarily sufficient on their own to encourage lower status groups to contribute. Instead, support from other team members and

signalling and direct invitations to lower status members of the team using both verbal and non-verbal cues were key approaches that succeeded in soliciting lower status contributions.

10.3.3 The role of lower status individuals in dynamic teams

Although the role of higher status leaders is a key area of interest within the literature on status hierarchies, much less attention has been given to the way in which lower status individuals themselves can contribute where status hierarchies are a feature of the team setting. A focus to date has been on identifying the factors that are likely to impede contributions, but there is little empirical evidence to demonstrate the nuanced behaviours required - depending on the nature of the contribution being made – to ensure effective lower status participation (Morrison, 2014). This is perhaps not surprising. As lower status members typically have less influence, it is likely to be particularly challenging for these individuals to be able to overcome the effects of the hierarchy, particularly because higher status members may behave in ways that preserve the status quo (Owens and Sutton, 2001). However, by identifying a subset of cases in MDT meetings where lower status groups did participate I was able to highlight specific approaches adopted by lower status groups in order to make a contribution.

These findings extend the theoretical framework that underpins this study by illustrating the way in which teams can capitalise on the knowledge and expertise of all members in situations where it is not possible or desirable to flatten the status hierarchy. Although the literature on status demonstrates that status hierarchies can impact negatively on the decision making process by disrupting information sharing and integration of contributions (Cohen and Zhou, 1991, Bunderson and Reagans, 2011, Bendersky and Hays, 2012), in reality, for some teams it will not be possible or desirable to moderate or flatten the hierarchy (Filc, 2004, Bienefeld and Grote, 2013). In recognition of this, by focusing specifically on cases where lower status members did contribute, I showed that adopting a wide range of approaches, including asking questions, using humour and sharing information, enabled lower

status individuals to work *within* this context. These approaches enabled lower status groups to contribute to the decision making process without challenging the established status hierarchy.

10.4 Strengths and limitations

10.4.1 Conducting the study as part of the NIHR-funded MDT study

There were a number of advantages and disadvantages inherent in conducting my research as part of the larger NIHR-funded MDT Study. Working as part of a research team in the Department of Applied Health Research at University College London meant that I was able to benefit from a wide range of constructive input and expertise from clinicians, academics and patient representatives. This gave me first-hand experience of the process of designing and managing a large and complex applied health research study, and as such provided an invaluable starting point for launching my own independent study for the PhD. The data collection and initial qualitative analysis for the NIHR-funded MDT Study was also a very reflective process, and regular analytical conferences with other researchers and advisory group members prompted debate, discussion and challenge which were all essential in ensuring rigour and developing and strengthening my research skills.

However, there are also limitations that reflect some of the constraints of conducting my study in this way. While Haematology, Gynaecology, and Skin cancer teams were recruited in order to maximise diversity, there are a wide range of cancer specialities not represented in this study. Furthermore, for practical reasons (to enable observation of multiple sites) all the teams were based in a single geographical area (London), which means that they may be unrepresentative of cancer MDT meetings more generally. As discussed in **Chapter 5**, this limits the ability to generalise the findings from this study. Nonetheless, the four teams provided a diverse context in which to study decision making. In addition, the themes identified in the analysis were largely common across the four teams and different specialities, which included both local and specialist MDTs. This suggests that the findings are likely to have broad relevance to cancer MDT meetings more

widely. They are however unlikely to be transferrable to settings where status hierarchies are *not* based on characteristics associated with expertise, as this was a key feature of these teams.

A further limitation relates to the number of interviews I conducted, reflecting the tight timescales that were a feature of the NIHR-funded study. In particular, given the focus of my PhD on the role of lower status groups, it may have been beneficial to purposively sample a greater proportion of CNSs and StRs from the four teams being studied. This was not possible due to resource constraints. Nonetheless, the purposive sampling process was designed to capture the diversity of professional groups attending cancer MDTs, and as such ensured a breadth of coverage. The extensive observation period across the four teams also gave me an exceptionally rich dataset to draw on in order to explore what actually happened in MDT meetings. This meant that I was not solely reliant on the reports of members themselves, but could compare and contrast these accounts with my own observations.

In addition to the limitations described above which apply to the whole thesis, there are also limitations specific to the findings presented in **Chapter 8**. The analysis for this chapter was predominantly based on observation data. This was because the topic guide for the NIHR-funded MDT Study did not focus specifically on the approaches used by lower status groups to get their voices heard. This meant that I was not able to triangulate between observation and interviews in the same way as I did in the first two findings chapters. As well as this, the analysis was based on a subset of 88 cases theoretically sampled from the main dataset. This meant that there were fewer examples to draw on when developing my themes. This reflects a broader challenge inherent in studying individuals who have limited participation within a group, because it is far easier to focus on those who express ideas and share information verbally, than on those who are largely silent (Dyne et al., 2003).

However, a key benefit of the extended period of observation I undertook was that it enabled me to identify recurring patterns in the data even amongst those who participated the least. Conducting this type of analysis with a more limited observation dataset would have been particularly challenging. It also remains the case that the approaches identified are important because they provide an insight into what is *possible* in these teams. Even if some approaches were only used on a relatively small number of occasions, this does not undermine their legitimacy (O'Reilly and Parker, 2013). Further research into the approaches used by CNSs and StRs in a wider range of cancer MDT meetings, which more extensively incorporates the perspectives of these individuals themselves, would provide further opportunities to fully explore this issue.

10.4.2 Using observation as a data collection method

One of the key limitations of MDT observation is that it can alter the behaviour of those being studied (Harris et al., 2014). However, I sought to minimise this risk by carrying out two weeks of pilot observation in each team to enable the MDTs to become accustomed to my presence. In addition, the size of the four teams and the fact that there were often other visiting researchers, and medical students who did not participate but were in attendance, meant that I was less conspicuous and there was nothing to indicate that my presence disrupted the team dynamics. The fact that I observed the teams for such a long period of time was also likely to be beneficial in minimising any observer effect.

Observation of a clinical decision making forum as a non-clinician also presented challenges for me as a researcher. Particularly in the early stages of data collection, the rapid pace of discussions and complex medical terminology meant it was sometimes difficult to keep up. However, the two weeks of pilot observation were helpful in this respect, and provided an opportunity for me to learn the names and roles of key members in advance of data collection, as well as giving me an overview of the way meetings worked. In addition, I was also able to refer to the

audio files following each meeting, throughout the period of data collection, and subsequently, which provided me with an opportunity to re-immense myself in each meeting as necessary.

10.4.3 Focusing on processes versus outcomes

Outcomes play a central role in health services research, given that the ultimate goal is to improve patient care (Rubin et al., 2001). However, as described previously, there is a wide range of factors that might potentially impact on clinical outcomes, over and above what happens in the MDT meeting, with no possibility (in the UK at least) to set up a randomised control trial that may help to disentangle the effects of MDT processes on outcomes (Sevdalis and Green, 2014). Instead, I have focused explicitly on the process of decision making, without considering the impact on the quality of decisions made or their influence on clinical outcomes. This is nonetheless important because developing a better understanding of processes is in itself valuable as a pre-requisite for improvement, in particular because decisions themselves are influenced by the way in which they are made (Lamb et al., 2011c, Dew et al., 2014).

10.4.4 Measuring status

Another key limitation of this work relates to the measure of status I adopted. Using professional group as an objective measure of status is an approach well-established in the literature. However, status differences also exist *within* as well as between professional groups, which means it is possible that this categorisation was overly simplistic. Nonetheless, it was clear from early on during the observation period that the 'between group' status differences (e.g. doctor versus nurse) were more salient than the 'within group' status differences, reflecting the conclusions of other researchers (Nembhard and Edmondson, 2006). In addition, a key benefit of this approach was that it enabled me to compare teams across three different specialities, allowing me to explore the decision making process in a wider range of contexts.

10.5 Implications for policy, practice and future research

Although the small, purposively selected sample for this study limits generalisability, the findings discussed above illustrate processes that have a number of implications for policy, for practice in cancer MDT meetings, and for future research. These are summarised in Box 7 and discussed in more detail below.

