What makes an excellent Delivery Suite Coordinator? Views of the Multidisciplinary Team, a constructivist grounded theory study

Debra Jane Bunford

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Abstract

There has been little research undertaken exploring the essential attributes necessary to be a successful Delivery Suite Coordinator (DSC). This lack of understanding about the role and its importance within the multi-disciplinary team (MDT) may have wide-ranging impacts for the safe functioning of the delivery suite.

The research combined a thematic analysis, and logic modelling of 15 DSC job descriptions and a constructive grounded theory methodology of 21 semi-structured interviews with members of the MDT explored their experiences of working with different DSCs.

Logic modelling of the DSC job descriptions found a consensus of the Trusts expectations. The role focus centring on the coordination of the delivery suite and leadership of the MDT. Findings from the MDT interviews revealed that effective DSCs maintained situational awareness (SA), 'the helicopter view', of the delivery suite to create Team Situational Awareness (TSA). Excellent DSCs were able to forward project the impact of the activity and plan accordingly. The DSC role was also found to be crucial in supporting staff with clinical decision making, which was influenced by the approachability of the DSC. DSCs who exhibited these attributes had a significant impact on MDT staffs' job satisfaction and ability to carry out their role to the best of their ability. Failure of the DSC to maintain SA may result in poor MDT decision making influencing maternal and neonatal outcomes.

The study concludes that changes are required to the support, succession planning and recruitment to the DSC role. The development of consultant midwife posts may facilitate career progression for the excellent clinical midwives and harness their coordinating skills for staff development. SA and human factor training should be incorporated as a core component of midwifery and medical education programmes and advanced level for those undertaking DSC roles. An addition suggests that for a DSC to work effectively, they should be supernumerary and not be caring for labouring women on a 1 to 1 basis.

Further research is required to understand the impact of the DSC on MDT working and understand what gives a DSC confidence. Dissemination of the findings from this study to educational and practice strategic groups is required to inform the current national debate on the safety of women and neonates.

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Abbreviations

AIMS	Association for Improvements in the Maternity Services
AMU	Alongside Midwifery led Unit
BAPM	British Association of Perinatal Medicine
CESDI	Confidential Enquiry into Stillbirths and Deaths in Infancy
CEMACH	Confidential Enquiry into Maternity and Child Health
CHI	Commission for Health Improvement
CMACE	Centre for Maternal and Child Enquiries
CNST	Clinical Negligence Scheme for Trusts
CPD	Continuing Professional Development
DfEE	Department for Education and Employment
DH	Department of Health
DHSS	Department of Health and Social Services
DSC	Delivery Suite Coordinator
CHI	Commission for Health Improvement
CPD	Continual Professional Development
EI	Emotional Intelligence
FMU	Free standing Midwifery led Unit
GMC	General Medical Council
HCC	Health Care Commission
HCSSC	House of Commons Social Services Committee
HRA	Health Research Authority
HSIB	Healthcare Safety Investigation Branch
MAC	Maternity Advisory Committee
MAU	Maternity Assessment Unit
MCA	Maternity Care Assistant
MDT	Multi-Disciplinary Team
MLU	Midwifery Led Unit
NCT	National Childbirth Trust
NICE	National Institute for Clinical Excellence
NHS	National Health Service
NMC	Nursing Midwifery Council
NMPA	National Maternity Perinatal Audit
NPSA	National Patient Safety Agency
NSF	National Service Framework
NVQ	National Vocational Qualification
PIS	Participant Information Leaflet
PROMPT	Practical Obstetric Multi Professional Training-Training based on simulation
RCM	Royal College of Midwives
RCOA	Royal College of Anaesthetists
RCOG	Royal College of Obstetricians and Gynaecologists
RCPCH	Royal College of Paediatrics and Child Health
R&D	Research and Development

TSA	Team Situational Awareness
SA	Situational Awareness
SHO	Senior House Officer-junior doctor
UK	United Kingdom
US	United States

Glossary of Terms

Antenatal	From conception to start of labour
CTG	CardioToco Graph. A technical means of continually recording the fetal heart proving a visual trace on graph paper
Established Labour	Regular and painful contractions accompanied by progressive cervical dilation from 4 cm (NICE 2016).
High risk	Pregnant woman with medical conditions and/or previous obstetric history which is linked to increasing her risks in pregnancy and childbirth of a potential poor outcome
Intrapartum care	Period of time from the start of labour to the birth of the baby and delivery of the placenta and membranes
Kings Fund	Health charity provides leadership development and informs health policy
Low risk	Pregnant women with no medical conditions or previous obstetric history which is linked to increasing her risks in pregnancy or childbirth
MBRRACE	Mothers and Babies: Reducing Risk through Audits and Confidential Enquires. A national collaborative programme investigating maternal deaths, stillbirths and infant deaths.
NMC	Nursing Midwifery Council. The professional body regulating Midwifery
1 to 1 care	Care provided for the woman throughout labour exclusively by a midwife solely dedicated to her care (NICE 2016).
Perinatal mortality rate	Number of deaths of babies from 24 weeks gestation up to 7 days post-delivery.
Postnatal	From birth until 6 weeks post delivery
Preceptorship	A period of time when newly qualified midwives are supported by a clinical instructor
Primigravida	Women pregnant for the 1st time
Ventouse	A rubber suction cap applied to the baby's head to aid the delivery

Chapter 1

Introduction and background

This thesis presents the findings of a constructive grounded theory study, interviewing members of the multidisciplinary team (MDT) to understand their views of the attributes in delivery suite coordinators (DSCs) that have a positive or negative effect on their shift.

> *"I just need to check the delivery suite off duty rota to see which coordinator I am working with tomorrow".*

My observation and curiosity from this simple statement that I witnessed countless times was the catalyst for this study. From doctors to midwives and maternity care assistants (MCA), this simple question was important. There appeared to be some tacit knowledge by staff, an understanding of the implication of the role without being explicitly stated (Gascoigne and Thornton 2013), and knowledge that the individual fulfilling the DSC role would have a direct impact on their shift. I was intrigued to discover more about the DSCs that staff in the MDT wanted to work with and why this role was so fundamental to staff. The delivery suite is acknowledged as a stressful environment for staff (Royal College of Midwives (RCM) 2014; General Medical Council (GMC) 2015; NHS England 2016a; Fenwick *et al.* 2017; Thumm and Flynn 2018; Albendin-Garcia *et al.* 2021), and the implications of poor MDT working on delivery suite and the associated culture is universally acknowledged as a contributing factor to poor outcomes for women and babies (Kirkup 2015; NHS England 2016a; Ockenden 2020; Health and Social Care Committee 2021). The DSC role is central to the coordination of the delivery suite and MDT for their shift. The rhetorical question was how this tacit knowledge of DSCs by staff related to the functioning of the shift and staffs' contentedness.

Background to the study from an MDT perspective

Professionally I became more acutely aware of the pivotal nature of the DSC role and its influence on the MDT whilst working as a Head of Midwifery over 3 geographically separate units, with 3 distinct delivery suites. A constant I observed between the units was the variations in the atmosphere on a shift by shift basis. The atmosphere was palpably different between shifts, ranging from a calm atmosphere, cheerful, visually happy staff, to a chaotic environment where staff appeared stressed and disorganised, which appeared to bear little correlation to the workload,

complexity of the women in labour or staffing levels. I had observed how staff would check the then, paper copy, of the off duty hanging in the staff rooms to determine which DSC was coordinating their next shift. Junior midwives through to consultant obstetricians anecdotally, openly shared they would 'check the off duty rota' or 'verbally enquire' to identify which coordinator was on duty to determine 'what type of shift or on call' they would have. Others stated they would avoid looking at off duty on back to back shifts as knowledge of who would be the coordinator for the next shift would positively or negatively affect the quality of their sleep. Strikingly, consultants articulated that they could accurately predict what their weekend on-call would be like, ahead of the weekend purely based on the coordinators on duty. Other consultants indicated the DSC on duty was a significant factor in determining if they came in from home immediately, out of hours, when called for advice by the registrar.

Subsequently, tutoring on an undergraduate programme has caused me to reflect on the meticulous mapping of course content to Nursing Midwifery Council (NMC) standards as part of the curriculum planning process and the absolute achievement of competencies required for the professional registration of students required to be a band 5 midwife (NMC 2009; 2019), followed by a period of preceptorship 12-18 months in duration, again supported by a competency framework to support the midwives to transition to a band 6 midwifery role (NMC 2020). As a Head of Midwifery, I had received support and training through the RCM leadership development programme to transition from clinical to management. Conversely, this management role of coordinating delivery suite, viewed as fundamental to the working environment, was void of a competency framework or development programme. Instead, an assumption was made that an arbitrary number of years providing 1 to 1 intrapartum care to women prepared the prompted individual with the skill set to manage staff, activity and the wider maternity unit. The ability to facilitate teamwork has been highlighted as a vital component for ensuring patient safety and positive patient outcomes (Firth-Cozens 2001; Leonard, Graham and Bonacum 2004; Liberati *et al.* 2019, 2020).

In maternity care, the particular focus for teamwork has been on delivery suite with a plethora of reports identifying and continue to identify the importance of MDT communication and MDT working together to improve maternal and neonatal outcomes (Lewis 2007; Royal College of Obstetricians and Gynaecologists (RCOG) 2007; 2016a; 2020; Centre for Maternal and Child Enquires (CMACE) 2011; Kirkup 2015; NHS England 2016a; Gov.UK 2016; Ockenden 2020). These reports are discussed in detail in chapter 3.

I acknowledge that an outstanding MDT operating with good communication is complex and multifaceted. Within the limitations of this thesis it was not possible to explore MDT communication in depth. The focus of this research was to access the wealth of experience of the MDT members working with good and ineffective DSCs, a source of tacit knowledge that could be explored to understand the contributing factors of the role that contributed to creating a positive working environment on the delivery suite. It was this knowledge derived from clinical experience which drove the focus of the research and decision to research the subject from an MDT perspective.

The study aimed to explore the MDT's perceptions of DSCs and the attributes which have a positive and negative influence on the functioning of their shift, team working and individuals' confidence. The research question was:

'What are the attributes in the DSC that the MDT perceived to be important for the effective coordination of their shift'?

For this work, I define attributes as:

> 'Characteristics, features or qualities of a person.'
> (Concise Oxford dictionary 1991 p.100).

However, I did not define the term within the interview setting as I deemed it important that the individuals understood and articulated their own connotation of the term.

A constructive grounded theory approach

The rationale for adopting a constructive grounded theory approach in preference to other grounded theory and qualitative methodologies is presented in chapter 5. However, core to Charmaz's (1995; 2014) constructive grounded theory is the epistemological stance that knowledge is co-created by the intimate familiarity between the researcher and participants, a unique relationship that is central and different to other grounded theory approaches (Guba and Lincoln 1994). The professional knowledge of the researcher about the area of research is celebrated and viewed by Charmaz (2014) to be central to the engagement process with the research participants, collection of rich data and data analysis. Clarke (2011) maintains it is inevitable that the researcher comes to the research ‘knowing in some ways’, recommending transparency is maintained within constructive grounded theory by the researcher's reflexivity concerning the process. Therefore, within the spirit of reflexivity at the beginning of the thesis, I wish to clarify my professional background, experience to date and how this has influenced my decision to study the DSC role from an MDT perspective.

Researcher’s background

As a practising midwife, my career to date has allowed me to view the DSCs and MDT through various professional lenses. Clinically working alongside the MDT on delivery suite, managerially working with doctors, midwives and MCAs, as a Head of Midwifery to support them to deliver, review and evaluate effective intrapartum care to ensure a cycle of constant improvement, and latterly an educational perspective, supporting mentor’s and students to become clinical midwives delivering intrapartum care. I have been inspired by the professionals who have gone beyond the call of duty to deliver care to women throughout my career. Although I have personally never held the role of the DSC, its multifaceted managerial and leadership role has continued to be a source of both inspiration and fascination. As a practising midwife with both managerial and educational expertise, I have approached this research through this lens, acknowledging the influence on the research.

The philosophical approach of constructive grounded theory and its relevance to the MDT

The philosophical approach of a constructive grounded theory methodology was adopted to acknowledge that truth is individually constructed (Lincoln, Lynholm and Guba 2018). This was important as the MDT represents a diverse range of health professionals. It was necessary to represent the perspectives of the individuals and professional groups within the MDT within the research to determine potential consensus or divergences of opinions between the professional groups on the DSC role.

Study

Participants interviewed for the study were recruited from a maternity unit in the North of England. The purposeful and theoretical sampling ensured that all staff groups from the MDT were represented in the study. The inclusion criteria of experience of working at different units ensured the knowledge gained from the research represents a plethora of DSCs from multiple units. Throughout the thesis, the terms excellent good and ineffective DSCs are used to differentiate between the skills and qualities articulated by the participants. For this paper, ineffective is defined as:

> ‘Not producing the intended effect.'
>
> (Concise Oxford dictionary 1991 p.807).

A decision not to use the term effective to describe the DSC viewed in a more positive light was informed by the literature, which refers to ‘good’ midwives (Bryom and Downe 2010; Borrelli, Spiby and Walsh 2016). The term effective was too limiting to differentiate between the skills and qualities of an outstanding DSC from the other DSCs.

Without exception, there was total admiration by the participants in the study for the individuals who fulfilled the role. Evidence will be presented in this thesis on how excellent DSCs fulfil this role and the implications for staff, decision-making, and ultimately the safety of delivery suite of the individual DSC’s ability to perform this role well. Recommendations are made for further research, practice, education and

the future recruitment and support of staff in this role. This thesis adds to the knowledge on situational awareness, team decision making, and staff support within maternity services.

Structure of this thesis

Chapter 2 examines the DSC role in context, exploring the clinical environment in which they operate, their interactions with the MDT and the role of the individual team members within the MDT. The delivery suite as a stressful environment is explored together with its implications for team working.

Chapter 3 identifies the paucity of literature pertaining to the DSC role, examining the health policy documents within a social context to understand how and why this role has been an oversight within the strategic direction of maternity services. The empirical literature from an extensive literature search identified a gap in the DSC role. Literature relating to what makes a good midwife providing clinical care for women, supporting students and a work colleague is reviewed for themes and potential insights into the DSC role.

In the absence of empirical evidence, Chapter 4 presents a small scale documentary analysis and logic modelling study of 15 DSC job descriptions to understand the employer, trusts, expectations of the role and the expected outcomes if the role is carried out effectively.

Chapter 5 provides the rationale for my choice of a grounded theory approach and examines the 3 schools of grounded theory to explain why the constructive grounded theory was deemed the most appropriate methodology for this research project.

Chapter 6 explores why interviews were the preferred method for data collection, together with the ethical approval process. Participant's recruitment, data collection and analysis and justification for the inclusion/ exclusion criteria and sampling are also covered in this chapter.

Chapters 7, 8 and 9 present the findings from the interviews supported by direct quotes from the participants.

Chapter 10 discusses the findings using Endsley's (1995) situational awareness framework supported by the related literature. The implications of the DSC's ability to perform the role well and the consequences of the poor execution of the role are explored with respect to decision making about clinical care and delivery suite priorities.

Chapter 11 examines the trustworthiness and transferability of the research

Chapter 12 identifies the unique contributions of this research to the literature and makes recommendations for practice, recruitment, education and further research.

Clarification of potentially ambiguous terms within the thesis

Within maternity services, interchangeable terminology is frequently used to describe the DSC role. Within the findings section, the terminology used by the participants have been cited verbatim to stay faithful to the constructive grounded theory approach. To avoid any ambiguity for the reader, clarification of the interchangeable terminology is provided below in table 1.

Table 1: Interchangeable terms

Term used in this study	Interchangeable terms with the same meaning
Delivery suite coordinator (DSC)	Shift coordinator, team leader, labour ward coordinator, coordinator
Delivery suite	Labour ward
Delivery suite manager	Labour ward manager

Chapter 2

Setting the scene. The delivery suite coordinator in context

Chapter 2 presents the DSC in context. The DSC role involves the leadership and management of a complex clinical environment and the associated interactions with staff from various professional backgrounds. This chapter examines and contextualises the world in which the DSC operates.

During the completion of this thesis, in line with the maternity strategy ‘Better Births’ (NHS England 2016a), the national module of band 5 and band 6 midwives allocated to delivery suite to staff the shift changed from midwives on 6 -12 month rotational posts to community based teams and core delivery suite staff. The current trajectory is that band 5 and 6 midwives providing intrapartum care will be based in community teams of 4- 6 midwives who come into the unit with women from their team to provide care (National Health Service (NHS) 2017). The DSCs role of maintaining staffing levels will be supported by some core band 5 and 6 midwives and is predominately reliant on the community teams to provide midwives for the unit's staffing.

The research was undertaken before the change in midwifery staffing patterns; therefore, the following chapter explains the DSC role within the context of the midwifery workforce when the research was conducted. The potential implications of the team midwifery module on the DSC are discussed in chapters 3 and 10.

Birthing environment

Currently, within the UK, women have the choice of place of birth. The majority give birth within an obstetric unit, for women deemed low-risk options include alongside or freestanding midwifery-led units or home births (Rowe 2011; National Institute for Clinical Excellence (NICE) 2017; National Maternity Perinatal Audit (NMPA) 2019). DSCs work within obstetric units supported by the MDT, supported by several essential services, namely neonatal, anaesthetics, intensive care, haematology, general surgery, medical and radiology specialities co-located to the obstetric unit (RCOG 2007; 2008; 2013b; British Association of Perinatal Medicine (BAPM) 2010; Royal College of Anaesthetists (RCOA) 2011; Knight *et al.* 2016).

Delivery suite coordinator role in the context of the MDT

A DSC works within the context of the core maternity and broader MDT. Each shift, typically 12 hours, is staffed by the core MDT comprising of the DSC, midwives at band 5 and 6, maternity care assistants (MCA), a ward clerk, consultant obstetrician, 1st and 2nd on-call doctors. Student midwives and medical students will also be allocated to the delivery suite for training experience.

Midwives provide 1 to 1 intrapartum care as autonomous practitioners for women under midwifery-led low risk care, and with the doctors for women under consultant high risk care (RCOG 2007; Department of Health (DH) 2010a; National Quality Board 2018). At the point of qualification, midwives work on a band 5 NHS pay scale. However, following a preceptorship period, 12-24 months, they achieve accelerated progression to a band 6 pay scale (DH 2008, DH 2010b), progression beyond this point, for example, DSC at band 7, is via an application for the higher level post (DH 2004a). Therefore, band 6 midwives are deemed to hold a greater level of delivery suite experience than the band 5 midwives.

MCAs, under the supervision of midwives, undertake various tasks, predominantly allocated by the DSC, ranging from housekeeping to observations, venepuncture and supporting women with infant feeding (Gregory 2007; DH 2010a; Griffin *et al.* 2010; National Quality Board 2018). The banding range of 3-4 reflects their level of training NVQ 3 to level 4 foundation degree (Hood 2007a; Griffin *et al*. 2012). Although units may vary, the general MCA to midwife ratio is 1 to 9 (RCM 2013; Hutchinson 2014). All the MCAs in this study were band 4. Ward clerks provide administration and clerical support for the delivery suite.

Doctors allocated to the delivery suite MDT work at 3 levels: 1st on call doctor (SHO), 2nd on-call (registrar) and consultant. Consultants are responsible for women with complex medical and obstetric conditions, high risk, and are required to be available for emergencies and lead the medical team of SHO and registrars (RCOG 2007; RCOG 2010). SHO (1st on call) doctors, having completed their foundation doctors training, are undertaking the first part of their 7-year competency-based obstetric training and registrars (2nd on call) are in the second part of their obstetric training

(DH 2006; 2008) (appendix 1). 1st and 2nd on-call doctors work a shift system, clinical responsibilities handed on to the incoming shift through a batten bleep and formal handovers system (RCOG 2007; Wright and Kean 2011). When medical input is required, the DSC decision will be made based upon the complexity of the clinical situation, on the level of expertise required, which will determine whom they contact, the SHO, registrar or consultant.

The numbers of each staff group vary and reflect the size of the unit. A wider clinical team of anaesthetists, neonatal and theatre staff provide backup support for complex care (RCOG 2008; 2013a; NICE 2017). In addition to individual personnel within the MDT, the DSC will liaise with multiple hospital departments supporting the logistical functioning of the delivery suite unit.

The overall management responsibility of the delivery suite is held by 2 people, the delivery suite manager/matron, a 9-5 Monday to Friday role and consultant lead for the delivery suite, from hours allocated as part of their job plan (RCOG 2007; Windsor 2016; NHS England 2016a).

For the duration of the shift the DSC and consultant share the direct line management of the maternity MDT with responsibility for midwives, MCAs and ward clerks falling to the DSC and medical staff to the consultant obstetrician (appendix 1). Larger units (appendix 2) aim to have a greater number of consultant obstetricians present on the delivery suite, with some units providing 24/7 cover. In smaller units, obstetric consultants provided out of hours on-call from home (RCOG 2013a; RCOG 2016b; Henderson, Kurinczk and Knight 2017). Arguably, the role of a DSC working in larger maternity units is more difficult and challenging due to the complexity of care provided and the footfall through the unit. However, the clinical MDT is more extensive, and the DSC has access to an on-site consultant obstetrician and is usually rostered with a 2nd band 7 midwife for support (Healthcare Safety Investigation Branch (HSIB) 2020a). DSCs working in smaller units are reliant on less staff within the MDT. Out of hours, the 2nd on-call doctor, (registrar), is the most senior obstetrician on-site, thus adding to the additional

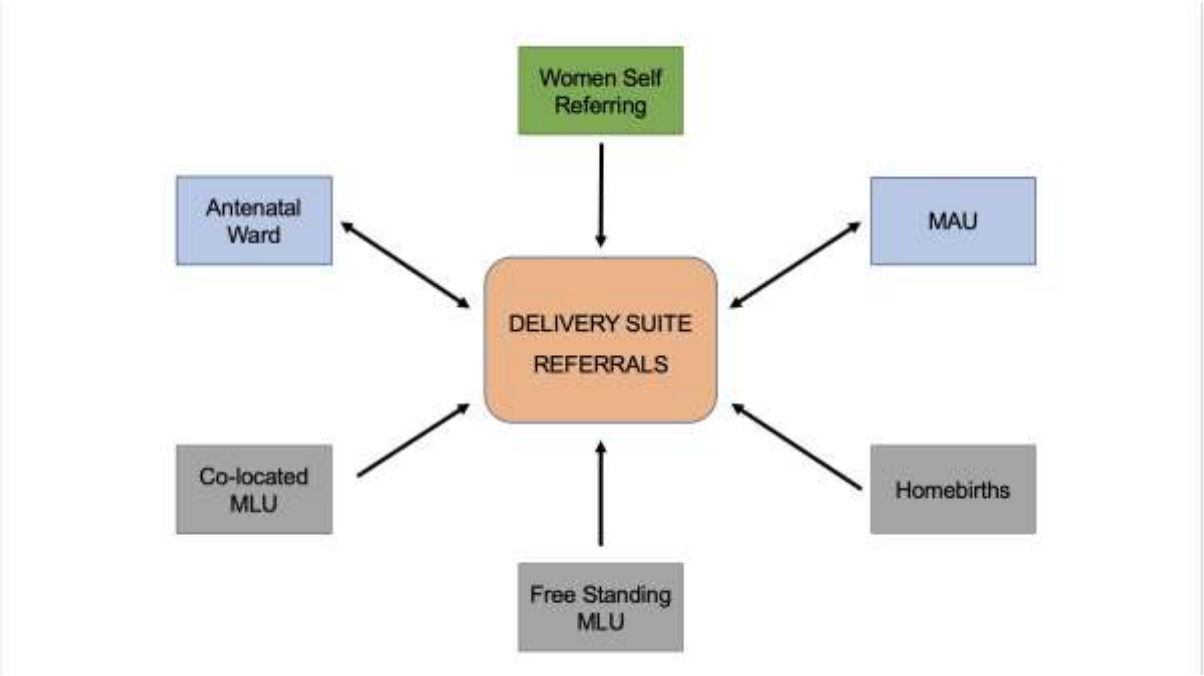
responsibility of decision making about when to call in additional support from the consultant.

Sources of referrals and predictability of workload

The DSC works with diverse health professionals (appendix 1); they must also work within a multidimensional environment and co-dependent maternity service. The interdependency between other maternity areas and the predominantly unplanned nature of the admissions to a delivery suite adds to the complexity of the DSC role. The unpredictable nature of childbirth and multiple sources of potential admissions makes workload challenging to predict. Admissions to the unit originate from many sources, with varying degrees of prior notice (figure 1). Women self-referring directly to the delivery suite or referrals from other areas within the maternity unit. The antenatal ward and maternity assessment unit (MAU) care for women experiencing a deterioration in their existing medical or pregnancy-related condition, which may require transfer to the delivery suite for induction of their labour or immediate operative delivery (NICE 2017).

In addition to offering a home birth service, more than 50% of maternity units in the UK also provide geographically separate intrapartum facilities, midwifery-led units (MLU). These units provide intrapartum care for low-risk women, staffed separately from the consultant unit (appendix 3), and designed to provide a non-technical homely environment. However, if complications arise, women are transferred to the obstetric unit delivery suite for consultant care and potentially immediate operative delivery (Rowe 2011). 51% of the delivery suite have co-located MLU's (within the same building), 28% of delivery suites will also link to stand-alone MLU’s (geographically separate from the delivery suite site) (NMPA 2019). In exceptional circumstances, neighbouring trusts may require to divert intrapartum activity to other local delivery suites during high peaks of activity when their capacity is saturated. These multiple sources of potential admissions add a degree of unpredictability to the activity on any given shift for the DSC to coordinate.

Figure 1: Referrals pathway to delivery suite



Many maternity referrals are not labour-related and will be reviewed in the MAU. This service provides a valuable triage service reducing non-intrapartum admissions to the delivery suite (Nolan *et al.* 2007; Spiby *et al*. 2013). Only larger obstetric units operate a 24/7 MAU service. Out of hours, the MAU facility will close in smaller obstetric units, and triaging activity transfers to the delivery suite adding to the workload at night (NMPA 2019).

Although staffed separately, during peak activity times, the DSC has the authority to reallocate staff from the ward, MAU and MLU to support the delivery suite or vice versa. The unpredictability, interdependency and complexity of maternity-related activity require DSCs to be aware of oscillating activity both on and beyond the wider delivery suite unit. This is achieved through a series of important communication channels.

In summary, several different and diverse areas feed into the activity on the delivery suite. The number of women who self-refer during the shift is difficult to predict. However, by maintaining and liaising with the wider maternity services about

potential transfers, elements of potential activity can be forecasted to facilitate workforce planning by the DSC.

The delivery suite coordinator and MDT communication

The DSC role is involved with many communication channels involving the MDT. Formalised structured handovers between midwives and coordinator and medical staffing occur at the beginning of the shift and ward round. Structured 'huddles', impromptu handovers are called by the MDT when a surge in activity occurs, and additional updates are required (Garner, Murray and Parisaei 2019). The DSC is also involved with clinical decision making, supporting midwives providing 1 to 1 care and escalating concerns to the medical team as problems arise. Essential information relating to clinical activity and progress of women in labour is recorded and updated by the DSC and staff on the communications board, which acts as the central point for all decision-making and formal handovers (Berridge, Macintosh and Freeth 2010). Although the consultant obstetrician has overall responsibility for the delivery suite, earlier work by Wallace *et al.* (1995) would suggest less than 2% of communications relating to clinical information exchange within the MDT, is through the consultant, in contrast to the coordinator who will be consulted and offer a second opinion on most of the clinical decision-making on delivery suite (Wallace et al. 1995; Lankshear, Ettorre and Mason 2005; Macintosh, Berridge and Freeth 2009).

In the 25 years since Wallace ***et al.'s*** (1995) research, increases in maternal age and comorbidities, such as obesity, have resulted in an increase in women requiring consultant care (NHS England 2016a; RCM 2017), the increasing consultant presence on delivery suite (RCOG 2013a) and call for closer MDT working for women with complex care (Knight *et al.* 2019) will have increased communication exchanges for the DSC. These communication channels remain fundamental to both the formal and informal communication of clinical information required by the MDT for decision-making on the delivery suite (RCOG 2007; 2016b; RCM 2017).In conclusions DSC role is complex and multifaceted, requiring communication and recording of information from both the delivery suite, wider maternity organisation, and interprofessional disciplines. The DSC acts as an advisor to the midwives and

escalates concerns to the doctors as required, acting as the interface for MDT communication. The complexity of the role is further exacerbated by the fluidity of the MDT membership, whereby each shift comprises of new team members, making the development of working relationships and the ability to understand the strengths and limitations of the team members, more complex to achieve within the shift timescale (Kings Fund 2008).

The importance of MDT working on delivery suite

Team working is defined as:

> The combined effective action of the group working towards a common goal. It requires individuals with different roles to communicate effectively and work together in a coordinated manner to achieve a successful outcome.
>
> (Winter *et al.* 2017 pp.3).

Cohesive MDT working is widely considered fundamental for managing the rising incidences of complex pregnancies, but there is still evidence of poor interdisciplinary working in maternity departments (Siassakos *et al.* 2013; Cornwaite, Edwards and Siassakos 2013; CQC 2021). Recent high-profile reports into the failings in maternity services cite the associated human factors of poor communication and dysfunctional MDT working as direct causative factors in poor outcomes for mothers and babies (Kirkup 2015; Campbell 2017; Ockenden 2020). It is suggested that 8% of labours result in adverse outcomes for mothers and babies (Nielson *et al.* 2007) and potentially 29% of maternal deaths, and 76% of poor perinatal outcomes could be avoided if MDT communication had been effective (RCOG 2017; Knight *et al.* 2019). Despite improvements in maternity services in the UK, 4.7 per 1000 babies per annum are stillborn, a rate which continues to be 50% higher than European counterparts including Germany, France and Spain (Wang *et al*. 2014, NHS England 2016b). Improvements in intrapartum MDT working and communication are major drivers in the UK strategy to reduce stillbirths (CMACE 2011; RCOG 2007; 2016a; 2020; Gov.UK 2016). The wider human implications of poor intrapartum care extend beyond the immediate impact. The reality that 1 family in 1740 births per annum will face the emotional and physical long-term and life-

changing challenges of raising a child with brain injuries sustained during childbirth (RCOG 2016a).

This does not account for the emotional effects on staff involved in the cases of stillborn infants or babies born with a brain injury (Wu 2000). Or the economic cost to the health economy, currently estimated to reach £2.7 billion by 2020 from obstetric related litigation claims (NHS resolutions 2017).

It would be naïve to assume childbirth for mothers and babies is devoid of risk, or MDT working offers an all-encompassing solution to improving maternity outcomes. However, it cannot be denied that poor MDT working has been a consistent theme in reports into units with higher than average poor maternal and neonatal outcomes over the last 20 years (Commission for Health Improvement (CHI) 2003; Healthcare Commission (HCC) 2004; 2006; 2008; Kirkup 2015; Ockenden 2020). The human factors associated with poor MDT communication continue to be a direct factor in 31% of the poor neonatal outcomes (Rowe *et al*. 2001; Lewis *et al*. 2003; HCC 2004: 2006; Lewis *et al.* 2007; RCOG 2007; King's Fund 2008; Knight *et al.* 2015a; 2015b; 2016; 2019; Draper *et al.* 2016).

Implications of positive MDT working relationships

Neonatal confidential enquiries have made strong links between ethnicity and deprivation as causative factors for poor neonatal outcomes (Draper *et al.* 2016; 2020). However, adjustments to stillbirth rates by statistically controlling for deprivation and ethnicity suggest the picture is more complex, with variations of up to 20% differences between maternity units, and 1 in 4 maternity units identified as requiring improvement, suggesting the culture within maternity units may be an influential factor (NMPA 2017: Care Quality Commission (CQC) 2020, 2021; Health and Social Care Committee 2021). An ethnographic study of the culture within a high performing maternity unit, delivering women with higher than average deprivation indices and reporting 50% lower perinatal mortality rates, concluded a proactive culture of team working facilitated by positive MDT communication and relationships was a major contributing factor to the units lower than average perinatal mortality and morbidity rates (Liberati *et al.* 2019). Firth-Cozens (2001) concludes, 'cheerful'

staff and staff morale contribute to better care through improved teamwork. This sense of cheerfulness derived from a sense of participation and support within the work environment. The cheerful staff articulated by Firth Cozens (2001) resonated with my observations of staff working on the delivery suite. Whilst there would appear to be links between team working, staff morale and potential improvements in perinatal outcomes (Firth-Cozens 2001; Liberati *et al.* 2019, 2020), the impact of the DSC role on the MDT dynamics and staff contentedness is less apparent. As a supervisor of staff, the DSC role has the potential to foster a supportive environment.

Delivery suite coordinator as a supervisor within the stressful environment of the delivery suite

Evidence suggests that the supervisor of the shift has a direct impact on staff, reporting a direct correlation between high levels of staff satisfaction and staff who felt well-led (Dawson *et al*. 2011; Bedwell, Mc Gowan and Lavender 2015; Pezaro, Clyne and Fulton 2017; NHS employers 2019). This direct correlation between supervisor and staff satisfaction might account for some of the staff's rota curiosity in the DSC managing their shift. The explanations may be more complex; the question of which midwife was coordinating the shift in other maternity areas, for example, the Postnatal ward and MAU, did not appear to be so relevant to staff. Although the nature of the ward work makes a direct comparison difficult, personal observation suggested that the management and leadership of the delivery suite shift were unique to the staff's experience of the shift and warranted this level of rota interest. The nature of the work and workload pressure on the delivery suite may partway account for staff concerns.

Within maternity services and the wider NHS, the delivery suite is acknowledged as one of the most stressful clinical environments accounting for the highest level of burnout within maternity services (RCM 2014; General Medical Council (GMC) 2015; NHS England 2016a; Fenwick *et al.* 2017; Thumm and Flynn 2018; Bourne *et al.* 2019; Albendin-Garcia *et al.* 2021). Studies quantifying occupational stress conclude that 75%-78% of midwives experienced stress, with 30% experiencing levels within psychiatric morbidity ranges, the most significant levels experienced by the younger and more recently qualified midwives (Mackin and Sinclair 1998; Hunter *et al.* 2019).

The complexity of clinical care is cited as a significant contributing factor for midwives leaving the profession and the difficulty in the recruitment and retention of doctors onto the obstetrics training programme, 30% of doctors opting to go into other less stressful areas of medicine and 38% midwives considering leaving the profession due to the levels of stress (Pinki *et al*. 2007; RCM 2017; 2021a; RCOG 2018; Bourne *et al.* 2019). Indeed, in his national bestselling book 'This is going to hurt', comedian Adam Kay (2017) documents the series of stressful and painful delivery suite events and resulting personal consequences that led him to quit the obstetric profession. The effects of staff stress on delivery suite are not confined to the maternity professionals; Pezaro *et al.* (2015) and Pezaro, Pearce and Bailey (2018) identified the unfavourable environment for women resulting from stressed staff. In her study, women articulated how they were reluctant to ask stressed and busy midwives questions and seek advice, directly influencing the experience of women and the labour ward experience.

The wider implications of staff stress on clinical care may hinder excellence in maternity care (Dixon-Woods *et al.* 2013; Albendin-Garcia *et al.* 2021). The physiological effects of stress can have wider implications for clinical care, most notably the impacts of stress on cognitive function, short-term memory, decision-making and the ability to plan and communicate effectively, ultimately affecting care delivery (Mitchell 2013; West *et al*. 2015). Many factors contributing to individual stress correlate with scenarios common on the delivery suite: long hours, lack of breaks and high workloads (NHS employees 2019). However, workload pressures are more likely to be perceived positively if staff feel valued by their managers (Lavender and Chapel 2004). Sexton *et al*. (2006) conclude that an essential aspect of feeling valued by one's manager is the manager's ability to make staff feel part of the team. Senior staff, in particular DSCs, are often viewed as gatekeepers to this process of inclusion or exclusion of staff into the MDT (Yearly 1999; Leonard, Graham and Bonacum 2004; Hunter 2005). This feeling of inclusion into the MDT is vital to junior midwives and doctors confidence and transition to working on delivery suite as newly qualified are directly linked to being part of the MDT (Pinki *et al*. 2007;

Bedwell, McGowan and Lavender 2015), which may in part explain why junior staff are interested in the rota and DSC for their shift.

The delivery suite coordinators and team working

The implications for mothers and babies of poor teamwork have been explored (Kirkup 2015; Campbell 2017; Ockenden 2020). However, the practicalities of facilitating MDT cohesion is a particular challenge for the DSC, who is required to coordinate individuals from different professional groups, midwives and doctors and their respective professional points of view shaped by their training. This can often lead to differences of opinion and tensions when womens' care crosses over from low to high-risk care, and staff are required to look beyond their professional groups for support (Downe, Finalyson and Fleming 2010; Knight *et al.* 2021). Work into outcomes in simulated emergencies by Siassako's *et al.* (2010) suggest that patient outcomes are based more on the ability of the team to work together than the knowledge base of practitioners of specific medical conditions or individual's manual skills. Therefore the problem being that health professionals are taught communication with patients/women to impart clinical information face to face but not as a member of an MDT.

Donnison (1988) and Kitzinger, Green and Coupland (1990) suggest relationships between midwives and obstetricians stem from their ideologies installed in training. Midwives educated to follow a holistic model of care, which views childbirth as a normal process, medical staff educated to view childbirth as normal in retrospect. A midwifery view which Kirkham (2010) suggests is dated, and the ideologies should be viewed as complementary rather than opposing. Appreciation of individual's roles within teams has been further compounded by no formal training on team working. By having profession specific education midwives and doctors have been less able to appreciate the strengths of other professional groups, leading to care planning based on experts and individual practitioners as opposed to the collective knowledge of a group of practitioners (Leonard, Graham and Bonacum 2004). The resulting medical and midwifery hierarchical structures based on individuals knowledge or expertise has created power distances, inhibiting team members from speaking up

and thus leading to avoidable harm (Cornwaite, Edwards and Siassakos 2013; Kirkup 2015).

The interprofessional conflict between midwives and doctors is not unique to the UK. In their study of 44 different labour wards in the US, Sexton *et al*. (2006) concluded that poor teamwork between doctors and midwives was a common factor in the breakdown in communications and associated productivity of hospitals. Research undertaken in Australia suggested that obstetricians and midwives seeking professional identity protection within the workplace resulted in conflict and complicated relationships resulting in professional 'turf wars' (Hastie and Fahy 2009; Cornwaite, Alvarez and Siassakos 2015). Changes in the maternity system to extend the midwives' roles by introducing midwifery teams and caseload models have added to the rivalry between the medical and midwifery professions (Reiger and Lane 2009; Connerton and D'Antonio 2012).

Research into the effectiveness of ward managers in nursing has demonstrated a link between well-led staff and improvements in patient outcomes, resulting in lower levels of patient mortality (Wong and Cummings 2007; 2013; Wong, Spence Lashinger and Cummings 2010; Bamford-Wade and Moss 2010; Malloy and Penprase 2010; Dawson *et al.* 2011; West *et al.* 2014). Whilst there are fundamental differences between ward managers and DSCs, this supports the link between leadership and positive outcomes. Evidence within maternity services linking leadership and improvements in outcomes for women and babies is currently limited to evaluating teams working in emergencies.