Box 7: Implications for policy and practice identified by the study

Summary of recommendations for cancer MDTs

- There is a need for national guidance to provide clarity for teams about which cases to discuss in depth in MDT meetings
- MDTs should agree local triage processes to identify cases for detailed discussion in advance of MDT meetings
- MDTs should consider appointing an MDT Lead primarily on the basis of their leadership skills, rather than their professional skills
- MDTs should separate chairing and documenting roles so that the MDT Lead is not responsible for both
- MDTs should review the layout and seating arrangements in team meetings
- MDTs should review their approach to presenting cases for discussion in MDT meetings
- Surgical and medical consultants in particular should use both verbal and non-verbal cues in order to explicitly seek input from other team members
- CNSs and StRs should adopt a wide range of strategies to contribute during MDT meetings

10.5.1 Implications for policy

By illustrating the way that the four MDTs under study were able to promote efficient decision making by aligning expertise with influence, the findings from my study appear to provide support for the direction set in the most recent cancer

strategy: *Achieving world-class cancer outcomes: a strategy for England 2015 – 2020*. This strategy proposes that MDT processes should be streamlined, with less time spent on cases that can be managed according to evidence based treatment guidelines (Independent Cancer Taskforce, 2015).

However, my findings also indicate that there may be a need for more detailed national guidance, to provide clarity for teams about which cases are likely to benefit from being discussed in depth, and which can be streamlined. Based on the evidence from the four cancer MDTs studied, this could incorporate guidance on both medical and non-medical factors that are likely to increase the complexity of treatment planning. My findings suggest that the medical factors that may indicate the need for multidisciplinary discussion include patients being re-discussed mid or post treatment, those with relapsed disease, or those with complex comorbidities which mean they are not physically well enough to tolerate standard treatment. The findings also suggest that patients may benefit from discussion if there is more than one treatment option available but clinical uncertainty or disagreement about which is most appropriate, and where a treatment plan needs to change once treatment has started.

In addition, guidance on the non-medical factors that may indicate the need for multidisciplinary discussion could include patients with strong preferences (particularly where these are likely to run counter to standard treatment), socially or psychologically vulnerable patients, or those unlikely to 'comply' with the treatment recommended by the team, as well as cases where there are likely to be difficulties in communication between the patient (and/or their family) and the wider team. The practical implications for teams in terms of identifying these patients in advance of an MDT meeting are discussed in more detail below.

Any national guidance would benefit from incorporating the views of a wider range of cancer professionals and patients than it was possible to include in this study.

Further research to test these findings across a broader range of specialties is also essential, given that they are based on study of only four teams.

10.5.2 Implications for practice in cancer MDT meetings

1) 'Triage' cases for discussion in advance of the MDT meeting

My findings also indicate that individual MDTs may benefit from explicitly agreeing which cases should be discussed in depth at an MDT meeting, and establishing a process to triage cases accordingly in advance of the MDT meeting. Local agreement at an MDT level is likely to be particularly important in light of the different views expressed by MDT members in this study about the right balance between 'efficiency' and holistic discussion in the MDT meeting. Once teams have agreed on criteria for triaging cases the MDT Lead could use these in advance of the weekly meeting to filter cases, maintaining an audit trail of any decisions that are agreed not to require a full discussion, and freeing up time for more detailed consideration of complex cases.

The process of agreeing criteria for triage could also provide an opportunity for teams to formally discuss and acknowledge the different perspectives within the team about the role of psychosocial information and patient preferences in particular. This could be part of a process of team reflexivity. Reflexivity has been shown to improve healthcare team effectiveness by creating an environment in which teams can explicitly review their practice and processes in light of their overall purpose, and make changes accordingly (West et al., 2012). Open discussion and reflection on these decision making processes may therefore enable teams to reach agreement about the most appropriate way to allocate time in the MDT meeting.

Over time, these discussions are likely to help teams to improve their triage process as they become better able to identify cases that would benefit from discussion in advance. Importantly however, existing research suggests that for the triage process to be successful, those cases selected for discussion would need to be

properly prepared, with all the necessary information available during the meeting (Lamb et al., 2013b). This means that teams may also have to consider practical issues such as who in the team has met the patient when triaging cases for discussion, if they are to ensure that a wide range of information is incorporated into the decision making process where it has been agreed that this is most valuable.

2) Leadership in the MDT meeting

My findings also suggest that teams should be aware of the factors that are likely to facilitate or inhibit contributions from lower status team members in particular. The MDT Lead could play a key role in providing leadership in this regard, by ensuring that lower status contributions are incorporated during those discussions where it has been agreed that this is most valuable. If teams are to achieve this they may benefit from considering who in their team is best equipped to provide inclusive leadership, irrespective of professional group, and ensuring they receive appropriate training. Medical members bring clinical expertise that others do not, and retain ultimate responsibility for a patient's treatment. Nonetheless, other team members may also be able to provide strong leadership skills that could successfully integrate the perspectives of the wide range of professionals in attendance.

Teams may also benefit from considering the scope of the role of the MDT Lead. In one of the teams I observed, this role extended to documenting treatment plans (as well as chairing the meeting). However, this had implications for multidisciplinary discussion. Teams that currently combine these roles could therefore consider alternative options for documenting treatment plans. Based on the different approaches used by the four teams in this study, it is possible that other consultant members, StRs, or the MDT coordinator could take on this role. Key to this would be a team member's ability to understand and process complex clinical information (for example about scan results). At the same time, as teams rely more on technology to facilitate their MDT meetings, IT skills will also be important if the

person recording the decisions is to keep up with the rapid pace of decision making (for example, where this involves recording treatment plans directly into electronic patient records during the meeting).

3) Seating arrangements in the MDT meeting

Given my findings illustrating the potential for seating arrangements to impact on the participation of certain groups in the MDT meeting, teams may benefit from explicitly reviewing the layout and seating arrangements of their team meetings, and considering and testing alternatives that take into account local circumstances, such as the size of the team, the equipment needed (e.g. screens to present imaging) and the facilities available.

4) Case presentations

Given the range of issues that the four MDTs in this study addressed in their weekly meetings, it would appear unlikely that there is one standard approach that can be used to introduce all cases, in all teams. However, at a local level teams should be cognisant of the potential impact of the way a case is presented on subsequent discussion. In particular, my findings suggest that there should be enough information presented for those who have not met the patient to be able to contribute constructively. For cases where it is agreed to be useful to facilitate multidisciplinary discussion, teams may benefit from encouraging holistic case presentations in order to provide opportunities for those with psychosocial information to contribute.

5) Encouraging lower status contributions during multidisciplinary discussion

My findings suggest that directed efforts from both higher and lower status individuals within the MDT are likely to be important if teams are to successfully encourage contributions from those least likely to participate. This may require training for both higher and lower status groups. In particular, higher status groups may benefit from knowledge of approaches that can be used to encourage lower status contributions, for example using both verbal and non-verbal cues to explicitly

seek input from lower status groups within the team. In turn, my findings also suggest a series of practical strategies that could be used by CNSs and StRs in order to contribute to MDT meetings. Fundamentally however, teams also need to be cognisant of the impact of discussing patients who have not yet met key members of the team. In these circumstances, even if opportunities are provided for lower status individuals to contribute, they are unlikely to be able to do so.

10.5.3 Areas for further research

My findings have provided suggestive evidence for the types of cases that may benefit from multidisciplinary discussion in an MDT meeting. However, if MDTs are to streamline other discussions it is important that this does not disadvantage patients whose treatment plans are 'approved' rather than discussed in detail in the MDT meeting. Further research that examines the effects on patient or clinical outcomes of a triage process would therefore be of great value. However, given the challenges inherent in doing this, notably the fact that the MDT meeting is just one part of a complex patient pathway, an intermediary step may be to assess the quality of decisions that are 'approved' versus those that are 'discussed'. This could be done by assessing treatment plans against best practice guidelines. Equally, the views of patients themselves are likely to be important and there is also a need to explore these perspectives to determine what is acceptable to patients.

Further study is also needed of the approaches used by lower status groups to contribute during MDT meetings. A wider sample of cases, or a more diverse range of teams and specialities may highlight additional approaches used by lower status groups to contribute. There is also a need to explore the views of lower status groups themselves about when, how and why they adopt different approaches, recognising that this may not always be done consciously. As such, observation will remain an important source of data.