Work by the Bristol-based PROMPT team has undertaken both internal and external evaluation of MDT simulation training for emergency scenarios demonstrating an improvement in both neonatal outcomes and its influence on a positive delivery suite working environment (Draycott and Crofts 2006; Siassakos *et al.* 2009; 2011a; Fox *et al.* 2011). Whilst this work demonstrates the positive influences of leadership and MDT working in emergencies, the influence of the DSC has not been evaluated in their work. While imperative that the MDT work together to ensure a positive

outcome in emergencies, the leadership and communication that facilitates MDT working to pre-empt and reduce obstetric emergencies also need to be understood.

In conclusion this chapter has explored the complex clinical environment and associated MDT interactions required of the individuals performing the DSC role. Knowledge and liaison with multiple clinical areas and MDT personal is required if the coordination of the activity and MDT is to be achieved. The following chapter 3 examines the literature relating to the DSC role.

Chapter 3.

Literature review

Chapter 3 presents the findings of the literature review of the empirical and wider evidence. An initial literature review identified a gap in the empirical literature relating to DSCs in the UK. It was therefore deemed pertinent to take a broader approach to the literature. Exploration of the literature in this chapter will therefore be addressed from 2 perspectives.

A review of policy documents and their influence on the DSC role to understand how the role has been shaped and why this role has been overlooked within the wider maternity context.

A literature search of the empirical research to ascertain current academic thinking on the role and attributes of the role

Policy documents and their influence on the delivery suite coordinator role

The DSC role does not operate in a vacuum. The multifaceted nature of this complex role was and continues to be, influenced by wider factors than the immediate delivery suite environment. Policy documents relating to maternity care, professional body standards, trusts' expectations of the role and the empirical evidence generated by research have influenced and shaped the role. Therefore, it was deemed necessary to adopt a more lateral approach to the literature review to include the grey literature in addition to the empirical research to understand why this role had not been researched and understand the influencing factors that have shaped this role.

The current DSC role has been influenced and shaped by a plethora of historical health policies implemented within the context of a politically influenced NHS agenda, compounded by the historical relationships between midwives and doctors influenced by the competing ideologies instilled during training (Donnison 1988; Kitzinger, Green and Coupland 1990; Hastie and Fahy 2009). A mantra which at times has lost sight of our professional raison d'être, namely that professional midwives and doctors are on the same side, namely the wellbeing and safety of mothers and babies (Kirkham 2010; Kirkup 2015; Ockenden 2020).

The current maternity strategy, Better Births, heavily influenced by the messages of the dysfunctional team working and poor MDT communication, fails to acknowledge the DSC role within the context of the MDT and its influence on how the team functions on a shift by shift basis (NHS England 2016a). To understand how the DSC role has been overlooked within maternity strategy, it is helpful to take a journey through the history of midwifery and the development of the delivery suite and DSC role within the context of the social, professional, political and health-related policies. Factors that have shaped the role have contributed to its apparent low priority within the wider maternity service.

The inception of the DSC role is historically challenging to decipher. Changes to maternity services and the choice of birthplace for women have influenced maternity care provision within the hospital setting over the centuries. Before the 1950s, the majority of births were conducted at home. The central delivery suite as an entity came into service during the 1960s (Oakley 1984), so it is reasonable to assume it was around this time that the DSC role was developed. However, midwifery as a profession within the social context has shaped the DSC role in practice today.

Ancient history

Midwifery as an occupation is one of the oldest in the world (Borrelli 2013). References to midwives go back to biblical times (Exodus 1:15-21), when the Egyptian king ordered the Hebrew midwives Shiphran and Phah to kill the male infants, in fear of the Hebrew male slaves (the population of which was increasing faster than the Egyptians) joining with the Egyptian's enemies in war.

18th century

Before the 18th-century, midwifery knowledge was handed down from 1 midwife to the next generation. During the 18th and 19th century midwives focused on attending to women in Childbirth (Hunter and Borsay 2012; Borrelli 2013). During this century, the first hospital-based maternity services were established, changing the trajectory for midwifery and the future of the DSC role. In London in 1749, the first 'lying in hospital' was established to provide a place for married women to give birth and

regain their strength, lying in hospitals then developed throughout the country with many provincial towns establishing their own hospitals (King 2012).

19th century

The 19th century marked a transition period for midwifery training, from the local community woman who had learned her skills, of variable quality, through apprenticeships, to a regulated profession with tightly monitored practice, establishing midwifery in its own right (Nuttall 2012). From the rise in the male specialist in the 18th-century one might assume that the medical profession would be opposed to the training and regulation of midwifery. On the contrary, the male London Obstetric Society in 1872 had founded the first diploma for midwives, recognising the importance of theoretical and practical training (Mayes 1930). This view was championed by Florence Nightingale, who emphasised the importance of scientific knowledge underpinning practical skills and a view supported by a small group of well-educated women led by Rosalind Paget advocating training for all midwives (Mayes 1930; Borrelli 2013). By the turn-of-the-century (1902), the Midwives Act had been passed, cementing in statute the education, certification and registration of midwifery practice.

20th century

The 20th century witnessed the most significant change to midwifery and maternity services, from self-employed apprenticeship trained midwives, predominantly conducting births at home at the beginning of the century, to graduate midwives conducting predominantly hospital births supported by technology by the end of the century (Hunter 2012).

Pre-World War 2

Before the 2nd World War, midwives predominantly worked in the community setting (Hunter and Borsay 2012). In 1938 the introduction of part 1 hospital-based and part 2 community-based midwifery education accelerated the move of midwives into the hospital setting. The trend continued during the war, as maternity homes in the countryside were established to accommodate evacuated women (Hunter 2012).

Post-World War 2

The formation of the NHS in 1948 marked a dramatic increase in hospital births. The prospect of free care and rest in purpose-built hospitals was a welcome attractive option for women used to the poor law infirmaries (Hunter 2012). The post-war increase in hospital births was led by consumer pressure from the National Childbirth Trust (NCT) supported by the pressure group Association for Improvements in the Maternity Services (AIMS) to campaign for all women to have a hospital bed and access to effective analgesia (Kitzinger 1990). As public confidence in medical technology increased, the belief in the correlation between medical science and improved maternity and neonatal outcomes emerged, accelerating the consumer pressure for access for all women to hospital-based intrapartum care (Durward and Evans 1990).

1960s

Before the 1960s, women had given birth in hospital on the antenatal ward. Central delivery suites were introduced in response to the rise in hospital births, and additional support women required associated with the introduction of technologies, namely the Cardiff pump for induction of labour and fetal monitoring CTG (Hunter 2012). Although there does not appear to be records of the DSC role, it is reasonable to assume the introduction of coordinating midwives, the role coincided with the introduction of central delivery suites.

In response to consumer pressure, the government set up a select maternity committee to review maternity services. The publication of their findings, the Peel report (Maternity Services Advisory Committee (MAC) 1970), recommended the *availability* of consultant-led units as a birthing option for women. This advice was universally interpreted as all women should deliver in obstetric units, misinterpreting the *availability* of a bed if required as advised in the report, and hospital births continued to rise.

1970s

During the late 1970s, an awareness of perinatal mortality rates began to emerge. The Short report (House of Commons Social Services Committee (HCSSC) 1980)

raised concerns about the unfavourable perinatal rates compared to our European counterparts, geographical variations within the UK and amongst different social groups. Although perinatal rates were higher than other European countries, the UK perinatal mortality rates had reduced in the late 1970s; the government select committee (HCSSC 1980) concluded hospital births were the contributing factor and the drive towards hospital-based births continued to gain momentum.

Opponents of the move from home births to hospital-based births argued that the reduction in perinatal mortality rates was flawed (Tew 1988); in truth, the perinatal mortality rate had been on a downward trajectory since the late 60s, primarily due to the improved post-war diet of women now giving birth. Tew (1988) argued that data on perinatal outcomes from European countries with high homebirth rates showing significantly lower perinatal mortality rates and evidence that mortality rates were 1/3 lower in GP units had been ignored by the select committee (HCSSC 1980), but the drive towards birth in larger consultant units continued as a policy.

As a result of post-war consumer pressure (Durwood and Evans 1990; Kitzinger 1990) and government select committee reports (MAC 1970; HCSSC 1980). The principal place of birth had shifted from home to hospital, rising from 24% in 1930 to 97% by 1990 (Holyrood *et al*. 2002). The impact for midwives was that most intrapartum care was now about supporting technology on a central delivery suite under medical authority, a role supported in the midwifery strategy, the Future Role of the Midwife (Department of Health and Social Services (DHSS) 1976).

1980s

During the 1980s, concerns over the medicalisation of births started to surface from some midwives and consumer groups influenced by anthropologist Shelia Kitzinger and French obstetrician Michael Odent, seeking to readdress the balance of power (Hunter 2012). A pressure that would continue into the 1990s.

In response to the concerns about variable perinatal mortality rates (HCSSC 1980), the first national standards and checklists for delivery suite were produced by the Maternity Advisory Committee (1984). The professionals from midwifery, obstetrics,

paediatrics and education on the committee concluded that nearly all babies being born in hospital and the rapid development of technology had brought problems for the professionals and users of the service, with variations in practice across the country. In addition to intrapartum guidance, the national standards focused on providing a positive intrapartum experience for the woman and safe care. Importantly the standards acknowledge the importance of the DSC (referred to as the senior midwife on shift) having the 'bigger picture' of all women and activity on the delivery suite. To date, this report remains the only maternity policy to acknowledge the DSC role as key to the wider clinical picture of activity on the delivery suite. Interestingly the tone of MDT working is supportive, midwives providing the care, with doctors available for emergencies. MDT working is assumed not stated, and it is not until the late 1990s that care is carved up into low and high risk (DH 1993).

1990s

The 1990s witnessed many political and social changes directly influencing health care delivery, including maternity services, which would impact the DSC role. Under the conservative government, the NHS was introduced to the internal market (DH 1990), promoting competition between health care providers, marking a shift in thinking within care to focus on women's choice and psychological wellbeing, as well as their physical safety (DH 1993; Walton and Hamilton 1995). The political shift in thinking towards patient choice in health care opened the door to consumer pressure from the NCT, the consumer group AIMS and midwives, whom the consumer groups viewed as allies campaigning for improved continuity of care and choice (Bradshaw and Bradshaw 1997). The subsequent expert maternity group review of evidence chaired by Baroness Cumberledge resulted in the Changing Childbirth report (DH 1993).

Changing Childbirth (DH 1993) was heralded by many as a positive progression for women's choice, continuity of care and professional autonomy for the midwives. However, critics of the report's recommendations argued the evidence submitted to the consultation committee was flawed, heavily influenced by the RCM and NCT; critics argued evidence to support the changes had been based on the views of less than 19% of the women interviewed and these were predominately well-educated

women and the committee had excluded a significant player in maternity care, the RCOG (Dunlop 1993; Bradshaw and Bradshaw 1997).

No reference to the DSC is made in the report; however, the implications for the DSC role relate to the changes Changing Childbirth made to the midwives and doctors providing intrapartum care. For the first time, a clear distinction was made between low-risk care led by midwives and consultants' high-risk care. Junior obstetric doctors SHOs were now employed within obstetrics as a training role, rather than part of the maternity workforce (DH 1993). This heralded a significant shift in the role of the DSCs, from an MDT team providing care across the continuum with fluid roles to staff with defined roles and boundaries. Coordinators were now required to support midwives with women defined as low risk and referral to obstetricians when complications arose. Secondly, they coordinated midwives and obstetricians providing care for high-risk women in addition to undertaking roles previously conducted by the SHO (National Patient Safety Agency (NPSA) 2007).

Progress in implementing the recommendations was slow, arguably never fully achieved (Meerabeau, Pope and Graham 1999). The gap between the theoretical desire to implement choice and continuity and practicalities of implementing the continuity of care schemes and lack of resources led to excessive midwife workloads and staff burnout. A 4-year post-audit demonstrated negligible change (Audit Commission 1997; Holroyd *et al*. 2002). More importantly, critics of the report voiced their concerns that the fragmentation of care between low and high-risk care would undermine MDT working particularly on delivery suite, potentially causing interprofessional rivalry, animosity and territorial disputes (Dunlop 1993; Meerabeau, Pope and Graham 1999) a concern which would come to fruition, cited as a direct cause for poor maternal and neonatal outcomes 7 and 12 years later in the Morecambe Bay, Shropshire and Telford maternity unit reviews (Kings Fund 2008; Kirkup 2015; Ockenden 2020).

The shift in focus to community care

The choice agenda shifted the focus away from the delivery suite and the DSC role into the community, a trajectory that would continue for the next 15 years. This

change was accelerated by the change to a Labour government in 1997 and their focus on public health policy shifted the focus of maternity care further away from the delivery suite and the coordinator role. Maternity services, community midwives, in particular, were viewed as significant players in contributing to the improvement of the ambitious public health agenda (Beake and Bick 2007). Community-based initiatives and funding streams including Sure Start community-based projects deflected resources and the focus away from the delivery suite and inevitably the DSC role (Department for Education and Employment (DfEE) 1999).

The narrow maternity focus exacerbated a lack of attention to the leadership role of the DSC, unlike nursing which had during the 70s, 80s, and '90s focused on the importance of leadership at the ward sister level. However the focus on midwifery leadership had been restricted to higher management posts, Head of Midwifery and delivery suite managers (Pembrey 1980; Ogier 1982; DH 1999; 2000; 2001; 2007a; 2009a; RCOG 2007; Gov. UK 2010; Pegram *et al.* 2014; Bannon Alderdice and Mc Neil 2017). The DSC role during the 1990s continued to be overlooked as the direction within midwifery continued to focus on the public health agenda and was largely antenatal based activity (DH 1999; 2000).

21st Century

Moving into the 21st-Century public health and health inequalities would continue to dominate the focus for maternity services. Confidential enquiries focused on the causative factors of poor outcomes on women from disadvantaged and ethnic communities (Lewis *et al.* 2003), influencing and intensified the public health message in the strategic Maternity National Service Framework (NSF) (DH 2004a). Concern was expressed by the then president of the Royal College of Nursing, Beverly Malone that the implementation of the NSF was primarily left to local discretion resulting some areas having difficulty in implementing the standards and the potential for variations in practice (Richens and Thomas 2004). The strong public health focus in maternity services continued to shift the focus of team working away from the MDT to community midwifery and multi-agency working (DH 2007a). This strategy led to the failure to acknowledge messages emerging from maternity service reviews at the time into poor maternal and neonatal outcomes, citing poor MDT

communication and working practice (CHI 2003; HCC 2004; 2006). Warning messages would go largely unheeded until the Morecambe Bay review 10 years later (Kirkup 2015). Instead, the House of Commons select committee report into the maternity unit reviews concluded staffing structures and shortages as a causative factor, recommending junior doctors reduce their hours to comply with the European Working Directive (House of Commons 2003). Whilst undoubtedly the reduction in hours for junior doctors had a positive impact on the medical staff, the impact for intrapartum midwives, particularly DSC, included taking on additional roles from the SHO's, thus adding to the DSC workload.

Maternity funding and its impact on delivery suite

The first 2 decades of the 21st century witnessed shortfalls in maternity services funding (Gould 2008). Underfunding through the payment by results scheme and the high proportion of maternity costs that contributed to clinical negligence schemes (CNST-insurance payments) put pressures on the service's finances (Gould 2008). Agency payments for temporary doctors, further exacerbated financial pressures to backfill the vacant hours from junior doctors reducing their hours to meet the European working time directives (DH 2002; 2006; 2007b). The solution for the intrapartum services was to move to larger centralised units to meet the recommendations of CNST standards of consultant availability for delivery suite and pool medical staffing to cover rotas and increase the workforce with the creation of maternity care assistants (MCAs) (Kings Fund 2008; 2014; Knight *et al.* 2015b). The strategic direction to move to larger units and increase MCAs further added to the complexity of the DSC role. In addition to taking on responsibilities from reducing SHO's, DSCs were now required to coordinate larger delivery suites and supervised untrained staff, MCAs (DH 2007a; Edwards 2008). Paradoxically, the national drive to reconfigure smaller obstetric units into larger obstetric units to meet the Clinical Negligence Scheme for Trusts (CNST) standards for medical cover resulted in reduced choice for women and reduced geographical accessibility for deprived communities, contradicting the public health agenda and maternity strategy (Bosanquent *et al.* 2005; Redshaw *et al.* 2011; Healthier together South East Midlands 2013; Office of Public Management 2014; Kings Fund 2014). Any additional maternity funding streams continued to be ring-fenced for public health

initiatives, such as breastfeeding and smoking cessation targets and failed to address the pressures on intrapartum care (Gould 2008; Clift-Matthews 2009).

Failure to recognise the DSC as key in delivery suite management and MDT working

DSCs were now either coordinating delivery suites in large obstetric units of more than 6000 births per annum, that experienced greater activity levels but had a more stable MDT, or alternatively, working in smaller units where the medical cover was subsidised with locum staff which created a more fluid and unfamiliar MDT for the DSC to manage: This was a factor later identified as a significant concern in 14 failing trusts following the Mid-Staffordshire review (NHS England 2013). By 2007, the failure of the MDT to recognise key clinical signs, exacerbated by ineffective MDT communication and team working, now accounted for the failings in 75% of maternal intrapartum deaths (HCC 2008). From 1990 to 2000, little progress was made to reduce the stillbirth rates (Confidential Enquiry into Stillbirths and Deaths in Infancy (CESDI) 1993; 1998; Lewis *et al.* 2003; CHI 2003; HCC 2006; 2008). None of the maternity policies since 1984 (Maternity Advisory Committee 1984) had offered guidance on intrapartum standards or working (DH 1993; DH 2004b; DH 2007b). In response to the public enquiry reports into failing maternity units, the RCM and RCOG led on the joint report 'Safer Childbirth' (RCOG 2007), setting minimum standards for the organisation and delivery of care on delivery suite. 23 years after the publication of the original standards (Maternity Advisory Committee 1984).

Despite the focus of the Safer Childbirth report (RCOG 2007) focussing on raising standards on the delivery suite through leadership and MDT working, the DSC role receives scant attention in the report, fleetingly referenced to within the organisational leadership section, the focus of the DSC role was on guideline development and monitoring of standards. The midwifery roles deemed to be influential to the functioning of the delivery suite related to the delivery suite manager and consultant midwives. Neither of these 2 roles operated out of hours or directly coordinated MDT staff, and some units did not employ consultant midwives on delivery suite. 2 sentences in the standards relate to the role of the DSC within the context of 24/7 cover, in contrast to the 2 pages dedicated to the role of the

obstetrician. A key document within the history of the delivery suite and the management of intrapartum care had failed to recognise the crucial role of leadership the DSC played within MDT and its coordination. The leadership contribution DSCs were making to MDT working continued to be an oversight despite the King's Fund report (2008) concluding that lack of clarity about leadership and poor management of staff was a major contributing factor to the poor outcomes at Ashford, Wolverhampton and Northwick Park (CHI 2003; HCC 2004; 2006). The report states:

> **‘**Midwifery co-ordinators are the leaders of a labour ward *midwifery* shift, providing support to all *midwives* on duty, taking decisions about staff deployment and reviewing professional decisions where appropriate’.
>
> (Kings Fund 2008 pp. 32).

No further explanations of the DSC and delivery suite leadership are made; instead, the report focuses on the consultant obstetrician as the leader, which in many units was not present on-site out of hours (RCOG 2007; RCOG 2016b). The solution offered for improving MDT working was viewed as MDT delivery suite staff attending emergency simulation courses such as the MOSES (Multidisciplinary Obstetric Simulated Training Emergency Scenarios) and PROMPT (Draycott and Crofts 2006). Whilst the importance of MDT communication and working together in obstetric emergencies is vital and undoubtedly joint training facilitated positive staff relationships, the fundamental issue of MDT communication to avoid emergency scenarios occurring appeared to be an oversight. This error would be repeated 9 years later in the Better Births report (NHS England 2016a).

By 2020 the DSC role had morphed from managing small obstetric units providing high-risk care only to larger units and managing an array of low risk through to high-risk cases. The DSC was now coordinating both trained and untrained staff with the SHO's additional responsibilities. With no formal management or leadership training, the additional responsibilities and expectations of the role had risen exponentially.

A key opportunity to recognise and support individuals in the DSC role was presented in 2010; the midwifery strategy Midwifery 2020 (Gov.UK 2010) guided the midwifery profession on the future development of the midwifery role (Masterson

2010). Despite the critical messages from the maternity reviews about MDT working, the midwifery strategy (Gov. UK 2010) continued to drive the message of midwives' contribution to the public health agenda. Intrapartum care focused on promoting normality, underpinned by the midwifery curriculum fostering a patriotic message of midwives as autonomous practitioners; arguably a concept that was poorly understood and not reflected in the midwifery rules and standards (Pollard 2003; DH 2009b; NMC 2009; 2012). DSC leadership and management development opportunities continued to be overlooked as the focus for leadership development centred on Heads of Midwifery, consultant midwives and linked to postgraduate education (Gov.UK 2010).

Despite the high-profile citation of leadership on the delivery suite in maternity reviews, less than 1 sentence of the report is dedicated to the DSC role:

> "There is an increasing range of demanding roles which require high levels of additional responsibility such as:
> - Delivery suite lead/coordinator."
>
> (Gov. UK 2010 pp 36).

Arguably, the 2010 maternity strategy (Gov.UK 2010) was a critical opportunity for the midwifery profession to address poor intrapartum MDT communication and working. The midwifery professions pursuit of the midwife as the lead for low-risk intrapartum care and the determination to pursue normality provided a missed opportunity for the midwifery strategy to recognise the crucial role of the DSC within the MDT and provide direction for MDT working to address the lessons learnt from previous maternal enquiries (CHI 2003; HCC 2004; 2006; 2008). Sadly, 5 years later, a sense of repetition when the public enquiry into the Morecambe Bay maternity unit was published in 2015 (Kirkup 2015), citing dysfunctional team working between midwives and doctors as a causative factor in the poor outcomes for women and babies.

In keeping with other maternity reviews, the Kirkup report (Kirkup 2015) had the potential to stay under the radar. However, the report was published on the back of the high-profile Winterbourne review (DH 2012) into the mistreatment of patients with learning difficulties and the Mid Staffordshire review (Francis, 2013) into poor patient

outcomes. The Mid Staffordshire review caused a media frenzy and understandably caused the UK public to question the professionalism of some NHS employees. This atmosphere provided the critical political environment for the Kirkup report (Kirkup 2015) to receive worldwide attention. In hindsight, the review's findings reiterated previous maternity reviews some 15 years earlier (CHI 2003; HCC 2004; 2006). The Morecambe Bay delivery suite culture between midwives and obstetricians had become so poor that a 'them and us' culture had developed (Kirkup 2015). The midwifery mantra of protecting normality for midwives was implemented to the extreme, with midwives excluding obstetricians from high-risk intrapartum cases to pursue normality and low-risk care. Indeed, DSCs were found to have acted as gatekeepers blocking referrals to obstetricians, thus highlighting the potential influence DSCs have on the culture of the delivery suite and MDT working.

Against this political backdrop and failing public confidence in NHS staff, the 5-year strategic direction for maternity, the Better Births report, was published in 2016 (NHS England 2016a). Incidentally, this report was chaired by the same individual who had chaired the original Changing Childbirth report in 1993 (DH 1993), which had led to the differentiation between high and low-risk care and initiated some of the initial sceptics' concerns about poor MDT working (Dunlop 1993; Bradshaw and Bradshaw 1997). A sense of déjà vu resonated with the release of the themes. The new strategy promoted: personalised care and continuity of care. Despite the concerns of the work-life balance of midwives required to deliver the caseload modelling, which had proved to be so problematic following the Changing Childbirth recommendations.

Lessons did not appear to have been learned from the 2 decades experience of implementing Changing Childbirth and community based teams, once again the focus was on the development of midwifery teams deflecting from the delivery suite and DSC role (Meerabeau, Pope and Graham 1999; Holyroyd *et al.* 2002; Duff 2016). The public launch of the strategy focused on personalised budgets for women and gave a positive spin on stillbirth and neonatal rates even against the background of obesity and smoking (NHS England 2016a; Boseley 2016a, NHS England 2016c). In reality, the UK perinatal mortality rates continued to lag behind European

counterparts in Germany, Italy, Ireland, Norway, Spain, Greece, Denmark, France, Sweden, Switzerland and the Netherlands (Wang *et al*. 2014). There was also UK geographical variations in perinatal mortality rates that continued to be problematic varying from 4.9 per 1000 to 7.1 per 1000, with potentially 50% of the stillbirths deemed preventable (Draper, Kurinzuk and Keyon 2015; Knight *et al.* 2016). A problem the government are seeking to address through the NHS long term plan (NHS 2016).

Two of the report's 7 recommendations related directly to the Morecambe Bay enquiry (Kirkup 2015), focusing on safer care provision through cohesive MDT working, supported by strong leadership. Midwives and obstetricians were identified as critical players in the MDT. However, the clarity of leadership and critical roles on the delivery suite, including the DSC role, were not identified in the strategy. Instead, solutions to improve MDT leadership and working focused on multi-professional undergraduate training and simulated training for emergencies. Underpinned by the extensive empirical research, the Bristol team had demonstrated improved neonatal outcomes through simulated MDT training, the PROMPT course (Draycott *et al.* 2008; Siassakos *et al.* 2010; 2013; Cornwaite, Alvarez and Siasskos 2015). However, the vague reference to strong leadership in the maternity strategy overlooked a critical insight from the PROMPT research, namely, it was the leadership style of the team leader in the emergency who was credited with maintaining MDT cohesion and improved neonatal outcomes (Bristowe *et al.*2012; Cornwaite, Edwards and Siassakos 2013). Whilst it could be assumed this role was afforded to the doctor, the DSC assumes the coordination role in emergencies in over 40% of clinical simulation scenarios. The DSC role's clinical and logistical decision-making skills often position them as the most experienced individuals to take the lead in specific emergencies (Janssens *et al.* 2019). Junior doctors are often underprepared for the role, exacerbated by their unfamiliarity with the unit due to the frequent rotation between units as part of the Obstetric training (Larsen *et al*. 2018).

Arguably of greater importance is the role of team leadership in preventing emergencies from occurring in the first place (NPSA 2007). Instead, the focus of the maternity safety strategy focuses on a midwifery champion at senior management

level to lead, align goals and develop a learning culture as solutions to support improvements in MDT working (NHS England2016a; DH 2016; CQC 2021). Whilst collective leadership advocated in the report reinforces the notion of working together; it is somewhat perplexing that a style of leadership poorly researched within healthcare should be recommended in preference to transformational and authentic leadership widely researched within health and credited for improvement in patient safety outcomes at ward level in nursing (Wong and Cummings 2007; Bamford-Wade and Moss 2010; Malloy and Penprase 2010; Wong and Cummings 2013; West *et al.* 2015).

As the current maternity strategy seeks to develop and expand community-based teams to promote continuity of care, midwives will come into the unit from the community-based teams to provide intrapartum care, core midwives on the delivery suite will decrease, adding a layer of complexity to the DSC role moving forward into 2022 and beyond, supporting transient midwifery colleagues and variable skill sets in units with significant shortfalls in midwifery and medical staff (NHS 2017; RCOG 2018; NMPA 2019; RCM 2017; 2021a).

In summary, I would suggest maternity policies since the 1990s and more recently, the Better Births report (NHS England 2016a) have failed to address the role the DSCs play in the 24/7 clinical leadership on delivery suite, specifically the DSC role and the role's contribution to the team working and safer care. The solution of managed clinical networks to support smaller units and the choice for women does not address the long-term problem of shortfall in paediatric staffing and middle-grade cover in obstetrics, with 9 in 10 maternity units reporting a gap in their rotas and reliance on agency backfill (Royal College Paediatrics and Child Health (RCPCH) 2011; 2016; NHS England 2016a; RCOG 2016b; National Quality Board 2018; RCOG 2018; NMPA 2019), a significant factor in failing Trusts and contributing factor to the failings identified in Mid-Staffordshire (NHS England 2013; Health and Social Care Committee 2021). Despite 25 years of government strategies for maternity services to deliver on the public health agenda, obesity levels in pregnancy have risen by 20% since 2012 (RCM 2017). The associated comorbidities of poor maternal health adding to the complexity of intrapartum care and pressures on staff

and DSC role (Arrowsmith, Wray and Quenby 2011; RCM 2017; Denison *et al*. 2018).

Consequently, the DSCs will continue to work with transient teams staffed by agency workers and community-based midwives, delivering care to women with increasing complexities exacerbating MDT's workload and responsibilities. In response to the poor UK stillbirth rates, the current Every Baby Counts initiative is now seeking to understand the human factors that lead to poor decision making and subsequent poor outcomes (RCOG 2017; 2020). Whilst the central focus of the report relates to individual cases, it does acknowledge the importance of team situational awareness of the activity on the delivery suite and its influence in the broader decision-making process but does not acknowledge or make reference to the DSC role in the process. The role continues to be overlooked within maternity policy thinking.

This section has explored the position of DSCs within the historical health policies and their influence on the DSC role. The following section explores the evidence from the literature search of the empirical research to ascertain current academic thinking on the role and attributes required for the role.

Literature search of the empirical research

In keeping with the constructive grounded theory approach, a comprehensive literature search and review was conducted pre and post data collection to establish the existing knowledge on the attributes of DSCs (Charmaz 2000; 2014). The timing of the literature search within the field of grounded theory is contentious, and I acknowledge Glaser and Strauss (1967) concerns of pre-data collection literature searches introducing preconception bias into the research. However, I chose to adopt the alternative pragmatic approach to grounded theory advocated by Strauss and Corbin (1990) and Charmaz (2014) to avoid repetition of existing research and focus on the interview proforma.

Search strategy

The paucity of published research into the role necessitated widening the search terms to midwife, leadership, and team working. To ensure all key databases were

accessed in the search, I engaged the support of the University and RCM specialist librarians, an approach proven to generate a greater number of relevant hits in literature searches (Rethlefsen *et al*. 2015).

American and English spellings of keywords, labour and labor were achieved using Boolean operators (Polit and Beck 2012; Fink 2014). Wildcards using the asterisk symbol * allowed for singular and plurals to be searched, for example, Midwif* (Dundar and Fleeman 2017) (table 2).

Table 2: Summary of the combinations applied to all database searches

Midwif* & leadership	Midwif* & good	Delivery & leader*
Midwif* & coordinator	Attributes & Midwif*	Labour/labor ward & team
Labour/labor ward & Coordinator	Delivery suite & Shift	Delivery suite & team leader
Labour/labor ward & manager	Delivery suite & morale	Delivery suite & teamwork
Delivery suite & Coordinator	Labour/labor ward & morale	Delivery suite & leader*
Delivery suite & manager	Labour/labor ward & teamwork	Labour/labor ward & leader*
Midwif* & manager	Midwif* & team leader	Doctor* & labour ward
Attributes & labour ward	Attributes & delivery suite	Doctor* & delivery suite
Attributes & coordinator	Attributes & team leader	

CINHAL and MEDLINE are generally acknowledged as the key databases for health research (Polit and Beck 2012). The Maternity and Infant Care database reflected the maternity perspective of the research. Assia, Business Complete and Psycho information databases ensured coverage of the topic area's psychological, social science, and business aspects. Unpublished doctoral studies were included through the EThos database. Grey literature can yield a rich source of information and be particularly relevant to this study (Adorno, Garbes and Matrix 2016). The RCOG, RCM, MBBRACE, King's Fund, and DH websites have continued to publish literature pertinent to maternity services. The RCOG has been particularly prolific in producing reports and recommendations relating to delivery suite (RCOG 1999; 2005; 2007; 2008; 2010; 2011; 2013a; 2013b; 2016a; 2016c; 2017; 2018; 2020). Whilst, not original research, the reports provide context to the DSC role within the wider guidance about the delivery suite and have been discussed in section 3.1.

The initial database search was carried out in February 2017 before the ethical approval application and repeated post data analysis during January 2020. Continuous monitoring for relevant publications ran for the duration of the thesis through monthly database alerts, subscription to Twitter feeds and hand searching of grey literature sites and Ethos database.

No limits were applied to the dates of the preliminary search, as the year for introducing the role of DSC was unknown and features in government publications dating back over 30 years (MAC 1984). However, primary research within the midwifery profession did not gain traction until the early 1980s, taking a further 2 decades before qualitative midwifery research gained exposure (Robinson and Thomson 1990) which may account for the dearth of literature retrieved pre-1990.

Results of the literature search

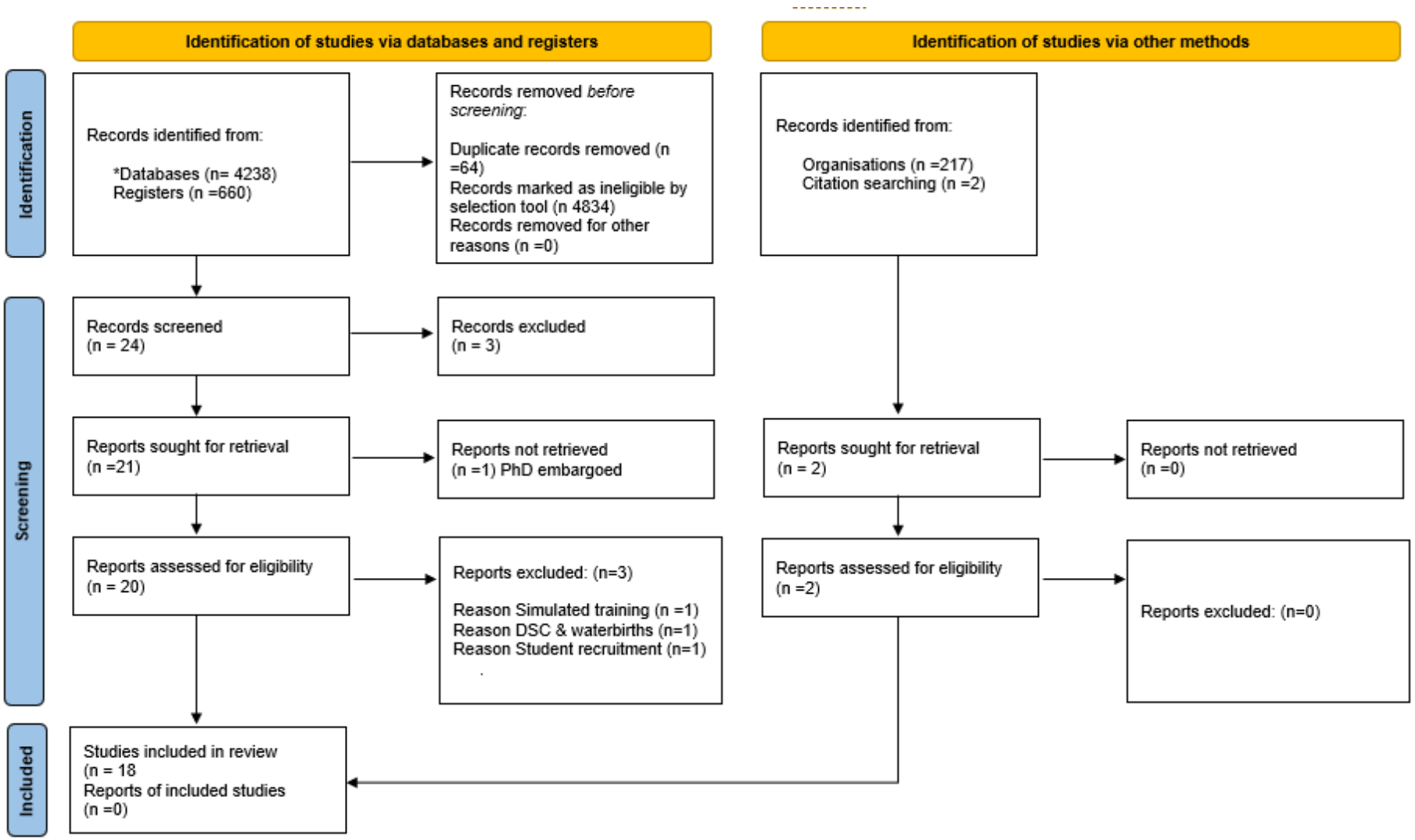
The combined pre and post-study literature searches identified a total of 7208 hits (table 3 figures 2 and 3).

Table 3: Number of hits by database

Database	Pre-study	Post study
Business source complete	177	48
Medline	515	648
Cinhal	1578	750
Maternity & the Newborn	239	280
Psch info	668	171
Ethos	660	0
Assia	839	501
RCOG	222	0
Total	4810	2398

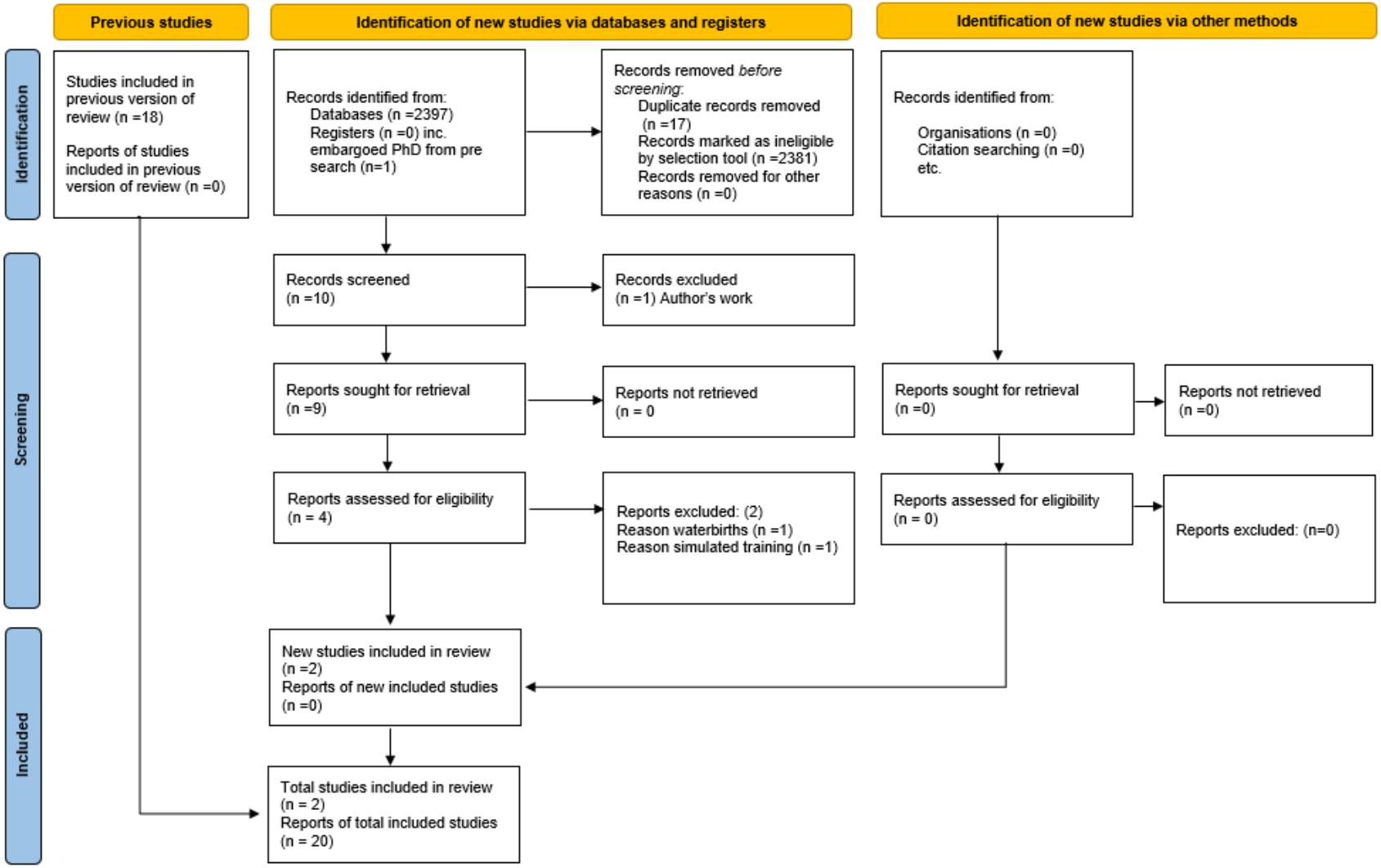
The literature search was unable to identify research specifically on the MDT's perceptions of DSC attributes that contributed to the delivery suite's management and leadership.

Figure 2: PRISMA literature search pre-data collection



(Page *et al.*, 2021)

Figure 3: PRISMA literature search post-data collection



At the identification stage, articles pertaining to non-maternity clinical areas, non-clinical management posts, reports, and training materials were excluded. A further 4 articles representing personal opinions and a published article I had written were excluded at the screening stage. Data from the eligible articles were extracted using a data extraction tool (Fleeman and Dundar 2017) and critiqued utilising a combined approach. The decision to use 2 critical appraisal tools by Walsh and Downe (2005) and the Joanne Briggs Institute (2017) (appendix 4) was informed by the mixed methodologies of the studies and sought to add rigour to the critical appraisal process a further 4 studies were excluded at this stage (table 3.3)

Table 4: Papers assessed for eligibility the final inclusion and exclusion

Pre-study literature search		
Paper	**Decision**	**Reason for exclusion**
Borrelli (2014)	Included	
Borrelli (2015)	Included	
Borrelli, Spiby and Walsh (2016)	Included	
Bristowe *et al*. (2012)	Included	
Byrom and Downe (2010)	Included	
Carolan (2011)	Included	
Carolan (2013)	Included	
Cornwaite, Edwards and Siassakos (2013)	Excluded	Context simulation emergency training
Feijen-de-Jong *et al*. (2017)	Included	
Fergusson, Smythe and McAra-Couper (2010) ‘	Included	
Fraser (1999)	Included	
Halldorsdottir and Karlsdottir (2011)	Included	
Hastie and Fahy (2009)	Included	
Kay (2010)	Included	
Lankshear, Ettorre and Mason (2005)	Included	
Mackintosh, Berridge and Freeth (2009)	Included	
Nicholls and Webb (2006)	Included	
Nicholls, Skirton and Webb (2011)	Included	
Reiger and Lane (2009)	Included	
Russell *et al*. (2014)	Excluded	Context DSCs supporting waterbirths
Waugh *et al*. (2013)	Excluded	Context recruitment of student midwives
Post-study literature search		
Hewitt, Priddis and Dahlen (2019)	Included	
Janssens et al. (2019)	Excluded	Context simulation emergency training

Pre-study literature search		
Paper	**Decision**	**Reason for exclusion**
Parkin (2016) (*thesis embargoed until 2018)*	Included	
Romijin *et al*. (2018)	Excluded	Context antenatal care

Findings of the literature review

The literature search was unable to identify research specifically on the MDT's perceptions of DSC attributes which contributed to the management and leadership of the delivery suite.

Focus of the studies

Thematic analysis of the final 20 papers representing 16 studies (table 5) identified 3 key themes (Braun and Clarke 2019). The first theme focused on the DSC and their central role in ensuring effective communication (Lankshear, Ettorre and Mason 2005; Macintosh, Berridge and Freeth 2009; Fergusson, Smythe and McAra-Couper 2010). The second theme is what makes a good midwife from various perspectives, midwives' views of a good midwife providing care for women (Bryom and Downe 2010). Perceptions of health professionals' views of a good midwife as a work colleague (Reiger and Lane 2009). Interprofessional collaboration on delivery suite (Hastie and Fahy 2009). Understanding womens' and health professionals' understanding of a good midwife informing curriculum development (Fraser 1999; Nicholl and Webb 2006; Nicholl, Skirton and Webb 2011). Perceptions of a good midwife as a mentor to students (Carolan 2011; 2013; Feijen-de-Jong *et al*. 2017). Theories and views of women of a good midwife providing ante, intra and postpartum care (Halldorsdottir and Karlsdottir 2011) and primigravida's perceptions of a good midwife delivering intrapartum care (Borrelli 2014; 2015; Borrelli, Spiby and Walsh 2016). The third theme focused on leadership within the community setting and the clinical environment of the delivery suite (Kay 2010; Bristowe *et al.* 2012; Parkin 2016; Hewitt, Priddis and Dahlen 2019). The findings of the data extraction and critical appraisal process will be presented under the associated theme.

Table 5: Summary of papers reviewed from the literature search

Paper	Research aim	Methodology	Method	Sampling/ participants	Comments
Borrelli, S (2014) What makes a good midwife? Insight from the literature. *Midwifery.* 30. pp 3-10	What makes a good midwife	Systematic literature review	Literature search	Papers (n=6) (International)	Views of women of the generic midwifery role
Borrelli, S. (2015) *The kaleidoscope midwife: a conceptual metaphor illustrating first-time mothers' perspectives of a good midwife: a grounded theory study.* PhD thesis. University of Nottingham. Borrelli, S. Spiby, H. and Walsh, D. (2016) 'The Kaleidoscope midwife: conceptual metaphor illustrating first-time mothers' perspectives of a good midwife during childbirth. A grounded theory study, *Midwifery*, 39. pp. 103-111.	What makes a good midwife providing intrapartum care	Qualitative Straussian grounded theory	Semi-structured interviews pre and post birth	Purposeful and theoretical sampling of first-time mothers (n=14). Planning births at home, freestanding midwifery units or obstetric units.	Views of women of midwives providing intrapartum care (Same study) UK Study
Bristowe, K, *et al.* (2012) teamwork for clinical emergencies: interprofessional focus group analysis and triangulation with simulation. *Qualitative health research.*22. (10) pp1383-1394.	Investigate health care professionals' beliefs about team working in medical emergencies	Qualitative thematic analysis Triangulation with data from a simulation study.	Focus groups	Random sampling of site. Secondary and tertiary maternity units (n=4) Purposeful sampling of Doctors, midwives, and MCAs (n=24)	Views of midwives, doctors and maternity care assistants of leadership in emergencies UK study
Byrom S, and Downe S. (2010) 'She's sort of shines': accounts of 'good' midwifery and 'good' leadership. *Midwifery.*26. pp 126-137	Explore midwives' accounts of the characteristics of 'good' leadership & 'good' midwifery	Qualitative phenomenological	Interview survey	Stratified sampling of senior and junior midwives (n=10) Maternity units (n=2)	Views of midwives of the generic midwifery role UK study
Carolan, M. (2011) 'The good midwife: commencing students' views,' *Midwifery*, 27, pp. 503-508	Explore commencing students' views of a good	Qualitative thematic analysis	Questionnaire (open text)	Purposeful sampling of a student midwife cohort at the start of their course (n=41)	Views of Australian students midwives Initial study

Paper	Research aim	Methodology	Method	Sampling/ participants	Comments
	midwife				
Carolan M (2013) 'A good midwife stands out': 3rd Year midwifery students' views. *Midwifery.* 29. pp 115-121.	Explore completing students' views of a good midwife	Qualitative thematic analysis	Questionnaire (open text)	Purposeful sampling follow up of student midwife cohort at the end of their course (n=31)	Views of Australian students midwives Follow up study Australian study
Feijen-de Jong, E. *et al.* (2017) 'Perceptions of nearly graduated fourth-year midwifery students regarding a 'good midwife' in the Netherlands', *Midwifery*, 50, pp. 157-162.	Explore the conceptualisation of nearly qualified students of a good midwife	Qualitative Cross-sectional study thematic analysis	Questionnaire (open-ended)	Purposeful sampling of 4th year Dutch students (n=67)	Views of final year Dutch students of the generic midwifery role Netherland study
Fergusson L, Smythe L. and McAra-Couper J, (2010) 'Being a delivery suite coordinator', *New Zealand College of Midwives Journal*.42. pp 7-11.	Experiences of midwives working as DSCs	Qualitative interpretative phenomenological	Interviews of DSCs stories of the role	Purposeful sampling of DSCs (n=5) from tertiary hospitals (n=3)	Views of coordinators Views of delivery suite staff not obtained New Zealand study
Fraser, D. (1999) Women's perceptions of Midwifery care: A longitudinal; study to shape curriculum development. *Birth*. 26, 2. pp 99-107.	How competence in midwifery is defined by women to inform the midwifery curriculum	Qualitative Descriptive longitudinal study	Semi and unstructured interviews	Opportunistic sample of women attending antenatal clinic (n=41) From a maternity unit (n=1)	Views of women of the generic role Purpose: To inform midwifery curriculum development UK study
Halldorsdottir, S. and Karlsdottir, S. (2011) 'The primacy of the good midwife in midwifery services: an evolutionary theory professionalism in midwifery', *Scandinavian Journal of Caring Sciences,* 25, pp. 806-817.	Develop a theory of professionalism in midwifery	Theory synthesis	Systematic review	Systematic review of 300 papers Review of identified papers (n=9)	Views of Nordic women of the generic role midwifery role Icelandic study
Hastie C. and Fahy K. (2009) Interprofessional collaboration in delivery suite: A qualitative study. *Women and Birth.* 24, pp 72-79	What factors affect inter-professional interactions in birthing units?	Qualitative interpretive interactionism	**I**nterviews	Convenience sampling strategy of Doctors (n=9), midwives (n=10) Birthing units (n=10) not identified	Views of midwives and doctors providing intrapartum care Australian study
Hewitt, L. Priddis, H and Dahlen, H.	To explore the	Qualitative	Interviews	Purposeful sampling of	Self-reporting views by

Paper	Research aim	Methodology	Method	Sampling/ participants	Comments
(2019) 'What attributes do Australian midwifery leaders identify as essential to effectively manage a Midwifery Group Practice?' *Women and Birth,* 32, pp.168-177.	attributes of midwifery group practice managers required to be effective managers	interpretive thematic analysis		Midwifery group practice leaders (n=8)	the Australian managers views not verified by the staff Australian study
Kay, L. (2010) 'Leading other midwives: experience of midwife team leaders', *British Journal of Midwifery,* 18(12), pp. 764-769.	To find out whether community midwifery leaders found the perceived autonomy of the midwives in their teams a challenge.	Qualitative Critical ethnographical Interviews and observation	Observation of team meetings Interviews	Purposeful sampling of community team leaders (n=5) from a community service (n=1)	Outside observer Views of community midwifery team leaders of leadership UK study
Lankshear, G. Ettorre, E. and Mason, D (2005) 'Decision-making, uncertainty and risk: Exploring the complexity of work processes in NHS delivery suites', *Health, Risk and Society,* 7 (4), pp, 361-377	Assess the impact of a computerised CTG system on clinical decision making	Qualitative Ethnographic	Observational study	Purposeful sampling of delivery suites sites (n=3)	Outside observer Views of delivery suite staff not obtained UK study
Mackintosh, N. Berridge, E. and Freeth, E. (2009) 'Supporting structures for team situation awareness and decision-making: insights from 4 delivery suite', *Journal of Evaluation in Clinical Practice.*15. pp 46-54	Understand how delivery suite teams achieve and maintain team situational awareness	Qualitative Ethnographic	Observational study	Purposeful sampling of delivery suites sites (n=4)	Outside observer Views of delivery suite staff not obtained UK Study
Nicholls, L. and Webb, C. (2006) What makes a good midwife? An integrative review of methodologically-diverse research. Journal of Advanced Nursing. 56, pp. 414-429	An integrated review aimed at answering 'what makes a good midwife?	Quantitative/qualitative integrated review	Stage 1: Systematic review	Papers (n=33) (International)	Finding to inform stage 2 Delphi study UK study

Paper	Research aim	Methodology	Method	Sampling/ participants	Comments
Nicholls, N. Skirton, H. and Webb, C. (2011) Establishing perceptions of a good midwife: a Delphi study. *British Journal of Midwifery.*19 (4) pp.230-236	What makes a good midwife	Quantitative Delphi study	Stage 2: Questionnaire results reviewed by an expert panel	Convenience sampling through national groups Women, midwives, and midwifery educators (n=226)	Views of midwives and women Purpose: To inform midwifery curriculum development UK study
Parkin, J (2016) *Clinical Leadership on the Labour Ward.* PhD thesis. University of Huddersfield. (Unpublished)	Explore leadership on the labour ward and understand the associated characteristics of clinical leadership	Qualitative Critical ethnographical Observations Interviews	Observational study Focused interviews	Purposeful sampling of site labour ward (n=2) midwives and DSCs (48) for interviews	Views of midwives of clinical leadership in midwifery colleagues UK study
Reiger, K. and Lane, L. (2009) 'Working together: collaboration between midwives and doctors in public hospitals', *Australian Health Review*, May, 33, 2, pp.315-324.	What midwives and doctors look for in colleagues they like to work with	Qualitative	Semi-structured interviews and focus groups	Sampling strategy not defined for choice of maternity units (n=4) or staff groups Midwives, doctors (n=unknown)	Views of doctors and midwives of midwives as work colleagues Australian study

The delivery suite coordinator role within the context of the delivery suite environment

Current understanding of the DSC role in the UK is limited to incidental findings in 2 ethnographic studies undertaken on delivery suite to determine the supporting structures for team decision-making (Macintosh, Berridge and Freeth 2009) and the influence of a computerised CTG system on clinical decision-making (Lankshear, Ettorre and Mason 2005) (Table 6).

During their observational study of 2 smaller (<3500 births) and 2 larger delivery suites (>5000 births) to understand the non-technical skills (human factors) contributing to safety, Macintosh, Berridge and Freeth (2009) discovered that in the units with a strong culture of team situation awareness (TSA), the DSC played a vital role as a conduit for information in team handovers and maintenance of the communications board, the focal point for the collation of information and team communication**.** When the DSC role was underdeveloped, TSA was maintained by doctors stepping in to fulfil the role. TSA is widely acknowledged as an essential factor in maintaining women's safety in receiving intrapartum care (Abbot, Rogers and Freeth 2012; Mitchell 2013; Edozien 2015). Macintosh, Berridge and Freeth (2009) acknowledge that whilst they identify the DSC role as key to TSA, they did not explain how the TSA was achieved on a practical level.

The DSC role was also involved with supporting midwives with clinical decision-making relating to CTG interpretations. Lankshear, Ettorre and Masons' (2005) ethnographic observational research of 3 delivery suites to determine the effects of a computerised CTG decision-making system discovered that DSCs were the first point of contact for midwives when seeking support for interpretation of CTG readings. Midwives would seek a second opinion before escalating concerns to the doctors, suggesting DSCs play a role in midwives' 1 to 1 support.

Observational studies undertaken by researchers from non-maternity based professions (Lankshear, Ettorre and Mason 2005; Macintosh, Berridge and Freeth 2009) provide a valuable third-party account of certain aspects of the DSC role. However, it may be suggested the findings may not reflect a MDTs perspective. It is,

therefore, reasonable to hypothesize that staff on 'the shop floor' may view the role from a different perspective to an independent observer.

There is a single research study into health professionals' understanding of the DSC is limited to 1 small-scale (n=5) phenomenological New Zealand-based study (Fergusson, Smythe and McAra-Couper's 2010) (table 6). The DSCs interviewed articulated their role as being at the 'hub' of activity, facilitating and supporting staff to undertake their role and the ability to 'solve puzzles' within the unpredictable work environment, which became more challenging when the unit became busy, likened to being in the eye of the storm. The notion of the DSC role being a central role for information exchange in decision-making concurs with the UK-based work (Lankshear, Ettorre and Mason 2005; Macintosh, Berridge and Freeth 2009). However, the transferability of the study findings is limited by the small sample size and model of maternity care. The New Zealand maternity care system is very different to the UK. New Zealand women commission GPs and independent midwives to provide their care (Grigg and Tracy 2013; Hunter *et al.* 2016). Independent of delivery suite staffing, these practitioners use the delivery suite facilities to provide intrapartum care for their women. Therefore, the staff dynamics and power relationships within the MDT and DSC role in New Zealand differ from the UK. Fergusson, Smythe and McAra-Couper's (2010) study provides an insight into DSCs' perspectives of their role. However, it is debatable whether staff in the MDT working alongside the DSC role view the attributes differently.

Table 6: The DSC role within the context of the delivery suite: - Summary of the key findings from the papers

Paper	Communication role	Decision making
Fergusson, Smythe L. and McAra-Couper J, (2010)	-DSC is the central point of activity on delivery suite (DSCP)	-Supports midwives with decision making about clinical care (DSCP)
Lankshear, G. Ettorre, E. and Mason, D (2005)		-DSC is the 1st point of contact to support midwives with decision making relating to CTGs (EO)
Mackintosh, N. Berridge, E. and Freeth, E. (2009) '	-DSC acts as the conduit of information for the updating of the communications board (EO) -DSC is the main conduit of information exchange at handovers to the MDT (EO)	
Key: External observer= EO, DSC's perspective= DSCP		

In summary, based on the minimal research, the DSC role would appear to influence the supply of clinical information to support TSA and support individual staff with decision-making. In the absence of research relating to what makes a good DSC, it was logical to examine what makes a good midwife as all DSCs progress from providing clinical care to the management role of DSC.

What makes a good midwife?

The professional expectations of all midwives are set out in the NMC Code of Conduct (NMC 2018). However, a good midwife is deemed to practice beyond the primary professional body's expectations. In keeping with other researchers (Nicholls and Webb 2006: Borrelli 2015), I acknowledge the potential ambiguity of the term 'good', but in the absence of any other word with equally ambiguous connotations, the term 'good' is used in this section acknowledging the subjectivity of individual interpretation and the lack of operational definition for a 'good' midwife. The purpose of the papers examining the notion of a good DSC is multifaceted. I, therefore, intend to present the findings under the headings relating to the aim of the study.

Health professionals' perceptions of a good midwife as a work colleague

Research from Australia (Reiger and Lane 2009) would suggest that midwives and obstetricians working on delivery suite differ in the qualities they value in midwives as the ideal work colleague**.** The methodology and sample size in Reiger and Lane's (2009) study are vague. However, midwives identified personal qualities and skills as important in their midwifery colleagues. Personal qualities included a strong professional identity and belief in normal birth. They valued midwives who backed them up professionally and supported their colleagues with the physical workload on the unit. Respect was awarded to midwives who were flexible, approachable and did not panic when complex situations arose. Skills associated with a good midwife were identified as working across all areas and competency with both intermittent and continuous monitoring.

The obstetricians in Reiger and Lanes' (2009) study valued midwives who possessed good communication skills with their colleagues and were willing to take

on the responsibility of clinical decision-making. The doctors expressed frustration at being called unnecessarily and were critical of midwives who they perceived abdicated responsibility to call them too often. Conversely, they wanted to be involved with complex care, expressing frustration with midwives who they perceived held onto women for too long when problems arose. Good midwives were viewed as knowing when to communicate with obstetricians, articulated as having 'a good grasp of what was going on' with their women. Doctors disliked being mistrusted and dismissed by midwives who viewed them as always wanting to intervene in care, expressing the frustration of being excluded from decision-making and the birthing rooms as midwives sought to protect normality.

Similar communication challenges between doctors and midwives on the delivery suite were identified in Hastie and Fahy's (2009) Australian study into intra-professional collaboration. Using an interpretive interactionism design Hastie and Fahy's study interviewed doctors (n=9) and midwives (n=10) from 10 maternity units, where they identified power struggles, which the authors described as ‘turf wars’ between the professional groups, resulting from midwives resisting medical interventions and doctors seeking to be involved in care. Although power struggles over care were articulated, in keeping with Reiger and Lane’s (2009) work, both the doctors and midwives in the study viewed each other as equals when planning care.

Both Australian studies were undertaken at a particularly fractious time when changes in the maternity models of care were introduced into the country’s maternity system. The midwifery profession perceived the changes as being resisted by the medical profession to block the advancement of autonomy and responsibilities of midwives (Reiger and Lane 2009). Whilst a degree of caution about the transferability of the findings from these 2 Australian studies to the UK maternity model should be considered, elements of the findings of ‘turf wars’ and the exclusion of doctors by midwives to maintain normality resonate with the findings of the UK based Kirkup report into poor outcomes at the Morecombe Bay maternity unit (Kirkup 2015).

The UK midwife's views of a good midwife

Studies within the UK focus on the attributes of a good midwife providing care to women. Bryom and Downe's (2010) phenomenological interview survey of midwives (n=10) from 2 units found that midwives admired midwifery colleagues whose clinical competence was underpinned by knowledge, which translated into a confident midwife. Good midwives were also admired for being approachable, caring, empathetic, supportive, friendly, honest and trustworthy. Attributes which the authors attributed to transformational leadership and emotional intelligence (EI). Whilst elements of the personal skills related to emotional and social intelligence (Goleman 1995; 2006; 2013), the links to transformational leadership are tenuous. Terms such as visionary, empowering and self-awareness are synonymous with this leadership style (Bass and Avolio 1994; Alimo-Metcalfe *et al.* 2008; Goleman, Boyatzis and McKee 2002a), but the midwives in the study did not articulate these terms. Their research gives valuable insight into midwifery staffs' views of midwifery colleagues delivering care to women on the ante, intra-and postpartum spectrum. However, it is difficult to differentiate specific midwifery attributes pertinent to the delivery suite environment.

Understanding a 'good' midwife to inform curriculum development

The standards for proficient midwives at the point of registration are determined by the standards for undergraduate programmes set by the NMC (NMC 2019). However, universities strive to deliver a curriculum that meets the expectations of women and maternity services. It is against this background that 3 of the papers focused on what makes a good midwife.

The women (n=40) in Fraser's (1999) longitudinal study wanted midwives who were clinically competent, knowledgeable and possessed good psychomotor skills to deliver care. The women also valued good communication skills in midwives to facilitate choice and individualised care. The findings of choice and individualised care in Fraser's research may have been influenced by the strategic direction of maternity policy at the time advocating choice for women and individualised care (DH 1993). Later research (Nicholls and Webb 2006; Nicholls, Skirton and Webb 2011) placed a greater emphasis on knowledge skills and attitudes by midwives than

on the provision of choice. In their 2 part study, Nicholls and Webb's (2006) systematic review and Nicholls, Skirton and Webb's (2011) follow-up Delphi study of womens', midwives and educators (n=226) identified a good midwife as possessing 3 domains, communication skills, being compassionate, kind and supportive (affective domain), knowledgeable (cognitive domain) and skilful (psychomotor domain) as key attributes. However, it was challenging to decipher which of the articulated attributes were attributed to women or midwives within the study as differentiations in the findings were not made. Halldorsdottir and Karlsdottir (2011) and Borrelli, Spiby and Walsh's (2016) studies focused solely on women's views of a good midwife.

Women's views of a good midwife

There exists a subtle difference in women's views of a midwife at the point of registration to the attributes of a midwife they experience care provision from. Through this lens, Halldorsdottir and Karlsdottir (2011) and (Borrelli, Spiby and Walsh 2016), drawing predominantly on their own Nordic-based studies, develop a theory-based model of 'the good midwife'. Halldorsdottir and Karlsdottir (2011) defined 4 components attributable to a good midwife:

1. Professional competence.
2. Professional wisdom, defined as the interplay between knowledge and experience.
3. Interpersonal competence, namely the ability to connect with women to form empowering relationships through active listening.
4. Professional caring; caring for women within their professional domain.

The Icelandic maternity system is very similar to the UK, with midwives taking the lead in normal pregnancies supported by a hospital-based system for complex care (Wrede, Benoit and Einsdottir 2008). Aspects of the study resonate with Fraser (1990) and Nichols and Webb's (2006) findings, namely competence and caring aspects. However, Halldorsdottir and Karlsdottirs' (2011) work is descriptive and based on the authors' research into women's experiences within the Nordic system. The components of Halldorsdottir and Karlsdottir's (2011) theoretical model

represents care across ante, intra and postnatal episodes, making it impossible to define the attributes of a good midwife providing intrapartum care.

Whilst research is available on women's expectations around childbearing, there appears to be little research on women's views of the attributes of a good midwife providing intrapartum care (Borrelli 2014). Borrelli, Spiby and Walsh's (2016) research was the only study identified in the literature search which specifically sought women's views of a good midwife providing intrapartum care. Her grounded theory study of primigravid women (n=14) identified good midwives as professionally competent and knowledgeable in their practice, cited by the author as 'knowledgeable doing'. The study found that women valued midwives' empathetic ability to develop interpersonal relationships and know when it was appropriate to be present in the room and when to give the woman privacy, cited as 'having a physical presence. Practice based on knowledge and the ability to develop personal relationships concurs with other UK based studies on midwives' and women's views of a good midwife providing care across the spectrum of childbearing (Fraser 1999: Nichols and Webb 2006; Byrom and Downe 2010). Whilst acknowledging the study only represents primigravida women, Borrelli's study gives valuable insight into women's views of a good intrapartum midwife and is the only UK based study identified which focuses on the attributes of a 'good' midwife providing intrapartum care.

Student midwives' views of a good midwife

Role modelling is influential in students' aspirations to be like practitioners they witness in practice, seeking to emulate the attributes of good practitioners (Nieuwenhuijze *et al*. 2020). Student midwives' views provide a valuable insight into their perspective of what makes a good midwife. No UK based research has been undertaken to examine student midwives' views around the 'good' midwife; however, there are 2 studies, 1 from Australia (Carolan 2011; 2013) and 1 from the Netherlands (Feijen-de-Jong *et al.* 2017). Throughout their 3 year training, Carolan's (2011; 2013) study found that Australian student midwives developed their understanding of a good midwife in that at the beginning of their programme, good communication skills and approachability were deemed to be necessary by the end

of their 3-year training, the students articulated the broader appreciation of skilled competence, care, compassion and resilience as being key to a good midwife. Dutch student midwives appear to have a broader appreciation of a good midwife compared to their Australian counterparts. In their cross-sectional study of Dutch students (n=67), Feijen-de-Jong *et al.* (2017) found that in addition to the importance of professional competence, Dutch students recognised the importance of good midwifery relationships, particularly with medical staff and joint decision-making for women with complex care.

Both studies provide valuable insight into student midwives' perspectives of a good midwife. However, consideration should be given to the context of the studies. The Australian and Dutch maternity care systems subtly differ from the UK, with midwives being trained accordingly, limiting the transferability of the findings. Dutch maternity services adopt a case loading model (Amelink-Verburg 2009), requiring a high degree of autonomy for the midwives, reflecting the emphasis on good communication with medical staff by the Dutch students. In contrast to the UK and Australian 3 year midwifery training programme, Dutch midwives train for 4 years. Therefore, the final 4th year of the Dutch students' program is more akin to the newly qualified UK band 5 midwives.

Maternity care assistants and ward clerk views of a good midwife

No literature was identified in the search about the views of MCAs or ward clerks on what makes a good midwife.

Summary

In the absence of research relating to attributes of a good DSC, the literature about good midwives providing 1 to 1 care to women suggests a level of consistency in the views of women, midwives and student midwives. No information was retrieved on doctors, MCAS or ward clerks views of clinical midwives. However, the limited research (n-1) into doctors' and midwives' understanding of 'good' midwives as work colleagues demonstrates a significant difference of opinion between the professional groups. Therefore, it is reasonable to assume the MDT beliefs about the attributes of a good DSC are likely to be different from those of a clinical midwife (table 7).

Table 7: What makes a good midwife? Summary of the 5 key findings from the papers

Paper	Effective domain	Cognitive domain	Psychomotor domain	Personal qualities	Support for colleagues
Borrelli, S. (20150 and Borrelli, S., Spiby, H. and Walsh, D. (2016)	-Empathetic (W) -Ability to develop relationships (W)	-Knowledgeable doing (knowledge & competence) (W)			
Byrom S, and Downe S. (2010	-Approachable (M) -Caring (M) -Empathetic (M) -Support to women (M)	-Clinical competence underpinned by knowledge (M)		-Honest and trustworthy (M)	
Carolan, M. (2011)	-Approachable (SM) -Good communication skills (SM)			-Approachable (SM)	
Carolan M (2013)	Approachable (SM) -Good communication skills (SM) -Compassionate (SM)		-Skilled competence (SM)	-Resilient (SM)	
Feijen-de Jong, E. *et al.* (2017	-Ability to connect with women and	-Professional competence		-Good relationships with doctors (SM)	

Paper	Effective domain	Cognitive domain	Psychomotor domain	Personal qualities	Support for colleagues
	develop relationships (SM) - Empowers women to make choices (SM) -Good communication with MDT with complex care (SM)	and ability to make decisions (SM) -Clinical competence underpinned by knowledge (SM)			
Fraser, D. (1999)	-Communication skills to facilitate choice (W)	-Knowledgeable (W)	-Clinical competence (W) -Good psychomotor skills (W)		
Halldorsdottir, S. and Karlsdottir, S. (2011	-Ability to connect with women (W) -Caring (W)	-Professional competence (W) -Professional wisdom (knowledge & experience) (W)			
Hastie C. and Fahy K. (2009)		-Involve doctors with complex care (D)			-Viewed colleagues as equals (M, D)
Nicholls, L. and Webb, C. (2006) and Nicholls, N., Skirton, H. and Webb, C. (2011)	-Compassionate (W&M) -Kind/supportive (W&M)	-Knowledgeable (W&M)	-Skilful (W&M)		

Paper	Effective domain	Cognitive domain	Psychomotor domain	Personal qualities	Support for colleagues
Reiger, K. and Lane, L. (2009)	-Approachable (M&D) -Good communication with MDT (D)	-Take responsibility for decision making (D) -Involve doctors with complex care (D)	-Work across all areas (M) -Skilled with intermittent and continuous fetal monitoring (M)	-Approachable (M&D)-Strong professional identity (M) -Belief in normal birth (M) -Flexible (M) -Does not panic with complex care (M) -Good relationships with doctors (D) -Honest and trustworthy (D)	-Back their colleagues up professionally (M) -Support colleagues with the workload (M) -Viewed colleagues as equals (M, D)
Key: W= Women's views, SM= Student midwives views, M=Midwives' views, D= Doctors views					

Leadership in the clinical environment

As a concept, I acknowledge that leadership is complex and a multifaceted subject, concurring with Northouse (2016, pp 16):

> 'Despite the abundance of writing on the topic, leadership has presented a major challenge to practitioners and researchers interested in understanding the nature of leadership'.

The research reviewed in this section is taken within the context of clinical leadership in maternity practice. Of the 4 studies identified in the search, 2 related to midwifery leadership in the community setting (Kay 2010; Hewitt Priddis and Dahlen 2019) and 2 to the delivery suite environment (Bristowe *et al.* 2012; Parkin 2016).

Kay's (2010) small ethnographic study (n=5) of community team leaders concluded that clinical leadership in midwifery is poorly defined and requires further research. Participants in the study articulated a lack of career development and support for the leadership role, leading Kay to conclude that training and staff support were required for staff seeking to transition from clinical midwife to community team leader. Whilst this study provides an invaluable insight into community team leaders who operate managerially at the same level as DSCs', the focus of the research on autonomous practice and leadership development within the community setting limits the transferability of Kay's findings to this study. Team leaders' roles within the community fundamentally differ from the DSC role. Community team leaders are responsible for coordinating a more stable workforce of band 5 and 6 midwives, in contrast to the DSC, who manages a more fluid team, the members of which change on a shift by shift basis. Liaison with the MDT for the community team leader is more infrequent and undertaken remotely; in contrast to DSCs, who work alongside the MDT with numerous interactions throughout the shift, limiting the comparison between the 2 leadership roles.

Similar challenges faced by community managers were also a theme identified in Hewitt, Priddis and Dahlen's (2019) qualitative interpretive study of Australian community-based midwifery group practice managers (MGP) (n=8). The self-reported accounts by the MGP managers identified the complexities of managing the

demands of the service and the individual support for the midwives in the MGP; particularly challenging was the desire to communicate and collaborate across the different forces outside the service to protect, guard, promote and safeguard the service. Outstanding individuals were identified as possessing both leadership and management skills. In keeping with Byrom and Downe's (2010) work, emotional intelligence (EI) was articulated by 1 participant, but a further explanation of this attribute was not made. The study provides a helpful insight into the practical challenges midwives face in clinical management roles; however, the findings represented the Australian manager's views of the attributes required for the role and were not verified by the staff they led. Therefore represent the leaders instead of the followers' views of desirable attributes in a clinical management role. In keeping with Kay's (2010) study, a paucity of courses and mentorship to prepare individuals to transition into the role was highlighted.

Research into the challenges of community midwifery leadership undertaken by Kay (2010) and Hewitt, Priddis and Dahlen (2019) provides an insight into the challenges of clinical community leadership. Whilst the DSC is viewed as a clinical leader, the roles are quite different. Clinical leadership on the delivery suite involves a fluid as opposed to a stable team. Unpublished work (Parkin 2016) into the impact of clinical leadership within the delivery suite on change and innovation discovered that midwifery leadership on the delivery suite exists at all levels of midwives, although predominantly in DSCs roles. The midwives interviewed in the critical ethnographic, observational and interview study identified how good clinical leaders in DSC roles could balance activity coordination and provide clinical support for individual midwives, allocating a 'wing man' to support more junior staff if they were they were unable to fulfil this role. The clinical leaders (n=18) interviewed (identified as leaders by the midwives interviewed) described their role as an advocate for women to challenge the doctors; at a practical level, these clinical leaders stated the importance of 'keeping their finger on the pulse', dealing with emergencies and giving support and direction to the midwives. These findings resonate with Fergusson, Symthe and McAra-Couper's (2010) New Zealand based study. Parkin's observations of clinical leadership dynamics on the delivery suite concluded that the coordinators thrived on the busyness of the delivery suite. However, the degree of

responsibility was exacerbated by junior midwives relinquishing their responsibility, accounting for the stress associated with a sense of personal culpability by the DSC within delivery suite practice, thus creating a 'fearful labour ward environment'. Parkin (2016) concluded that this fostered DSCs to adopt a heroic and value-based leadership style to protect the safety and productivity of the unit counterintuitively, fostering a dependency staff and stifling innovation and change, thereby exacerbating the negative cycle of emotional and physical stress for the DSCs.

The attributes of midwives identified as leaders, not in DSC roles, were described as having good practical knowledge, often more senior and viewed as approachable for advice, mainly when the DSC was unavailable. Viewed from the midwifery perspective, Parkin (2016) acknowledges that a limitation of the study was the lack of representation of other key players within the MDT, namely medical staff. Data collection for the study predates the findings of the Kirkup report (Kirkup 2015), highlighting the consequences of poor delivery suite leadership and fractured MDT working. Whilst Parkin's research provides an invaluable insight, the national strategic direction for maternity (National Maternity Review 2016) has moved towards fostering a more cohesive MDT relationship. Therefore, it would seem important to understand the DSC role from an MDT perspective.

The notion of MDT working on the delivery suite and the report influencing the current maternity strategy ‘Better Births’ (National Maternity Review 2016), demonstrates the strategic direction maternity services have taken. This is discussed in section 3.1. A recommendation in the Better Births report is greater working together by the MDT. This view is supported by research from the Bristol-based PROMPT team (Siassakos *et al.* 2011b). However, most of the PROMPT research relates to MDT emergency simulated training on clinical outcomes (Draycott *et al.* 2007; 2008; Siassakos *et al.* 2009; 2011a). Primary research into the MDT's understanding of real-time clinical leadership in emergencies on delivery suite is more limited. The only article retrieved from the search was a UK study by Bristowe *et al.* (2012). This qualitative study using focus groups (n=5) of doctors, midwives and MCA's from 4 maternity units sought to ascertain the views of the MDT of effective clinical leaders in emergencies. The findings concluded (table 8) that good

leaders used strongly directive communication skills to allocate tasks to the team. The participants identified how the ability of the team to function effectively was influenced by the ability of the leader to remain calm and directive. Ineffective leaders were identified as those who panicked, transmitting their stress to the rest of the team. No specific reference to the DSC role in emergencies was identified in the study; instead, the right leader was deemed to be the person with TSA, defined as knowing the team's capabilities.

An important aspect of the DSC role is the involvement in emergencies. However, much of the role involves non-emergency work and day-to-day management of the delivery suite activity and staff. Transferability of leadership attributes in emergencies may or may not apply to the non-emergency delivery suite environment, equally Bristowe *et al's.* (2012) research did not differentiate between the staff groups, so it is difficult to ascertain if the different members of the MDT all held the same opinion.

Table 8: Leadership in the clinical environment. Summary of the key findings from the papers

Paper	Leadership activities	Communication
Bristowe, K, *et al.* (2012	**-**Calm and directive (DS)	-Strong directive communication in an emergency (DS)
Hewitt, L. Priddis, H and Dahlen, H. (2019)	-Need to be a leader and manager (IC)	-Communicate and collaborate across disciplines to protect service
Kay, L. (2010)		-Lack of leadership career development (IC)
Parkin, J (2016)	-Balance coordination of activity (DS) -Clinical support to midwives (DS)	-Clinical support to midwives (DS) -Advocate for women (DS) _-Challenge the doctors (DS)
Key: On delivery suite= DS in community= IC		

Summary

The evidence from the literature review suggests that qualified midwives, student midwives and women have similar perceptions of the attributes of a good midwife in providing care across the spectrum of the role; doctors articulate a different view. Midwives, student midwives and women valued clinical competence underpinned by a sound knowledge base, skilled psychomotor skills, and good communication, a term which includes being approachable, caring, empathetic and supportive, were all deemed to be important (Fraser 1999; Nicholls and Webb 2006; Nicholls, Skirton and Webb 2011; Byrom and Downe 2010; Carolan 2011; 2013; Feijen-de-Jong *et al*. 2017). However, when cared for in labour, the midwife's ability to demonstrate professional competence underpinned by their knowledge directly relates to the confidence of the woman in the midwife (Borrelli 2014; 2015; Borrelli, Spiby and Walsh 2016). Doctors expressed the frustration of midwives who involved then in uncomplicated labour and births but perceived that good midwives involved them with decision making for women with complex labours (Rieger and Lane 2009). The limited research on the DSC role suggests it is fundamentally different from the midwives providing 1 to 1 care. The role acting as a conduit for information (Macintosh, Berridge and Freeth 2009) and supporting midwives with clinical decision making (Lankshear, Ettorre and Mason 2005) whilst coordinating the unit (Fergusson, Smythe and McAra-Couper 2010).

The midwife as a clinical leader is limited to midwives' views of leadership (Kay 2010; Parkin 2016; Hewitt, Priddis and Dahlen 2019) and the MDT perspective from emergencies situations (Bristow *et al*. 2012).

Conclusion

In conclusion this chapter explored the current evidence relating to the MDT's perspective of good midwives on delivery suite as a work colleague is limited to 1 Australian study (Reiger and Lane 2009). However, the study's focus was on midwives working in band 5 and 6 equivalent roles, as opposed to midwives undertaking the DSC role. This literature review concludes a

lack of evidence relating to the MDT's perspective on the role of the DSC and its impact on the contentedness of staff and the professional service to women. This thesis aims to address this knowledge gap. In light of the paucity of empirical evidence on the DSC role the following chapter 4 analyses job descriptions to understand the employer's expectations of the role.

Chapter 3 has explored how both health policy and the research community has over looked the DSC role. Despite the lack of UK based research to underpin the role, DSC posts continue to be advertised. This suggests some level of knowledge and understanding within the NHS as to what the post-holder is required to do, knowledge, skills and attitudes are summarised within job descriptions. In light of the paucity of empirical evidence I deemed it important to analysis the data available within the DSC job descriptions to gain an understanding of organisations' expectations of the DSC role. This was achieved using a documentary analysis of the job descriptions and logic modelling of the findings discussed in the next chapter.