Another area that I did not fully explore in this thesis was the role of psychologists in the MDT meeting. This group is very rarely mentioned in the literature, possibly

in part because they are not core members of all cancer MDTs. During the observation period for this study for example the Gynaecology team was the only team where a psychologist regularly attended weekly MDT meetings. However, this role was identified as a factor in helping those in the team with psychosocial information to share to work together cohesively. Given that it was not possible to explore the scope of this role in detail in my study it would be useful if further research were to consider the ways in which lower status groups can be supported by a 'third party' in the meeting. The consultant clinical psychology role is interesting because it is distinctive in combining consultant status with a psychosocial role. It is possible therefore that these professionals have the potential to bridge the gap between higher and lower status members of the team. This could potentially provide another mechanism for encouraging multidisciplinary discussion, and would therefore be a valuable field of further study.

10.6 Conclusion

If cancer MDT meetings are to achieve their full potential, they must be able to identify and incorporate the relevant knowledge of team members during the decision making process. At the same time, MDTs are also tasked with making decisions in a highly time-constrained environment. The findings from this study suggest that status hierarchies can both support and challenge teams in achieving these potentially conflicting goals.

Promoting efficient decision making by capitalising on the expertise of higher status members of the team would appear to be a pragmatic approach to capitalise on an expensive and finite resource. However, efficiency should not come at the expense of holistic treatment planning for those patients most likely to benefit from multidisciplinary discussion. In these cases, this study has highlighted approaches that can be used by MDTs to capitalise on the relevant knowledge and skills of all team members when making decisions in the MDT meeting.

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Appendix 1: MDT Study publications and presentations

Peer reviewed publications

- Raine, R, Nic A' Bhaird, C, Xanthopoulou, P, Wallace, I, Ardron, D, Harris, M, Barber, J, Prentice, A, Gibbs, S, King, M, Blazeby, J, Michie, S, Lanceley, A, Clarke, A & Livingston, G (2015) Use of a formal consensus development technique to produce recommendations for improving the effectiveness of adult mental health multidisciplinary team meetings, *BMC Psychiatry* 15:143 doi: 10.1186/s12888-015-0534-6
- Raine, R, Wallace, I, Nic a' Bháird, C, Xanthopoulou, P, Lanceley, A, Clarke, A, Prentice, A, Ardron, D, Harris, M, Gibbs, S, Ferlie, E, King, M, Blazeby, JM, Michie, S, Livingston, G, Barber, J (2014) Improving the effectiveness of multidisciplinary team meetings for patients with chronic diseases: a prospective observational study, *Health Services and Delivery Research*, 2(37) doi: 10.3310/hsdr02370
- Raine, R, Xanthopoulou, P, Wallace, I, Nic a' Bháird, C, Lanceley, A, Clarke, A, Livingston G, Prentice A, Ardron D, Harris M, King M, Michie S, Blazeby JM, Austin-Parsons N, Gibbs S, Barber, J (2014) Determinants of treatment plan implementation in multidisciplinary team meetings for patients with chronic diseases: a mixed-methods study, *BMJ Quality & Safety*. doi: 10.1136/bmjqs-2014-002818
- O'Driscoll, W, Livingston, G, Lanceley, A, Nic a Bháird, C, Xanthopoulou, P, Wallace, I, Manoharan, M, Raine, R (2014) Patient experience of MDT care and decision-making, *Mental Health Review Journal*, 19(4) doi: 10.1108/MHRJ-07-2014-0024

Conference Presentations

- Wallace, I, Nic a Bhaird, C, Xanthopoulou, P, Raine, R (2014) Improving the effectiveness of multidisciplinary team meetings: assessing the predictors of decision implementation. Paper presented at the *Health Services Research Network Symposium*, Nottingham
- Wallace, I, Nic a Bhaird, C, Xanthopoulou, P (2013) Improving the effectiveness of multidisciplinary team meetings for patients with chronic diseases. Paper presented at a Training Day for Specialty Registrars in Geriatric Medicine, London Chest Hospital

Appendix 2: Use of secondary sources in this thesis

Chapters 2 and 3 of this thesis are based on reviews of policy and literature on cancer MDTs within the field of applied health research, and research and theory from the micro organisational behaviour literature. I used slightly different approaches to search these diverse bodies of literature, although all searches were underpinned by a structured and methodical approach. I briefly describe the search strategies and review processes below.

Search strategy for policy and grey literature on cancer MDTs

My starting point for this search was my existing knowledge of key policy documents, gained during a previous role as an NHS Service Improvement Manager, and supplemented by extensive literature reviews conducted as part of the NIHR-funded MDT Study. I also drew on three published reviews of the development of cancer policy in England (Griffith and Turner, 2004, Haward, 2006, Richards, 2010). From this starting point, I used a process of snowball sampling to identify other relevant policy and guidance documents (Mathew et al., 2003). In addition, I searched the following sources for grey literature comprising policy, guidance, or commentary relating to cancer multidisciplinary teams:

- Cancer Quality Improvement Network System (CQuINS) <http://www.cquins.nhs.uk/>
- Cancer Research UK: <http://www.cancerresearchuk.org/about-us/cancer-taskforce>
- Commissioning Support for London¹
- Department of Health: www.gov.uk/government/organisations/department-of-health
- London Cancer: www.londoncancer.org/
- London Cancer Alliance: www.londoncanceralliance.nhs.uk/
- Macmillan Cancer Support: <http://www.macmillan.org.uk/>
- My Cancer Treatment: <http://www.mycancertreatment.nhs.uk/>

¹ This website is no longer operational – CSL was shut down in 2011

- National Cancer Intelligence Network: www.ncin.org.uk/home
- National Institute for Health and Care Excellence: www.nice.org.uk/
- NHS England: <http://www.england.nhs.uk/>
- NHS Improving Quality: <http://www.nhsiq.nhs.uk/>
- Public Health England (Cancer Commissioning Toolkit):
<https://www.cancertoolkit.co.uk/Home/PublicUsers>
- The King’s Fund: www.kingsfund.org.uk/
- The National Cancer Action Team (NCAT)²:
webarchive.nationalarchives.gov.uk/20130513211237/http://www.ncat.nhs.uk/
- The National Peer Review Programme: www.nationalpeerreview.nhs.uk/
- The Royal College of Physicians: www.rcplondon.ac.uk/
- The Royal College of Surgeons: www.rcseng.ac.uk/
- The Royal College of Pathologists: www.rcpath.org/
- The Royal College of Nursing: www.rcn.org.uk/
- The Royal College of Radiologists: www.rcr.ac.uk/

These websites were searched before and after the implementation of the NHS restructure in April 2013, because a number of organisations and their associated websites were closed or rebranded following this. A further update of this search was conducted in May 2015 following the General Election on 7 May. No documents were identified beyond July 2016.

In addition, I searched:

- **PubMed** using the terms: ‘cancer’ AND ‘policy’ AND ‘england’ (title and abstract, all documents up to October 2016)
- **HMIC** using the terms: ‘cancer’ AND ‘policy’ AND ‘england’ (title, all documents up to October 2016)

² The NCAT website was archived following the NHS restructure in 2013. Responsibility for this website has transferred to NHS Improving Quality (NHS IQ).

- **CINAHL** using the terms: ‘cancer’ AND ‘policy’ AND ‘england’ (title, all documents up to October 2016).

Review of policy and grey literature

In order to focus my review, I only included policy and guidance relating to the English NHS. Whilst a number of other countries across Europe (Prades and Borrás, 2011), Australia (Cancer Australia and The Royal Australian College of Obstetricians and Gynaecologists, 2011), New Zealand (Ministry of Health, 2012), and America (American College of Surgeons and Commission on Cancer, 2012) have also introduced models of multidisciplinary team working, the relevance of these policy documents was limited due to underlying differences in the healthcare systems.

Initially, to determine which articles were relevant I reviewed titles and executive summaries of publications identified in the search, and searched the content of all policy or guidance documents for reference to ‘multidisciplinary teams’ or ‘multidisciplinary team meetings’. I retrieved all documents that made reference to multidisciplinary team meetings in cancer. I marked up the relevant excerpts in the text to allow me to move back and forth between key points. Following this I adopted a narrative approach to write up the results of this analysis in order to set the scene for this study (Buse et al., 2010).

Search strategy for research literature on cancer MDTs

I searched for literature on cancer MDTs in a number of different phases. Initially, papers related to measuring or improving the effectiveness of cancer MDTs were identified in a search of key databases (including Web of Science, MEDLINE and OVID) as part of the NIHR-funded MDT Study. Key words included ‘multidisciplinary’, ‘cancer’, ‘team’ and ‘effectiveness’. This early search incorporated papers published between 2005 and 2010. Reference lists of key articles were reviewed to identify further, relevant documents, and references were also sought from experts in the field.