Chapter 4.

Logic modelling of job descriptions

Aim

Chapter 4 presents the findings of the analysis of DSC job descriptions. The aim of the analysis and logic modelling of the DSC job descriptions was to ascertain an understanding of the core expectations of the role by NHS organisations.

Purpose

The purpose of this preliminary research study was to add to the literature available to inform the main research project a constructive grounded theory study to ascertain the MDT understanding of the attributes of DSCs.

Study design

This aspect of the research adopted qualitative documentary analysis, an approach involved finding, selecting, appraising and synthesising data found within the documents. The approach was chosen as it offered a robust framework to systematically view and analyse the job descriptions (Bowen 2009). Ethical approval was not required for this aspect of the study as it was a desk-based study of publicly available documents from the NHS website. All data was anonymized.

Data collection

The study used a purposeful sampling approach (Glaser and Strauss 1967) to identify job descriptions over a 6-month period from a nationally available NHS recruitment website, using the search terms ‘delivery suite/labour ward coordinator’. All job descriptions advertised over this 6-month period which met the criteria (table 9) were included.

Table 9: Inclusion and exclusion criteria

Inclusion criteria	Exclusion criteria	Rationale
Consultant led units (with or without alongside midwifery led units)	Stand-alone midwifery led units	In stand-alone units coordinator coordinates midwives only as opposed to the MDT

Inclusion criteria	Exclusion criteria	Rationale
Coordinator of a shift	Delivery suite managers	Delivery suite managers coordinate the delivery suite unit in its entirety as opposed to the clinical coordination of a shift
Delivery suite/ labour ward	Ante/postnatal ward coordinator Community team coordinator	The coordination role of the MDT on delivery suite is more intensive than the ward and community

The DSC job descriptions incorporated the roles and responsibilities for both short-term leadership and management of the shift and the longer-term staff management, sickness absence, recruitment retention and continuing professional development of staff. For the purpose of this study, the analysis focused on the expectations of the DSC role for the short-term leadership and management of the shift.

Data analysis

Each job description (n=15) was analysed using a modified 5 step thematic analysis (Rapley 2016; Braun and Clarke 2019) (table 10). The descriptive sentences/bullet points from the first job description were read and transcribed verbatim. Initial analysis of the sentences led to the development of 3 overarching themes. Further analysis was conducted to refine the overarching themes and a number of related subthemes emerged. This iterative process of code generation and allocation to themes and sub themes was applied to each job description in the sample. Where descriptive sentences from the second and subsequent job descriptions were similar, sentences were numerically logged for frequency, then merged into 1 code. This process was followed as each job description became available on the website, until all job descriptions had been analysed. In total, 240 descriptive sentences/bullet points from the job descriptions were extracted, coded and allocated to themes and subthemes. The requirements from the person specification were not included in the analysis, as the aim of the study was to understand the expectations of the role as opposed to the skills and experience required.

Table 10: Thematic analysis process

1.	Familiarized myself with the dataset *(job descriptions)*
2.	Generated initial codes
3.	Searched for themes and collated similar codes *(similar sentences to other job descriptions)* into themes/ categories.
4.	Reviewed themes; checked if themes worked in relation to the datasets checked for examples that do not fit.
5.	Refined themes and specific themes (Key areas of responsibility identified and used as headings).

The decision to quantify qualitative data was influenced by Silverman (1985 p 140) who argues that 'simple counting techniques' can offer a means to survey the whole corpus of data ordinarily lost in intensive, qualitative research'. This enabled me to highlight the most commonly used subthemes generated from the job descriptions. This was important as it enabled a hierarchy of the most important through to the least used to be identified and assumptions drawn about their importance to the role to be made. Findings from the thematic analysis were then used to develop a logic model to assist with a more in-depth understanding (Wilder Research 2009; Adamson and Prion 2016, Community toolbox 2017).

Findings

A total of 15 job descriptions were included in the study and originated from maternity units delivering more than 2500 plus babies per year (appendix 5). Analysis of the job descriptions generated 3 themes (table 11): The coordination role, leadership of the MDT and staff development. Staff development related to DSC responsibilities for the longer term CPD training of staff, therefore the findings presented centre on the coordination role and leadership of the MDT, specifically related to coordination of the shift. Illustrative descriptive sentences from the job descriptions supporting the themes of coordination and MDT leadership are presented in tables 11 and 12.

Table 11: Overview of themes and sub-themes generated from analysis of job descriptions

Themes	Coordination role		Leadership and support of the MDT		Staff development	
Sub-themes	Coordination of the unit	42*	Conduit for information	41	Personnel and staff development	29
Sub-themes	Staff management short (n=29) and long term (n= 31)	61	Communication with the MDT	29		
Sub-themes	Safety management	22	Communication women & families	16		
Total		125		86		29

- Number of descriptive sentences allocated to each subtheme

Coordination role

The theme underpinned by the highest number of descriptive sentences was the 'coordination role' (125 of the 240 descriptive sentences). This may lead to the assumption about the perceived importance within NHS Hospital Trusts that the coordination of delivery suite is the main focus of the role. Coordination was underpinned by subthemes, such as coordination of the unit, staff management and safety management (table 12). Coordination of the unit -related to the DSC responsibilities for the shift, in contrast to staff management, which included organising staff on a shift by shift basis. The safety management aspect of the role centred on reporting incidences and the creation of a safe working environment, health and safety.

Table 12: Coordination role

Sub-themes	Examples of statements from the job descriptions
Coordination of the unit	Coordinating with an awareness of activity on the unit & MLU Coordination of women's' care through handover from outgoing shift to incoming shift Coordinates admissions & discharges, bed shortages, implements diversion policy to divert women to neighboring maternity units when activity is at capacity

Sub-themes	Examples of statements from the job descriptions
	Liaison with the obstetric, anaesthetic, theatre teams and neonatal unit
Staff management (Shift specific)	Deal with unpredictable high levels of activity Ensure adequate staffing levels for the shift Effective management of staff and resources on a shift-by-shift basis
Safety management (Shift specific)	Minimise risk and report incidents

Leadership of the MDT

The theme of leadership and support for the MDT was underpinned by the next highest number of descriptive sentences (86 of the 240 descriptive sentences). Again, this highlighted the importance of the role, particularly in gathering and communicating information from a number of sources and escalating care to the most appropriate member of the MDT (table 13). Leadership of the MDT was underpinned by the subthemes of the DSC role as a conduit for information with the MDT, communicating with the team and women and their families.

Table 13: Leadership and support of the MDT

Sub-themes	Examples of statements from the job descriptions
Conduit of information	Update communications board Ensure effective communication between the MDT Deciding whether to alert medical team to situations outside the remit of the midwife's role Works with other coordinators
Communication with the MDT	Coordinates the MDT for the duration of the shift Promotes team working challenging poor behaviors and attitudes Create an environment central to decision-making
Communication women & families	Ensure effective communication between relatives and visitors

Logic modelling

Although the analysis of the job descriptions illuminated the roles, responsibilities and expectations of the DSCs it did not provide answers to the important questions such as the impact of the elements of the DSC role. The challenge was to identify a framework that would bring the required level of understanding to the findings and illuminate the expected outcomes; logic modelling met this requirement. Logic models present a simplified picture of the connections between resource inputs, activities and the resulting outcomes of the NHS service (North East Commissioning support 2016). In the context of the DSC role it provided a conjectured picture of the relationship between:

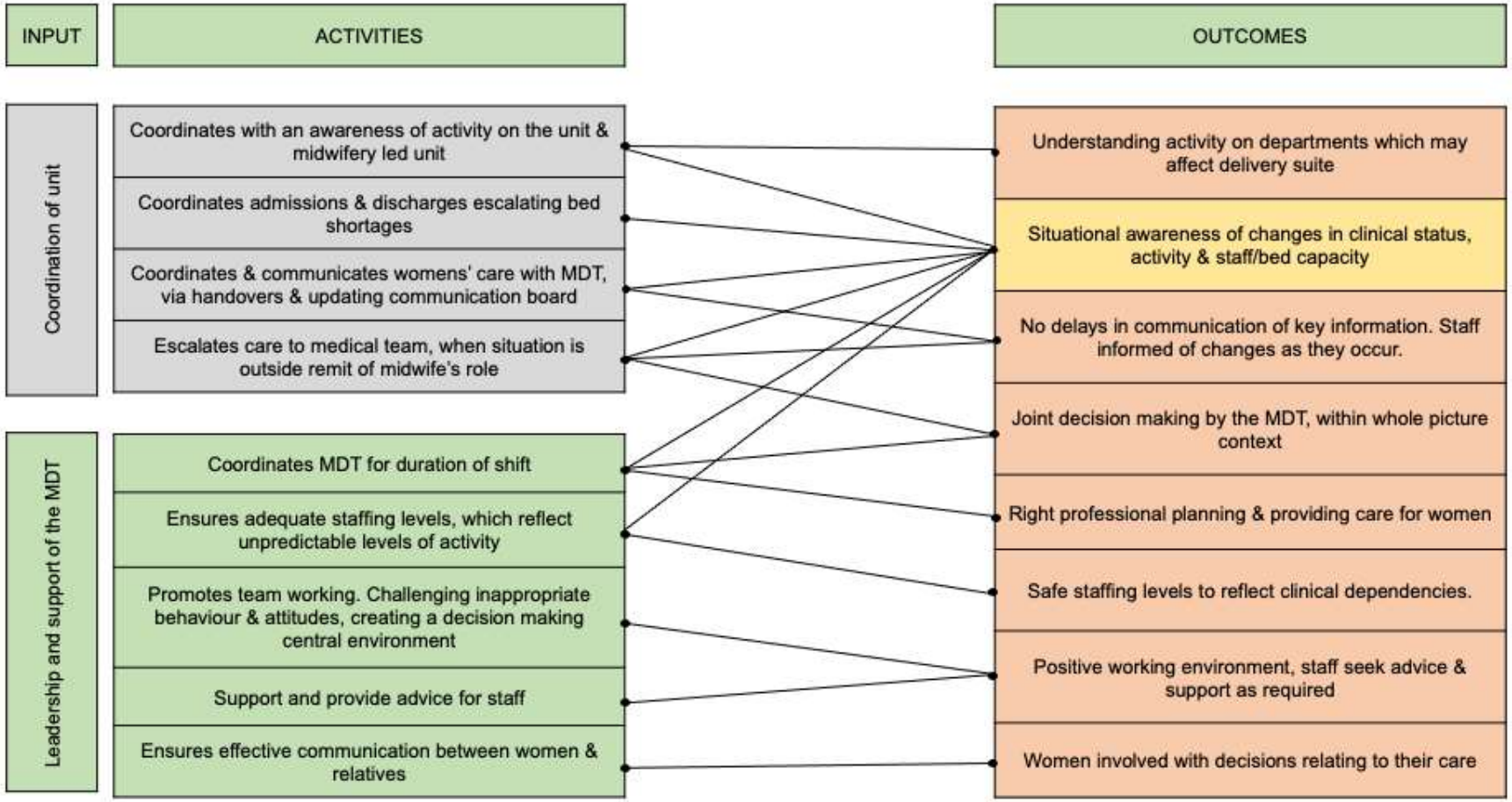
- Inputs of the DSC role identified from the thematic analysis of the job descriptions
- The activities undertaken by DSCs as depicted in the descriptive sentences/bullet points extracted from the job descriptions
- The conjectured outcome of the DSC role if operated successfully, which was informed by the literature and author's clinical knowledge.

At the heart of the logic model (figure 4) are the 'activities' undertaken by DSCs during the shift, identified from the descriptive sentences within the job descriptions. The activities pertaining to managing the shift, have already been grouped into 2 themes from the thematic analysis: coordination of the unit and leadership in support of the MDT. The logic model comprised of 9 outcomes that were expected to arise if the activities were carried out. The modelling demonstrates that many of the relationships between activities and outcomes were simple and triggered only 1 outcome. However, the use of the logic modelling highlighted a locus of complexity in that 6 of the 9 activities which triggered the same outcome 'situational awareness of changes in clinical status, activity and capacity of staff/beds'. Relating to the findings back to the thematic analysis (tables 6,7 and 8) it's clear the coordinator is expected to undertake a number of information gathering strategies to build the overall picture enabling them to coordinate with an

awareness of the situation on delivery suite in respect to activity, capacity, staffing and clinical status of women, namely situational awareness of delivery suite.

The 6 activities from the job descriptions underpinning situation awareness, if effectively executed situation awareness by the DSC should ensure that there is no delays in communicating the ‘whole picture’ to the staff, enabling the MDT to make joint decisions in context, allowing the right professionals to plan and provide timely care, the foundation for safe care (Berridge, Macintosh and Freeth 2010). Returning to the personal specifications in the 15 job descriptions post analysis the term situational awareness did not feature in the personal specification in the job descriptions, so it is reasonable to assume this is not part of the recruitment criteria for appointment to these roles.

Figure 4 Logic Modelling



Strengths and limitations of the use of job descriptions to understand the DSC role

Although the themes identified were remarkably consistent, this might suggest units use each other's jobs descriptions as templates for their own. The job description analysis represented a range of units in size and geography (appendix 5) but were limited to 15 job descriptions and cannot therefore be generalised to every DSC role. However, the coding framework and logic modelling has provided an insight into the NHS organisations expectation of the role.

In conclusion whilst the job descriptions explain the organisations expectations of the role and logic modelling provides an insight into the main focus of the DSCs having awareness of activity on the unit in order to manage and lead the MDT, it does not address the original research enquiry- why all professional groups in the MDT have a preference to work with particular DSCs or how the DSC role impacts on MDT staff on a personal level. Questions which I sought to address in the main study in this thesis, by using a constructive grounded theory study interviewing members of the MDT to determine the attributes of the coordinators they deemed to have a positive influence on their shift. The following chapter 5 explains my rationale and choice for the constructive grounded theory approach for the main study.

Chapter 5.

Theoretical underpinning and methodology

Chapter 5 explores the theoretical underpinning and rationale for the choice of a constructive grounded theory methodology. Grounded theory as a methodology is explored. Furthermore, the 3 schools classical, Straussian and constructivist grounded theory, are deconstructed to understand the philosophical underpinnings of each school to explain and summarise the decision-making process in the choice of methodology for this research study.

The rationale for the choice of a constructive grounded theory methodology

The choice of methodology is important as it prescribes the boundaries of the research and is influenced by the research question (Trafford and Leshem 2010). Ethnographic and phenomenological approaches were considered. An ethnographical approach offered the opportunity to observe, describe and interpret the delivery suite culture and the socially learnt behaviours of the MDT (Hammersley and Atkins 2019; Liberati *et al.* 2019). A phenomenological approach would have explained the hidden meaning of the lived experience of working with DSCs (Gribch 2013; Lingis 2017; Van Mannen 2017). Both methodologies represent the researcher's interpretation of meaning. The raison d'état for the research was to capture and represent the participants' understanding of excellent DSCs, not my observed or post data collection analysis of what I perceived was representative of an excellent DSC. The iterative process of grounded theory of data collection and analysis between interviews allowed the testing of my assumptions within the emerging themes and co-construct meaning with the participants as the interviews progressed maximising the expertise of the MDT, to understand the social phenomenon currently not represented in existing theories (Bryant and Charmaz 2007; Corbin and Strauss 2015).

The rationale for adopting the constructive grounded theory approach was informed by Breckenridge *et al.* (2012), who state that PhD students using a grounded theory methodology face:

> The challenge of navigating their way through the methodological mire, in order to arrive at an informed decision about which version of grounded theory to use
>
> (Breckenridge et al. 2012; p1).

Failure by the researcher to acknowledge the fundamental areas of inherent differences between the 3 schools of grounded theory can result in a hybrid grounded theory methodology of incompatible schools of thought (Breckenridge *et al*. 2012; Evans 2013). To avoid this common research error, I intend to examine the 3 grounded theory schools for the fundamental areas of agreement and disagreement to clarify the choice and preference of a constructive grounded theory approach for this research study.

Grounded theory as a methodology

Grounded theory is a systematic, inductive approach to understand the social phenomenon which is not formed within existing theories (Bryant and Charmaz 2007; Corbin and Strauss 2015). The methodology uses an iterative process of simultaneous data collection, coding and analysis to generate theory from the data. By grounding the theoretical development in the scientific data, grounded theory seeks to mitigate against the more descriptive data presentation approaches of the phenomenological and ethnographic methodologies and explain why things take the form that they do (Charmaz 1995; 2017; Rees 2011; Howard-Payne 2016). The notion of generating a new theory for an area of no pre-existing knowledge was of particular relevance to this research. An understanding of the DSC from the perspective of the MDT was a unique area of research, with no apparent existing knowledge. The application of grounded theory to a social phenomenon related well to the social context of the delivery suite environment. In order to understand the 3 schools of grounded theory, it is helpful to understand the historical context which has shaped and developed this methodology.

The conceptual notion of grounded theory as methodology originated from Glaser and Strauss (1967). During their research on the dying in hospitals,

Glaser and Strauss developed grounded theory in response to the recognition that sociological research in the 60s was focusing on the verification of existing themes, as opposed to the generation of new research. They viewed the underpinning sociological theories of Durkheim and Webber as lacking the grounding in the data, rendering it unsuitable for the practical application to healthcare research (Glaser and Strauss 1967). Influenced by their quantitative research training and exposure to symbolic interactionism at Chicago University, the philosophy of grounded theory is underpinned by symbolic interactionism, which advocates that as human beings, we make sense of our world through community, language and its associated structure and that by the very sense of being a human being means we do not simply react to other humans; we interpret the interaction and attach meaning to it (Blumer 1969; Charmaz 1995) as such grounded theory aims to capture the socialised behaviour of those involved in the interactions as opposed to categorising individuals (Glaser 2003). Glaser's notion of capturing socialised behaviour is relevant to the aim of this research, to capture behaviours and attributes of DSCs, not the person in the role.

At the time of its inception, qualitative research was undergoing criticism for its impressionistic and unsystematic approach. Grounded theory served to bridge the gap between the theoretically uninformed quantitative research and the uninformed theory of qualitative research (Howard-Payne 2016). The set of rigorous data collection strategies and analytical procedures conceptualising theory from the data used within grounded theory serves to bridge the gap claiming the qualitative methods in their own right instead of a precursor to more rigorous quantitative research (Glaser and Strauss 1967; Charmaz 1995; Howard-Payne 2016). Glaser and Strauss's work (1967) advocating the discovery of theory within the data resonated with social scientists and soon gained traction as a popular research design within the field of social science and health (Rees 2011; Birks and Mills 2015). Over time Glaser and Strauss developed different approaches to their data collection and analysis. Differences in their theoretical and philosophical

assumptions resulted in the parting of ways in 1987 (Evans 2013). Strauss moved on to unite with Corbin developing a more constructivist approach to grounded theory, namely Straussian grounded theory (Strauss and Corbin 1990). Influenced by Strauss and Corbin's work, Charmaz further developed the constructivist approach into the constructive grounded theory methodology (Charmaz 2000).

Areas of convergence between the 3 schools of grounded theory

The 3 schools of grounded theory share several areas of methodological agreement. Glaser's classical grounded theory, Corbin and Strauss's Straussian grounded theory and Charmaz's constructive grounded theory all share the common assumptions that 'truth' is located in the experience and knowledge of the participants (Kenny and Fourie 2015; Udod and Racine 2017). Hood (2007b) refers to the shared characteristics as the Holy Trinity of grounded theory study:

1. Theoretical sampling
2. The emergence of categories through comparative analysis
3. Substantive theory development

Theoretical sampling

All approaches use theoretical sampling to determine data saturation. In grounded theory, data collection and data analysis are performed in parallel, as categories emerge from the data, gaps are identified, which inform further data collection. This iterative process continues until no new categories are discovered, and the identified categories are saturated, i.e. data saturation. Therefore theoretical sampling determines the final sample size of the study (Polit and Beck 2012; Kenny and Fourie 2015).

The emergence of categories through comparative analysis

Although the 3 approaches use different approaches, they all advocate the constant comparison between the emergence categories from the data

analysis to inform theory generation (Glaser and Strauss 1967; Strauss and Corbin 1990; Charmaz 1995).

Substantive theory

All 3 approaches generate theory from the data from the line by line coding, fracturing and reconstructing the information. This contrasts with phenomenological and ethnographic approaches, which utilise the narrative to describe findings (Polit and Beck 2012). Memo writing is advocated as a tool to document the theoretical thinking by the researcher during the data analysis, a strategy that adds rigour and transparency to the analysis and theory generation process (Glaser and Strauss 1967; Charmaz 1995: Lempert 2017).

Whilst the 3 approaches to grounded theory have core principles, they fundamentally differ in their philosophical position, affecting the position of the researcher, use of the literature and approaches to the coding and analysis.

Areas of divergences between the 3 schools of grounded theory

Although all 3 schools have their roots within symbolic interactionism and adopt the same approaches to the iterative process of data collection, theoretical sampling and theory generation, they differ in 3 fundamental areas (Kenny and Fourie 2015; Udod and Racine 2017).

1. Philosophical position and its influence on the position of the researcher
2. Approach to data coding
3. Use of the literature

These areas of debate will now be explored as separate entities whilst acknowledging that there is a crossover of influences.

Philosophical position and its influence on the position of the researcher

Contextualising the paradigms of the 3 schools helps understand the different ontological positions, the nature of reality, which determines the epistemology, the position of the researcher to those being studied (Polit and Beck 2012). A major contributing factor in my decision process to adopt the constructive grounded theory methodology was the position of the researcher and their relationship with the researched.

Classical grounded theory

Glaser resists labelling the paradigm of classical grounded theory, suggesting the methodology stands alone as a conceptualising methodology (Glaser and Holton 2004). However, classical grounded theory is widely acknowledged in the field as positivism, with its implicitly objective stance of external reality influenced by mechanisms that can be observed (Charmaz 2000; Appleton and King 2002; Mills *et al*. 2007). The classical grounded theory aims for a conceptual understanding of social behaviour, a singular truth which is discovered in the data, in contrast to the constructivist focus, which aims to construct concepts by the interpretation of multiple meanings in the data singular versus multiple truths (Breckenridge *et al.* 2012; Evans 2013). The application of this concept to the DSC advocates that there is a distinct set of attributes in the DSC that each professional group and subgroups within the MDT all identify and agree upon as essential for the coordination of the shift.

Glaser advocates that the researcher maintains an external neutral observed position in their pursuit of the generation of 'objective' knowledge from grounded theory (Guba and Lincoln 1994; Glaser 2002). In order to avoid the introduction of subjectivity into the research, in classical grounded theory, the researcher is required to have no preconceived questions before the interviews/study and maintain a neutral, detached stance to avoid researcher bias (Andrews 2012; Howard-Payne 2016), for example, the researcher may approach the participants with a broad idea of the area to be discussed in the interview, an opening statement could be ..” can we talk about the DSC…?” which leaves the content and direction of the discussion with the participants,

the researcher interjecting only to clarify aspects of the conversation as opposed to probing by asking questions.

Crotty (1998) is critical of Glaser's objective stance and ideas that singular causality of knowledge is waiting to be discovered in objects in the data. He challenges Glaser's view that objective truth can only be measured through a distant objective stance by the researcher. Suggesting it is through the interaction of the researcher and researched that truth is created.

Straussian grounded theory

Straussian grounded theory rejects the classical approach of an objective, neutral researcher, believing it is impossible to be totally objective. Proposing that if the participants' voices are to be heard and understood, active participation between researcher and research is required to facilitate a common understanding between researcher and participant of the topic area (Polit and Beck 2012; Kenny and Fourie 2015). Although Straussian grounded theory acknowledges the potential subjectivity of the researcher, in keeping with the objective stance of the classical approach, they seek to maintain objectivity through a structured, linear, data analysis process to gain a single consensus from the multiple realities of the participants in the research (Strauss and Corbin 1990; Evans 2013). The philosophical position of Straussian grounded theory is debatable, Strauss and Corbin (1997) are clear that they have departed from the positivist realist position to post-positivism, the deconstructing old ideas and restructuring of new ideas. Guba and Lincoln (1994) acknowledge their departure from classical grounded theory concerning the researcher's position. However, they suggest they maintain a positive objective stance to pursue a singular consensus of truth. In summary, the ontological position of classical and Straussian grounded theory remains that of positivism, the pursuit of a singular truth, but Strauss and Corbin adopt a different epistemological position concerning the researcher's interaction with their participants (Charmaz 2000; Heath and Cowley 2004).

Glaser (1999) maintains grounded theory was developed to generate novel theory and is critical of the Straussian and constructive grounded theory approach of researcher engagement in the research, maintaining the inability to achieve a neutral stance results in the research collaboration with the researcher's preconceived ideas. Charmaz (2000) acknowledges the personal and professional characteristics of the researcher and the potential introduction of bias into the research process, advocating the use of reflexivity by the researcher to maintain the rigour of the research process. Clarke (2011) maintains that it is inevitable that researchers come to the research project already ‘knowing in some ways’ which she describes as being ‘infected’ and is critical of Glaser devoting energy to producing boundaries to keep the researcher and researched apart and the justification that the researcher can be or should be invisible. This notion of the researcher being ‘infected’ is of particular relevance to this research and is discussed later in the chapter.

Constructive grounded theory

As a former student of Glaser and Strauss, Charmaz’s constructive grounded theory places the method within interpretive social science aligning it with symbolic interactionism (Charmaz 1995; 2000; 2006; 2014; Charmaz, Thornburg and Keane 2018). In her approach to grounded theory, Charmaz departs from the positivism of classical and Straussian grounded theory. She is transparent that her ontological position of constructivism is marking a significant shift in thinking about the reality of knowledge within grounded theory. At this point in the chapter, it would be helpful to explore constructivism, to conceptualise the change and why the philosophical thinking between Glaser and Charmaz is so different.

Constructivism

Originating from the field of sociology, with its roots in symbolic interactionism, constructivism, in direct contrast to positivism, assumes there is no absolute truth, that individuals construct their own sense of reality by

‘being in the world’ (delivery suite within the context of this research) which exposes them to shared experiences, for example, working with DSCs (Howell 2013; Lincoln, Lynholm and Guba 2018). While the shared experience can occur within the same social context, individuals’ life experiences and their associated human interactions will result in the coexistence of multiple realities (Guba and Lincoln 1989; 1994). Related to the MDT in this study, all participants in the study share the same experience of working with DSCs on the delivery suite as an integral component of their role (MCA, ward clerk, midwife and doctors). However, from the constructivist perspective, an individual’s professional experiences to date and the associated human interactions with health professionals will have shaped their unique sense of the reality of the DSC. For example, midwife A will have worked in different units and on different shifts to midwife B, thereby exposing them to different DSCs within the context of different shifts and unit cultures, shaping and influencing their unique sense of the reality of DSCs. Likewise, doctors and midwives will work on the same shift with the same DSC. However, their sense of the reality of the DSC will be shaped based on their different human interactions, determined by their professional role, which their delivery suite experience to date will also influence. Within the constructivist paradigm, the importance of the influences of the social context on the individual's sense of reality is core to philosophical thinking. However, equally the influence of time and culture on the individual's construction of reality is also important, that the sense of reality is a dynamic state (Howell 2013). Andrews (2012) is critical of Charmaz's simplistic use of constructivism, arguing that she uses constructivism and social constructivism interchangeably. Howell (2013) acknowledges the differences between constructive and social constructivism as individually and socially developed but suggests both come from similar positions, namely that reality is defined through social interaction. Whilst I acknowledge that constructivism and social constructivism can be viewed as separate entities within the delivery suite environment, the staff's individually constructed sense of the reality of the delivery suite coordinator can only be constructed within the social context of the delivery suite and the interplay of MDT staff.

Therefore, in line with Charmaz (2000), no differentiation in this research is made.

Constructivist grounded theory acknowledges the multiple exposures, which allows the researcher to examine the detail of the human experience shaped by their lived experience in the social world (Appleton and King 2002). This added theoretical thinking to this study concerning the cultural influences of training of the professional groups of the MDT. Whilst the annual mandatory training for maternity staff is multi-professional, doctors and midwives trained for their respective professional qualifications as a homogenous group. The focus of the woman and baby remain central to their role, but the philosophical underpinning of obstetric and midwifery training is fundamentally different, the biomedical models of obstetric training and the holistic biosocial model of midwifery training (Donnison 1988; Kirkham 2010). These differing philosophical views are subconsciously informative on the cultural environment in which they learn. This has the propensity to shape and influence their perspectives of the delivery suite and the DSC role.

Within nursing research, the professional socialisation of nurses' and doctors' training was found to be significantly influential in the health professionals understanding and use of the early warning score chart (EWS), a nationally designed and recognised observational tool to identify deteriorating patients. The constructive grounded theory study found, despite the national initiative to standardise and unify professional practice, the multiple realities of the different professional groups led to doctors and nurses adopting a completely different use of the tool for clinical decision making (Greaves 2017). If different health professional groups understanding of a simple observation chart can be so diverse, it would be naïve to assume the existence of a singular sense of reality, advocated by Glaser, by all the staff groups within the MDT of the DSC role. Indeed, fixed socialized opposing professional views have been a central theme in poor intrapartum outcomes in maternity (Kirkup 2015).

Kean *et al* (2016) research examining ITU survivorship, using constructive grounded theory, found that time as an entity had a significant influence on the patient's construction of reality, from the point of their admission to their sense of reality 12 months post-discharge. This notion, within constructivism, of the influence of time on the perception of reality added a further layer of complexity to this PhD study. Participants in the study would have been influenced by professional socialisation, but also their sense of the reality of the DSCs is likely to have morphed over the years as they transition from newly qualified to senior health professionals. For example, a consultant or senior midwife would have spent a significantly more clinical hours exposed to working with DSCs than junior midwives and doctors, influencing their sense of reality about the role. Therefore, the subjective dynamics of time on the participants multiple coexisting realities of reality was important to consider (Guba and Lincoln 1989; Straughair, Clarke and Machin 2018). The recognition and celebration of the multiple realities of truth within constructivism in contrast to the objective pursuit of a singular reality of truth resonated with the eclectic makeup of staff in the MDT.

Position of the researcher in constructive grounded theory

In keeping with Straussian grounded theory, Charmaz's epistemological position is an interactive process between researcher and the researched. She concurs with Strauss and Corbin that the researcher's professional expertise and influence in the research process cannot be ignored, or equally mitigated against, by maintaining the neutral stance advocated by Glaser (Charmaz 1995; 2017; Strauss and Corbin 1990). Gibson and Hartman (2014; p 46) suggest:

> 'A clear difference, between constructive grounded theory and objectivist classical and Straussian grounded theory is that the researcher in constructivist grounded theory in some way identifies themselves with the researched'.

However, in contrast to Strauss and Corbin (1990), who seek to objectify the subjectivity of the researcher's position, Charmaz views the interaction and

subjectivity of researcher participation as central to the process of inductively collecting and mutually co-constructing the subject matter with the participants to create meaning (Guba and Lincoln 1994; Charmaz 1995; 2014). Charmaz postulates it is the attention to detail in her constructivist approach to grounded theory that sensitises the researcher to the multiple realities and viewpoints of the participants' voice. Which she argues leads to the generation of rich and thick data to generate theory. Charmaz is critical of Glaser's aim for conceptual understanding of social behaviour, elicited by the researcher maintaining a distance to protect a neutral and objective stance (Charmaz 2014). Whilst Glaser (2002; 2012) is critical of the subjectivity of the intimate relationship between the researcher and the researched in constructive grounded theory, Guba and Lincoln (1989; 1994) argue objective knowledge is possible to achieve by the researcher participating in the participant's world, but requires the researcher to seek consensus of meaning, whilst being alert to new explanations. This cocreated literal translation of meaning adds rigour and objectivity to the research (Guba and Lincoln 1994). In dealing with the potential researcher bias, Bryant (2003) suggests Charmaz is adding a layer of transparency to the methodology creating an optimum level of enquiry.

The relevance to this research

The debate relating to the position of the researcher within grounded theory is particularly relevant to this research. As a midwife with clinical and managerial experience, it would be naïve as a novice researcher to maintain or claim objective neutrality, having been socialised into the midwifery environment. This socialisation process has inevitably tainted the lens through which I view the research. Howell (2013) suggests that by the very nature of constructivism, knowledge, truth and reality are constructed by human perceptions from their experiences, making it inevitable that the researcher's understanding of reality will be infected. Acknowledgement of the researcher's background and potential conflict by Charmaz's (1995) constructive grounded theory provided a methodology to be transparent

about my professional background and the influence on the construction of knowledge in the research study.

Coding of the data

Coding of the data is the second area of contention within the 3 schools. Whilst all 3 grounded theory approaches adopt the basic classical grounded theory, the development of the methodologies has led to differences in the coding processes. A summary of the coding pathways is recorded in table 14 (Holton 2010). A factor influencing my decision to adopt constructive grounded theory was the flexibility Charmaz's approach to data coding afforded the study. The MDT are not a homogenous group; therefore it was reasonable to assume several theories could be developed from the research. Straussian grounded theory's linear analysis of induction, reduction and verification provides a highly systematic and rigorous coding structure with distinct lines between the phases, which can be complex to navigate for the novice researcher (Evans 2013). Designed to induce objectivity into the research process, Strauss and Corbin (1994) suggest that the system provides flexibility to move between stages. However, Glaser and Charmaz refute the flexibility of the linear process, Glaser criticising the approach as forcing the data into preconceived concepts biasing theory generation, whilst Charmaz is critical of the rigid rule-based system concluding it stifles the researcher's creativity (Glaser 1992; Charmaz 2000).

I deemed the Straussian grounded theory system to be too inflexible to accommodate and make the comparative analysis of the emerging themes by and between the MDT subgroups. Glaser's classical grounded theory analysis adopts a more simplistic constant comparative approach. However, it focuses on developing a core category (Holton 2010), potentially stifling the differences between subgroups within the MDT by focusing on 1 category. Charmaz's 3 staged approach promoting coding and constant comparison encourages the development of multiple categories to reflect the multiple realities of the participants (Charmaz 2000; 2014). Critical of Charmaz's approach Glaser (2002) argues the approach is conceptual rather than being

faithful to participant's experiences and is more attuned to qualitative data analysis than the ethos of grounded theory. Whilst I acknowledge this criticism, Charmaz's coding approach allowed for a flexible comparison of emerging themes in the data between categories but, more importantly, between the groups of staff within the MDT. This elicited areas of agreement and differences in the perceptions of DSC attributes.

Table 14: Summary of the coding procedures for the 3 schools of grounded theory

Classical grounded theory	Straussian grounded theory	Constructive grounded theory
Substantive Coding	Open coding	Initial coding
Theoretical coding	Axial Coding (11 step)	Focused coding
	Selective coding	
	Conditional matrix	
Grounded theory	Grounded theory	Constructing grounded theory

Use of the literature

The third and final difference between the schools is the use of the literature by the researcher. In the attempt to maintain objectivity and avoid potential contamination of the research by the literature, the Classic grounded theory school advocates that the researcher does not engage with the literature before or during the research process, arguing it clouds and restricts the researcher's ability to make objective constant comparisons of the data, therefore a literature review is only undertaken post data analysis (Glaser and Holton 2004). Both the Straussian theory and constructive grounded theory schools advocate engagement with the literature as part of the research process to identify gaps in the academic literature to focus the research and inform the research questions (Strauss and Corbin 1990; Charmaz 2006). Whilst acknowledging that previous research will inevitably influence the research, they argue that researchers have the ability to maintain an open mind about the literature. Strauss and Corbin do not state at what stage in the research the literature should be consulted. Charmaz is

more directive in advocating a preliminary literature search, a literature review chapter, and literature interspersed throughout the thesis (Charmaz's 2006; 2014).

Summary

In choosing a methodological approach within grounded theory, there is no right or wrong approach. However, the differences between the schools should be taken into account to determine 'the best fit' to reflect the aims of the research and avoid the adoption of a hybrid methodology between the 3 approaches (Breckenridge *et al*. 2012; Birks and Mills 2015). The decision to adopt a constructive grounded theory approach for this study was primarily influenced by the ontological position of constructivism, which acknowledges the participants (MDT) subjective knowledge, which is socially constructed and influenced by the social context of working on delivery suite and the interaction with multiple DSCs. Therefore, multiple realities will coexist. The classical and Straussian positivist pursuit of a single objective truth would have limited the potential variation in theory generation between the professional groups, which run counterintuitive to the aim of the research to ascertain an MDT perspective. The research aim was never to seek the cause of a 'good 'or ineffective DSC from a single objective stance. It was to construct theory from the multifaceted picture of the ideal DSC through the rich and diverse lived experience of staff working alongside these individuals. The constructivist paradigm of constructivist grounded theory, which acknowledges this reality of individual multiple constructive truths, affords the explanation of perspectives from both socially unique environments and ultimately personally unique opinions.

Secondly, the epistemological position of the researcher with the participants was a fundamental factor in the decision to adopt a constructivist grounded theory methodology. My professional career to date has afforded me a unique and personal insight into the working life of the delivery suite and interactions of the MDT on the delivery suite environment from both a clinical and managerial perspective. I consider it impossible to maintain true

objectively of my experience, the recognition of this approach that the researcher comes to the research as ‘infected’ by their professional experience and the positive influence this has on the construction of participant truth addressed this concern (Clarke 2011). Whilst the Straussian grounded theory school acknowledges the researcher's expertise and their role in data collection, the objectivist pursuit of a consensus of an opinion runs counter-intuitive to the notion of the MDT with their multiple realities of truth constructed over their life as a health care professional and exposure to different clinical experiences of multiple units and coordinators. Charmaz’s approach of viewing the researcher and their knowledge central to constructing meaning provided the vehicle for me to actively engage in the data collection and analysis whilst providing the transparency of the subjective influences of my role as a researcher on the researched.

In conclusion this chapter has explored why the Constrictive grounded theory methodology was deemed the most appropriate to address the aims of this research. Constructivism acknowledges the multiple senses of realities constructed within a social context, which gives credence to the multiple staff groups in the MDT and their level of experience whilst acknowledging the influence of the social context of different delivery suite environments and exposure to multiple DSCs. Charmaz’s (2014) position of recognising the influence of the researcher’s expertise, together with the role the researcher plays in the interactive process with the participants, provided the framework for me to utilise my knowledge and be transparent about its potential influence on the research. The following chapter 6 explains and justifies the approach taken for the data collection and data analysis in keeping with the constructive grounded theory approach.

Chapter 6

Research design and methods

This Chapter details the research design of constructive grounded theory and the process followed to collate and analyse the data used for the findings in this study.

Aim, objectives and purpose of the research

This study aimed to explore the staff's perceptions of the impact of DSC's leadership and management skills on shift coordination and how this impacted staff's efficiency and contentedness.
The objectives were:

- To identify knowledge and beliefs about DSCs held by the Multi-Disciplinary Team (MDT).
- To identify which attributes contribute to a positive shift.
- To explore how those attributes contribute to staff experiences of their shift.

Methodology

The methodology for this research used the constructivist grounded theory approach developed by Charmaz (2000; 2014). By embracing the constructivist paradigm, the research investigated how individual healthcare professionals within the MDT constructed their views of excellent DSCs through their exposure to different DSCs, within the social context of the delivery suite environment.

In keeping with the philosophy of constructive grounded theory, as the researcher, I was at the centre of the relationship with the participants to co-construct meaning on the phenomenon. I do not seek to suppose that the theory generated has been interpreted independently of my reality but informed by my clinical and managerial experience as a midwife. Nor does the constructive grounded theory methodology claim to be objective of the researcher’s influence (Charmaz 2017). In keeping with the openness to the influences of the research in constructive grounded theory, I used field notes

to record my reflections and memo writing throughout the data collection and analysis process to maintain transparency and credibility through reflexivity, discussed in section 6.7 (Glaser and Strauss 1967; Charmaz 2000; 2014).

Ethics

Ethical considerations in qualitative research

Interviewing in qualitative research raises several ethical considerations which differ from the more deductive approach of quantitative research (Rogers, Mogford and Thomson 2008). The purpose of grounded theory is to generate theory on subject areas where knowledge is currently unknown. Therefore, it is not possible to know in advance the exact direction the study will take. This is particularly relevant to the method of interviewing and the limited ability of the researcher to pre-empt the sensitive nature of the discussions that will take place during the interviews (Olson 2018).

Van den Hoonaard (2002) suggests there are both external and internal ethical considerations for grounded theory researchers. The external ethical context of the rules relating to the research, namely autonomy; the right of the participants to choose to participate in the research (discussed in the managing consent and withdrawal process section). Balancing the risks and benefits of the study, which extracts the participants' experiences whilst acknowledging and managing the potential emotional distress for participants as they revisit potentially emotional experiences (discussed in the access to the research site section). Justice is achieved by ensuring the researcher makes their perspective clear and analysing the data, ensuring the participant's voice is reflected, not the results the researcher expects to find (discussed in the reflexivity and in vivo coding sections). Van den Hoonaard (2002) also advocates the importance of the grounded theory researcher addressing the ethical issues of the internal context of the research, which relates to the research process. A robust approach articulates the transparency behind sampling, consent and ensures anonymity and confidentiality of the participants (discussed in the confidentiality & data

protection section, managing consent procedure & withdrawal process section, sampling section 6.4 access to recruitment site section and data collection sections).

Ethical approval

Competent researchers should ensure all participant's safety and well-being when taking part in research studies both scientifically and ethically. These are the fundamental principles set out in the Helsinki declaration that underpin any research study (World Medical Association 2013; Health Research Authority, (HRA) 2017 p 10). These principles underpin the integrity of the University of Teesside Research Governance Framework (Teesside University 2017), which sets out standards for the ethical approval for all research conducted through its institution. All research undertaken by students at the University within the Health and Social Care setting is also required to be approved by the HRA research ethical approval process, which independently assesses research proposals for governance and legal compliance (HRA 2020). To ensure the research complied with the HRA requirements for conducting research in the health care setting, the ethical approval process for this research was conducted in 3 stages:

1. Ethical approval from the University of Teesside
2. Health Research Authority (HRA) approval
3. Approval from the Trust's Research and Development (R&D) Department

University ethical approval

The application was submitted using the HRA IRAS form in line with the university ethics committee guidance. Together with supporting evidence of the participant information sheet (PIS) (appendix 7), consent form (appendix 8) and information for gatekeepers (appendix 9).

HRA approval

Approval by the University's ethics committee was received in July 2018 (appendix 10), and an application to the HRA department was made in August 2018. After clarifying some minor points, approval was received in October 2018 (appendix 11).

Trust's R&D department approval

Application to the Trusts R &D department was submitted in October 2018, including the University, HRA clearance and evidence of insurance. Following a DBS check, human resources correspondence, references and photo ID, the research passport was issued in December 2018 (appendix 12). Data collection commenced in January 2019.

Confidentiality and data protection

During stage 1 of the application process for ethical approval, amendments to the Data Protection Act came into force in May 2018 (Data Protection Act 2018). The initial application was amended to reflect the changes in the new law.

Participants were informed about their rights under the data protection act, university storage of the data and the opt-out clause in the PIS (appendix 7). Confidentiality was maintained in line with university guidance by removing any participant identifiable data and replacing it with a transcript number, e.g. M6 (1). Before the interview and in the PIS information, I reiterated to the participants that if any poor or dangerous practices were identified, confidentiality would have to be breached by the researcher and appropriate action taken. All completed consent forms were stored in a locked cabinet in a locked office in the university setting. The consent process is discussed under participant recruitment.

Managing the consent procedure and withdrawal option process

Interviews were arranged at a mutually convenient date and time to maximise participant autonomy. All participants opted to be interviewed on the maternity unit at a convenient time before or after their shift and a private

room was made available for the interview. In the PIS, I had clarified that anonymity and confidentiality could not be guaranteed if the participants opted to be interviewed on the maternity unit. This was reiterated pre-interview. None of the participants appeared concerned, only that their comments in the research write up would be anonymised, I reassured all participants that any comments used in the thesis could not be linked to the individual.

The participant information sheet (PIS) had been attached to the email from the gatekeepers as part of the request to participate in the research. Before conducting the interview, the participant was given the opportunity to raise any questions or seek clarification on any points in the PIS before being asked to sign a consent form (appendix 7)

The option to withdraw from the study within a 2-week window was reiterated. The participant was reminded of the process to be followed if they wanted to withdraw from the research; these details were also in the PIS, adding rigour to the participants' autonomy. To ensure confidentiality, a unique code number was written on the top of the PIS and consent form; an additional PIS was given out if this was not brought to the interview. The participants were advised to quote this number when applying to withdraw from the study

Information linking the interview to the unique code was collected and stored together with the consent forms in a locked cabinet in a locked office in the university setting until the final 2-week window passed. None of the participants opted to withdraw from the research

Conflict of interest

The funding for the PhD study was part-funded by the University of Teesside staff training budget, the remainder self-funded. Neither party held any financial interests in the Trust or area of research.

Sampling

The sampling strategy for this research adopted a combined purposeful and theoretical sampling approach. The final sample size was informed by data saturation instead of a predetermined number of participants. Data saturation is discussed later in this section.

Purposeful sampling

The research aimed to understand the perceptions of the MDT staff. Therefore a strategy to ensure inclusivity of all the MDT members in the interviews was required to avoid excluding any staff group from the MDT. Individual judgement on sampling can introduce bias into the study, a strategy to minimise selection bias and increase transferability was consensus of the sample with stakeholder clinicians, discussed in the decision-making process for the inclusion/exclusion criteria section. Purposeful sampling is often used to initiate data collection in grounded theory, serving the purpose to gain maximum insight into a range of complexities (Rees 2011; Polit and Beck 2012). This sampling technique has been used successfully in several constructive grounded theory research studies within the health care setting to ensure inclusivity of key participants in the studies (Holtslander and Duggleby 2009; Greaves 2017; Fry 2017). Several co-complexities within the MDT existed, which I aimed to address within the inclusion and exclusion criteria for the purposeful sampling.

In chapter 2 (appendix 1), I have discussed the MDT definition for this research, which was debated and agreed upon with key stakeholders. The co-complexities of staff subgroups within the key professional groups were identified, as I needed to ensure that each member of staff from the subgroups was included in the sampling strategy. For example, doctors as a professional group subdivided into consultants, registrar (ST4-7) and SHO (ST 1-3). Purposeful sampling allowed me to ensure that all subgroups were included in the final sample (appendix 1).

Clinical experience of the delivery suite and experience working alongside DSCs depend on the staff's clinical rotations. For example, a junior midwife may have been qualified for a year but, as part of their clinical rotations post-qualification, not worked on the delivery suite, having been allocated to other areas of maternity. Therefore, it was imperative that my purposeful sampling ensured that staff represented within the subgroups had the clinical experience of working on the delivery suite and had interacted with the DSC role.

Inclusion and exclusion criteria

The inclusion criteria were that all doctors and midwives were required to have worked for a minimum of 6 months on the delivery suite and worked in a minimum of 2 maternity units (table 15).

Table 15: Sampling framework

Role	Inclusion criteria	Exclusion criteria
Midwives band 5	Worked on any delivery suite > 6months in the band 5 role Trained or worked at another unit	Worked on any delivery suite for < 6 months Trained and only worked at the unit
Midwives band 6	Worked on any delivery suite > 6months in the band 6 role Worked at another unit	Worked on any delivery suite for < 6 months as a band 6 Trained and only worked at the unit
Maternity Care assistants	Worked on any delivery suite > 6 months Worked in another area in maternity and another area of the hospital	Worked on any delivery suite for < 6 months Only worked in maternity as an MCA
Ward clerks	Worked on any delivery suite > 6 months Worked in another area in maternity	Worked on any delivery suite < 6 months
Consultants	Worked > 6 months in current role	Worked as a consultant < 6 months
ST 4-7 doctors	Worked on any delivery suite > 6 months in current role minimum of 2nd rotation	Worked on any delivery suite < 6 months in current role minimum of 1st rotation
ST 1-3 doctors	Worked on any delivery suite > 6 months in current role minimum of 2nd rotation	Worked on any delivery suite < 6 months in current role minimum of 1st rotation

The rationale for the criteria of a minimum of 6 months working on the delivery suite

The constructivist paradigm asserts that individuals construct their sense of reality by 'being in the world' and the exposure to shared experiences (Howell 2013; Lincoln, Lynholm and Guba 2018). A period of exposure by the participants to working with DSCs was deemed essential if this sense of reality was to be constructed. Staff, particularly midwives and MCAs, rotate into other areas of the maternity unit. The criteria of a minimum of 6 months working a delivery suite ensured sufficient time for the participants to experience exposure to DSCs by ‘being in the world’ working alongside these individuals.

The rationale for the criteria of working and/or trained at another unit

The symbolic interactionism roots of constructivism advocate that humans make sense of the world within a 'social context. By narrowing the social context to 1 delivery suite per participant, I would have limited the richness of the multiple realities within the contexts of multiple social exposures (Appleton and King 2002). I also deemed it essential to mitigate against potential introspective views of the participants formed through the unconscious organisational bias of 1 unit's culture and its influence on the DSCs working within that unit. This criterion served 2 purposes, firstly, mitigating against organisational bias and secondly, increasing the confidentiality of the DSCs. As the participants were drawing on their experience from several units, it was not possible within the interview transcripts to identify if the attributes being identified by the participants related to the research site or other maternity units the participant had worked.

Specific criteria for specific groups ST 1-3 (SHO) 1st on-call rota and ST 4-7 (registrars) 2nd on-call rota

The stipulation of a minimum for the second rotation for the ST1-3 SHO and ST4-7 registrar doctors ensured a minimum informed participants' social experiences of 2 maternity units in their current role. During their 3 years as

an SHO, career obstetricians rotate on a 6-12 month basis, experiencing a minimum of 3 maternity units as an SHO before moving to the registrar level. Likewise, registrars rotate to different units during their 4-year training. Therefore, a registrar on their 2nd rotation will also have experienced a minimum of 2 units as a registrar and 3 units at the SHO level.

Consultants

The stipulation of a minimum of 6 months in post ensured the consultants were 'in the world' in their role as a consultant making sense of their reality of the DSC role within the context of a consultant role. As part of their training, consultants would have experienced a minimum of 6 units as part of their SHO and registrar training posts. Therefore, I acknowledge that their 'lived experiences' would have been influenced by the DSCs they encountered during their training. Indeed, consultants referred to exceptional DSCs who had been particularly influential to them during their training. Participants within the study had all been in their consultant posts for several years, so they had had exposure to various DSCs due to staff turnover (table 16).

Midwives band 5 and 6

The criteria for midwives to have had the experience of another unit was in line with the rationale outlined for the doctors. Experience as a midwife in another unit for band 6 midwives is more common than band 5 midwives, who usually seek to complete their 12-18-month preceptorship to progress to a band 6 role before moving trusts (NMC 2020). I acknowledge that the experience of the DSCs for the band 5 midwives at previous units may have been as a student midwife in training but suggest the experience of other units gives valuable insight into DSCs from other trusts and reduces organisational bias.

In differentiating between band 6 and 5 midwives, I sought to reflect on the potential variation in expectations of the coordinator. My assumption was that band 6 midwives qualified for a minimum of 18 months were more likely to be more confident in their practice than a band 5 midwife who recently qualified.

Therefore, their expectations of the DSC role were potentially different. I acknowledge that experience and confidence are subjective, and some junior staff members may possess greater personal confidence than more senior staff. However, I worked from the generalised assumption that the greater the time served in a role, the more likely individuals were to be confident in their role and have different expectations of the coordinator role.

MCAs and ward clerks

Identifying MCAs and ward clerks who had the experience of working in other units was more problematic. Movement between units is unusual in this group of staff. A compromise was reached to include this group of staff by purposefully sampling MCAs and ward clerks who had worked on other wards in the hospital and other areas of the maternity unit, broadening their exposure to coordinators of other ward areas. This made protecting confidentiality more challenging and is discussed in the data collection section.

Extrapolation of the criteria to the final sample

Based on the assumption, if a staff member had worked on 2 different delivery suites, independent of staff turnover, they would have the experience of working with a minimum of 16 DSCs. The calculation of the final sample factored in an 11% staff turnover rate (NHS Improvement 2019a). In total, this equated to the exposure of 679 coordinators throughout the participants' professional careers (table 16). By applying the inclusion criteria to the final sample size, the participants' human experience of multiple DSCs within different social contexts on the delivery suite was achieved.

Table 16: The number of DSCs worked with by staff group based on their career to date

(Assumptions based on 8 DSC per unit and 11% staff turnover per annum: NHS Improvement 2016a)

Participants by staff group	Years in current role	No. DSCs worked with during training in this role	No. DSCs worked with during training in this role	No. DSCs worked with during in current role	Total
		ST1-3	**ST4-7**	**Consultant**	
C1	20 year	24	32	24	80
C2	2 years	24	32	9	65
C3	19 years	24	32	15	71
C4	8 years	24	32	14	70
R1	ST6	24	24		48
R2	ST7	24	32		56
R3	ST6	24	24		48
SHO1	ST3	24			24
SHO2	ST3	24			24
SHO3	ST2	16			16
M6(1)	>10 years	24			24
M6(2)	8 years	22			22
M6(3)	>10years	24			24
M6(4)	4 years	19			19
M5(1)	1 year	16			16
M5(2)	1 year	16			16
M5(3)	1 year	16			16
M5(4)	1 year	16			16
MCA1		8			8
MCA2		8			8
WC		8			8
Total					**679**

The decision-making process for the inclusion/exclusion criteria

Charmaz (2014) directs the researcher to remain transparent about the subjectivity they induce into the research. In keeping with the constructivist paradigm as a midwife 'being in the world' (Lincoln, Lynholm and Guba 2018), there was the potential for this to influence my assumptions about who were the right members of the MDT to be included in the research. I was

also conscious that my sense of the reality of what constituted 'experience' in terms of 'time served' was influenced by my exposure to individuals I deemed to be 'experienced' in certain situations. To increase the rigour and trustworthiness of the selection criteria, I sought to test my assumptions with other health professionals (Neill 2006). I met with key stakeholders to ascertain their views on who constituted the MDT and confirm a measurable criteria which could be applied to ensure the purposeful sampling of the correct participants. The final agreed criteria submitted as part of the ethical application process and adopted for the research was the result of a joint consultative process between the Head of Midwifery and Delivery Suite Manager (whom themselves had both worked in the DSC role), the Lead Consultant for delivery suite and the Obstetric Consultant lead for research.

Discussion with the medical staff highlighted the MDT as a flexible team, including paediatricians, anaesthetists and the theatre team, who were co-opted into the team when complications arose. A consensus was reached on the final core members of the team as the members who interact with and had the most exposure and interaction on a shift with the coordinators. The selection of the MDT members was cross-referenced with 2 colleagues who had worked as DSCs before working in academia.

Rationale for the exclusion of DSCs, Delivery Suite Managers and Student Midwives from the study

The decision to exclude the DSCs and Delivery Suite Manager from the sample was made with the stakeholders, which included the Delivery Suite Manager. The Delivery Suite Manager confirmed that the 9-5 nature and intermittent presence in the delivery suite of their role meant the intensive exposure to the DSCs required would not be achieved. The rationale to exclude the DSCs was informed by the aim of the study to explore staffs' as opposed to the DSCs' perceptions of leadership and management styles. Mindful this posed a potential threat to the DSCs, the Delivery suite Manager agreed to inform all the coordinators of the study, circulate the PIS as a source of information and forward my contact details if further information or reassurance was required. 1 DSC made direct contact with others, tending to

approach informally when I was present on the unit. Any anonymity concerns were dispelled in the explanation of the anonymising of quotes in the final thesis and selection criteria requiring the midwives and doctors to have worked in more than 1 unit.

The decision to exclude Student Midwives involved a more complex discussion with the ethics committee chair and Director of Studies. The research site supported Student Midwives from more than 1 university, complicating the ethics application. The nature of the students' placements limited them to 1 site. To have limited the student participants to the host university rendered a potential conflict of interest for the students, who may have felt a sense of obligation to their midwifery lecturer to participate. Reluctantly a decision was made to exclude Student Midwives from the sample, although I acknowledge this as a study's weakness.

Ethical approval depended on a 3rd party sending out the invitations to participate in the research. The delivery suite manager and 2 consultants volunteered to act as gatekeepers to distribute the information to their staff. A strength of this arrangement was that the gatekeepers knew which staff met the criteria and avoided sending information to potential willing volunteers who did not meet the criteria. A limitation of this approach was that I was dependent on the gatekeepers not 'hand selecting' staff they wanted to participate in the study and needed to trust the stakeholder's reassurance that they would email all the staff who met the criteria.

The decision-making process for the research site

The research site for the interviews was a maternity unit in the north of England, conducting 5000 deliveries per annum. It was chosen as it reflected many facets of the maternity units in the UK and was deemed to represent the future module for delivery suites, thus future-proofing the research findings. The unit comprised a neonatal intensive care unit, an alongside midwifery lead unit (AMU) and a free-standing, rural-based midwifery lead unit (FMU). The unit had received a good rating in the recent CQC maternity

assessment and was rated outstanding for well lead maternity services, which gave external validation of good clinical leadership. Prior to 2016, 24/7 consultant cover had been the standard for units with >6000 deliveries per annum (RGOG 2007). A decision that was reversed following a lack of empirical evidence that 24/7 consultant presence improved maternal and neonatal outcomes (Knight *et al*. 2015b; RCOG 2016b; Sandal *et al.* 2017) but had left a legacy of larger units still being staffed by 24/7 consultant cover at the time the research was conducted. Units conducting less than 6000 deliveries per annum had not been required to provide 24/7 consultant cover (RCOG 2005; 2007; 2013a; 2013b), so at night the most senior doctor on the unit was the registrar with on-call consultant cover from home, thus representing the future model of medical cover for delivery suites in the UK and MDT configuration for DSCs to coordinate.

I deemed the site combined many significant factors which reflected the DSC's role nationally and increased the transferability of the findings.

- Intrapartum transfers from the AMU and FMU
- Neonatal intensive care managing complex intrapartum cases transferred in from other units.
- In complex cases, women book at the unit because of the potential for increased medical expertise and neonatal intensive care.
- Out of hours responsibility for the coordinator to decide when to call in the consultant from home.
- Midwifery staff levels to provide clinical cover for 5000 births per annum ensured the coordination of several midwives per shift providing care for both low and high-risk cases.

This ensured the DSCs were exposed to the complexities of issues for the coordinators in both the smaller units, no on-site consultant cover for out of hours and the complex cases and in utero transfers for the neonatal facilities, therefore typical of the larger units > 6000 deliveries per annum, together

with intrapartum transfers from an FMU typical of maternity units in more rural areas of the UK.

Purposeful, theoretical sampling and data saturation

Purposeful sampling ensured that each staff group within the MDT were represented in the research. In keeping with the explorative nature of constructive grounded theory, the final sample size was determined by theoretical sampling (Charmaz 2014). Theoretical sampling distinguishes grounded theory from other qualitative inquiries. The iterative process of constant comparison of the data from the initial and focused coding (discussed in the data analysis section) identifies the categories and the conceptual gaps and informs further questions at subsequent interviews. Theoretical sampling is the specific and systematic refining of the theoretical categories by 'going back to the field' to gather further data to refine and saturate the categories (Charmaz 2014). Charmaz (1995; 2006) advocates that this iterative process is repeated until the emergent categories are saturated and the data content sufficiently rich that no new theoretical insights into the categories are achieved.

Example of data saturation:

During the first interviews, every participant identified that good DSCs were proactive in maintaining an overview of the unit. When subsequent participants identified the same theme, I would ask them to explain this in greater detail until no new themes emerged to facilitate saturation of the category.

Example of theoretical sampling:

All staff identified the importance of the DSC being approachable. This was more frequently acknowledged in the midwife's interviews. Therefore additional midwives were recruited until no new themes in the category emerged.

Sample size

As discussed in the section on theoretical sampling, data was collected until data saturation had been reached. Polit and Beck (2012) suggest that typical

sample sizes for theoretical sampling range from 20 to 30 participants. In their review of 83 qualitative studies, Marshall *et al.* (2015) concluded that the number of interviewees ranges from 6 to 200, concluding that 25-30 single interviews have the maximum impact. Charmaz (2014) warns against the fixation on the number of interviews, which may fail to address the concept of information power. She suggests smaller numbers of interviews may elicit richer data, achieving data saturation, in contrast to larger numbers of interviews extracting thin data. Malterud, Sierma and Gluassora (2016) concur with Charmaz (2014) and Glaser (1992) that data richness and the saturation of categories should be the guiding factor for the decision making in the sample size, which is dependent on the weight, depth, and quality of the data collected, as opposed to an arbitrary number of participants.

In total, 21 participants were interviewed. No new categories were discovered after the 7th interview. An additional 14 interviews were conducted using theoretical sampling and data saturation was achieved after a combined 19 interviews. The remaining 2 interviews confirmed that the repetitive nature of the findings had achieved saturation. Interviews by staff group are identified in table 17.

Table 17: Number of staff interviewed by professional group

Staff group	n=21
Consultants	4
Registrars (ST4-7)	3
Senior house officers (ST1-3)	3
Midwives (band 6)	4
Midwives (band 5)	4
Maternity care assistant (MCA)	2
Ward clerk	1

Data collection

Method

The method adopted for data collection used semi-structured interviews. Focus groups were considered, discussed with my director of studies as a potential assistant and would have allowed for a collective view of the DSC

by the MDT. I acknowledge that focus groups provide an environment for rich data collection and would have provided me with the opportunity to observe group interactions between the MDT staff (Krueger 2006). Whilst the ethos of focus groups seeks to respect individuals' views, not reach a group consensus, the propensity for specific individuals to dominate the conversation and seek group consensus exists. The possibility of eliciting bias from more dominant individuals within the group receiving more attention is more likely to be problematic if the person is perceived to be of higher status (Connolly 2015; Myers and Newman 2017). The diverse span of participants' clinical expertise and educational backgrounds within the MDT rendered hierarchical bias a significant risk. Later in this chapter, I discuss how the MCAs as a group of health workers were sometimes uncomfortable with participation in research. Being placed in a group with medical and midwifery staff could have undermined the research process for the MCAs.

Charmaz (2014) suggests that intensive interviewing facilitates more control over the interview and data construction. Semi-structured interviews afforded me a sufficiently derived structured approach to ensure that particular topic areas emerging from the analysis from the constant comparative analysis from earlier interviews were explored in subsequent interviews; in contrast to unstructured interviewers where the researcher has no pre-conceived views on the topic so has no pre-prepared set of questions (Polit and Beck 2012; Howard 2013). Charmaz (2014) stresses the importance of listening to the meaning of the participant's dialogue. I found the 1 to 1 interview environment allowed me to concentrate on the words and phrases used by participants, which facilitated the development of categories through in vivo codes, discussed in the data analysis section, which may not have been achieved if distracted by multiple participant conversations in focus groups.

Decision to use semi-structured interviews

Semi-structured interviewing is the most common source of quality data collection by grounded theorists (Charmaz 2014). However, my decision to

adopt semi-structured interviews was also a pragmatic one and based on advice from the stakeholder involvement. The nature of childbirth, the unpredictability of workload, and women's dependency on the unit made it impossible to predict in advance to pre-plan focus groups during shift times. The stakeholders and I also considered incorporating focus groups as part of staff meetings. However, the fluctuating attendance due to workload and constant interruptions meant it was impractical and would compromise the anonymity of the participants. Focus groups outside of work time were impractical; Krueger (2006) and Polit and Beck (2012) suggest the optimum number of participants for a focus group to be effective is 5-12 people. Off duty and medical rotas, together with variations in the start and finish times of shift patterns, made convenient times for arranging focus groups at a central location nigh on impossible. Also, it was unrealistic to expect staff to take time out of their day off to attend a focus group. The large geographical area the research site covers mean many staff live significant distances from the university and hospital settings and would have involved lengthy travel time. Telephone interviews were considered and rejected; whilst these can be more convenient and helpful for sensitive issues, non-verbal communications, which may promote additional exploration by the researcher, can be lost (Irvine, Drew and Sainsbury 2012).

Individual interviews allowed the participants to self-select a convenient time and venue, which enabled them to commit focused time to the interview, enabling them to divorce themselves from the clinical pressures and distractions. In the participant information and email correspondence about arranging a suitable time and place for the interviews, I clarified that their anonymity could not be assured if they chose to be interviewed on the maternity unit. All participants chose to be interviewed in the hospital environment but specified where they wanted the interview to occur, which was always a private room they had organised.

Access to the research site and recruitment of participants

A condition of the ethical approval was that access to all participants should be conducted via a gatekeeper. For the purpose of this research, the gatekeepers acted as the conduit for the dissemination of information to the staff who met the criteria. The Delivery Suite Manager and Obstetric Lead for the delivery suite kindly agreed to fulfil this role. The ethical principle of autonomy of the participants was adhered to by a 2-stage recruitment process. The gatekeepers circulated the participant information (appendix 8) to their staff, who met the criteria via email. Staff interested in participating in the research were requested to email me directly; this avoided selection bias by the gatekeepers of the staff they wanted me to interview. Beyond the initial email, the gatekeepers had no further involvement with participant selection, ensuring the gatekeepers did not know the staff who participated in the research, thus maintaining participant confidentiality.

The risk and benefits of the research for the participants were outlined in the PIS. While the PIS indicated no individual benefits to the individuals, their collective contributions to the research were acknowledged. The nature of the research was not anticipated to be emotionally sensitive for the participants. However, had any of the participants become emotionally affected, I planned to stop the interview and had the support of the Trust R&D department to guide staff to the Trust's counselling services should the need arise, which was not the case. Field notes incorporated into the findings section recorded 2 episodes where the participants became slightly emotional but quickly composed themselves and were happy to continue the interview.

Participants selected for the purposeful sample were on a first-come, first-serve basis and a reserve list was created for the theoretical sampling. With the exception of the SHOs, MCAs and ward clerk, the number of volunteers exceeded the theoretical sampling requirements. I returned their email of interest to participate for those participants on the reserve list, thanking them and explaining that I had put them on a reserve list if additional participants were required. Participants for the theoretical sampling were contacted from

the reserve list. Interviews were conducted over 4 months, from the end of January to May 2019.

Reflection on the recruitment process

My reservations concerning attracting sufficient interest to recruit staff to the research were unfounded. Initially, I received 2 emails from the staff offering to participate and following the initial interview, email requests to be involved quickly followed. I believe this to be a testament to the respect the MDT staff have for the individual coordinators and their willingness to contribute to research into a role they identified as fundamental to maternity services.

As the interviews gained momentum, typical post-interview conversations followed the thread of how important they perceived the role to be and whilst the invitation emails had been circulated by the stakeholders, typical responses to emails were to view them as low priority. However, the participants were eager to involve other colleagues they knew had received invites from the gatekeepers to participate and clearly encouraged their colleagues to get involved as post interviews, emails to participate in the study typically followed within a 24 to 48-hour timeframe. Other post-interview conversations ran along the lines of "do you still need more volunteers? I could ask around if that would help?" Whilst participants were not recruited via this informal route. I believe it was a testament to the importance participants placed on the research that they were willing to take time within their busy working schedule to help in the recruitment process and participate in the interviews.

I recognise that there are lower numbers of staff in the MCA and ward clerk group. The 1st round of emails from the gatekeepers to the MCAs and ward clerk yielded only 1 MCA. In the 2nd round of emails, additional MCA and a ward clerk were recruited. A further ward clerk requested a telephone conversation about the study, which resulted in her declining to take part. The decision to interview the 2 MCAs and 1 ward clerk was taken in consultation with my supervisor and informed by Macintosh, Berridge and Freeth's (2009) study identifying the ward clerk's role as a critical player in

the MDT on delivery suite. An additional conversation about protecting their anonymity due to low recruitment numbers in this staff group was discussed pre-interview with the MCAs and ward clerk.

Field notes from the MCA interviews noted that both individuals had not been involved in research before and were uncertain about the value of their contributions. The ward clerks were very open, pre-interview that they did not understand what their role could add to the research. Field notes from all 3 interviews noted how the participants felt valued and optimistic about participating in the research. All 3 individuals articulated post-interview that they valued being part of the MDT. My reflections on the inability to recruit more significant numbers to this staff group related to this group's perceptions about their role and the field of research rather than their contribution to the team.

Whilst only 2 MCAs participated, the information from the 2 interviews showed the most significant degree of correlation of ideas. The 2nd MCA did not raise any further information that had not already been covered in the 1st MCA interview.

The interview schedule

Adams (2010) and Myers and Newman (2017) argue that meticulous attention to the staging of the interviews is essential. Providing space, privacy, and attention to the scripting of the questions can mitigate against misconceptions of expectations by the participant.

Gibson and Hartman (2014) stress the importance of maintaining openness when formulating the research proforma to avoid pre-conceived notions, which they argue represents Glaser's (1992) notion of 'forcing'. Charmaz (1995; 2014) maintains that within naturalist enquiry, it is important that the research question frames the focus of the research to define the broad boundaries of the study, arguing that the avoidance of all preconceived notions by the researcher is impossible to achieve, but should be acknowledged through reflexivity; namely that the initial interview question is

a flexible starting point which gives the flexibility to encourage openness rather than prohibit discovery of the topic area (Guba and Lincoln 1989; Polit and Beck 2012). If the initial interview question is not formulated correctly, the researcher cannot determine when data saturation is achieved (Mantzoukas 2008) due to a lack of topic focus.

In response to the criticism of constructivist grounded theorists making assumptions in the questions (Gibson and Hartman 2014), I acknowledge that as the researcher with a background in midwifery, I was assuming that DSCs did affect the way the shift was managed. Indeed, that had been the knowledge that staff already held that some DSCs managed the staff better than others, which was why they checked the off duty, which had prompted my interest to undertake the research in the first place. This research works on the assumption that DSCs did impact the shift. I was seeking to understand those intuitive assumptions staff were making about the DSCs, which enabled them to predict the type of shift they would have before the shift started, independent of complexity, activity, or workload on the unit. Staff in the interviews talked about knowing that if certain DSCs were coordinating their shift regardless of how busy the unit was, they would be supported. This contrasts with the stress associated with feeling 'on edge' and apprehensive about their care provision alongside less effective DSCs.

Although interviews afford the opportunity to gain rich data, Myers and Newman (2017) warn against some of the common pitfalls of interviewing within the social setting. Drawing on Goffman's work 'the presentation of self in everyday life' I sought to mitigate against the participants performing as they perceived the organisation would expect them to respond, rather than expressing their true core values and beliefs (Goffman 1959); as opposed to a corporate image where the delivery suite was well lead 24/7, by a high performing DSC. I was also mindful of my presentation of self-conducting the interviews; I chose to dress casually but smart and spent some time engaging in small talk before the interview to portray myself as an ordinary

individual rather than a potentially threatening academic, intending to help the individual to relax and relate on an equal basis.

This concept of presentation of self is important and relevant to this research by attempting to understand how individuals construct their sense of the reality of their views of the coordinators. It was important to mitigate against the participant portraying the DSC role as they perceive the organisation would expect them to articulate it, rather than their individually constructed sense of the role and its attributes. This was particularly important because the participants knew I was a midwife. Field Notes enabled me to reflect on the process. Following the first interview, I changed how I introduced myself to mitigate against this concern (appendix 6).

Mindful of the potential for staff to 'slip into corporate mode', the introductory interview question was designed to focus on them as individuals and articulate their DSC reality by reflecting on personal experiences. The participants were asked to think about times when they had been on shifts where things had gone particularly well or not so well and think about the attributes of those DSCs coordinating the shift. In the preamble at the start of the interview, I reiterated the information in the participant sheet that I was interested in all the DSCs they had worked with throughout their career, not just in their current role and maternity unit. By relating the research to all DSCs past and present, I sought to minimise the influence of the organisational culture of the research site and enhance a more generic understanding of the DSCs. This approach also increased the anonymity of the DSC because, as the researcher, it was not possible for me to identify if the DSCs referred to in the interviews worked at the participant's current or previous place of work.

The introductory interview question was:

> "Could you think of times when you have been on shifts where things have gone really well and "could you think about the DSCs' attributes that have contributed to those shifts?"

The concluding question was:

"Is there anything else you would like to say or add?"

This allowed the participant to reflect on areas not covered in the interview, ensuring completeness in the data collection.

To ensure the introductory question was not too broad or narrow, too simplistic or ineffectively focused therefore yielding trivial or insufficient results (Mantzoukas 2008), the introductory questions were piloted on 2 colleagues who continued to maintain their clinical practice on the delivery suite. Neither colleague had prior knowledge of the focused area of my research and was asked to answer the question as a clinical midwife working on the delivery suite. The pilot confirmed that the introductory question allowed for enough details to maintain the focus but also flexibility for unhindered discussion. The feedback from the pilot indicated that the invitation to reflect facilitated the visualisation of scenarios and individual coordinators, which encouraged the narrative.

Recording the interviews

With verbal and written consent, the interviews were recorded on a university issue Edirol MP3 recorder. Following the interviews, the recordings were immediately transferred onto a password-protected computer and the recording device was secured in a locked cupboard. The password-protected computer recordings allowed my supervisor and myself to revisit the interviews as part of the data analysis.

All interviews were personally transcribed within 24 hours of the interview, using Dragon Dictate, a voice to text recognition package. This enabled me to verbally transcribe the interviews, playing back over the interview and written transcripts, line by line, to ensure accuracy against the interview recordings. The verbatim transcribing included colloquial terms to reflect the meaning behind the language. None of the participants breached confidentiality during the interview by using the coordinator’s name. A few participants inadvertently referred to themselves by name. This was deleted

from the transcript and replaced with (referred to themselves by name). The opportunity to read their interview transcript was afforded to all participants.

Charmaz (1995) suggests that personal transcription of interview recordings and writing of field notes enables the researcher to engage with the language and meaning, which is particularly important for the novice researcher. Engagement with the data from the onset elaborates on the direction your data will take. It allows the researcher to pay close attention to the participant's language, which bridges the gap between participants' lived experiences in the research question. The personal transcribing of the interviews provided invaluable insight into the intonations and emphasis the participants placed on their language to describe the coordinators and was instrumental in the choice of the in-vivo codes.

Field notes and reflective entries

Field notes were written up immediately post-interview; they were not intended to be part of the data collection but added clarity to the interview context and facilitated personal reflections on the interview (appendix 7). Field notes provide an objective narrative of observed events within the interviews (Polit and Beck 2012). The field notes also served as an invaluable tool to note nonverbal communication, which was impossible to capture on the tape recordings, thus contextualising the participant's responses. Key field note entries have been incorporated into the findings section of chapters 7, 8 and 9. The personal reflective notes served as useful aid-memoires and were used in conjunction with memo writing during the analysis phase of the research. They also facilitated my reflexivity as a researcher and provided a useful personal reflective tool to assess my effectiveness as a researcher post conduction of the interviews.

Data analysis

NVivo versus manual analysis

The decision to adopt a combined approach using the NVivo package windows 12 (QSR International 2018) and traditional pen and paper was informed by Charmaz (2006; 2014), who emphasises the importance of the

researcher immersing themselves in the data to gain a deep and insightful interpretation. Unlike the positivist model, which requires the researcher to maintain a degree of objective separation, the interpretive model requires the active element of the researcher in this process (Glaser 2002; Suddaby 2006; Charmaz 2014). The combined approach allowed for greater flexibility and immersion in the data during the analysis process.

While Houghton *et al.* (2016) advocate that the Nvivo system provides a robust and pragmatic way of managing the complexities of large amounts of information, Birks and Mills (2015) suggest that we learn as individuals through visual, auditory, and kinaesthetic modes. The smaller view afforded by a computer screen limits the visual and kinaesthetic modes, which may impact the researcher's interaction with the data. This may be of greater relevance during the relationship analysis at the thematic ideas stage, which requires a more fluid process (Welsh 2002). As a visual learner, this was of particular relevance to me.

In their grounded theory study using Charmaz's (2006) approach to analysis, Maher *et al.* (2018) compared the traditional pen/ paper and NVivo package for data analysis. They concluded the traditional pen, paper, and coloured sticky notes offer a greater degree of freedom for the researcher to compare data with data, codes with codes and view data from the reflective perspective, thus adding to the rigour and trustworthiness achieved through the constant interplay between the data-sets (Suddaby 2006).

In keeping with Maher ***et al's.*** (2018) findings, whilst the NVivo package provided an invaluable storage and sorting facility, limited the visualisation of large amounts of data and the ability to code and map information manually. Undoubtedly, this slowed down the analysis process; it gave meaningful insight into the data by allowing the contextualisation through the visual representation over a larger surface area. It allowed using the benefits of both approaches (Welsh 2002).

In keeping with constructive grounded theory methodology, data collection and analysis were conducted in parallel. Interviews were transcribed and analysed before undertaking the following interview. This iterative process was supported by memo writing. Data were analysed in line with Charmaz's (2006; 2014) constructive grounded theory and was informed by the work of Holtslander and Duggleby's (2009) approach from their work with bereaved spouses of terminal cancer patients and followed a 3-step approach (figure 5)

1. Initial coding
2. Focused coding
3. Theoretical coding

Memo writing was used throughout to maintain reflexivity.

Figure 5: Simultaneous process of data analysis process

<table>
<tr><td rowspan="3">Data Collection</td><td>Initial coding</td><td rowspan="3">Memo writing</td><td rowspan="3">Constant comparison</td></tr>
<tr><td>Focus coding</td></tr>
<tr><td>Theoretical coding</td></tr>
</table>

Initial coding

The transcribed interviews were re-read line by line, noting specific attention to the words and meaning to understand the data better. In vivo codes/nodes were allocated using the NVivo windows 12 (QSR International 2018) and interview abstracts were allocated to the in vivo codes.

In vivo codes

Howard (2013) suggests codes serve as a helpful shorthand device to label, separate and organise data. In vivo coding pays particular attention to the language used by the participants (table 18). Using participant's terminology as codes serves as a symbolic marker of the meaning, ensuring I remained close to the data and the findings remain grounded in the data. It also mitigates against coding people as types rather than what is happening in the data (Holtslander and Duggleby 2009; Charmaz 2000; 2014). This was particularly important to this study as it avoided coding by the professional group rather than focusing on what individuals were articulating about the coordinators' attributes.

Table 18: Example of in vivo coding

Interview abstract	In vivo code/ node	An explanation for the code (from the memo writing)
You see that in everything they do so…. They have a very good overarching view of the unit, what I would call a ***helicopter view***. They know what's going on in every room with every woman**.**	**Helicopter view**	Ability to have an overview of everything going on in the unit.

Advantages of initial coding

This iterative process continued until the completion of the interviews and served to inform the focused codes and refocus subsequent interviews. The purpose of fragmenting the data by initial coding into codes gives the tools to integrate and synthesise the data and conceptualise its meaning before moving into analysis and making sense of the statements (Charmaz 2014; Straughir, Clarke and Matchin 2018).