I updated this search periodically throughout the NIHR-funded MDT Study in order to

keep abreast of emerging research. I also made use of four systematic reviews relating to MDT meetings: one on the impact of MDTs on patient outcomes (Prades et al., 2014); one on cost-effectiveness (Ke et al., 2013); one on the quality of decisions made by cancer MDTs (Lamb et al., 2011b); and one on the effectiveness of MDT meetings for lung cancer (Coory et al., 2008). I also drew on a literature review of the impact of cancer MDTs on clinical practice and patient outcomes (Croke and El-Sayed, 2012).

In addition, I conducted a review of PubMed, Embase (via OVID SP), CINAHL and NHS Health Management Information Consortium databases in June 2015. This was to ensure that no key research papers had been missed, and to focus the search specifically on issues of status and participation in MDT meetings. I used combinations of the search terms 'multidisciplinary'; 'cancer'; 'team'; and 'status' or 'hierarchy' or 'information sharing' or 'decision making'. I repeated this search periodically during my thesis write up to keep abreast of emerging research.

Search strategy for research and theory in the micro-organisational literature

My starting point in the micro-organisational literature was the review of key texts. In the early stages, my secondary supervisor helped me to identify a number of important papers and literature reviews on teams (Levine and Moreland, 1990), diversity within teams (van Knippenberg and Schippers, 2007), and status characteristics theory (Bunderson, 2003) amongst others. I also attended a ten week introductory course on micro organisational behaviour at London Business School and used the weekly reading lists and seminars as a starting point for exploring the vast literature. When I had selected status as a theoretical perspective for my thesis (the rationale for this is explained in **Chapter 5**), I built on this starting point by reviewing reference lists of key articles and PhD theses, identifying significant authors in the field (e.g. Berger, Edmondson, and Nembhard) and conducting searches of the JSTOR database using key words related to 'status' and 'teams'. As I reviewed this literature I extended my search to include the concepts of 'voice' and 'silence' as these emerged as key ideas when considering the role of lower status groups.

When searching for literature for my theoretical framework I did not exclude any papers based on date of publication alone. This reflected the fact that some of the initial papers on status characteristics theory were published in the 1970s.

Reviewing the literature on cancer MDT meetings and status

I used a similar approach to reviewing the literature in both fields. Initially, I reviewed titles and abstracts from the papers I had identified in my search. This enabled me to determine which articles were most relevant to my research questions. I then read selected articles in full, before summarising the findings and developing key themes. I created a series of mindmaps to display these themes and to determine the structure of my write up, as illustrated in Figure 6 overleaf.

Appendix 3: MDT participant information sheet

[Trust logo]

VERSION 2 (SMH) 3 AUGUST 2010

PARTICIPANT information leaflet

Improving the effectiveness of Multi-Disciplinary Team Meetings (MDMs) for patients with chronic diseases

We would like to invite you to take part in a research study. Please read this leaflet which tells you about the study and what it involves and ask one of our team if there is anything that is not clear. Take time to decide whether or not you wish to take part.

What is the purpose of the study?

Multi-Disciplinary Team Meetings (MDMs) are widely used across the NHS for managing chronic diseases. We want to find out more about the factors that influence clinical decision making at MDMs. The findings will be used to improve treatment decisions in your MDM and in other MDMs across the NHS by recommending possible improvements in the way that MDMs work.

Why have I been chosen?

We wish to examine a number of MDMs covering a wide range of clinical conditions affecting a diverse range of patients. All members of your multi-disciplinary team have been provided with this information sheet because we wish to observe your MDM and to invite some MDM members to participate in an interview. We will invite MDM members from each core professional group represented on the MDM, including both regular and infrequent attenders, to be interviewed.

What does the research involve?

If all multi-disciplinary team members consent, a researcher – Ms Isla Wallace - will attend and observe a number of consecutive MDMs. She will not be an active

participant in these meetings, but will both audiotape the meeting and take notes, using a structured form. She will collect information on the structure of the meeting (including the number of patients discussed, the professional mix of members attending); processes (including the roles of each of the members); patient related factors that are discussed and the clinical decision made. We expect to attend and observe between 22 and 41 meetings, depending on the number of patients discussed. In this part of the study, you will not be required to do anything outside of, or in addition to your normal day to day activities.

Following this, the researcher will conduct face-to-face interviews with a selection of multi-disciplinary team members. The purpose of these interviews is to explore members' perceptions of MDM strengths and weaknesses; factors influencing MDM decisions; their professional role and value to the MDM. The questions will be flexible and open-ended, to allow you the chance to raise the issues that you feel are important. If you are approached to be interviewed, we will ask you to sign a further consent form. All information given during these interviews will be kept strictly confidential and no names will be attached to the information provided. The interview will be conducted at a convenient time and place of your choosing. The interview will last between 30 minutes and one hour and may be ended by you at any time. It will be tape-recorded, if you consent, but the tapes will be destroyed after analysis has been completed.

Do I have to take part?

It will be entirely up to you to decide whether or not to take part in the study and you can withdraw from the study at any time without having to give a reason. If you decide to participate, you will be asked to sign a consent form, and given a copy to keep. A decision not to take part or a decision to withdraw from the study will not affect your work in any way.

What are the possible disadvantages of being interviewed?

It is expected that this study does not have any disadvantages, but the interview will take between thirty and sixty minutes of your time.

What are the possible benefits of being interviewed?

The information we get from this study will improve the MDM decision-making process by highlighting areas of excellence and possible weaknesses. If you take part in an interview, your anonymised views will contribute to our findings and any resulting recommendations for change.

Will what I say be confidential?

Yes. We will follow ethical and legal practice and all information about you will be handled in confidence. If you are interviewed, this will take place in private, and the recording will not contain your name or any personal information, only a study identification number. Recordings will be encrypted and held in a computer in the Department of Epidemiology and Public Health, UCL. Only those members of the research team who are directly involved in analysing the information will have access to the recordings. In publications and reports, the identity of participating MDMs will not be revealed, only basic descriptive information on the conditions covered and regional location of the MDM will be given. Professor Rosalind Raine is the Chief Investigator and she has overall responsibility for confidentiality and data security.

What will happen to the results of the study?

Once the study has finished the results will be analysed and conclusions drawn about how treatment decisions are reached, and how this process might be improved. Findings will be published in scientific journals, but the MDM and all individuals will be referred to in anonymised form. Quotes from the interviews may be used, but again will be anonymised. Any quotes where the individual concerned could be identified by another team member, or anyone else, will not be used. We will also visit your MDM and provide a summary of our findings. Again, interview

quotes will only be used as long as the speaker's anonymity can be preserved. MDM members will have the opportunity to discuss the findings and give their views on the recommendations.

Who is organising and funding the research

Professor Rosalind Raine is the Chief Investigator and the study is funded by the National Institute of Health Research. No payments are made to the researchers conducting this study.

Who has reviewed this study?

All research in the NHS is looked at by an independent group of people, called a Research Ethics Committee, to protect your interests. This study has been reviewed and given a favourable opinion by East London Research Ethics Committee.

What do I do if I wish to make a complaint about the research?

If you wish to complain about any aspect of the research, you should contact the Chief Investigator, Professor Rosalind Raine or the researcher. If you feel you do not receive a satisfactory response and you wish to take the matter further you should contact the Complaints Manager (see below) giving the project title and the Principal Investigator's contact details.

Contact details

Please contact [researcher] if you would like to ask questions about the study or for any other reason:

By [telephone]: or by email: [email address] or post: [post]

You can also contact: Professor Rosalind Raine on [telephone] or by email [address]

Contact details for the Complaints Manager are: [local service address and telephone]

Thank you very much for taking the time to read this information about the study.

Appendix 4: MDT participant consent form

[Hospital logo]

UCL Project ID number: 10/071

Participant ID number for this study:

Title of study: Improving the effectiveness of Multi-Disciplinary Team Meetings (MDMs) for patients with chronic diseases: Non-participant observation

Chief investigator: Professor Rosalind Raine **Principal Investigator at [Hospital]:**

Researchers: Isla Wallace, Caoimhe Nic a' Bhaird, Dr Penny Xanthopoulou

INFORMED CONSENT FORM

Please initial box

1. I confirm that I have read and understand the participant information sheet dated 03/08/10 (version 2) for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.
2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason and without my medical care or legal rights being affected.
3. I understand that all the information I provide for the purposes of this study will be kept strictly confidential.
4. I consent to the multidisciplinary meetings being taped and understand that these recordings will be stored securely and destroyed after analysis is complete.
5. I agree to being quoted anonymously in the results.
6. I agree to take part in this study.