Initial coding aided the development of categories and provided an analytical framework. By careful coding using in vivo codes, I could refrain from using my professional knowledge of the language and inputting personal motives and issues into the data (Charmaz 2014). This was of particular importance

as a healthcare professional conducting the interviews in addressing the ethical issue of justice (Olson 2018).

As further interviews were undertaken, line by line coding of the interview transcripts were analysed. The findings were then populated into existing codes, plus new codes created as concepts and behaviours emerged. Abstracts and codes were transferred into a spreadsheet, colour-coded by the professional group. The codes were manually transcribed onto corresponding colour-coded Post-it notes and stuck onto flipchart paper under the emerging categories.

Focused coding

The focused coding allowed for the frequency and significance of the codes to be sorted, synthesised and integrated into categories (Holtslander and Duggleby 2009). As the interviews progressed and further codes were processed, these were transcribed manually and added to the emerging categories. As the categories evolved, categories were compared to categories and combined where mutual meaning existed and subcategories were created to reflect the subtle emerging differences between the main categories (Table 19). This iterative process and evolving categories informed the 'probing questions' in future interviews to check the meaning and saturation of categories and inform the theoretical sampling.

Table 19: Example of initial and focused coding from the interview abstracts

Interview abstract (colours link to staff group)	**Initial coding and emerging categories**	**Focused coding comparison between initial coding and categories'**
It's about **juggling all those balls**, know which ones you can drop, a few minutes and which ones absolutely have to keep up in the air or keep your focus on. C1	**Category 'Juggling balls'** **Notes: from memo writing.** Ability to make quick decisions under pressure/ the ability to prioritise multiple things.	**Final category** **Ability to make decisions under pressure** **Notes from memo writing** The ability to make quick decisions and juggle balls equates to decision making under pressure.
They have to be aware of what is going on	**Category 'Ability to make quick decisions**	

Interview abstract (colours link to staff group)	Initial coding and emerging categories	Focused coding comparison between initial coding and categories'
everywhere and some days, it's easy because everything is running along smoothly when you have those days when you're backs up against the wall and what you are you going to do now. As yet another woman is coming in now to look after and no room to put her in and three emergences about to happen. M6 (1).	**Notes from memo writing** The role becomes more complex the greater the activity on the delivery suite. Ability to make decisions and multitask as activity increases and capacity issues arise.	

In contrast to the 11 step prescriptive axle coding, which develops distinct categories from the data collection and analysis (Strauss and Corbin 1990), Charmaz (2014) advocates the use of subcategories, arguing the ridged categories of Straussian grounded theory limits what the researcher is learning about their research. In keeping with the constructive grounded theory approach to analysis, I applied subcategories to the categories.

Example:

Category: Ability to make quick decisions
Subcategories:

- Ability to prioritise and delegate/ escalate
- Ability to project into the future and act
- Why it is important to staff?

I found the subcategories to be particularly helpful to give meaning to the categories. The purpose of my research was to understand the impact of DSCs ' leadership and management skills, it was therefore important not only to ascertain the attributes of good DSCs but also to ascertain how and why these impacted on staff. The process of focus coding allows the researcher to explain the data and show relationships, thereby adding to the precision and clarity, such as the social environment influences (Charmaz 2014). This

was particularly relevant as categories emerged to determine if these categories were influenced by the social context of professional groups and their professional relationships with the DSC.

Where the initial codes did not fit into emerging categories, I revisited the interview transcripts to understand the codes in context. Charmaz (2014) refers to this process of stopping, pondering and thinking afresh as 'theoretical sensitivity, ' enhancing the analytical precision of developing categories (Kelle 2007; Gibson and Hartman 2014). This process informed my decision to allocate a new category or combine the code into an existing category. The process of constant comparison continued until no further categories emerged.

Theoretical coding

The purpose of constructive grounded theory is to generate theory from the data. Theoretical development is about seeing the possibilities within the data by establishing connections and asking questions (Glaser and Strauss 1967; Charmaz 2006). Abstract theory is not always obvious or a simple step-by-step approach but a messy non-linear process requiring intimate knowledge of the data through reflection and an open mind, moving backwards and forwards between the data, memos and diagrams without losing the purpose of the research, theorising until the puzzle fits (Charmaz 2014; Kean *et al.* 2016).

The iterative process of initial and focused coding had identified 9 categories and subcategories (appendix 13), which highlighted how complex the DSC role is. Memo writing extracts relating to this stage in the research highlighted my frustration about the categories' slow progress in theory generation. Kean *et al's* (2016) constructive grounded theory research on a patient's journey through ITU enlightened me to how their professional knowledge and expertise had influenced their theory generation. As a novice researcher attempting to be reflexive, I realised that I was trying to be too objective in adopting Glaser's (2002) approach of detachment to the data

rather than embracing my professional expertise as advocated by Charmaz (2014).

Example of memo writing entry related to this stage of the analysis:

> The categories do not appear to stand in isolation as separate theories but seem interconnected between the coordinators' management attributes and personal leadership traits. Why are these 9 categories about the DSC important to the staff? Why do they make a difference? (Appendix 15)

Reanalysing the categories through the lens of what is important to staff refocused the theory generation back to how the DSCs attributes affect the coordination of the shift. From the refocus, 3 theories emerged and are discussed in detail in the findings section.

1. **Situation awareness**- Good DSCs are in control because they know what is going on.
2. **Supporting staff to achieve their role**- Good DSCs support staff to fulfil their role to their best ability.
3. **Approachable**- Good DSCs are approachable.

All 9 categories underpinned and some cross-referenced the 3 theories (table 20), giving the context to how DSCs display these attributes and why and how these attributes influence the MDTs' shift experience.

Table 20: Correlation between the 3 emerging theories and 9 categories from the focused coding

Theory	**Situation awareness**	**Staff support**	**Approachable**
Category 1	Ability to make quick decisions		
Category 2	Knowledge		
Category 3	Helicopter view		
Category 4	Organised& in control		
Category 5		Personality to challenge	
Category 6	Proactively leads		
Category 7	Supportive and approachable		

Theory	**Situation awareness**	**Staff support**	**Approachable**
Category 8		Team player	
Category 9	Sharing of information		

Confidence

During the initial analysis, 'confidence' was allocated a code. During the iterative process, it became apparent that the term was more complex. It had so many different connotations for staff, so it did not form a stand-alone category but was subtly intertwined through all the codes and categories. The participants in the interviews did not articulate confidence as a specific attribute. The term was used to describe DSCs who were situationally aware. Some participants used confidence as an adjective to describe supportive and approachable DSCs, but confidence was used too infrequently to be a significant attribute. It could be argued that a DSC needs to be confident to display the attributes of situation awareness, staff support and approachability. The counterargument would suggest that situation awareness gives the DSC confidence to coordinate the shift. Engaging in staff support gives DSCs confidence that their staff are functioning to the best of their ability and confident DSCs are open to staff challenges. The cause and effect of confident DSCs were difficult to decipher. To have pursued what makes DSCs confident would have distracted from the remit of this research, namely what gives staff confidence in the DSC. However, the question poses an area of interest for further research.

Memo writing

Charmaz (2014) stresses the importance of constant reflection on the categories to avoid the researcher's preconceptions influencing the theoretical coding process; this was facilitated by memo writing. Memo writing encourages thinking by the researcher about the codes, elaborates on and explores the codes in new ways that inform and support theoretical sampling, aiding the analytical integration of theoretical frameworks with empirical reality (Charmaz 1995; 2000). Straussian grounded theory advocates memo writing to track the patterns, questions, and categories (Strauss and Corbin 1990). Constructive grounded theory utilises memo

writing to document the researcher's thinking behind the comparative process. Documenting the conceptual analysis through memo writing adds an additional layer of transparency and rigour to the process (Howard 2013; Charmaz 2014). Memo writing was particularly important in documenting the rationale for the emerging categories (Appendix 14).

Peer review of the analysis process and findings

Throughout the data collection, analysis and writing up of the findings, accountability was maintained by my 3 supervisors, who independently reviewed, discussed and challenged my findings at independent stages of the process. Further rigour was added by choosing supervisors from non-midwifery backgrounds, mitigating against midwifery bias. The 1st and 3rd supervisors held nursing qualifications, the 2nd supervisor held experience in management and leadership outside the health service.

Reflexivity

An essential facet of constructive grounded theory research is the researcher's position with the participants in co-constructing theory. Charmaz (2006; 2014) is transparent about the subjectivity this induces in the research. A strategy for quality control to optimise the integrity and trustworthiness of constructive grounded theory is reflexivity, as the researcher seeks to understand self in creating knowledge (Berger 2018). With roots in symbolic interactionism, constructivism's concern is the influence of human interaction and how individuals make sense of the world (Howell 2013; Lincoln, Lynholm and Guba 2018). Therefore, it is essential to acknowledge the researcher's impact on the research process (Finlay 2002; Neill 2006). Reflexivity offers a vehicle to process and acknowledge the researcher's position and influence on the research process (Dodgson 2019). Often used interchangeably with reflection, reflexivity offers subtle differences. Reflection involves learning by an individual by looking backwards, in contrast to reflexivity, which requires the individual to self-examine and evaluates their influence on the research process (Finlay 2002; Neill 2003).

Reflexivity is explicitly recommended in constructivist grounded theory research as a mechanism for increasing the rigour and transparency of the research process (Neill 2006; Mruck and Mey 2007). Clarke (2011) argues that reflexivity provides the opportunity to 'put on the table' the impact of self on the research, data collection and analysis (Clarke 2011). Glaser (2002) rejects the necessity for reflexivity, arguing that the constant comparative process during the analysis stage in grounded theory exposes any potential influence of the researcher on the research process. Unlike the objectivist epistemological stance of classical and Straussian grounded theory, the emphasis is placed on the voice of the participants being heard in constructivist grounded theory. If the ethical principle of justice is to be considered, the blurring of the participants' and researcher's voices must be addressed. As a practising midwife and lecturer with previous management experience, I consider my personal and professional experience to date and its influence on my beliefs to have been a valuable resource in constructing meaning with the research participants. However, it would be naïve as a novice researcher not to consider, as an insider, the potential influence this had on the research process and findings. I refer to the term 'insider researcher' as a midwife, not a work colleague.

Whilst an outsider conducting the research could be viewed as more objective and concurs with Glaser's (2002) notion of the researcher remaining neutral to the research, both insider and outsider researchers contend with the methodological issues based on their knowledge (Fleming 2018). As an insider to the midwifery profession, a pre-understanding of the delivery suite environment, terminology, and MDT roles enabled me to develop questions and gain a rich understanding and insight that Fleming (2018) suggests may not be as easily uncovered by an outsider, external researcher. I was equally mindful of researcher bias relating to my personal values and experience and the influence this could project on the research questions, design and data collection. Fleming (2018) advises the insider researcher to stay neutral but acknowledges that it is not uncommon for

participants to ask everyday questions and the researcher to share their experiences. This was an approach I chose to avoid as I deemed my clinical expertise irrelevant to the study. However, I endeavoured to check and agree, meaning if I perceived the participant assumed as a midwife, I knew what they meant. The steps taken to mitigate against my insider knowledge influencing the research outcomes included piloting the interview questions and accountability through my 3 supervisors from non-midwifery backgrounds, which have been discussed earlier in this chapter. The inherent risk of the insider's informal power leading to coercion in recruitment was addressed through gatekeepers (Fleming 2018) and discussed in the recruitment section.

Charmaz (2014) advocates that researcher reflexivity is enhanced through memo writing and a reflective diary, which serves as an audit trail. Although reflective diaries are used in other schools of grounded theory, memo writing is central to the analytical process in constructive grounded theory, serving to document the researcher's thinking during the research's comparative analysis and theory development stages (Charmaz 2014; Birks and Mills 2015). Memo writing and reflective diary entries served as valuable tools to document my decision making throughout the research process and a platform for supervision discussion throughout this doctorate study.

Ethical tensions as a professional registrant

During the interviews, 2 of the participants had disclosed unapproachable DSCs as displaying behaviour that could be perceived as 'belittling staff'. As an NMC registered health professional, I understand my responsibility to report unsafe practices (NMC 2018). Before the interviews, I explained that I would need to break confidentiality if any dangerous practice was divulged, reiterated in the PIS (appendix 8). Post-interview with the tape recorder off, I ensured the participants were okay and explored with the participant if this behaviour was currently contributing to a toxic and or unsafe environment. In both incidences, without disclosing the identity of the DSC or naming the maternity unit, the participants confirmed the references made referred to many years previously and the individual DSCs in question had both retired

from the profession. This post-interview discussion was followed up and discussed with my Director of Studies.

Trustworthiness of the research

There is much debate over rigour in qualitative research (Polit and Beck 2012). In qualitative research, rigour refers to an extensive process undertaken within the context of the research journey without the rigid boundaries associated with quantitative research (Thomas and Magilvy 2011). I do not intend to enter into the debate about quantitative research being more rigorous than qualitative but to utilise Lincoln and Guba's (1985) 4 standards developed to address the concerns about trustworthiness in qualitative research:

- Credibility
- Transferability
- Dependability
- Confirmability

Credibility

The use of reflexivity discussed in chapter 6 was used throughout the data analysis process, supported by field notes, memo writing and reflective accounts (appendix 6 and 16). External consultation on the inclusion/ exclusion criteria and research questions served to add transparency and rigour to the research process (Neill 2006; Mruck and Mey 2007; Charmaz 2014).

Glaser (2002) is critical of the subjectivity of the intimate position of the researcher within the constructive grounded theory and the researcher's effect on the rigour of the data collection and analysis. In response to this criticism, I have sought to adopt Charmaz's (1995; 2014) level of transparency as a researcher throughout the thesis, clarify my professional background, and use memo writing, reflective accounts and accountability meetings through supervision to add a layer of transparency and rigour to the research process.

Transferability

Qualitative research is viewed more critically for its transferability (Hardman 2012). Charmaz (2014) suggests that the collection of 'thick data' addresses this criticism. Several strategies in the research were adopted to mitigate against lack of transferability. Purposeful and theoretical sampling served to represent all staff groups within the MDT and achieve data saturation. The research site was deliberately chosen as it represented the majority of maternity services provided nationally, therefore representing the national challenges and complexities of intrapartum care for the DSCs and MDT. External expertise on the study design from health professionals working in the field was sought to maximise the transferability of the findings to other units.

Dependability

Dependability relates to the ability of future researchers to follow the audit trail of the study and retrieve similar results (Thomas and Magilvy 2011). The ethos of dependability is more challenging within the constructive grounded theory, the theoretical underpinning of constructivism advocates that human experience is affected by the social context (delivery suite) and overtime (career to date) (Guba and Lincoln 1989; Howell 2013; Lincoln, Lynholm and Guba 2018). Within the constructive grounded theory, the term resonance is used in preference to dependability. (Charmaz 2014) maintains this is achieved through data analysis and portraying the participants' reality, achieved in the rigorous coding by hand and theoretical sampling. The inclusion criteria of participants who had worked at other units sought to mitigate against the biases of a single unit's culture, although I acknowledge this was not feasible for the MCAs and ward clerk.

Confirmability

Confirmability is achieved when credibility, transferability and dependability have been established (Thomas and Magilvy 2011), demonstrating openness as the results unfold. The purpose of grounded theory is to discover the theory from the data instead of imposing theories from other studies (Chiovitti and Piran 2003).

Throughout this study, I have sought to present the participants' voices, remaining true to theory development grounded in the data.

This chapter has presented the approach taken to the research process and sought to explain the measures taken to maximise the trustworthiness of the research. The next chapters 7, 8 and 9 present the findings from the interviews.

The findings from the research will be presented as 3 separate chapters to reflect the 3 categories generated from the data analysis. Chapter 7 reviews the evidence underpinning the situationally aware DSC, Chapter 8 the staff support provided by the DSC and chapter 9 the approachable DSC.

Overview of the research

My overall impression of the maternity unit from the research was that staff felt the MDT worked well together and were keen to emphasise the positive attributes of the DSCs. Any negative comments were made in the vane of areas for improvement rather than problematic DSC relationships. In keeping with the inclusion criteria the staff had worked in more than 1 maternity unit, therefore it was impossible to determine if their comments related to past or present DSCs.

Clarification of terminology

Throughout the findings section the DSCs are referred to as excellent, good or ineffective to differentiate between those DSCs who had a positive or negative effect on the shift (table 21).

Table 21: Definitions of terms used in the findings section

Term	Explanation of term within the context of the findings
Excellent DSC	DSCs who the participants viewed as having exceptional attributes which made them ‘stand out’ from the other DSCs
Good	DSCs who the participants viewed as having attributes which had a positive effect on the shift.
Ineffective	DSCs who the participants viewed as having had attributes which had a negative effect on the shift

Chapter 7.

Situational awareness (SA): 'The Helicopter view'

This chapter explores the overarching category of SA. The colloquial term 'helicopter view' was used interchangeably by participants to mean SA; therefore, SA will be used. SA is defined as an appropriate awareness of the situation (Stanton, Chambers and Pigglott 2001), or more simply, knowing what is going on around us (RCOG 2017). The 5 categories from the focused coding underpinning SA are summarised in table 22.

Table 22: Focused coding SA

Overarching category from theoretical coding	Categories from focused coding
Situational awareness (Helicopter view)	Helicopter view
	Proactively leads
	Ability to make decisions under pressure
	Sharing of information
	Organised and in control
	Knowledge

The helicopter view, although initially a category from the focused coding, become the overarching category. What follows are direct quotes from the participants which relate to DSCs with SA. For clarification ……..within the quotes represents natural pauses in speech by the participants and the participants responses are in italics. Field notes are used to illustrate observations I made, particularly concerning the non-verbal cues which were impractical to capture on tape. The codes in table 7.2 relate to staff groups and order of interview. For example, R2= the 2nd registrar interviewed.

Except for the introductory and concluding question, very few additional questions were required to facilitate conversation. For clarity of presentation where the participant's quotes represent their immediate response to the question, the question has been cited. When the participant's quote represents a natural line of thinking several sentences after the question, the context of the comment has been cited.

Table 23: Interview codes

Staff group	Staff code	Order of interviews	Code
Consultant	C	1	C1
Registrar	R	2	R2
Senior house officer (SHO)	SHO	1	SHO 1
Midwife (band 6)	M6	1	M6-1
Midwife (band 5)	M5	3	M5-3
Maternity care assistant (MCA)	MCA	1	MCA1
Ward clerk	WC	1	WC1

SA was explained from 2 aspects: What the SA DSC portrayed and how the DSC achieved SA.

DSCs who maintained SA throughout the shift were perceived as being organised and in control. Consultants identified positive shifts as being associated with DSCs who were organised and in control which set them apart from other DSCs.

> Interviewer: Can you think of shifts where it has gone really well? I am interested in the attributes of the DSC of those shifts.
>
> *Consultant: Yes, okay… so I think very positive (clearly knowing precisely what they meant) the shifts that are good shifts that I leave thinking yes that was a satisfying day….. To me those coordinators are very organised and very in control and are actually slightly set apart from the rest of the midwives (C2).*
>
> *Consultant: It's about how the coordinator communicates with the whole team and having 'a presence that is felt' "I would put that in" (requested by the interviewee) that aura of confidence (C3).*

The consultant explains the organised DSC exudes a persona of confidence articulated as having a presence being set apart from other DSCs. Midwives and registrars viewed the organised and in control DSC as a coordinator that knows what was going on, which was understood by the MDT on the shift. Knowing what was going on had slightly different connotations for the midwives compared to the registrars. Midwife M6-3 clearly links 'knowing

what is going on' with control of the unit, whilst the registrar links 'knowing what is going on' as crucial on a busy shift:

> *Midwife: Just you feel that they're in control of what's going on everywhere within the unit (M6-3).*
>
> *Registrar: I think it's about someone having to feel that they have a grasp of what's going on and they're confident in their own ability to achieve things to get the job done (R3).*

Field notes for all the interviews noted that very minimal prompting about the organised, in control and confident DSCs was required. Several entries noted how the non-verbal communications, particularly the facial expressions of participants, demonstrated they did not need to think hard; they intuitively knew and were clearly visualising the excellent DSCs in their mind, which they portrayed as a smile on their face, often bordering on a look of excitement, as they would launch into a free-flow conversation with minimal prompts from me.

'Confidence' was a finding throughout the study, which appears to be multifaceted, not an attribute in isolation, but a consequence of multiple factors. Within the context of SA, confidence related to confidence by staff in the DSC who was situationally aware and conversely a DSC with SA exuded confidence. These multifaceted factors linked to the term 'confidence' will be made explicit throughout the presentation of the findings section. The term in control was also synonymous with SA.

Understanding the bigger picture

The following quotes demonstrate that all staff groups identified with the effective DSCs as someone who had the bigger picture of the activity, frequently referred to as the 'helicopter view'. For the registrars the bigger picture was the activity on the delivery suite, women's progress within the individual rooms and the collation and synthesis of this information by the DSC on the central communications board. The consultants and midwives viewed the bigger picture as a wider understanding by the DSC of activity on

the maternity unit as a whole, which had the potential to impact on the delivery suite. This involved knowledge of the activity on the antenatal and postnatal wards, the maternity assessment unit (MAU) and the adjacent midwifery led unit (MLU):

> *Registrar: So the coordinators that I think of in terms of positively, I very much think that they will have an overview of the whole board, as well as a grasp of the detail, of what's happening in the individual rooms, so that have those 2 things going on at the same time (R2).*
>
> *Consultant: You see that in everything they do so…. They have a very good overarching view of the unit, what I would call a 'helicopter view', they know what's going on in every room with every woman (C2).*
>
> *Midwife: Just you feel that they're in control of what's going on everywhere within the unit*
>
> Interviewer: Could you explain what you mean by being in control?
>
> *Control is possibly the wrong word, just having that like um…. 'Helicopter view',… Looking at the whole picture. Just having that overall view of the unit, I think is to me what makes a good team leader (M6-3).*

The board is the central communication board, either a whiteboard or electronic version, which has a summary of all the women on the delivery suite together with key information, such as progress in labour. The board is usually located in a central point on the delivery suite accessible to all staff to communicate the current situation. Early in the analysis, it became clear that the DSC was a very complex role. The registrar (R2) eloquently explains the need for the DSC to switch between details of the individual women in the individual rooms to the broader picture with information recorded on the communications board. In the early analysis and memo writing, I used the analogy of a jigsaw puzzle. It was a term I found to be a helpful abstract thought to visualise and understand why this detail and the wider picture was essential to the staff. I therefore intend to use this analogy as a framework to create a visual image for the reader throughout the findings section. In the discussion section, I explain why the ability of the DSC to collect the correct pieces of the jigsaw to complete a correct picture is important.

For the purpose of this research, the jigsaw pieces represent the information, detail of women, staff and capacity. The information board is the area where the DSC constructs the jigsaw to build a picture of the current situation. Excellent DSCs, those who stood out from the other DSCs due to their exceptional attributes, were able to conceptualise the important information beyond the delivery suite. When asked about excellent DSCs, this midwife explains the DSC's impact extended beyond the immediate delivery suite influencing the functioning of other areas such as the ward:

> *Midwife: The ones I would say…. I've noticed them, not when I've worked on the delivery suite, but on the postnatal ward, they ring for beds, and you say, "actually we are really struggling, we are only 3 members of staff"….. And they understand that*.
>
> Interviewer: You seem to be saying they have an understanding of more than just delivery suite?
>
> *Yes, absolutely they (referring to the DSC) have that picture of the whole of the maternity unit rather than just the delivery suite (M5-1).*

The DSC role was important to staff beyond the immediate delivery suite. Midwife M5-1 explains knowledge of activity and staffing by the DSC of the wider maternity unit is key to maintaining standards and safe care across the maternity service, delivery suite does not stand in isolation of other clinical areas.

The bigger picture, SA by the DSC, was particularly important to the SHOs and registrars. However they expressed the effect of the situationally aware DSC from a different perspective, the DSC had a direct effect on their ability to plan their workload and do their job effectively. SHOs and registrars work between the delivery suite, ward and MAU. Knowledge of the wider activity by the DSC (SA) and their ability to articulate the priorities, enabled the doctors to prioritise their workload more effectively, reducing stress through the avoidance of and unnecessary workload. This SHO explains the guidance of the DSC:

SHO: So a good coordinator has an awareness of everything that is going on on the maternity unit, 'SA'. That is so important because they will be guiding us in terms of what needs to be done (SHO1).

The DSCs who had the bigger picture were also respected by midwives working in other areas of the maternity unit. In the following quotes the midwives, currently working on the delivery suite, recalled that when working on the MLU and ward how the excellent DSCs achieved the 'helicopter view' of the wider maternity unit by proactively engaged with the MLU and ward, either by phone (M6-4) or physically visiting the relevant clinical area (M5-1). This appeared to be more important to staff when the MLU or ward became busy and staff were asking for support:

Interviewer: You seem to be saying excellent DSCs are aware of what is going on?

Midwife: Yes, yes, it's just about constant situational awareness they're phoning low dependency and asking, "What women have you got? Do you need help?" "Are you able to give help because we are really short? (M6-4).

Interviewer: Are there any team leaders that you can think of when the unit is exceptionally busy, stand head and shoulders above other team leaders in terms of having it altogether?

Midwife: Yeah, there is…...

Interviewer: What is that?

They then turn up, and they look at the board, and they say "okay yes that's really rubbish let's see what we can do to help you"

Interviewer: So, they are making themselves aware of the proper situation rather than on the surface is that what you're saying?

Yes, the good ones will go around naturally see it for themselves (M5-1).

The physical act of the DSC going to the other areas of the maternity unit was perceived by midwives to lead to a more accurate assessment of activity in different parts of the unit. This assessment was based on the complexity of the women on the ward not just the number of beds occupied. The DSC

ensured they collected the right pieces of the jigsaw not just counted numbers. Midwives working on the delivery suite explained how the DSC would hand over the coordination responsibility to another senior midwife while they visited the clinical area expressing activity concerns. This was in contrast to DSCs perceived by midwives to be less effective, who made a judgement call on clinical pressures based on superficial information without ascertaining the bigger picture of clinical dependency factors on the ward. The following comment relates to a DSC perceived by midwives to be ineffective when the ward is exceptionally busy

> *Midwife: Then you have others who ignore what you're saying and let you struggle on postnatal ward. And you get comments like got 10 empty beds, and you say, "yes, we've got 10 empty beds, but that doesn't reflect the workload that we've got" they don't actually get off their seat to come and see what's going on (M5-2).*

All the MDT staff related to the DSC who possessed SA, often referred to as the DSC who had their 'finger on the pulse'. DSCs who lacked SA were a particular source of frustration for the doctors who relied on the DSC's helicopter view of the unit to make clinical decisions based on activity levels. This was particularly problematic at night. At night consultant support was from an on call consultant at home. The following quote from a consultant explains the frustration of a poor knowledge of the bigger picture by the DSC who lacked SA and called the consultant at home during the night as they try to ascertain if they are required to come into the maternity unit from home in the middle of the night:

> *Consultant: "We have got lots of women delivering"…… So, I'd ask what's the registrar doing?..... typical reply." I don't know not seen them for ages, "so where's the SHO?" "I don't know. I think they're in A & E" (C1).*

For the registrars, who were the most senior obstetrician on site, out of hours, this lack of SA by the DSC added an additional layer of responsibility and stress, explain by this registrar:

> *Registrar: The thing that I find frustrating is if the midwife (DSC) who doesn't have control of the situation, that 'helicopter view, 'then you feel the whole responsibility rests on your shoulders as the registrar if you're on nights and there is no consultant (R3).*

The registrar suggests the lack of SA by the DSC puts additional pressure on them, particularly at night when they may be the most senior obstetrician on site. Reduced staffing levels out of hours suggest a level of vulnerability and associated stress for the registrar if the DSC does not maintain SA of activity on the unit. This was confirmed in a post interview conversation with one of the registrars who opened up to the stress and anxiety registrars feel when they are working a night duty shift with a DSC who lacks SA. The registrar described the feeling of being 'stuck' in a room or theatre doing an instrumental or operative birth, not being able to leave the room or operating theatre wondering what was happening on the wider unit and whether they would emerge from the room or operating theatre 30 minutes to 1 hour later into an chaotic environment. The registrar eloquently explained the mental stress of trying to block out their concerns about the ineffective DSC and wider delivery suite management and concentrate on the task in hand, which became progressively more difficult to do as time went on. How it took great mental strength not to rush the procedure in desperation of getting back to the delivery suite control area. This was in direct comparison, to the same situation working with situationally aware DSC where they felt totally relaxed and confident that everything would be under control, enjoying to 1 to 1 care they were able to give. (R1) (a conversation included with verbal consent).

The SA DSC had a direct impact on the confidence of the consultant on call. Consultants would articulate how their anxiety levels were reduced if they knew the DSC on the night shift possessed a high level of SA. They felt secure in the knowledge that these DSC had the helicopter view and would contact them in a timely fashion with any potential concerns, which in turn affected their stress levels and quality of sleep. The following is a comment made by a consultant relating to being on call from home at night:

> *Consultant: They are the team leaders (referring to DSC who have a good understanding of the 'whole picture') that when I go home at night, and I'm on a nightshift then I'm confident that they will have 'eyes on everybody' (Earlier in interview refers to this as helicopter view) and if they have any concerns will ring me (C2).*

The impact of the SA DSC was not confined to doctors. This astute observation by the registrar succinctly articulates the direct impact they observed on other staff of a situationally aware DSC:

> *Registrar: So along with that (referring to the helicopter view), it may be a coincidence, but that type of coordinator always seems to be in control of things; they are often….. There is a kind of a nice, more relaxed atmosphere and often they'll be a bit of banter there too. That's probably a personal preference, but I find the 2 things often go side-by-side, and often is perhaps that coordinator, they feel like they're in control, they feel like they're in charge, so they're relaxed to give a bit of banter and not feel like the pressure is on (R2).*

A DSC, who is in control, reassures staff and creates a positive working environment, which in turns reduces unnecessary staff stress because staff know the DSC understands what is going on and is control of the situation.

Proactive about collecting information (the pieces of the jigsaw)

All the staff groups identified the importance of the DSC knowing what is going on. I have discussed how DSC obtained information from adjacent clinical areas, however, all the MDT identified how important the collation of current information on the delivery site was for the helicopter view and how it directly influenced clinical decision making. Field notes from the first interviews and memo writing associated with the analysis indicated that staff identified that the excellent DSCs had the innate ability to gather the information required for SA, and others did not. From the theoretical sampling, this was an area that was further developed in subsequent interviews. Some participants spontaneously explained how the excellent DSCs collected information (R1), and others required a prompting question to expand on the explanation to include this information (R3 and M6-3):

Registrar: Someone who is proactive rather than waiting for people to come to them; they go to the rooms to find out what's happening (R1).

Interviewer: At the beginning of the interview, you talked about the really good coordinators having all the information, 'the helicopter approach'. Is there anything you've noticed about the excellent coordinators in all the units you worked in and how they gather that information? Is there anything you've noticed that they perhaps do differently?

Registrar: I think they go into the rooms and see the women when they come on the ward rounds; they take a good handover (R3).

Midwife: I think some of the team leaders, the ones I would view as good team leader (DSC), makes sure she is aware of that information so she will go to each room and get an update or make sure she catches the midwife in each room, see what is happening asking them what is happening in their room and updating the board (M6-3).

The registrars and midwives explain how the good DSCs take the initiative to go to the midwives in their rooms rather than expecting the midwives to come to them. Articulated in this consultant interview as leading from the front:

Consultant: I think they're on their feet and then not team leading from the office. They are team leading from the shop floor, they're in and out of rooms as necessary making sure that progress is happening and they know when and who is due for an examination and if that's been done but not updated on the board, they will go find out because they need to know what's going on (C2).

This collection of information was important not only for updating the communications board, but also MDT communication, in particular handovers and ward rounds. This midwife talks about how good DSCs ensured they were prepared for the ward round to brief the team:

Interviewer: Is there anything you've noticed about the really good coordinators and how they get that information?

Midwife: So from my experience, it's the coordinators that,… so obviously there is the initial handover with all the staff, and once they've had that initial handover, they go into every room to get likely a

1 to 1 handover from the midwife and introduce themselves as the coordinator for that shift. If there is CTG, they will have a quick look at the trace, will also look at the board about personal details, so they know what's going on. That's also for her benefit because they also do the ward round with the doctors, so she's already got that bit of knowledge built up, so when she walks in (as part of the doctors round), she's not completely new to the situation (M5-4).

Those DSC's viewed as 'good' by the participants proactively gathering pieces of the jigsaw prior to the ward round to ensure the clinical picture was informed by the right pieces of information, which is then uploaded to update the communications board and accurately facilitate joint decision-making. Midwives and MCAs in particular identified how the excellent DSCs did not limit this information gathering to set times, such as ward rounds; information gathering was a constant process. Midwives and MCAs explained how DSCs regrouped with staff, known as 'mini huddles', to gain a joint MDT understanding of the situation and plan priorities, as the clinical picture and capacity of the delivery suite changed:

Interviewer: Is there anything you've noticed about the really good coordinators that have that knowledge and how they get that knowledge about the women on the unit?

Midwife: What I noticed, it was a few shifts ago that I had stood watching a coordinator, and I noticed that the coordinator stopped and said, 'can we just go over this hand over again'? And had a kind of mini huddle, all the members of staff just to try and work out what had happened, getting an update from everybody. So, although we have a handover, beginning shift, she did mini handovers throughout the day, just to make sure she knew everything was up to date (M5-3).

MCA: Yes, again it's just about being organised, they go round and speak to each person in turn 'where are we at? What are we doing?' That type of thing huddles are great just because we could have chance to take 5 minutes altogether to find out where we're all at. And that makes it go bit more straightforward and a lot calmer, rather than everybody trying to run around doing their own thing and not knowing where each other is at or thinking I'm not getting any help (MCA2).

'Where we are at',' and 'can I just go over': these midwives and MCAs' suggest that these DSCs are maintaining 'the helicopter view' by constantly updating information within a constantly changing environment. That

updating of information also involves checking their understanding of the information and the emerging picture with others, working with the staff to complete the jigsaw. The collective discussion, do we have all the pieces we need to have; have those pieces changed?

All staff groups articulated how situationally aware DSCs were proactive; they were physically on their feet 'in and out of the rooms' to get the relevant clinical information recording the information on the communications board. This was in direct contrast to the ineffective SA DSCs referred to by participants as office-based:

> *Midwife: It is a stressful role, but I think just being present all the time on delivery suite and is being accessible to everyone is the main thing because some of the team leaders that don't leave the office so much, they aren't… may be so approachable (M6-4).*

Field notes consistently noted how staff interviewed were reticent to discuss ineffective DSCs. However, this was an area where a sense of frustration permeated into their responses. DSCs who were not proactive in collecting information expected midwives to leave their delivery room to come to them, which gave the persona of a workshy, unapproachable individual. The notion of approachable/ unapproachable DSC is explored in chapter 9.

The doctors and the ward clerk noted the reverse, where DSCs would get embroiled in the delivery room for long periods of time, unavailable for updates. This registrar expressed frustration about DSCs who got embroiled in clinical care within the rooms and were not available to brief the medical team at handovers:

> *Registrar: So, the flip side of that (referring to DSCs who do not have SA) if I don't feel that they have that view they're either getting into getting too involved in... In rooms where they shouldn't be, for example, there might be a junior midwife, and they could use another senior midwife to go into the room that has not been allocated staff. I can see that, so it won't necessarily be that is not that availability of staff. I could see why aren't using this person. Because you need to be out, and we need to be staring at that board, you know…And*

naming no names I've worked with coordinators, for example, are always never present at the medical handover because they're in a room, and it's like the medical handover is the same time every day. So how can you never be there? And you go to the room, put your head in and say would you like to join the medical handover but get very frustrating, which is problematic as the doctors are not present at midwifery handovers (R2).

The lack of availability of the DSC to provide advice was also a source of frustration for the ward clerk, who described being put into a difficult situation and making decisions in the absence of DSC support due to the DSC lack of availability:

Ward clerk: Yes, absolutely, so she's caught up in a room (coordinator) and midwife on the other end of the phone (referring to a midwife on the day assessment unit wanting to transfer a woman) that she needs to come. I'm left with saying, well, you bring around, I'm not sure who's going to look after her (WC1).

This midwife explains from a midwife's perspective why it is important that the DSC has an input into the ward round the lack of and need for joint MDT planning that may also explain the registrar's frustration of DSCs not being present at handovers and ward rounds:

Midwife: When the doctors are present in their handover, they're (DSC) present to and will give their input. So, they will take handover from everybody else (relating to the midwives) and go, if necessary, to advocates as to why we are doing certain things, so basically having an opinion on the plans of care. So, for example saying 'should we try this? Should we try that?' (M5-1).

The DSC's lack of contribution to the handovers is discussed further in the decision-making chapter 8. However, the following comments by doctors from interviews with participants C1 and R2 gives an insightful perspective as to why some DSCs have the ability to balance between how long they should be in a room to support midwives without it impacting on their ability to maintain the helicopter view and MDT handovers and other DSCs struggle. This consultant and registrar talked about DSC's ability or inability to make the transition from a band 6 role providing 1 to 1 clinical care to the

management of people role, the MDT, suggesting managing people requires a very different skills set to managing clinical care:

> *Consultant: That ability they tend to raise themselves up away from 'I've got to do everything' role which is a big problem that the girls moving up (from a band 6 to DSC role) have, because they've been the midwife in the room doing everything, and they want to be the midwife in every room doing everything. And some of them are not good at making that transition (C1).*
>
> *Registrar: Because they're almost clinging onto their old (midwife) role, and that's not the role now the role is to be about looking to see what's happening in each area. Don't get me wrong. It's a really tough role (R2).*

The inability to transition from midwife providing 1 to 1 clinical care to managing staff activity, may be a confidence issue or the inability to judge how long was acceptable to stay in a room away from the central board.

In summary, proactive DSCs who went into the rooms for information added an additional layer of support for midwives, who were often unable to physically leave a labouring woman and the delivery room environment to share key information. Midwives not only viewed DSCs who are office-based as lazy, they were also concerned that they did not have the whole picture because they lacked their part of clinical information, which in turn could adversely affect the overall clinical picture on delivery suite . The doctors and ward clerk wanted the DSC available at the board to discuss care. Therefore the good DSCs were able to achieve the balance between collecting the information from the rooms but avoided getting embroiled in clinical care, so they were available at the central area to advise staff on events and support MDT decision making.

Juggling balls-The ability to make decisions under pressure

In the previous section, participants elicited how DSCs maintain SA through the proactive gathering and sharing of information. All staff groups also explained how DSCs could process multiple pieces of information they had gathered to make decisions, referred to as ‘juggling balls’ by this consultant:

Consultant: You have just got to make those decisions, and you've got to assess things quickly; you have got to be able to juggle lots of balls. It's about 'juggling all those balls', know which ones you can drop, a few minutes and which ones absolutely have to keep up in the air or keep your focus on (C1).

The consultant crystallises how they viewed good DSCs as being able to use the information they gather, process multiple pieces of information and use this to prioritise and stay focused under pressure, 'the ability to juggle balls'. Using the jigsaw analogy, was about having numerous pieces of the jigsaw and deciding which pieces were essential to use first, which part of the picture that is most important to construct and concentrate on and identify which pieces could wait. The following interview extract from the interview with registrar (R2) explains what that equates to in practice:

Registrar: 'It's that I've got the whole view I know what is happening in all my rooms I know where all my staff are and have a doctor vacillating because either she goes to theatre or she doesn't because these things can happen in about an hour. That is what you really need in those situations (R2).

Interviewer: Is that one you would rate as an excellent coordinator?

Yes absolutely. It's something about being current with the information. Yes, and having that overall view and that change based on just one room. In one room, you may expect to be fully and there are only 8 cm, so that might now mean a section so that completely changes the workflow' (R2).

The doctors suggested excellent DSCs are current with the information and in tune with the subtle changes that impact on decision-making. This attribute was particularly evident when the unit was busy and the DSC under pressure. The DSC's ability to prioritise information and communicate the priorities to the MDT was particularly important to the doctors and midwives interviewed who valued concise information from the DSC to clarify the priorities, which in turn enable them to prioritise their workload. The following 2 quotes from midwives describe excellent DSCs in action when the delivery suite is very busy:

Midwife: Then also it's been crazily busy, having like many huddles. Getting everybody in to say 'right, where are we at?' Okay, so we can move this person, we cannot move that person, so making a plan, so everybody is aware of what's going on (M5-4).

Midwife: It's their (DSC) ability to prioritise. I think that is important…. Yes, prioritise, really …. Leave that… Please do that….some do it better than others (M6-1).

'Right where are we at?' being current with the information, prioritising and communicating the priorities to staff is succinctly articulated by this consultant:

Consultant: Sometimes, it's about eliciting the wood from the trees (C4).

The use of the central communications board as a means of team communication was referred to in several interviews, particularly when staff described good DSCs. The following quotes by a midwife and registrar refer to good DSCs in action:

Registrar: Thinking of 1 team leader, in particular, that's clearly how she gathers information too. Because she's so strict about what goes on that board, and she gets cross if someone has not updated her and there is information that has not gone via her. She is slightly fanatical (laughs) about who writes on the board and what they write, that's obviously because that's her domain for information you need to ask permission to write on that board, and that's fair enough. I also see the board as absolutely central. So, I personally never write on a piece of paper because the board is almost seared into my mind and to me it's a constantly moving thing because if I write a piece of paper, it might be irrelevant in one hour's time (R2).

Midwife: I think some of the team leaders, the ones I would view as good team leaders, makes sure she is aware of that information so she will go to each room and get an update or make sure she catches the midwife in each room to see what is happening, asking them what is happening in their room and updating the board (M6-3).

The good DSC uses the board as the central point of information for the overview of the delivery suite. The DSC also understand the importance of

updating changes as they occur, keeping the information board current and up to date with the latest relevant clinical information, serving as a visual prompt for the MDT. The collation of information would appear to be more important to the MDT as activity increased. In their interview this consultant gives an insight as to why this may be important:

> Interviewer: Are you saying standing back looking at the board?
>
> *Consultant: Those that can keep their cool and still organise everything, things can be very difficult when you haven't got enough staff, you need to regroup every now and again… Let's go over what we've got here these are the priority….. We're going to do this that…. Write the timings on the board when certain things have to happen (C4).*

The excellent DSCs use the central communications board as the focal point for team communication and decision-making. They understood information on the board which is not current can influence the accuracy of the clinical priorities particularly when the team is under pressure.

Apart from the SHOs and ward clerk, midwives, MCAs and doctors all articulated the importance of the DSCs having the capabilities to process multiple pieces of information, mainly when the unit was busy, and information streams became more complex. However, the relevance of DSCs ability to 'juggle balls', had different connotations for the different staff groups. For the consultant, it was not just the ability to process multiple pieces of information. Consultants talked about the DSC's ability to determine which pieces of information were important from the multiple bits of information they were receiving and the ability to use this information to prioritise medical input. The registrars in their interviews explained they wanted the DSC to communicate key information; however, it was also about the accuracy of the information on the communication board for the registrar. When the unit was busy, registrars in particular used the communication board as a visual tool to determine which women were more likely to require their attention and potentially pre-empt clinical situations, for example, 2 women requiring a caesarean section at the same time. For the midwives

interviewed, it was the DSC's ability to quickly synthesise information to determine the priorities and clearly communicate this to their staff. How the DSC communicated this information to the MDT was also key to all staff groups, the ability to get to the 'nitty gritty'.

Shares information-Getting to the nitty-gritty.

Having processed the information, participants identified how good DSCs were able to clearly and concisely articulate key messages to staff. Doctors valued succinct direct information. This consultant explains how good DSCs communicate concisely.

> *Consultant: There are some team leaders that will give you that information, but it's wrapped up in umm… A lot of layers, like an onion, and you have to peel away the layers before you get to the 'nitty-gritty' bits, and their other team leaders will be able to go, bang bang bang bang bang. What I want is bang bang bang bang bang. So, it is the ability to do bang bang bang bang, however if you don't have it doesn't matter it just takes longer, the handover takes much longer (C3).*

Peeling away layers of onion to get to the 'nitty-gritty' takes time, the DSC is relying on the doctor to make decisions about what is and is not relevant in the information to the clinical decision-making process, rather than taking the responsibility to make that decision. This is succinctly explained in the following consultant interview:

> *Consultant: So, I guess it's the people who can sort of pick out what information you actually may need (C4).*

The consultant goes on to explain how they use good DSCs to précis messages to support their decision-making if the registrar is vacillating, in particular when they are off site on call at night. The quote relates to the consultant being on call at night and receiving a phone call from the registrar at home:

> *Consultant: I have used the team leader when the registrar is not very good at explaining things and they are really waffly and they go, "well,*

it's just not quite right the CTG" and I am thinking, Okay but I cannot see it what exactly do you mean… and I think can I just speak to the team leader…(C4).

This SHO interviewed shared the consultant's frustrations with DSCs who lack the ability to get to the nitty-gritty:

SHO: So, the midwives are worried we think yes so, we will have to go and see. But if they don't know what's going on or if they are unsure... They sort of have to get a grip of what's going on first. Also, when the team leader gives the handover, it's not about going into the social circumstances, the mother said this….. The mother said that etc….. Yes, that is important but need the medical first. So, her medical situation of the CTG etc. with the social bits at the end (S3).

The doctors wanted the DSCs to give concise handovers to avoid the key messages being lost in translation. The doctors interviewed discussed how they rely on a clear handovers to enable them to prioritise other work commitments, which are influenced by the delivery suite activity, this is explained in the following 2 quotes:

SHO: So I think key is SA and giving us a good handover that will help us (referring to the doctors) prioritise. Because after the handover, we go on our ward round, so it really helps us to prioritise things unless there is a dire emergency that they're dealing with. Having that crucial information is important to us especially about who is in labour, what is going on in the induction suite, who's coming in because we start to prioritise our day from that handover (S1).

Consultant: What I really want to know is am I going to have 2 caesarean sections at the same time. What am I planning to do the next few hours? (C3).

Doctors rely on clear handovers from the DSC to plan when they can leave the delivery suite to attend to work in other areas of the maternity unit and how much time they have before they are required to return to the delivery suite.

Clear and concise information from the situationally aware DSC was also important to the ward clerk, in ward clerk interview they explained how the

DSC's ability to share key information influences their ability to plan their activity for the day, which ultimately affects customer service:

> *Ward clerk: There are team leaders that come on and the day is organised and you don't have to say who is taking this induction because they would already know; they will say…... When so-and-so comes in…... She is taking her (referring to the midwife), or she's going in this bed, which helps me. I think sometimes when things aren't communicated…… I think it sometimes when you get inductions coming into the unit. You need to know who's having them and the team leader on that day says….' I don't know if you can find so-and-so' to see if they can have them…(WC1).*

Trying to elicit the information once the woman has arrived portrays disorganisation beyond the ward clerk's control, impacting on their ability to provide good customer service and affects the pride in their job and the associated job satisfaction. This MCA explained how a lack of information from the DSC can cause unnecessary and awkward conversations with women, which could easily be avoided:

> *MCA: So if there is certain things going on in the rooms, that's helpful to know because if you go and answer a buzzer, you're not 'blind-sided' likes sort of putting your foot in it, like saying something that is not right if you're not sure what's going on in the room you know. You know how to adjust what you're going to say how you can be towards a person (MCA2).*

When the unit was busy or an emergency occurred, doctors and midwives admired the direct communication style of DSCs, which in turn directly affected their ability to function in the situation. The MDT did not need to know everything, just their role, staff wanted clear and concise instructions from the DSC. This was articulated by both a midwife and a consultant in their interviews:

> *There were others (referring to an emergency) who make sure everybody knew what they were doing. Relates to an emergency situation, I've had a few coordinators that come in and it hasn't been very clear who was taking the lead, was it the midwife in the room caring for the lady or was it the team leader? (M5-3).*

Consultant: It is the fairly assertive midwife, the rather sort of 'bossy' midwife who can just say you do that…. You do that…… I need that that… And that for that…… Sort of midwife (referring to the team leader) stands out as being particularly good in those cases (C2).

This style of direct and succinct communication by the DSC to staff in emergency or busy situations gave staff the confidence that the DSC was in control of the situation.

In summary, good DSCs were able to communicate clearly and concisely but required SA to ensure all the relevant information was communicated. The inability of the DSC to be SA and to communicate succinctly had a significant impact on staffs' ability to effectively plan their work, carry out their role and so directly affected their job satisfaction.

Organised and in control: Remains calm

The ability to handle and process multiple pieces of information under pressure has been presented. DSCs who staff referred to as 'knowing what was going on' (being in control) were also described as calm which portrayed a calming influence on staff, particularly when the unit was busy.
The MCAs and registrars referred to the influences of an effective or ineffective DSC on staff when the unit is extremely busy. This quote relates to busy shifts:

Interviewer: Is there anything when you come on shift seeing a DSC on that you immediately feel confident in that person? Is there anything you can think of about those individuals?

Registrar: Yes, there are ones where I think this can be okay I think they are more in control, more directive to staff. Very calm. Know exactly what's going on, not phased I suppose they have to be very grounded and experienced (R3).

'Very grounded' gives a subtle insight into staff confidence in the DSC on shift because they are able to remain calm when the unit gets busy. The following extracts from a consultant and MCA's explain why it may not be

‘okay’ if the DSC is not calm and in control and how this impacts on the MDT on the shift:

> *MCA: I think it’s not panicking. Not being able to organise themselves, I don’t really know how to explain it,…… So, if something is going on … Just take 5 minutes out to look at everything to order it out. Whereas others just come in and go aww 'where do I need to go where do I need to be?' (Mimicking a stressed voice) I think that projects onto everybody else, the shift goes a bit….. Crazy (MCA1).*
>
> *Consultant: Some midwives (DSCs) will say I just need more staff.. I need… you now; they seem to lose the plot (C4).*

All staff groups outlined what they felt was the impact on the MDT of DSCs who were unable to stay calm under pressure and the associated stress felt by the staff of lack of control of the situation. This was in contrast to the good DSCs who were able to handle multiple pieces of information and make quick decisions under pressure whilst remaining calm and in control, which was often aligned to confidence from their knowledge.

Knowledge: Knows their stuff

Previously clinical staff suggested DSC confidence was associated with maintaining the helicopter view with the doctors suggested this may be linked to the DSCs ability to transition from a role (band 6) providing 1 to 1 care to the DSC role managing staff and multiple clinical situations. Namely, the confidence to transition from ‘the doing’ to ‘the supervising’. The following extracts suggest all staff groups linked the confident DSC with their knowledge base which underpinned their decision-making, referred to as ‘knowing their stuff’. This in turn it was suggested created confidence among the staff and a positive working environment. This midwife and MCA explain further:

> *Midwife: Even if the board is crazy, you've got a team leader who is a confident team leader ‘knows their stuff’ and happy in the role and happy even if the board is busy, everybody tends to be really positive and upbeat and works together really well, even if it’s absolute bedlam we can still laugh in the coffee room…(M6-2).*

MCA: There are also those (referring to DSCs) that really 'know their stuff', and you can see the doctors know that (MCA1).

The following extract confirms the MCA's observation from a consultant interviewed:

Consultant: What makes a poor one…there are maybe 1 or 2 who are less clinically confident… that might not be the right word that I am look for but..they will be um…they will be clinically insecure maybe?... Yes, so their decision making may be slower (C3).

When the DSC's knowledge base is not so strong, it is suggested that their ability to make quick decisions and 'juggle balls' was inhibited. The registrars in particular, in their interviews articulated how confident DSCs also had a wealth of knowledge and experience, which they valued and used to support them in decision making discussed in greater detail in chapter 8:

Registrar: But I would say that's mainly a personality thing because you get a very senior midwife, in a coordinator role, who clearly know what to do most of the time better than the junior registrar (R1).

Registrar: Because she had that wealth of experience and had seen consultants doing enough things, you know…. She would say this one needs to go to theatre. And the challenging bit would mean there is no argument, there was no discussion because 9 times out of 10, she was right (laughs) (R2).

The DSC knowing the correct decision to make and having a wealth of experience in the role were clearly key for the doctors However, experience can be a very nebulous term. The Field notes suggested that when midwives in particular offered explanations about knowledge, they often linked knowledge to clinical rather than coordination experience when asked to define exemplary DSCs or those they admired, this was highlighted in the following midwifery interviews:

Midwife: So, the team leaders I like mostly as a junior are not the ones that I like now.

Interviewer: That's interesting. Would you like to expand on that a bit more?

Midwife: So the more I've got to know them, the more I've respected them…. their knowledge base, their confidence, their competence and their practice.. That's what makes me feel comfortable…have team leaders that are….. they're very very experienced…. Umm…

Interviewer: Experienced?

Midwife: Umm…they have a really broad knowledge base they've potentially been involved in lots of complex care in the past, so that type of work doesn't faze them, so for example, if you have a lady with pre-eclampsia that is quite unstable they're confident with the way it's managed it can really impact on the unit if you've got a team leader who is experienced with complex care and able to support the midwife looking after that woman…..but what makes them good is they are…… Their confidence and are easy to approach (M6-2).

This long extract explains the midwife is equating experience to exposure and attainment of clinical knowledge, particularly complex care, which translates to confidence, which is supported by the following explanation from midwife M6-2:

Midwife: The knowledge of complexity as well as normality. But saying that there are team leaders who have been so involved with complex care and they're really good as well… But what makes them good is they are…. They ooze confidence and are easy to approach…… Very easy to approach (M6-2).

Participants suggested that the DSCs 'who know their stuff' have a very good understanding of complex maternity care. In addition to a good knowledge of complex care doctors also valued the DSCs experience in the DSC role. The difference in working relationships may explain this alternative view. Doctors rely on the DSC's expertise to support decision-making and the prioritisation of care for more than 1 woman, in contrast to midwives who liaise with DSCs about 1 to 1 clinical care.

DSCs who were less confident appeared to have the greatest impact on the doctors. Field notes relating to the dialogue from the doctors about less confident DSCs often noted a sense of hesitation in their demeanour. Several entries noted that doctors were trying to find words to avoid being

overly critical of the less confident DSCs, but equally keen to articulate the unnecessary impact on their workload and frustration this caused. This long extract from the consultant explains how DSC who lack a strong knowledge of complex care, relied heavily on the unit guidelines as opposed to their own clinical judgement:

> *Consultant: Less clinically confident DSCs are likely to be more dependent on the doctors and guidelines, they are very consultant dependent. Some of the midwives are quite consultant dependent…..The main part, I think, is to stop being the guideline addict and stop being it's got to be this way because is a hard skill to learn. To learn to be able to live with uncertainty because as we live with uncertainty as consultants all the time. So, the panicky ones and the protocol-driven ones, such that it's got to be in the guidelines, ones are quite difficult to deal with. Attentive to "the guidelines says", and they haven't got……. I believe that obstetrics is a bit of an art, not about guidelines, it's not about protocols, and it's a little bit of art to it…. A bit of art to midwifery and obstetrics in general.And that learning to juggle that learning to live with uncertainty they don't have time to learn that….(C1).*

The consultant suggests that less confident DSCs rely more on the doctors to support their decision-making and potentially rely on the guidelines to support a weaker knowledge base. However, registrars and SHOs also expressed their frustration with DSCs who relied on them for clinical decision making. Doctors clearly viewed midwives as independent practitioners (R3) and expect them to take responsibility for their clinical decisions:

> *Registrar: It's difficult… I can think of midwives I've worked with who are very nice but not very certain of the decisions they've made as they run everything past you. They want to offload responsibility to the doctors that can be really frustrating. Because midwives are independent practitioners and they should take responsibility too. No coordinator should be asking you about low-risk women. It's like that's really a midwifery decision and not a medical decision (R3).*
>
> *SHO: Um.. Someone who is willing to take responsibility because some more just…. won't really, it's easier to call the SHO. But if there is a coordinator on a really busy shift and she is willing to take the responsibility, she knows what she's doing (S2).*

Lack of knowledge and confidence appears to equate to a low threshold for referral to medical staff and willingness to take responsibility for their decision making referred to as the 'Teflon DSC' by this consultant:

> *Consultant: There are a couple of DSCs who I can think of… How can I put it….? A bit 'Teflon'. The responsibility of the role….. they have the badge that says responsibility, but it's never their fault (C1).*

This registrar goes further in their interview suggesting confidence in decision making is so fundamental to the DSC role, those who lack confidence should not be appointed to the role:

> *Registrar: Difficult, it's about safety and being confident in the decisions. If they're not confident in those decisions, perhaps it's not right that they're in that position (R3).*

In summary the respondents felt that disorganised, panicky DSCs transmitted their stress to staff by giving the impression they are not in control of the situation. It is difficult to determine if 'panicky' DSCs are related to personality or lack of confidence and knowledge base. However, DSCs who had a good knowledge base were a source of confidence for the MDT and avoided unnecessary workload on the doctors.

Pre-empting-Projecting into the future

The previous sections demonstrate subtle nuances between the professional groups. However, all the staff interviewed were very clear on what differentiated the excellent from good DSCs. The excellent DSC had the ability to pre-empt situations and project forward, an aspect of SA. Field notes on the previous section relating to SA referred to the staff taking their time to choose their words. Staff were keen not to be negative. However, notes about the following section noted several entries which referred to the smiles on participants' faces as they knew precisely who they were talking about when they talked about the DSC's ability to project into the future. There was no hesitation in the choice of their words or holding back. Field notes recall how staff were positively excited and visually animated as they

described the ability of the DSC to project into the future. Field notes relating to my own reflections as an interviewer noted there was no need to ask if it was an excellent DSC that the participant was describing. Their non-verbal communication demonstrated their admiration for these DSCs, and the question would have disrupted the free flow of conversation. Examples of looking into the future included:

> *Consultant: So it is about their ability to look at something and go well at the minute we are all fine but I suspect that in 1or 2 hours we might not be fine so what can we do to ….. Then I know I will be phoned back'. (C3).*

> *Midwife: I do think some team leaders 'forward think' situations more to 'pre-empt' what the board could look like in say, for example, 1 hours' time. So, I do think it goes back to that forward planning really, (M5-2).*

'Pre-empt what the board might look like in 1 hours' time'. Both the midwife and consultant in their interviews articulated the importance of the ability of the DSC to think 1 to 2 hours ahead and how the labouring women's progress in labour will change clinical dependency and workload. This midwife explains the potential consequences of coordinators who lack the ability to pre-empt situations:

> *Midwife: I would say that some coordinators are better than others and 'forward think' workload and what might be 'coming in. Where I think some of the team leaders are very much "well we would just see how things go "and sometimes it doesn't get any better and were already at capacity with midwives and then suddenly, a labourer walks in and then it's what happens? (M5-2).*

This results in staffing and capacity issues as the problem has arisen and no additional capacity or staffing have been organised. The registrars explain why the ability of the DSC to project into the future is so key to delivery suite management:

> *Registrar: I feel happiest when I have regular meetups with the shift coordinator throughout the day where we review everything that's happening just update each other what's going on in all the rooms, so*

with both singing from the same hymn sheet, so we both know where each other is at, and review the board and plans together, check problems even if they haven't been brought to me, to 'pre-empt' things (R1).

Registrar: So, someone who is well-organised and has a good understanding of what is going on. So will have a good idea of what's happening in every room and how that fits into the overall picture. So, for example, when women might be delivering, where we might have 3 women delivering in quick succession so that we are aware of which 1, or 2 or 3 of them may need help and how we will plan that (R3).

Pre-empting situations gives time for the registrar and DSC to plan together to determine if there may be either staffing and/or clinical capacity issues so preventative actions can be instigated. This may involve making different clinical decisions to avoid potential situations explained by this registrar:

Registrar: And I as registrar learn from that because certainly over the years you learn the times when the full menu of options to patients in these times you just can't and you just go "maybe in a different situation we would have given you another 2 hours we recommend caesarean here (implying in 2 hours' time another lady will be required a caesarean section). And you learn that from coordinators as much as is from consultants, to be honest, in fact, the good coordinators you learn more from than the indecisive consultants (R2).

The ability of the DSC to articulate the potential future state to the registrars is important as it influences their decision making and advice to women, thus avoiding potential clinical incidences. Further practical examples from midwife M5-4 paints a picture of the DSC's ability to forward plan:

Midwife: I think it's um… Seamless leadership, the coordinator ensures she gets regular updates from everybody and at this time is when you see a good coordinator standing at the board. You can almost see the clock ticking and she's 'predicting' possible possibilities that could happen. She knows what's going on in other areas, which allows her to manage workloads a bit better.

Interviewer: That's interesting are you saying they are predicting what could happen?

Yes, yes exactly (M5-4).

The DSC using the central whiteboard, to relay information ‘predicting possibilities’.is also recognised by non-clinical staff. The ward clerk in their interview reiterated how the excellent coordinators use SA to forward plan. The nature of labour means the majority of delivery suite work is unpredictable, except for inductions of labour. In these examples participants explain how the DSC uses this information about planned admissions and their impact on the future state:

> *Ward clerk: The organisation from the morning in for the induction’s because someday she can have inductions coming in throughout the day they walk through the door and you’re trying to find who is having this induction……. So, are you saying some team leaders have the information to hand? Yes, they already know (WC1).*

Therefore the DSC predicts knowing what is happening elsewhere within the unit that in X number of hours there will be 2 or 3 planned inductions of labour, or possibly more women coming into the unit who will need a midwife to care for them and allocate staff pre-admission:

> *Midwife: But yes, I think that's key for me, it's just forward planning, I think so if you've got an induction board of 4 who can have their waters broken, which then puts them on a 1-to-1 care, you have some team leaders will say "if you can break the waters just break them" and not necessarily thinking about the consequences of you taking a midwife off, and then you have some that will say “if you’re on inductions today (referring to the induction area) I want to know what’s happening so we know what we can afford staff ability wise to break 1 woman’s waters and unfortunately you have to apologise to the other women to go from there (referring to delaying inductions of labour if the unit is busy) (M5-2).*

Midwife M5-2 explains that the need to project into the future may extend beyond their shift, considering the workload for the staff on the next shift. Whilst there may be enough midwives to care for women during the early stages of the induction process, by the next shift, these women will be in advanced labour requiring 1 to 1 care on a higher midwife to woman ratio, this is confirmed by the SHO in their interview refers to decisions made by the day shift DSC about inductions of labour from the day shift impacting on the workload for the night shift:

SHO: So that would be helpful to (referring to the team leader's tour of the rooms) then speak to the ward clerk to find out whose plan to come in (will refer to induction of labours) or the night team leader will fill up the board (referring to the communication board) (S1).

The excellent DSC uses the information to forward plan staffing requirements based on the projected activity instead of waiting for the peaking in capacity to occur before taking action. How the DSC forward plans is explained by midwives M5-2 and 4:

Midwife: If I'm thinking of a certain band 7 in mind, they would come in and it would be "you go and do this, you go and do this, and you go and do this, they're very good allocating workload, and again I think that 'forward planning'. It gets busy, I think some team leaders are very good at saying, "right, we need to call (uses the name of the midwifery lead unit) now" we need their staff, or we need to contact maternity assessment or a ward to see what staff they've got and we need them here" if they can afford that and I think some team leaders will be very quick to do that, in a good way (M5-2).

Midwife: You know if they need to call the consultant in, they call the consultant in. So, it's making those executive decisions sooner rather than later. Obviously, you then have the presence of those extra people on the ward (M5-4).

Making the decision sooner rather than later to get additional help and forward plan. This ensures staff are in place ready for the peak of activity which mitigates against overloading staff with additional workload and associated stress as activity peaks, and last minute plans put hurriedly put into place. Where pre-emptive plans which could have been enacted several hours earlier if the DSC had the foresight forward plan. Additional help and forward planning may involve extra staff, including the medical staff as explained in this interview extract:

Midwife: Or there's been times when you have bleeped the SHO and has been no response got some team leaders who will automatically say we can't wait bleeped the registrar and there will be some who try the SHO again. Or will say do you want to ring the MAU instead. Or do you want to ring the ward to see if they are there. Wasting time, with a good coordinator, they'll escalate it to the registrar and will say

> *if the registrar does not answer, their bleep will take it from there. So, it's that she's kind of predicting what's going to happen and getting in there quicker, rather than you trying to chase around finding people (M5-4).*

Excellent DSCs build in timescales to avoid delays in assembling the right people for the situation, e.g. the consultant's travelling time to the unit at night from home can delay key clinical interventions. Participants explain how the excellent DSCs pre-empted potential problems with delays with medical referrals and planned accordingly. Excellent DSCs may identify what additional staffing and support, which might be time limited but will be required several hours hence. This midwife explains how DSCs forward plan staffing to accommodate additional but time-limited support:

> *Midwife: Or you might need support if that woman is not progressing in labour and the woman has the potential for an instrumental delivery, they know that things might be heading that way and are prepared that the midwife might need assistance whether it be from her (as the coordinator) or another member of staff (M6-3).*

In their interview MCA 1explains pre emptive situation management by the DSC is not limited to staffing and medical opinions but also the availability of the physical capacity of rooms, which have been cleaned and stocked ready for the next admission:

> *MCA: Knowing who's doing what and what's happening with the workload. Being aware of time, so when I do a shift, saying 'is that room sorted we have got a lady coming in (referring to a woman in labour), do you want a hand? (MCA1).*

The MCA explained that it is about the ability of the DSC to recognise how long it takes staff to prepare rooms and to allocate additional support to speed up the process if required.

The ability of the DSC to project into the future is not solely about the DSC being in control, it is about ensuring that unnecessary stress is not put onto staff by the inability of the coordinator to recognise predictable situations and

then build in sufficient time to instigate appropriate strategies and contingency plans, articulated so succinctly in this quote:

> *Consultant: It's the faith in their (DSC) ability to prioritise and know when things are not going in the right direction before they have got to the point of no return.*
>
> Interviewer: Early intervention?
>
> *Consultant: Yes, yes. It is the communication, the prioritising it's being able to see further down the line and that is what makes them… oh yes… that's make makes me feel I am comfortable…comment relates to at night when off-site (C3).*

Participants felt 'comfortable' when working with the DSC who has the ability to project into the future. Confident because the DSCs organisation skills mean they are in control of the predicted situation, not just the present.

Summary

In conclusion this chapter has presented the DSC as having the 'helicopter view'. The ability of the SA DSC to pre-empt situations, communicate the potential situation and make plans accordingly differentiate the excellent from the good DSCs, instilling confidence in their staff and avoiding unnecessary work-related stress. This becomes more pertinent when the delivery suite activity and complexity escalates. The following chapter 8 presents the importance of the DSC's ability to support the MDT and their perceptions as to how this is undertaken effectively.

Chapter 8.

Supporting staff

Chapter 7 explored how DSCs operate at a macro level, being situationally aware of activity across the maternity unit and the potential implications for the delivery suite to plan accordingly. The following chapters explore how good DSCs operate at a micro level to support individual staff to fulfil their role to the best of their ability. The 5 categories from the focused coding underpinning staff support are summarised in table 24.

Table 24: Focused coding: Staff support

Overarching category from theoretical coding	Categories from focused coding
Supporting staff 1.The physical and emotional aspect of their role 2.To feel part of a team 3. A source of expertise for advice	Knowledge
	Supportive & approachable
	Team player
	Sharing of information
	Proactively leads

Many of the attributes articulated by the MDT about the good DSCs resonated with aspects of managing human factors. Succinctly defined, human factor management involves supporting staff to perform to the best of their ability through mutual performance mentoring, teamwork, and putting together strategies to mitigate against stress and fatigue in the work environment which leads to errors (Mitchell 2013).

Extracts from memo writing during the analysis identified that the DSC role was fundamental to the participants' ability to fulfil their role. All groups of staff articulated how they valued the support of the DSC, captured in the following quotes from a midwife and a registrar:

> *Midwife: It's the support they offer. So be it that she is in charge of the whole ward and still very focused on 'I'm here if you need me' (M5-4).*
>
> *Registrar: That person is not only gives great advice but is also immensely supportive. Of all of her staff, including the medical staff. Who she sees as a family.um…...(R2).*

‘Immensely supportive’, ‘being there for me’ identifies the good DSC support the staff on an individual level. Theoretical coding identified how staff support by the DSCs was underpinned by 3 subcategories.

1. How the DSC supported staff with the physical and emotional demands of the role.
2. How they supported staff to feel part of the team
3. How they shared their expertise to provide support and advice to staff.

Good DSCs had the ability to balance the complexity of the delivery suite activity, discussed in chapter 7, with the ability to focus on and care for the individual staff. How good DSCs achieve this appears to be complex and multifaceted and viewed from different perspectives by the different professionals in the MDT. In keeping with the interview extracts in chapter 7, minimal questions were required in the interviews to facilitate conversations relating to staff support. Participants would often give extended examples of good and poor support to illustrate their point.

The following chapter is subdivided into 3 sections to reflect the 3 areas of staff support the participants articulated as being displayed by good DSCs.

Supporting staff with the physical and the emotional aspects of their role

This section explores how the DSC supports staff with the physical and emotional aspects of providing care on the delivery suite.

Supportive delivery suite coordinators use their knowledge of their staff to determine the appropriate level of support.

DSCs who were identified positively as supportive of their staff in the physical aspect of their role, understood the strengths and weakness of their staff and used this knowledge to adjust their level of support, articulate in the following consultant interview. This response relates to a question asked of a consultant about the DSC and what how they ensure a shift goes well:

Consultant: It's confident in management of different people and knows their staff and their strengths and weaknesses of staff on duty (C4).

Underpinning staff support was the ability of the DSC to understand the capabilities of their staff and their level of experience, extrapolating this knowledge to provide the appropriate level of support.

Field notes from the following interviews noted how intuitively participants identified DSCs who know about staff strengths and weaknesses but needed to think more about how this was displayed. The following 2 quotes from the consultants articulate the nuances that the good DSCs use to determine how they will support the staff, which may include the approach used for very junior staff in comparison to more senior staff and judging the level of supervision staff require with particular clinical skills based on their experience to date:

Consultant: Um….You might have a junior midwife who is……. very new to the role and is umm …….uncertain and very nervous you are going to have to handle her very differently to someone who has been a critical care midwife for donkey's years and is confident in all sorts of ways (C3).

Consultant: Um…...Some registrars need more support than others (referring to DSC support) ……some you if X needs to happen, you need to watch them to ensure that X happens, whereas others you can say I think that…. And you can be confident that they have gone off to do that (C4).

The inability of the DSC to make this judgement call on the level of experience of staff require and the level of support required to develop a particular skill is explained in the following extract which follows a long story about an unapproachable DSC critical of the participant's lack of experience in a particular clinical situation and how that made them feel. The midwife in this interview felt she had been put into a situation, unsupported, which she did not have the experience to deal with:

Midwife: Um…. I suppose a good team leader is one that knows your strengths and weaknesses. (M5-1)

The midwife felt the situation arose because the DSC was unaware of her level of experience but goes on to express frustration at the lack of development opportunities:

Interviewer: Can you say a little bit more about that?

Um…. And others as well. …. And knows what you need to learn to experience, for example, I ask if it's quiet if this suturing needs being done can I be okay to go and do it? But it doesn't always happen (meaning learning opportunities are not always supported) (M5-1).

Both consultants and midwives identify how DSCs used this knowledge as a baseline to determine levels of support staff need, including additional supervision of clinical procedures. However, doctors, midwives, and MCA's viewed why the DSC's ability to understand staff's strengths and weaknesses was important from different perspectives.

The SHO's and registrar perspective

The DSCs ability to understand the staff's strengths and weaknesses was particularly important for the registrars and SHO when they first joined the unit as part of their clinical rotation. SHO's in particular who had completed their 2 year post registration foundation training and were in their 2nd year as a career obstetrician (appendix 1), disliked being confused by the DSC with newly qualified doctors on an obstetric placement as part of the foundation training, as this undermined their clinical experience.

This comment by the SHOs relates to feeling their clinical expertise was under estimated due to the DSCs inability to understand the difference in the medical training structure:

SHO: There are more SHO's and being an ST2 still training compared to one who is an F2 (a junior post with 2 years' experience), so sometimes being treated at the same level as an F2, I think that is something that does not go well with me (S3).

This SHO explains the level of experience of the junior doctor, which can vary from a doctor completely new to obstetrics to a doctor who has almost completed their junior training and is ready to progress to the registrar level. DSCs who were overtly critical of SHOs undermined their confidence. The following quote explains that whist SHOs are trained doctors they are new to the field of obstetrics and can feel anxious about being supported and accepted in this new role:

> *SHO: So, not being criticised (referring to the DSC) all the time is very important to me and the junior doctors (S2).*

Later in the interview, when asked about DSCs who create a good atmosphere, this SHO goes onto explain:

> *SHO: I think that if this team leader has been established here for many years, and I'm relatively new and junior if she (referring to the DSC) is accepting me and my different ways of thinking and my mistakes, this helps me to feel better in myself, I feel I function better (S2).*

The SHO explains how this level of training is a time of vulnerability and can take time for the DSC/ SHO relationships to develop, highlighted in this story from the registrar reflecting on DSCs' influences on their SHO training. The registrar's comment relates to DSCs being approachable when they were doing their SHO training:

> *Registrar: I think part of it as a registrar is knowing them (referring to the coordinators) when you first come to a unit, they don't know you and it's a bit like….. An initiation test for want of a better term. Because we will work with people who don't have confidence in you, I suppose they have to develop confidence in you. So I found the relationship when I went to another unit I could see they developed confidence in me, my transition from SHO to registrar over those 2 years, the relationship changed dramatically because when I first started, that particular coordinator was very unapproachable, by the end of it I'd obviously come a long way as well and we had quite a good relationship. Sort of had the mutual respect, she had confidence in me to do certain things, I had confidence in her. So, it worked well (R3).*

‘Confidence in me’, it was important to avoid undermining SHO’s confidence, which afforded them dignity and respect, in contrast to DSCs who were less supportive and tolerant of the junior doctor’s weaknesses which significantly affect the junior doctor's confidence and was picked up by the staff through the subtle nuances between DSC and SHO. This midwife explains how the wider MDT are able to make judgments on the DSC/ SHO relationships base on the DSC’s interaction with the SHO on shift:

> *Midwife: We know that if there’s a good team of SHOs and registrars on (referring to the competence of the doctors). The team leaders seem happy and confident. You can see in the team leaders they feel more comfortable if they’ve got a doctor, they think more highly of (M5-2).*

The impact of a lack of DSC confidence in the SHO has been explained by the SHO but is also problematic for the consultants who witness a decline in the SHOs confidence over time. The following 2 comments relates to DSC support of junior medical staff:

> *Consultant: Obviously, it is fantastic when they get on well the coordinator see the junior staff is really good ... There can be times when they (DSC) seemed to lose confidence in them and then it could be a bit difficult because it becomes a never-ending circle for that junior member of staff. They need to achieve but need more confidence because they’ve almost... I would say 'blacklisted', but they think I'm with so-and-so tonight (C4).*

Field notes noted when questioned about the term ‘blacklisted’ the consultant explained if the DSC does not have confidence in the doctor’s abilities this is transmitted to the doctor by the DSC, which in turn further undermines the doctors confidence and then the doctor does not want to work with the DSC because they feel they will not meet that particular DSC’s expectations, exacerbating the doctor’s lack of confidence. The following quote acknowledges how important DSC relationships with SHOs is but understands how difficult this is for the DSCs within the short time constraints of the trainee programme:

Consultant: So, it's about building that confidence and that relationship. Over time I think that is easier for consultants as we are a stable body, but the juniors change... some the GPs…change every 3 months …. (Goes on to explain it's difficult for coordinators given the short time frame) (C3).

Good DSCs quickly assess, recognise and acknowledge doctors' capabilities and support them. Good DSCs were proactive in providing training opportunities, discussed later in this section. The impact of unapproachable coordinators highlighted (R3) is discussed in detail in chapter 9.

The MCAs perspective

The MCA's viewed the DSC's ability to know their strengths and weaknesses as important but related this to being given opportunities to use their skills to their maximum potential in contributing to the team. Following on from a conversation about being made to feel part of the team:

Interviewer: I get the impression ones you hold in real high esteem are the ones who make you feel part of the team.

MCA: Yes, yes…...

Interviewer: Would you like to say a little bit more about those coordinators?

It's the ones who really know your role and what you do. What your strengths and weaknesses are and give you those opportunities (gives the example of taking blood). Some will just get you to do the beds, whereas good ones will know what skills you have and use them (MCA-1).

Field notes from the interviews with the MCA's noted how they all felt appreciated and valued by DSCs who used their skills, rather than viewing their role as preparing and cleaning rooms. The utilisation of these strengths translated to being valued as a team member, which was important.

All staff groups within the MDT acknowledged the importance of the DSC knowing the strengths and weaknesses of the team. From the consultant's perspective, this related to which staff needed additional support, registrars and SHO's reflected the ability of the DSC to understand and acknowledge

their capabilities, for midwives it was the DSCs ability to delegate work according to staffs' abilities and support learning (discussed in the next section) and for the MCA it related to allocating additional responsibilities, based on their strengths, which made their job more interesting.

Supportive delivery suite coordinators balance the workload allocation

The midwives perspective

The DSC's ability to 'know their staffs' strengths and weaknesses and having 'confidence' in them appeared to have different connotations for midwives, which may be reflective of the direct line managerial responsibilities DSCs have for midwives' workload allocation. This is in contrast to the doctors who self-determine workload management. This was particularly important on busy shifts when staff are under pressure and the availability of staff to give additional support is more limited. This midwife's quote relates to coordinators who stand out as managing a busy shift well:

> *Midwife: The ones I find that are really good recognise the abilities of the staff they have and their…. 'experience' …is probably rather than abilities is probably a better word to describe it and…. Maybe, delegating things that they know that staff members cope with. And if they recognise that the shift tends to run better (M6-3).*

This was also deemed important in emergency situations to avoid staff being allocated roles beyond their capabilities. The following quote relates to the DSC in an emergency situation:

> Interviewer: What is it about coordinators that keep everything calm, is there anything specific?
>
> *Midwife: Its ability to pick out who would be most useful… Knowing people's expertise and knowing who is capable of what at the time… Although we're all learning... And we need to experience things but, in an emergency, you need the right people there at the right time (M6-1).*

Helps the 'shift and emergency situation run better by delegation'. Midwives associated the art of 'delegation' based on staff's strengths and weaknesses

in stressful situations, busy shifts and emergency situations, as an attribute of good DSCs. Field notes referred to how midwives often spoke at length about the allocation of work by clinical expertise and competence and the notion of fairness in workload.