Name of Participant (PRINT)

Date

Signature

Name of person taking consent

Date

Signature

Appendix 5: Qualitative observation coding sheet

Meeting date:

Team ID:

INPUTS - Systems, organisational

1. Mention of national policy directives or guidelines:
2. Mention of local guidelines/rules/regulations:
3. Mention of resource issues (staff, time, money)? How do these factors impact on decision-making:
4. Mention of other individuals/services/teams within organisation that impact on options/decision made:
5. Other broader contextual factors influencing decision-making:

INPUTS - Team and task

6. What information is shared in advance? How does this influence decision-making?
7. Meeting environment (Size of room / seating arrangement / light / acoustics):
8. What use is made of technology? e.g. access to test results, patient notes, virtual team. How does this influence decision-making?
9. How structured is the meeting process? (e.g. following agenda, protocol):

10. Who presents cases? How? Use of structured proforma? Framing of decisions to be made:

11. Patient factors: who mentions patient preferences? Who, if anyone, mentions carer or family preferences? How do attendees react? Any variation by patient characteristics:

- Socio-demographic (age, gender)
- Socioeconomic (education, poverty)
- Social (marital status, employment, family)
- Health literacy (understanding of condition and navigation of healthcare services)

12. Mention of missing information? (test results, attendees) Impact on decision-making:

13. Other team, task and patient inputs influencing decision-making:

MEDIATORS - Team processes, emergent states

14. Participation / Communication: who dominates? Who has least involvement? Is there a hierarchical pattern of participation or a relatively even distribution?

15. Any misunderstandings/lack of clarity - between whom? Who asks questions? To whom? Is there dissent or conflict? Who disagrees? How is it dealt with?

16. Leadership style: clear role or several competing leaders? Does the leader dominate discussion or decision-making, or take a back seat? Do they encourage involvement or limit contributions (e.g. because of time)? Do they check understanding or proceed at their own pace?

17. Cohesion: Any social conversation immediately pre/post meeting? Is everyone focused on the task - anyone chatting/disinterested? Mood/affect - Relaxed? Pressured? Formal? Focused on task?

18. Decision mechanisms: Is consensus sought? How? (Verbal, eye contact) Are decisions made in the absence of consensus?

19. Other mediators, processes influencing decision-making:

OUTCOMES

20. Clarity of recommendations; Who records the decision? Is there a verbal summary and rationale? Is responsibility for implementation discussed?

Other:

Appendix 6: Quantitative observation data collection tool

Study ID

Patient Data Proforma: Haematological cancer (1)

MDT Date:

A. PATIENT AND SOCIAL CHARACTERISTICS

Information shared explicitly during MDM (written/verbal):

1. Descriptors of age Elderly Young No mention
2. English proficiency Poor Good/native No mention
3. Ethnicity White Mixed Black Asian No mention
- Nationality _____
4. Marital Status: Single Widowed Married/cohabiting Divorced Separated No mention
5. Relationship with services Obstructive Non-adherent Positive No mention
6. Caring roles Yes No No mention
7. In residential care Yes No No mention
8. Disability Yes No No mention
9. Difficult socioeconomic circumstances Yes No No mention
- 10a. Social support Good Ambiguous Poor No mention

10b. Free text detailing social needs discussed:

Health behaviours

11. Smoking Yes No Prev. history No mention
12. Heavy drinking Yes No Prev. history No mention
13. Physical activity Inactive Regular exercise No mention
14. Patient knowledge of managing condition Poor Good No mention
15. Patient/carer prefs mentioned Patient Carer Both No mention

B. DIAGNOSIS/SEVERITY

Information shared explicitly during MDM (written or verbal):

Diagnosis	Confirmed	Suspected	Ruled Out	
1. Leukaemia (CLL/CML)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> No mention
2. Lymphoma – Non-hodgkin’s	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> No mention
3. Lymphoma – Hodgkin’s	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> No mention
4. Myeloma (MM)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> No mention

5. WHO diagnosis new diag. relapse refractory Other No mention

6. WHO perf. status 0 1 2 3 4 No mention

7. Ann Arbor stage I II III IV No mention

8. Stage modifiers A B E S No mention

FLIPI 1 = prognostic index for follicular lymphoma (✓)

- Raised LDH
- Age >60
- Stage III/IV
- Raised Hb
- Nodal avul >3

FLIPI 2 = new prognostic index for follicular lymphoma (✓)

- B2M >N
- Age >60
- Node size >6cm
- Hb <N
- BM involvement

9. FLIPI1 score 0-5 10. FLIPI2 score 0-5
No mention/unclear

IPI – non-Hodgkin lymphoma (✓)

- Age >60
- LDH >N
- WHO PS >2
- F/N areas >2
- Stage ¾

IPS – prognostic score for advanced Hodgkins (✓)

- Hb <N
- Age >45
- Male
- Albumin <N
- Stage IV
- Lymphocytosis
- Leukocytosis

Rai Stage (for chronic lymphocytic leukaemia)

- 0= low risk, lymphocytosis
- 1= intermediate risk, + lymphadenopathy
- 3= int risk, hepatomegaly/splenomegaly
- 4 = high risk, +low rbc
- 5 = high risk, lymphocytosis plus thrombocytopenia

11. IPI score /5 12. IPS score /7 13. Rai Stage (0-5)
No mention/unclear

C. COMORBIDITIES

Information shared explicitly during MDT (written or verbal):

<i>Comorbidities</i>	Yes	No	Suspected	
1. HIV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> No mention
2. HIV post-transplant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> No mention
3. Other immunosupp	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> No mention
4. Hepatitis B/C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> No mention
5. Other infection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> No mention
6. Pregnancy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> No mention
7. Cardiac	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> No mention
8. Renal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> No mention
9. Respiratory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> No mention
10. Depression/anxiety	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> No mention
11. Obesity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> No mention

C. Free text detailing additional co-morbidities

D. ACTIONS AND DECISIONS

Information shared explicitly during MDM (written/verbal):

1. Rational for patient being discussed here

a	New Referral
b	Feedback
c	Specific query
d	Unknown to MDM members

- 2. Missing info Yes No
- 3. Presenter questioned before decision made? Yes No No mention
- 4. Is the intent curative or palliative? Curative Palliative No mention

5. Actions discussed

6. Decision 1

- 6a. How is decision recorded? Written Verbal Both Neither Unclear to researcher
- 6b. Named decision owner? Yes No
- 6c. Is decision conditional? Yes No No mention

7. Decision 2

- 7a. How is decision recorded? Written Verbal Both Neither Unclear to researcher
- 7b. Named decision owner? Yes No
- 7c. Is decision conditional? Yes No No mention

8. Factors impacting on team ability to make a decision (free text):

9. Any disagreements/challenges? Yes No

9a. Cause/content of disagreement:

Appendix 7: Professional interview topic guide



Department of Applied Health Research

MDT STUDY: Participant interview topic guide

Version 1, 28.3.12

INTRODUCTION FOR PARTICIPANTS

The purpose of this interview is to explore your views on the multidisciplinary team meetings that you attend for [*team name*], and to discuss some of the factors influencing MDM decision-making.

The questions will be flexible and open-ended, to allow you the chance to raise the issues that you feel are important. Your responses will be confidential, and anonymised in any findings we publish. They will not be shared with your team. There are no 'right' or 'wrong' answers and I stress that this is not about individuals, but about the system. There is conflicting evidence in the literature about whether MDTs are effective or not, and this is what we would like to explore.

Interviewer will then talk through information sheet if needed and answer any questions.

Warm Up

1. This interview is about your experience of the MDT meeting, in general, how do you find working in this way?
 - *What do you think **works well** about your MDT meeting?*
 - *Is there anything you would **change** about your MDT meeting?*
 - *If there was no MDT meeting, what **difference** would it make?*
 - *Is the MDT a good use of your time? What is most/least valuable?*
 - *What would you describe as the **primary role** of the MDM? Does it have any **other functions**?*

2. What factors are most important to the success of an MDT meeting?

Team Processes – I'd like to focus now on the wider team

3. What is the atmosphere like in the team meetings? What do you think creates this atmosphere?
 - *What would make it better?*
 - *Do you think people are able to speak freely during the meetings? Why?*
 - *How do different professional groups interact in the team?*
 - *Are some professions more or less relevant to the meeting than others?*
 - *What do you see as your role in the meeting?*
 - *What kind of issues do you bring to the meeting? Do you think the MDM is the best way to do this?*

4. What happens when people disagree?
 - *Can you give example of time you disagreed?*

Decision-making - can I get you to think about decision-making in the MDM?

5. How does the team come to a decision about a case/patient?

- *What information do you need to make a decision?*
- *Probe re barriers to accessing information.*
- *Are there times when the team doesn't come to a decision? Why is this?*

6. Can you talk a bit about patient preferences in relation to decision-making?

- *How much do you tend to know about patient's preferences? To what extent do they influence decision-making?*
- *How could patient preferences be incorporated into decision-making?*
- *What about other factors, for example, other illnesses or conditions: how do these influence decision-making?*

7. Is there anything you think **doesn't get discussed** enough during the meeting?

- Is there anything you think **less time** should be spent on?
- Can changes happen (realistically) to improve it? How (*how can x or y happen*)?

8. How do MDT meetings affect the quality of clinical decisions?

- Do you think MDT meetings lead to **better clinical decisions** for patients?
- *Prompt for a specific example*
- Are there times when **poor/sub-optimal decisions** are made? Why do you think this happens? *Prompt for a specific example*

9. Can you describe a time when a decision made at the meeting was changed? Why did this happen?

10. How much of decision-making happens **outside the meeting**? How does the quality of these decisions compare?

11. To conclude this section, could you reflect on what could be improved about the way decisions are made?

External influences

12. How is decision-making influenced by resourcing issues (e.g. time-constraints, funding, staff shortages)?

13. Thinking about the physical environment, are there any aspects of the room or layout that influence the way the team interacts?

14. At the moment, there are a lot of changes going on in the NHS...

- *How would you describe the **impact** of this on your **organisation**?*
- *And do you think this has **impacted on the team**?*

15. Finally, is there anything else you think is relevant?

Appendix 8: Patient interview topic guide



UCL Department of Applied Health Research

MDT STUDY: Patient interview topic guide

Version 1, 28.3.12

INTRODUCTION FOR PATIENTS

This research aims to understand clinical decision-making processes through the eyes of the patient. There will be three sections to the interview. First, we'd like to hear about your experience of your care so far. Then we'll move on to how you and your healthcare team make decisions about your care. Finally, we'll discuss more generally how you feel patients should be involved in these kinds of decisions.

We would like to emphasise that the study is being conducted by UCL and we are not employed by your Trust or the NHS.

We wish to reassure you that you do not have to answer any question you feel uncomfortable with and you can stop the interview at any time. This will in no way affect your care.

This is about getting your views across. Your responses will be confidential: they will not be shared with your healthcare team. Quotes from the interviews may be

used in our findings, but it will not be possible to identify you or your healthcare team from these.

Interviewer will then talk through patient information sheet if patient/carer wishes

Warm up - I'd like to start by asking you about your condition and your care

1. Could you briefly tell me about your [condition] and the most important ways that it affects you?

Encourage focus on main condition (focus of MDM) & impact on quality of life

2. What types of care do you currently have for your [condition]?

Encourage brevity & focus on major health (+/- social care) interventions

3. Can you describe how decisions were/ are made about your care?

- *Who are the main people involved in making decisions about your care? i.e. are respondents aware of multidisciplinary team (MDM) vs. individual consultant making decision?*
- *What involvement did you have in making decisions / planning care?*
- *What were your preferences/wishes regarding your care?*
- *Can you describe any times when you were invited to discuss or choose any aspects of your care?*
- *Did you want to make choices? Does it depend on the type of decision?*

4. Please can we talk in more detail about a particularly important decision that was made about your care? This may include a treatment, diagnostic procedure, something about the timing, setting (inpatient/outpatient) or anything else such as a 2nd opinion.

5. Can you describe how you made your decision to / not to receive this care? Can you tell us the factors that influenced the decision?

- *Any perceived concerns / benefits e.g. side effects; time in hospital; convalescence time; enormity of procedure; quality of life etc.*
- *Where they received information from (e.g. family, friends, reading, clinical staff)*
- *Which of these factors made a difference to the decision made? Why?*
- *Extent to which their choice / decision was influenced by personal characteristics e.g. belief systems (fatalism, faith, 'willing to try anything', autonomy [want to retain personal control], delegation [want their Dr to make important decisions] etc.)*
- *Extent to which personal characteristics interacted / were mediated by context e.g. their relationship with key health professionals / the importance of the decision / uncertainty surrounding management options etc.*

6. Is there anything about your care that you know now, that you would like to have known before?

- *Side effects, time in hospital, recuperation issues, specified risks etc.*
- *How might this information have changed your care preferences / decision?*

MDT meetings - increasingly in the NHS, patient care is managed by a team of professionals with different skills, rather than one person. For example, [insert relevant mix of professionals] may meet together once a week to discuss different cases. Patient care decisions are often made in these in 'multidisciplinary team meetings', by the whole (multidisciplinary) team.

7. What do you know about these meetings?

- *Do you know that your care is discussed?*

- *Were decisions fed back to you?*
- *What do you think about this way of working?*
- *How do you feel about your care being discussed in these meetings?*

8. What were /are the important things about you that you would want the multidisciplinary team to consider when they meet to discuss your care/management?

- *Priority (quality versus quantity of life etc.); attitude to risk; personal trade-off between benefits & risk; family support / commitments; work commitments; age; specific comorbidities etc.*

9. What were / are the important things about your care that you would want the multidisciplinary team to consider when they meet to discuss your care/management?

- *Defined benefits & concerns e.g. side effects; time in hospital; convalescence time; enormity of procedure; quality of life etc.; importance of short versus long term effects*
- *Timing; setting etc.*

10. When is the most appropriate time to discuss this information with you?

- *How should it be done & how often? e.g. before or after the MDT*
- *Who would you want to represent your views at a multidisciplinary meeting (key health professional; patient advocate; patient/carer)*

11. Are there issues that you would wish to remain confidential (not to be shared) when the team is discussing management options for you?

As appropriate, probe, with sensitivity:

- *Comorbidities; risky behaviours; personal circumstances (do NOT press to define these if the patient does not volunteer the information).*

In this final section, I'd like to talk more generally about how you think multidisciplinary teams should work

12. Do you think it is important for multidisciplinary teams to always consider patients' views when making a decision about care?

As appropriate, probe the influence of:

- *Context e.g. major decisions (to have a major intervention or not etc.) versus decisions about process (scheduling, setting etc.);*
- *Intervention specific issues e.g. where there is clinical uncertainty about options; quality of life (pain, impact on mobility / independence etc.)*

13. What information should be fed back to patients about the multidisciplinary team meeting decision-making process about their care?

As appropriate, probe:

- *How the MDT decided what to recommend e.g. whether it was protocol / evidence based; the specialties involved in making the decision; options discussed; factors which influenced the decision etc.*

14. Do you have any suggestions for ways for patients' views to be represented at the multidisciplinary team meeting?

As appropriate, probe:

- *Some suggestions include: staff known to patient attend; patient advocate attends; preparatory meeting with patient; patient preferences written down in advance; patient submits a written statement; patient/carer attends*

meeting; formalised feedback after the meeting; decision options discussed with patient after meeting etc.

- *How would this work in practice? e.g. would they find it upsetting, would they understand the discussion, would it be intimidating; is it feasible (work & family commitments)?*
- *What about for patients who feel unable to express their view / ask questions?*

Finally, is there anything else about how patients are involved in decisions about their healthcare that you would like to add?

Appendix 9: Patient information leaflet

[Trust logo]

VERSION 3, 28 February 2012

Patient information leaflet

Improving the effectiveness of multidisciplinary team meetings in healthcare

We would like to invite you to take part in a research study. Please read this leaflet which tells you about the study and what it involves and ask one of our team if there is anything that is not clear. Take time to decide whether or not you wish to take part.

What is the purpose of the study?

Multidisciplinary Team Meetings (MDMs) are widely used across the NHS for managing patient care. We want to find out more about the factors that influence clinical decision making at MDMs. The findings will be used to improve care decisions in your MDM and in other MDMs across the NHS, by recommending possible improvements in the way that MDMs work.

Why have I been chosen?

As part of our research we wish to explore methods for taking patients' wishes about their care into account during MDM decision making. We are therefore inviting a diverse range of patients to be interviewed.

What does the study involve?

A researcher will contact you to see if you are willing to be interviewed. If you are, they will arrange a time and day that suits you. You will be interviewed in private at a place of your choice. This may be at your home or at this clinic, when you next have an appointment. During the interview, the researcher will ask you questions about your health care wishes and expectations and the extent to which these were

met by the decisions made about your care at the MDM. They will also be interested to hear any suggestions you may have to improve patients' involvement in health care decision making. The questions will be flexible and open-ended, to allow you the chance to raise any issues that you feel are important. The interview will last between 30 minutes and one hour and may be ended by you at any time. It will be tape-recorded, if you consent, but the tapes will be destroyed after analysis has been completed. You will also be asked to allow the researcher to collect medical information about your condition and hospital care from your medical records.

Do I have to take part?

It will be entirely up to you to decide whether or not to take part in the study and you can withdraw from the study at any time without having to give a reason. A decision not to take part or a decision to withdraw from the study will not affect your care in any way.

If you are interested in taking part then the health care professional who has given you this sheet will give us your contact details. The researcher will then contact you by phone. If you prefer to be contacted by another method, then please tell the person who gave you this sheet and we will email or write to you instead. The researcher will then arrange to meet you. You can contact the researcher or other members of the research team at any other time using the contact details below.

If you decide to be interviewed, you will be asked to sign a consent form to say that you are happy to take part and that you agree to the researcher having access to your hospital records. You will be given a copy of the consent form to keep. You will still be free to withdraw from the interview at any time, and without giving a reason.

What are the possible disadvantages of being interviewed?

It is expected that this study does not have any disadvantages, but the interview will

take up your time.

What are the possible benefits of being interviewed?

The information we get from this study will improve the MDM decision-making process by highlighting areas of excellence and possible weaknesses. If you take part in an interview, your views will contribute to our findings and any resulting recommendations for change. However the identities of participants will not be revealed in any publication or report relating to this research.

Will what I say be confidential?

Yes. We will follow ethical and legal practice and all information about you will be handled in confidence. If you are interviewed, this will take place in private, and the recording will not contain your name or any personal information, only a study identification number. Recordings will be encrypted and held, together with information from your medical records in a password protected computer in the Department of Applied Health Research, UCL. Only those members of the research team who are directly involved in analysing the information will have access to the files on the computer. Professor Rosalind Raine is the Chief Investigator and she has overall responsibility for confidentiality and data security.

Involvement of your doctor

The health care professional in charge of your care here is aware that you have been invited to participate in this study. If you decide to participate, a copy of your signed consent form will be kept in your notes. However s/he will not see any study information with your name on it. In all publications and reports, the identity of participants will not be revealed.

What will happen to the results of the study?

Once the study has finished the results will be analysed and conclusions drawn about how care decisions are reached, and how this process might be improved. Findings will be published in a scientific journal, but it will not be possible to identify

you or your healthcare team. Quotes from the interviews may be used, but again, these will be anonymised. We will also produce a summary of our findings which we will send to you.

Who is organising and funding the research

Professor Rosalind Raine is the Chief Investigator and the study is funded by the National Institute of Health Research. No payments are made to the researchers conducting this study.

Who has reviewed this study?

All research in the NHS is looked at by an independent group of people, called a Research Ethics Committee, to protect your interests. This study has been reviewed and given a favourable opinion by East London Research Ethics Committee.

What happens if I become upset by any aspect of the study?

In the unlikely event that you become distressed by any aspect of the study, the researcher will offer support and can contact a person suggested by you if that is your wish. This may be your partner or carer. If you ask, they will also provide feedback (the content of which will be agreed with you) to the healthcare professional who is primarily responsible for your care. In the event of illness, the researcher will contact the healthcare professional most readily available to offer help.

What do I do if I wish to make a complaint about the research?

If you wish to complain about any aspect of the research, you should contact the Principal Investigator [name], the Chief Investigator, Professor Rosalind Raine or the researcher. If you feel you do not receive a satisfactory response and you wish to take the matter further you should contact the Complaints Manager (see below) giving the project title and the Chief Investigator's contact details.

Contact details

Please contact the researcher, Isla Wallace, if you would like to ask questions about the study or for any other reason:

By telephone : 020 7679 1860

By email: i.wallace@ucl.ac.uk

By post: Isla Wallace
Department of Applied Health Research
University College London
1-19 Torrington Place
London WC1E 7HB

You can also contact:

Professor Raine on 0207 679 1713 or by email (r.raine@ucl.ac.uk).

Contact details for the Complaints Manager are:

[Local contact details]

More general information about taking part in medical research is available from the Patient Advice and Liaison Service (PALS), either online at www.pals.nhs.uk or via your local PALS office at:

[contact details for local service]

Thank you very much for taking the time to read this information about the study.

Appendix 10: Patient consent form for interviews

[TRUST LOGO]

VERSION 3, 28 MARCH 2012

UCL Project ID number: 10/071

Patient ID number for this study:

**Title of study: Improving the effectiveness of multidisciplinary team meetings in
healthcare**

Chief investigator: Professor Rosalind Raine

Principal Investigator at [Trust]: [Name]

Researcher: Isla Wallace

INFORMED CONSENT FORM

**Please initial
box**

1. I confirm that I have read and understand the patient information sheet dated 28/03/12 (version 3) for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.
2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason and without my medical care or legal rights being affected.
3. I understand that all the information I provide for the purposes of this study will be kept strictly confidential.

4. I understand that the researchers will need to know my name, address and contact details. These will be used only to contact me about the study. I give permission for the researchers to have this information.
5. I understand that the researchers will have access to my medical records. The researchers will use these:
- to collect medical information about my condition and care
 - to update my contact details if these change during the study
- I give permission for these individuals to have access to my records.
6. I consent to the interview being taped and understand that these tapes will be stored securely and destroyed after analysis is completed.
7. I agree to being quoted anonymously in the results.
8. I agree to take part in this study

Name of Participant (PRINT) _____
Date _____
Signature

Name of person taking consent _____
Date _____
Signature

Appendix 11: Thematic framework I

Theme	Sub-theme	Code (<i>sub-codes in italics</i>)
I. THE DECISION MAKING PROCESS	Meeting Function	decision making
		peer to peer learning
		teaching
	Initiating Participation	initial case presentation
	Opportunities to Participate	reflections on imaging input
		reflections on pathology input
		clinical information provided to support interpretation of imaging or pathology
		high participation
		low participation
		multidisciplinary discussion
		asks questions
		responds to question
		gives advice
		Evaluation of Contributions
	lower status contribution not incorporated <i>- lower status contribution ignored</i>	
	lower status interrupted	
	willingness to contribute	
	Influence	defers decision
		steers discussion

Theme	Sub-theme	Code (<i>sub-codes in italics</i>)
		issues directive or request
		makes decision
	Explanations for patterns of participation and influence	importance of higher status knowledge
		limits of lower status knowledge
		time pressure specifically as a barrier to participation
willingness to speak up		
II. EFFECTS OF STATUS HIERARCHIES	Efficiency	time pressures
		minority of patients where MDT makes a difference
		tension between discussing all patients and discussing in depth
	Benefits of MDT Meetings	access to a range of opinions
		ensures consistent approach to treatment
		improves coordination and speed of care
		improves patient care
		increases recruitment to clinical trials
		opportunity for cohesion and communication
		provides holistic view of the patient
	Information Sharing	provides reassurance for patient and clinician
		reflections on levels of information shared

Theme	Sub-theme	Code (<i>sub-codes in italics</i>)
		patient contact with MDT members - <i>medical or surgical consultants</i> - <i>other doctor</i> - <i>StR</i> - <i>CNS</i>
		Role of patient centred information - <i>patient preferences</i> - <i>psychosocial factors</i> - <i>physical wellbeing and comorbidities</i>
	Multidisciplinary Discussion (circumstances where it occurs)	Patients with limited treatment options - <i>palliative care</i> - <i>relapse</i>
		Inability to cope with treatment - <i>Elderly of physically frail patients</i> - <i>Vulnerable patients</i>
III. FACTORS INFLUENCING MULTIDISCIPLINARY DISCUSSION	Meeting Atmosphere	provides support for lower status contribution
		seeks consensus
		member descriptions of atmosphere
		disengagement
		humour
	Physical Environment	seating arrangements
		attempts to change or challenge seating arrangements
		quiet talk and acoustics
		personalities
Leadership Style	attempt to limit discussion	

Theme	Sub-theme	Code (<i>sub-codes in italics</i>)
		clear structure
		decision making is an open process
		does not curtail discussion
		invites contributions
		lack of structure
	About the Teams	gynae meeting context
		haem1 meeting context
		haem2 meeting context
		influence of peer review
		skin meeting context

Appendix 12: Thematic framework II

Theme	Strategies	Outcomes
Asking questions	<ul style="list-style-type: none"> Asks questions 	<ul style="list-style-type: none"> Prompts discussion Influences decision
Framing contributions in medical or surgical terms	<ul style="list-style-type: none"> Psychosocial frames contribution from a medical perspective StR provides a clinical rationale for discussion 	<ul style="list-style-type: none"> Prompts discussion Influences decision
Providing a practical alternative or solution	<ul style="list-style-type: none"> Proposes an alternative solution (<i>specifically challenging another suggestion</i>) Proposes solution to a problem facing the team 	<ul style="list-style-type: none"> Prompts discussion Influences decision
Sharing information	<ul style="list-style-type: none"> Provides clinical information Provides information about patient as a person 	<ul style="list-style-type: none"> Prompts discussion Influences decision Facilitates teamwork
Using humour	<ul style="list-style-type: none"> Uses humour 	<ul style="list-style-type: none"> Influences decision Facilitates teamwork

Appendix 13: ‘Questioning’ node by professional group

Professional group	Nvivo node frequency	Illustrative quote
Surgeon	100*	<i>Is she symptomatic at the moment?</i> (Consultant Gynaecologist, Gynaecology, observation transcript)
Haematologist	73	<i>Can I just ask, his stage of disease previously was more than stage one, is that right?</i> (Consultant Haematologist, Haematology 2, observation transcript)
Oncologist	42	<i>This woman is eligible for Nicam [a clinical trial]. The question is, is she fit enough for Nicam?</i> (Consultant Medical Oncologist, Skin, observation field note)
Dermatologist	15	<i>In a patient like this do you think there’s a higher risk...of getting radiotherapy induced tumour at the edges of the areas or is that not something you see really?</i> (Consultant Dermatologist, Skin, observation transcript)
Radiologist or imaging specialist	16	<i>So can somebody tell me a bit what’s going on? Because there have been long standing abnormalities, haven’t there?</i> (Consultant Radiologist, Gynaecology, observation transcript)
Pathologist or histopathologist	18	<i>Does he [the patient] want radiotherapy?</i> (Consultant Dermatopathologist, Skin, observation transcript)
CNS	14	<i>So do we follow her with ultrasound?</i> (CNS, Skin, observation transcript)
StR	10	<i>Ok, does anyone have any strong feeling whether we need to take this porto-cath out then?</i> (Haematology StR, Haematology 2, observation transcript)
Psychologist	3	<i>Does her son come with her regularly?</i> (Psychologist, Skin, observation transcript)

* These numbers should not be interpreted as meaningful in themselves. Some differences will simply reflect composition of the teams and the length of their meetings, for example only one team had dermatology input, while all four had radiology input. However, I used the node frequencies during analysis as a starting point to explore patterns in the data, comparing these with data from my field notes, looking for similarities and discrepancies.

Appendix 14: ‘Responds to question’ node by professional group

Professional group	Nvivo node frequency	Illustrative quote
Surgeon	67	<i>Gynaecologist 2: has she got somebody that comes with her?</i> <i>Gynaecologist: her daughter's got lupus so was at [another hospital] at the time that she was seeing me in the clinic</i> (Gynaecology, observation meeting transcript)
Haematologist	66	<i>MDT coordinator: is he an in-patient still at the moment?</i> <i>Consultant Haematologist: no it [the patient's discharge summary] said he was discharged, his most recent one</i> (Haematology 1, observation meeting transcript)
Oncologist	46	<i>Gynaecologist: how old is she? Born in [year]. She's fit and well?</i> <i>Consultant Medical Oncologist 2: yeh she's fit and well she's had a laparoscopy in [country abroad]...that's when they picked up the nodules</i> (Gynaecology, observation meeting transcript)
Dermatologist	14	<i>Dermatopathologist: who's he coming to see?</i> <i>Consultant Dermatologist 2: I don't know it says on the MDT sheet it just says [name of surgeon]</i> (Skin, observation meeting transcript)
Radiologist or imaging specialist	64	<i>Consultant Haematologist: can I just check what was the response, what magnitude of response has he had [to chemotherapy]?</i> <i>Radiologist:it's [the tumour] 3.8 to 3.3 centimetres so by RECIST [response evaluation criteria in solid tumours] criteria it would be stable</i> (Haematology 2, observation meeting transcript)
Pathologist or histopathologist	45	<i>Gynaecologist: what are the dimensions of the tumour [pathologist]?</i> <i>Pathologist: ...it was described as 45 but it looked as if it was lining the whole endometrial cyst so it was only 5mm of thickness...and quite diffuse so you know it was difficult to see a mass</i> (Gynaecology, observation meeting transcript)
CNS	31	<i>Clinical Oncologist: remind me the background, so he's got axillary disease and what other disease?</i>

		<p><i>CNS: none everything else was clear the CT was clear</i></p> <p><i>Clinical Oncologist: there's no mets? [metastatic disease: the spread of cancer to other parts of the body]</i></p> <p><i>CNS: no</i></p> <p><i>(Skin, observation meeting transcript)</i></p>
StR	24	<p><i>Consultant Haematologist 2: was it a definite diagnosis?</i></p> <p><i>StR: they are pretty sure, the antibodies were negative...but they say that doesn't discount the diagnosis but she has been started on steroids...</i></p> <p><i>Consultant Haematologist 2: ok but the diagnosis was based on a clinical diagnosis</i></p> <p><i>StR: correct</i></p> <p><i>(Haematology 2, observation transcript)</i></p>
Psychologist	0	-

Appendix 15: 'Giving advice' node by professional group

Professional group	Nvivo node frequency	Illustrative quote
Surgeon	3	<i>Consultant Gynaecologist 2: so if it's endometriod [cancer] is it worth trying some provera [medication for treating hormone dependent cancers]</i> <i>Consultant Medical Oncologist 2: have we not done that?...we'd need to check...but it's a good point</i> (Gynaecology, observation transcript)
Haematologist	11	<i>Consultant Haematologist 5: ok so the decision is between further salvage using chemotherapy...or radiation...so what's the general</i> <i>Consultant Haematologist 2: ...I wouldn't want to give somebody radiotherapy in this situation without a PET [scan] to confirm [if he has progressive disease elsewhere]</i> (Haematology 2, observation transcript)
Oncologist	9	<i>Consultant Clinical Oncologist: I didn't offer her treatment the last time there wasn't any evidence to really support it I suppose what she's really concerned about is the next time it comes back it's going to be more widespread and she's got this fixation in her mind that if she'd had some treatment it would have prevented that from happening</i> <i>Consultant Medical Oncologist: ...well...there's nothing to target with radiotherapy here is there in an adjuvant sense so I think she should have nothing, but that's not helpful to you</i> (Gynaecology, observation transcript)
Dermatologist	2	<i>Consultant Medical Oncologist: ok but what I don't want to do I don't want to add to her confusion that's the [issue]</i> <i>Consultant Dermatologist 1: ...what about...explaining it in terms that [surgeon 1] just did...saying if it were, if you were my sister [I'd be advising]...</i> (Skin, observation transcript)
Radiologist or imaging specialist	8	<i>The skeletal deposits don't look like the sort that would give him a pathological fracture so they probably can be ignored</i> (Consultant Radiologist, Skin, observation transcript)
Pathologist or	6	<i>He may need further biopsies</i>

histopathologist		(Consultant Dermatopathologist, Skin, observation transcript)
CNS	3	<i>I think as well we need to try and avoid telling people like that to go to their GPs. I think we need to see them</i> (CNS, Haematology 1, observation transcript)
StR	0	-
Psychologist	3	<i>I think the fact that she's seeing lots of people isn't helping her is it I think you've got to have one person who is the driver here</i> (Psychologist, Skin, observation transcript)