Fair workload allocation

Midwives disliked being allocated a workload which they perceived to be heavier than that of their colleagues. Disproportionately higher workloads were associated with frustration and stress associated with the perceived quality of care they could deliver and feelings that the DSC was delivering poor staff management. This sense of unfairness permeated through the interview conversations about workload, highlighted in the following 2 quotes from band 5 and 6 midwives. In the first quote M6-4 articulates their perception of the potential impact on the quality of care women may receive if some midwives are caring for disproportionally more women than other midwives:

> *Midwife: Team leaders that fairly distribute the workload, they make sure there is quality across the floor. So that half the team are working on whilst the other half drinking tea (M6-4).*

The following midwifery quote implies it is not just the equal allocation of workload that is important to midwives, but also equal learning opportunities:

> *Midwife: They well look at the board (the communication board with the women on delivery suite) and you know that everybody is going to get an 'equal shot' at the board (M5-1).*

This fairness in midwifery workload allocation and its impact on midwives was also witnessed by the MCAs. This MCA explains what they had witnessed at handover:

> *MCA: Yeah, I think...yeah… When there are certain coordinators on, you find work is dished out more evenly, so they (referring to the midwives) feel they have time to do everything... And that creates a nice atmosphere (MCA-2).*

Getting an ‘equal shot’,’ ‘quality across the floor’ ‘dished out evenly’ relate to the staffs’ sense of fairness in their workload for the shift. It could be argued busy shifts make the fair allocation of workload particularly difficult for the DSC, but the following quote suggests this is an attribute DSC do or do not possess, as staff know when they come onto shift workload allocation is DSC not workload dependant. This quote explores how a midwife feels when starting a shift:

> *Midwife: To me personally, some midwives… I feel like… Whenever the team leader comes on, I know the type of shift I am going to have. The way they allocate me workload. Pressure they feel they can put on me. Some team leaders just don’t get that at all, and you can see that they will make a particular midwife struggle, for example, give a lot of workload for 1 midwife……. For example, me because they know I get on with it. And be compliant and just work hard and graft all day. And some midwives they won’t put as much on because they know they will….. This is my perception…… I think they think that they'll just get a load of chew. That it will just make their life hard work if they give this midwife a particular woman (M6-2).*

This suggests DSCs who were perceived as less effective allocated work according to the path of least resistance, reluctant to manage the stronger characters in the team, allocating higher workloads to the midwives who were less likely to complain,*’ getting a load of chew’*, which is confirmed in the following extract:

> *Midwife: Umm, again, it depends on who’s coordinating because some people are easier to manage than others, I can see that from being part of the team. And I do like the no-nonsense approach of the coordinator, who says, and those dish out the work, says, “you’re in there, you’re in there, you’re in there”, and 90% say yes that's okay and others would say umm... I'd rather not… And some coordinators would back down and say, "well, okay then ", you could swap with….. I would prefer a coordinator who says, "whats your problem? No, its fine in you go” (M6-1).*

Midwives know before the shift starts that the ability to understand and manage workload was independent of activity. Some coordinators proactively balanced workload allocation, others preferred to opt for an easier life.

Supportive DSCs allocated workload based on staffs' expertise

The good DSCs where identified by the midwives and MCAs as using their knowledge of staffs' expertise to allocate work and support their staff, accordingly, articulated in the following 2 extracts:

> *Midwife: Yeah yeah, there are certain ones (referring to the coordinator). When you come on the shift, you know you're gonna get a lot of help (M5-1).*
>
> *They know the appropriate experience midwife has so knows what support newly qualified midwives need (MCA-1).*

The inability of the DSC to understand the level of support their staff needed left midwives in particular feeling unsupported and vulnerable. The impact of DSCs who did not support newly qualified staff is highlighted in the following quote:

> *Midwife: And have other team leaders that you know that one's going to be mine and that one's going to be mine, and it's going to be the worst of the bunch, and I suppose that's because I'm newly qualified and they want you to experience, but sometimes it just feels as if they're waiting for you to trip up, and they're waiting for you to have to go and ask them, so they can almost ridicule you (M5-1).*

Field notes from this interview noted how this midwife spoke at length about shifts with an ineffective DSC in the early days after she had qualified as a midwife. Despite being qualified for 18 months at the time of the interview, she could relate with pinpoint clarity the shifts. Her voice trembled at times as she composed herself. Regaining her confidence had been a lengthy process.

The inappropriate allocation of complexity by the DSC to junior staff also had a direct impact on the band 6 midwives' workload. The following explanation by a band 6 midwife articulates the frustration of having a high workload and trying to support more junior staff with complex case which are beyond their experience:

Midwife: Because the stress levels of everybody are then not rising because they're working within their remit and then not getting more and more stressed….. Because everyone stress levels rise, everyone else is having to help out, more staff are coping, they….. Having to help someone else then their stress levels go up…. That makes sense. Then everything escalates, I think (M6-3).

'Every bodies stress levels' suggests all the midwives on the shift were affected if some staff are allocated work beyond their capabilities. In contrast to the following reflections by band 5 midwives who articulate the positive effect DSCs have when they have the ability to fairly allocate workload:

Midwife: Well, the end of the day, when you think yes, that was a good day in relation to the coordinator, it's about have they considered your current abilities to what they gave you on the board (referring to the communication board). Taking into consideration your capabilities (M5-2).

Midwife: Delegating workload to the appropriate people. So, for example, someone quite junior like me, not having someone to care for who's high-risk, that I might struggle with potentially need a lot more help in that situation. Whereas someone else might be quite confident in that situation. So, playing to everybody's strengths as to what their experiences are (M5-3).

Memo writing from the initial interviews with midwives refer to going back to the field to explore how junior staff get experience if not allocated complex cases. The midwife in the following extract explained how the DSC recognised they had had minimal experience with a particular clinical situation and provided them with support to gain experience, maximising the learning opportunity, whilst minimising the stress associated with feeling out of one's depth:

Interviewer: If you're not allocated complex women to care for, how do you gain experience with these cases?

Midwife: Yeah… Yeah…. Well I have had that. I was allocated a complex case, but I got allocated a buddy, somebody else who was unable to take the lady as a 1 to 1 but was quite experienced, so in terms of like drug wise, came with me and did all the initial setup with me, came in with me and we discussed the guidelines together, and regular observations things like that she needed so I had a clear idea

in my head what my plan of care would be. Then I went did it and if I had any problems went to her. So, I got given the kind of buddy.

Interviewer: So, was it the coordinator that make sure you were allocated the buddy?

Yeah… yeah (M5-3).

The term 'buddy', 'help' and 'supported' was used interchangeably and viewed positively as a development opportunity, within the context of not feeling out of their depth. The allocation of 'buddies' for the junior staff also resonated as a positive DSC attribute with band 6 midwives:

Midwife: They will look at strengths within the team and encourage other members of staff to support other members of the team. So, for example, if the team leader is busy with something else, she would delegate another senior midwife to make sure the staff (referring to junior midwives) are supported (M6-4).

Midwife: I think delegation of work plays a big part in it. Maybe delegating to the more senior staff for support when it's needed, and they are there to support all of the team but particularly the band 5s, I think because they're the newly qualified and they need that reassurance (M6-3).

This midwife then goes on to explain that it is more than just delegation of senior staff support. A good DSC understands when it is appropriate to expose newly qualified midwives to women with complex health care needs, because there are enough experienced midwives available who can support them:

Midwife: Recognising that possibly the newly qualified midwives/staff may not take a lady with pre-eclampsia. You know it might not be the best time on this really busy shift for them to experience that without having lots of support around (M6-3).

DSCs viewed in a less positive light appeared to go for an easier option or possibly did not recognise the opportunity for junior staff to be exposed to complex care with support. They automatically allocated women with complex health care needs to more experienced midwives, causing an

imbalance in workload and stress for the experienced midwives. The frustration of which is expressed by this band 6 midwife:

> Interviewer: So, is it an easy option?
>
> *Midwife: Yeah…. They will do what makes their life easier rather than supporting, say having a junior midwife taking a woman who is quite complex to give her the experience, even though there's quite a few senior midwives to give her support….. Also, they'll tend to give them… a really senior midwife, lots and a junior nothing (M6-2).*

The allocation of a 'buddy' by the DSC was viewed positively by both band 5 and 6 midwives. The junior midwives developed their confidence and expertise in more complex cases. Senior midwives appreciated the balance in workload of not taking all the complex cases. It was also an important aspect of workforce development by the DSC, if junior staff could be supported in their development of caring for women with complex health care needs when support was available, they become confident and ready to care for such cases when the unit became busy and less support was available. The psychological impact for junior staff of the DSC achieving this balance if clearly articulated in the following band 5 midwife quote. Approachable coordinators are examined in greater detail in chapter 9. This midwife recollects a good shift:

> *Midwife: So, I think for me, being quite newly qualified and new to the trust, my shifts when I have felt really well supported. You know, no matter what has happened, if I feel I have been well supported I go away feeling that was quite nice. So just about having that…… Someone who is approachable, just make sure that everybody is all right on the shift, everybody is managing their workload, and nobody is struggling and um….(M5-3).*

The DSCs ability to support staff by allocating workload fairly based on staff capabilities only appeared to apply to midwives and MCAs. It may be explained by the direct line management responsibility DSCs have for this group of staff and their ability to reallocate midwives workloads as required. A sense of fairness was particularly important to this group of staff. Midwives

accepted the peaks and troughs in activity and associated workload, but a sense of uneven work distribution was a great source of dissatisfaction.

Proactively leads- Are you okay?

This level of support for the midwives by the DSC was often expressed as the question ‘are you okay’? This phase was frequently used by the midwives in the interviews to explain the dialogue used by good DSCs when they checked on their wellbeing. This proactive action on the part of the DSC was used to ascertain if staff needed additional support, advice or general enquiring about the situation between the midwife and the woman the midwife was caring for. The ‘are you okay?’ statement could be used by the DSC to determine if the midwife needed additional support with complex cases, highlighted in the quote below:

> *Midwife: Knowing that you're quite new into the role, having a good coordinator, they will always say," Is that okay are you happy with that?" (Referring to a woman with complex care needs) (M5-2).*

Or checking on the women’s progress and if any additional advise or support was required. Support by this midwife’s experience:

> *Midwife: Things like that she just checks on you. When I get further on into my training (referring to being qualified for longer), it may not be so important. But at this point, to me, it is quite important (M5-3).*

In chapter 7 midwives explained how the good DSCs gather information to maintain a helicopter view by proactively going into rooms to gather clinical information. This process of physically checking on staff for clinical information to update the board was also viewed positively by midwives and MCAs as a support mechanism for staff. The band 5 midwives suggested the ‘are you okay’ DSC question was important as a newly qualified midwife. However, band 6 midwives also valued being asked if they were okay. This senior midwife explains how checking if staff are ‘okay’ had a positive effect on the atmosphere, independent of activity levels. In this quote the context relates to a question about a positive atmosphere on delivery suite which is

independent of activity on the unit and what it is about the coordinator on that type of shift:

> *Midwife: I think the team leaders (DSC) that are um…. The ones I said previously... Make sure they come into the rooms… Make themselves very available to all the members of staff is probably the best way of putting it…. They come into the room "do you need anything"? "Is everything okay"? "Can I help with anything"? I think those team leaders who tends to be the ones that, even on the busiest of shifts, check on everybody… They are the ones you know when to come onto a shift and you know you can have a good shift. No matter how busy it's going to be (M6-3).*

It also gave midwives the impression that the DSC genially cared about their wellbeing. The field notes from the following midwife interview noted how the respondent's face lit up when they talked about how the DSCs came into their rooms to gather information:

> Interviewer: So, it's something about that personal gathering of information. Can you tell me a bit more?
>
> *Midwife: Yes, absolutely they're interested in you and what you're telling her as well (M6-4).*

The 'interest in you' suggested midwives appreciated the DSCs genuine interest for their staff's wellbeing. They viewed going into the room as a means of the DSC both checking on their wellbeing and updating on clinical problems. The nonverbal communication displayed how much this meant to the participant.

This checking on staff's wellbeing by the good DSCs was in direct contrast to the ineffective DSCs who just checked up on the midwives for the tasks they had completed. Expressed in the following interview quote (M6-2).Here the context relates to a question about the DSC going into the room to gather information:

> *Midwife: Saying to your colleagues, are you okay? Do you need a break rather than coordinating like that it's more like... Have you done*

this? Have you done that?... Generally, just about the way people speak to each other (M6-2).

The importance of the are you okay question to the midwives by the DSC was also validated by the doctors and MCAs observations as having a positive impact on their staff:

MCA: The ones that are in and out the rooms often because you see some take a step back a bit. The good ones, the ones that are in and out of the room asking midwives if they're all right? They're constantly reassuring and supporting staff. I have heard the midwives say they feel more supported when the team leaders come into the room and ask them if they are okay, 'how was your trace, how was your woman?' (MCA-1.

Consultant: The good team players, they have to be supportive characters. They have to be someone who will go into a room and be supportive of that midwife …. They are not just going and say 'what are you doing now' type of thing (C1).

Why the act of physically checking on staff by the DSC is important

The nature of the physical environment on delivery suite, single rooms, can lead to a sense of isolation from other clinical colleagues by the midwives providing 1 to 1 care. Described by this midwife. The following extract relates to a midwife feeling positive about a DSC being on duty when coming on duty*:*

Midwife: A team leader (DSC) that made sure if you've been stuck in a room with a woman on Synt (colloquial term for Sytocinon used for induction or acceleration of labour) all night, she gives you a knock and asks if you're okay. That definitely makes a difference (M5-1).

Participants differentiated between the good DSC who checked on staff to avoid the sense of isolation and the excellent DSC who made the connect between increased activity and dependency levels and the greater potential for the isolation of staff escalating the need by staff to be asked if they were okay. If the unit was busy and the DSC was unable to check on staff in person, they would ensure they delegated that responsibility to someone else. This installed a sense of confidence in the midwives that support was

always available irrespective of workload, this confidence is highlighted in the following quotes from 2 midwives:

> *Midwife: We've got a couple of coordinators who immediately spring to mind when I think of a really good coordinator, regardless of how busy it is. So, it is those coordinators who are actively engaging with their staff. They're going around to find out which midwives are not visible and do they need support? (M6-4).*

> *Midwife: Even if they just asked someone else to go in if they are busy and often say, "Can you just go in there? Make sure that midwife's okay" (M6-3).*

'Supportive', 'busy', 'stuck in the room'. Excellent DSCs understand that the midwives who were 'not visible' were more likely to require support. Due to the complexity of the woman's care or stage of labour, the midwife was not physically able to leave the room. The physical act of knocking on the room and asking the question, *'are you okay?'* defused the feeling of isolation. The excellent DSCs understood this to be even more important when the unit is busy. This midwife suggests that the DSC coming into rooms and introducing herself also helps the woman feel at ease:

> *Midwife: And also, I think it's nice because the midwife in that room can say to the woman, 'oh, this is the team leader on today making sure everything's okay and that you're all right'. This helps the woman to feel at ease because she knows who the senior member of staff is. So, if the coordinator needs to come in an emergency, is already a familiar face she is seen before (M5-4).*

Consultants and MCAs were acutely aware that midwives can be isolated providing care witnessing DSCs proactively checking up on staff gave them confidence that staff were being supported. For the midwives providing care in the single rooms, the proactive DSCs gave a source of reassurance to know that they were not forgotten and may not be in a position to leave the room to share information. The design of the physical environment of the delivery suite is tailored to provide privacy for labouring women, namely individual rooms. However, this isolates the midwife providing 1 to 1 care from the visual contact with colleagues and causes the potential to feel

isolated. The midwife's comment about the woman feeling 'at ease' when the coordinator comes into the room highlights the dichotomy for the woman between maintaining their privacy and knowing the wider team was supporting her midwife. This area requires further research but is outside the remit of this thesis.

Supporting staff to get a break

In the previous section, midwives explained how they admired and valued DSCs who asked if they were okay, relating to caring for women and clinical support. However, an area of staff support that received specific attention by the midwifery and MCA staff interviewed was the DSCs who ensured staff had a break and refreshments. This midwife explained why feeling cared for includes breaks.

> *Midwife: They make sure everybody is fed and hydrated and functioning and are safe (M6-4).*

Clarifying her comments related to an excellent DSC the midwife goes on to say:

> *One particular team leader talks a lot about human factors, I cannot think of the term, but there's this window that happens between 3-5 in the morning, which she quotes regularly. Regardless of how busy it is, she will go round and make sure, "have you had something to eat? Have you had something to drink? Can I relieve you?" Because some team leaders will say you have got to have your break, but they won't physically support you to do that, although they might be sitting down themselves and saying they send no one to relieve you (M6-4).*

Field notes relating to this comment noted total fixation of the midwife, as they visualised the DSC as they spoke, displaying a facial expression of total admiration as they spoke about this individual DSC. Good DSCs understand how the lack of food and drink can impact on their staff's physical wellbeing and cognitive ability to make sound clinical decisions, particularly as the shift progressed. This MCA's observation clearly articulates the impact of lack of food on midwives:

> *MCA: It's just that stepping up. It's also about making sure the staff had something to eat and drink because when it's really crazy, people don't eat and drink, and you see them (midwives) slowly getting… feeling faint… getting unwell … too warm (MCA-1).*

The reference to the window of 3-5 o'clock on night duty suggests an accumulative effect of lack of hydration, nutrition and abnormal biorhythms from night duty culminating at points in time where mistakes are more likely to occur due to fatigue (Yoong *et al.* 2020). Midwives and MCAs identified how excellent DSCs did not just ask midwives and MCAs to go for a break; they 'ensure' staff got a break by having strategies in place identified by M6-4, especially when the unit was busy:

> *Midwife: Regardless of how busy it is she will go round make sure, "have you had something to eat? Have you had something to drink? Can I relieve you?" So, it's those team leaders that make sure everybody is fed and hydrated and functioning and are safe; because we were able to function, it's going back to basics really. So, it's a team leader who might, for example, say, "do you need a cup of tea?" "Do you need 5 minutes, someone to sit with your lady so you can have a break"? (M6-4).*

Excellent DSCs had a proactive approach to ensuring staff got a break and refreshments and they were acutely aware breaks were less likely to happen as activity levels on the unit increased and the potential human factor consequences of poor hydration and nutrition.

Midwives and MCAs identify the importance of hydration and nutrition throughout their shift. This did not appear to be relevant to medical staff who could manage their own workload and breaks accordingly. However, when the unit was busy, midwives caring for women, were unable to physically leave the room and were reliant on the DSC to provide cover to get a timeout break.

Support to undertake the physical aspect of the role was more relevant to the midwives interviewed, supported by observational comments from MCAs who identified how good DSCs supported midwives to fulfil their role to the

best of their ability through fair work allocation and a buddy for support if care was complex. Good DSCs proactively led by physically going into the rooms to check on staffs' wellbeing and employed strategies to ensure all staff remained fed and hydrated to ensure cognitive function was maintained to mitigate against the fatigue of working on the unit. Excellent DSCs prioritised this level of support when the unit was busy and understood the link between high workload, no breaks and the potential mistakes from poor cognitive function resulting from poor cerebral hydration.

Supportive: Maintaining a positive emotional state

Midwives and MCA's identified how good DSCs supported them with the physical aspect of delivering care, particularly when the unit was busy and the workload high. However, supporting the staff emotionally, particularly when there were negative outcomes, was important to all members of the MDT. This went beyond the 'are you okay?' questions and involved taking time to debrief with the staff member involved with the negative outcome. Identified in the following 2 quotes:

> *Midwife: They support you emotionally as a practitioner because it's emotional work at times (M6-4).*

> *Registrar: But it's about the relationship you have with people. I think someone that you can debrief with (gives a long account of traumatic birth and negative comments by a DSC). I feel it's important to have a relationship with people because of the type of job we do. We have to support each other emotionally as well because it can be quite draining. There was an article recently in the British Journal of Gynaecology about emotional support, they called it second victim support to not just the patient but also those that look after them when things go wrong because there is no formal support system. See, you kind of get that informal support from your colleagues, I think the coordinator has quite a big role in that (R3).*

This registrar identifies the good DSCs as those they could develop relationships with, whereby staff were comfortable debriefing with DSCs offering, 'informal support' and stress management associated with negative outcomes on the delivery suite. This consultant goes on to explained their perceptions of the impact on staff of a good DSC's response to staff when there had been a difficult clinical situation on the unit:

Consultant: So, as I said, positive reinforcement when things go well as they could have because things don't always go well. I also think leaders that congratulate people things go right, even though it may not be an easy scenario, for example, about shoulder dystocia. (Discusses a particular case of good teamwork at length), but the outcome was not perfect ….said well done to everyone afterwards because it couldn't have been managed any better as far as we could see, and it's just the way that everybody works together (C4).

The ability of DSCs to articulate the positives from a negative situation was reiterated by this midwife, who used the term *'singing from the same hymn sheet'*, depicting the notion of the DSC and staff being in a stressful situation together:

Midwife: When it's a bad day, when it's a negative outcome, you can still get positives out of it if you know you've done your best. You're 'singing off the same hymn sheet' as the coordinator. If you have had any concerns being supported by the coordinator who has either agreed or disagreed with what you have proposed and patted you on the back despite it being a bad outcome (M6-1).

This was in contrast to the mistrust by staff of DSCs who sought to apportion blame when they were involved in negative outcomes. These 2 astute consultants describe their observation of the impact on staff of a positive or negative DSCs reactions following a negative outcome and its effect on staff confidence and future, trust in the DSC:

Consultant: You can get some staff that feel underconfident. What you don't want on a shift is... When things don't go so well is…. 'Whodunit' sort of thing, and blaming other people sort of going over and saying "they should have done this "they should have done that" (C4).

Consultant: I think they want to be empathic, and they're not very good at supporting the junior midwives if the junior midwives do miss something…and…. I see that those midwives they don't trust these team leaders in the same way (C1).

With the exception of the SHOs, all staff recognised how good DSCs acknowledged the emotional aspect of maternity care, supporting staff emotionally when the outcome was negative. The registrars in particular

valued the support as they were often directly involved with the care and valued a relationship with DSCs where they could debrief prior to the next situation. It was not clear why the SHO's did not refer to this level of emotional support in the interviews. Their focus appeared to be centred more on the support by DSC to achieve the clinical competencies required for their role. This may be explained by the limited exposure SHOs had had on the delivery suite therefore they were less likely to have been exposed to cases with negative outcomes.

Summary

In this section, participants reflected on how good DSCs supported them to perform their roles to the best of their ability. Fairness of work allocation based on competencies and support was important to midwives and MCAs. Junior doctors identified that DSC support could increase or undermine their confidence. All MDT staff groups identified the DSC role as key to staff support with the emotional stress associated with poor outcomes. Excellent DSCs used strategies to ensure breaks and refreshments happened, particularly when the unit was busy to mitigate against cognitive fatigue. In summary, good DSCs had the ability to empathetically care for their staff.

Team player: Making staff feel part of the MDT

The previous section explored how good DSCs supported the MDT with the physical and emotional aspects of working on the delivery suite. This section explores how participants identified how good DSCs proactively sought to create a positive and inclusive team working environment. Doctors, midwives and MCAs all referred to how the DSC was instrumental in creating a culture conducive to the socialisation of staff into the MDT for the duration of the shift. This consultant highlights the importance of staff morale:

> *Consultant: Someone who is quite good keeping morale up because you can find that it can get very tiring (C4).*

Being included into the team was particularly important to the SHOs and may reflect the transient nature of their short clinical rotations, allowing less time

to build relationships. Field notes noted a sense of vulnerability expressed by the SHOs, being medically trained with the doctor status, but working in an environment where midwives and particularly DSCs often had more knowledge and experience than them. Being socialised into the team had a positive effect on the sense of vulnerability for the SHOs. Whilst the consultants have overall responsibility for the SHO's training the DSC liaises directly with the SHOs as part of the medical team. Building team relationships was therefore important to break down barriers to feeling excluded. This SHO refers to being included in the team as a doctor:

> *SHO: That is the rapport we need to have with the coordinator. It's a mutual thing it's not just about the team leader, we also need to be accommodating as doctors (referring to feeling part of a team). Everybody has their role, and if they understand their role and communicate well, it effectively means we keep everybody in the loop. I think that makes my shift go well (laughs) (S1).*

Field notes from this interview noted English was not this individual's first language, in using the term 'keeping everyone in the loop', they were referring to involving the doctors in the team dynamics, using the colloquial term of 'everybody in the loop', in the wrong context.

Making the 'team work' involved the DSC being proactive about creating team working. The DSC has a key role in the use of strategies to facilitate team building through inclusivity, explained in the following midwife interview extract:

> Interviewer: How do they create this atmosphere? (Referring to feeling part of the team).
>
> *Midwife: I think sense of inclusion amongst all staff there aren't any…. With some team leaders on…. Senior leaders have been here for a long time, you get the team…. 'people being in a cliques', and from experience, I think that also happens in other areas, not just delivery suite. But when those strong team leaders are on, they managed to dissipate the clicks if you like. They involve everybody in conversation but only on a social level but also on a professional level. Everybody is included, everybody feels supported, regardless of your particular social status within a particular circle of friends (M6-4).*

Strong leaders ‘dissipated cliques’, the coordinators recognised established staff could subconsciously exclude newer staff members in group conversations. The strong DSCs proactively involved staff on the periphery, supporting them to feel included as part of a well-established team. Good DSCs have the ability to create a team spirit where everyone is involved and support each other; roles, responsibilities and boundaries are blurred. This relaxed environment lead to easy and light hearted conversations between the team members. Light-hearted fun was an antidote to the emotional pressures of the job. The term ‘banter’ was used by doctors:

> *Registrar: Having a laugh as well. Having a bit of humour and a bit of banter because it is quite stressful. Having a bit of fun because it is a high-pressure job. The good coordinators know when to have that banter and when to get the job done (R3).*

A positive approach to the shift

A couple of participants referred to the DSCs positive or negative attitude to a busy shift and its effects on the team’s mindset articulated in the quotes below:

> *MCA: I think it’s just about the attitude and stuff. They (referring to the DSCs) come on duty, and even if the board looks horrendous (very busy), they say ‘we are going to have a good day’ others will say ‘ohh’ look miserable. Ones that are positive and say that going to have a good day, you think yes, we’re going to have a good day (MCA-1).*

In contrast to the less effective DSCs who were perceived to display a negative attitude to high workloads:

> *Midwife: Some just don’t… You know… They just seem to want to come in get the shift done…. “There has been 4 deliveries and I’ve been in every room!” (Said with a sarcastic tone) …. I think and is that what you are here for? (M6-1).*

However, this was not a consistent theme and appeared to be more of a personal irritation.

Words of encouragement

The DSC's mindset and attitude were key to the creation of a positive or negative atmosphere. This is explored in greater depth in the section on approachability. The importance of creating a good team spirit by the DSC boosted morale. A few simple words of thanks and encouragement from the DSC contributes to staffs' morale. Midwives, doctors and MCAs all explained how they felt encouraged and appreciated by a few words of affirmation by the DSC. For the doctors this was encouragement about their training (S2 and R3). This SHO and Registrar relate how they experienced encouragement during training:

> *SHO: Well, I think a good leader is very important and crucially makes a lot of difference. So just understanding. Especially one who respects you and commends you saying 'doing a really good job' makes you feel appreciated. (S2).*
>
> *Registrar: I think it's about just involving you in the patient care and reassure you that you will get there, that they were junior themselves at one time and you learn these things. Just supporting each other (R3).*

'You are doing a good job' 'reassuring me that I'll get there'. For the midwives and MCAs words of encouragement took the form of a thank you at the end of the shift, this is expressed in the quote below:

> *MCA: When you feel appreciated, you go home and think that was a really good shift; I've done good, the team leader's told me I've been a 'big help' today, you come in the next shift and your morale is sky-high (MCA-1).*
>
> *Midwife: A team leader who will at the end of the night, says thank you. You know it makes a difference (M5-1).*

Kind words of encouragement and thanks by the DSC was a simple but effective attribute. All the comments in this section related to the start of the shift, which suggested that staff knew which DSCs would and would not show their appreciation to staff.

In summary, DSCs have a significant influence on making the team work effectively and harmoniously. Good DSCs understood the importance of including all MDT staff in the ‘banter’ and group conversations and were aware of potential cliques forming. Other strategies less important strategies included making staff feel appreciated and displaying a positive attitude to work, particularly on busy shifts. All these attributes contributed to a positive team environment.

The delivery suite coordinator as a source of expertise for staff advice

The DSCs knowledge of the macro-level of the maternity unit to facilitate SA and their ability to succinctly share the relevant information with the MDT has been discussed within the context of SA. During the focused coding and memo writing it became clear that good DSCs used their knowledge and shared their expertise to support the MDT at a micro level, supporting staff at a 1 to 1 level to make clinical decisions and supporting staff to develop their clinical expertise. However, subtle differences emerged between the professional groups about the DSCs expertise and how this was a source of support for them as individual clinicians. Doctors viewed the expertise of good DSCs as integral to their training as obstetricians.

Support with training

SHOs

The SHO doctors relied on the DSCs expertise to inform them and involve them in learning opportunities which were essential for their obstetric training. Working across the maternity unit the SHOs were often absent from the delivery suite, tending to other patients on other wards when learning opportunities arose on the delivery suite therefore they were reliant on the DSC understanding of what clinical experience they needed for their obstetric training. Explained by the following 2 SHOs:

> Interviewer: So, is it about having that understanding of your training needs?

SHO: Yes. Most of the team leaders do let me know they say…… (Mentions herself by name) …..." This lady is fully dilated, making slow progress, if you what to just linger around in case she needs a ventouse, rather than go off to gynaecology" So bearing in mind the training requirements as well, of both midwives and junior doctors (S1).

SHO: Also, she (referring to the DSC) will be understanding that there is no conflict with me doing instrumental deliveries and also be keen to give the patient whatever she wants, for example, if she is keen to do a natural birth, there is no conflict. So, understanding there is no conflict between these two points (referring to natural versus medicalised birth); is very good (S2).

The SHOs explained how the DSCs are in a unique position to know which women were unlikely to achieve a normal birth or required an assisted birth . They use their expertise to notify the junior doctors of potential learning opportunities, advising them to 'linger' to ensure they were available for the experience. This junior doctor explains how the good DSCs were more proactive in ascertaining the training needs of the staff:

SHO: I think sometimes as part of training, we have these junior midwives as well as these junior trainees and the team leader acknowledges at the end of handover what the juniors need for their training. So, for example, I can say I need experience of ventouse, if there is a potential for any ladies needing this please could you let me know. I appreciate it's probably an extra task, but also to be mindful of that as well. So, it's as if I'm involved about what is happening.

Interviewer: Are there some that do it better than others?

Oh definitely, can't name names, but there are some of them who would involve you, let me know what's happening (S3).

The act of asking the junior doctors to assess training needs ensured the SHO was called if any opportunities arose requires a level of SA by the DSC and was viewed as a positive attribute by junior doctors (S2):

SHO: Um.... um Well, I think because I've mentioned earlier that for my training purposes I would like to spend all my time on the delivery suite, but it's never the case, I have to go to postnatal, antenatal, so if I am working with a good understanding coordinator. I would spread the word to her if you have a potential instrumental (referring to

forceps) would you bleep me while you're bleeping the Reg (referring to registrar) if she is kind enough, she will do this for me (S2).

Here the doctor explains how the excellent DSCs use their situational awareness expertise to think ahead ‘project into the future’, bleeping the junior doctor at the same time as the registrar, to give them time to come to the delivery suite for the experience of a forceps birth . DSC’s expertise for the SHO was not solely about notifying them of learning opportunities. SHO's recognised the DSC’s intrapartum expertise and wanted to be taught by them.

Registrars

Registrars also valued the DSCs expertise in their progression from SHO to registrar. Having now progressed to the next level of training from SHO to register. In this interview the registrar (R1) was able to reflect on the influence the DSC had had on their SHO training:

Registrar: So when I was an SHO, I would find coordinators were a very important source of learning for me and guidance and teaching in terms of practical skills, for example, perineal repair or something like that they were a really useful source of education for me as an SHO (R1).

As a registrar having gained the clinical skills as a SHO, the learning opportunities from the DSC’s expertise related more to decision making and coordinating of the unit rather than the acquisition of clinical skills. The registrar (R2) in this interview explains how opportunities to learnt from the DSC is important but dependant on the culture and working practices of the maternity unit. This comment relates to the Registrar’s training earlier in their Obstetric career:

Registrar: What is interesting is that is very much my relationship with the midwives at this unit, it’s much more of a team-based system. So, the opportunity to be guided by the team leaders and to learn from team leaders in that way is much more than for example, at another unit I have worked at where it is 2 straight lines, parallel lines (R2).

Consultants

Whilst consultants carry the responsibility of training SHO's and registrars (Barber *et al.* 2021), they valued the DSC's expertise in this training process, viewing the DSCs as partners in the training and evaluation process of the obstetric trainees. In this interview the consultant (C4) explains how the DSCs have a different perspective on the doctors training and progress. Adding an invaluable insight into their progress:

> *Consultant: If that trainee is struggling, we need to know about it because often we don't get to know. They can be very different to us then they can to the midwifery staff. We don't see that …...we don't see examples of 1 to 1 liaison or relationship with the patient and the junior* (*C4). …*

The consultant goes on to give a long explanation about how excellent coordinators give honest and constructive feedback on junior doctors in training and areas for improvement in their performance

This consultant extract highlights how relevant the DSC's expertise is to provide honest feedback on doctors in training from a different but important perspective. In keeping with the feedback from the SHO and Registrar interviews consultants also understood the valuable role DSCs play in identify learning opportunities for the doctors in training, articulated in the following quote where the answer relates to a question about positive doctor/ delivery suite relationships:

> *Consultant: The junior doctors… Senior midwives/ team leaders are very good at getting the juniors involved, and they will, if we say to them, you need to learn so they will go over looking at traces will look at them. So, most of our team leaders are very supportive with the juniors about the juniors needing to learn, certainly on things like caesarean sections (C1).*

Support staff with decision-making

The DSCs' ability to make decisions under pressure has been discussed within the context of SA. All staff groups also identified good DSCs as a source of expertise to facilitate their decision-making about individual

women's care but viewed involvement with decision making from a different perspective. SHOs valued being involved with decision making in particular from a learning perspective. In the interviews with S1 an S3 they talk about the DSCs involving them in the decision making as a learning process, but also the DSC taking the time to explain why an alternative decision may be more appropriate in the situation. This SHO makes reference to their perception of a good DSC:

> *SHO: As an SHO, I think they involve us in decision-making. Being involved that is the most satisfying thing, the time involved in the decision-making process. So, I'm involved in the decision-making process or I have been told why the decision has been made (S3).*

This SHO relates to how a good DSC supports the junior doctor's decision making without undermining them:

> *SHO: So, they would say, "I think this is what we need to do, what are your thoughts?" (laughs) and the reason I need this plan is because of A, B and C, do you feel any differently?" Because I am open to that type of conversation. Particularly when it's an unusual situation and we need to plan care that is different to the normal pattern (S1).*

Both SHOs refer to a sense of satisfaction of being included and involved by the DSC which may relate back to the importance of feeling part of the team. Good DSCs did not just listen and support staff in decision-making, they empowered staff by challenging the decision-making process. Registrars were happy to be directed in their decision making but the following interviews with R2 and R3 suggest a level of resentment at being told by the DSC what to do:

> *Registrar: I'm quite happy with that sort of coordinator is also directing me, saying… (Refers themselves by name) I need you in room 7 there is potential 3rd.degree tear to be assessed. "Will you go in there please "and this is what else is going on so we can go to theatre at the moment if the needs be (referring to theatre for the repair of the tear) (R2).*
>
> *Registrar: Not so much now but when I was younger or junior, I should say (laughs). It would be that some coordinators would say that a*

woman needs a section, or she just needs this, or she just needs that, and well like that is not your decision to make, it is your decision to ask me to review the lady, then I make the decision. Just having that relationship… You know… And understanding…. Because they have a good understanding (referring to the team leader), but they don't do it (R3).

Midwives respected DSC who involved them with decisions made with medical staff. Midwife M5-1explains:

Midwife: But with respect, a good team leader will not take everything a doctor says as gospel and will involve you (referring to a band 5) in the conversation (M5-1).

Supporting decision-making but not taking everything as 'gospel' 'suggesting why other courses of action may be appropriate', 'being listened to,' 'involve us' implies staff value being involved when decisions were being made.' Understanding the decision making process suggests staff learn from the DSC expertise about how and why certain decisions are made within the context of the clinical environment thus facilitating their learning.

Differences in decision making support between junior and more senior staff

Senior staff, doctors and band 6 midwives viewed DSC's support in decision-making as subtly different. Unlike junior staff who sought advice from the DSC as an expert, staff with years of experience had already made their clinical decision but valued the relationship with the DSC whereby they could bounce ideas off each other to verify or adjust their care plan based on the DSCs ability to talk through the decision-making process, this ability is highlighted in the interviews with M6-4 and M6-2:

Midwife: They talk through decision-making with you, empowering you as a midwife to make your own decisions, but also supporting you in those decisions, rather than dictating. Whereas other team leaders, you know, regardless of the outcome they will support you in reaching your decision in a way that is constructive and helps with your learning as a practitioner rather than shoot me down in flames for better want of terms (M6-4).

The impact of negative responses by the DSC to questions is covered in chapter 9:

> *Midwife: Well the team leaders I find approachable are the ones that you can actually have a conversation with, the ones that are sat there and happy to listen to you…... Can often feel when a team leader is stressed that they don't want to hear it… So, it almost has to be a significant issue that needs looking at. Rather than just been able to bounce ideas off them, to make sure you're on the right track. Umm…... 'So, there are different team leaders, some will "say what you would like me to do?" …...and you can say, I just wanted to bounce this idea off you… They're really nice about it. But there are others who are very stern and say, "what you want me to do about it?" (M6-2).*

The midwives refer to this process of talking through decision-making as 'bouncing ideas off each other'. Field notes noted using the DSCs expertise to 'bounce ideas off' was particularly important to the registrars. The registrars talked about they valued an equal partnership and joint decision making with the DSCs. Checking that 'they are on the right track' is different from the SHO and band 5 midwives who were learning why certain decisions were made. This group of more experienced staff used the DSC's expertise as a sounding board. This relationship and dialogue between more senior staff and the DSC are explained in greater detail in the following extracts:

> *Registrar: So I guess there are some coordinators where I feel they come to me and just expect and put everything on me to fix stuff, which is fine, but I would say best when we are almost like equals and we are bouncing ideas between ourselves. And sometimes there are coordinators where I feel like they're my superior. I have to get their approval of plans and that has its challenges as well. And sometimes there is no right or wrong answer, it's not clear-cut, and if you're in the middle of the night, the consultant is asleep in bed, you want to have someone you can bounce ideas off (R1)*.

> *Registrar: So yes, my ideal shift is where I'm on with coordinators and we get along well, they are approachable, we involve each other about decisions, about the women together as a team, rather than there being hierarchy either way between the two of us. Because I think as you get more senior, it's a bit different when you're more junior you want to be able to have that kind of relationship where you can say "well, what do you think?"*

Interviewer: Like the 2 heads are better than 1 approach?

Registrar: Yes of course that's it…….I think it's just about being friendly and open to discussions (R3).

This partnership in decision making with the good DSCs was in direct contrast to the ineffective DSCs discussed in this quote:

Registrar: You also feel as the doctor in charge of labour ward that day, the responsibility is more on you than a member of the midwifery team, but then at the same time, you don't always feel fully in control of the patient's plan if there is a 'very strong headed' senior team leader. That is something that is difficult to deal with as a new registrar. This is a difficult thing to balance because their experience (DSC) is vital, but same time as a junior registrar, you don't want to feel undermined (R1).

These insights into DSC/ doctor relationships suggested registrars valued working as equals with the DSCs. 'Strong headed' hierarchical power struggles and the inability of the DSC to work as an equal or value the contributions of the doctors in decision-making was a cause of registrar frustration and impacted on their relationship with the DSC and affected their job satisfaction. In the interviews with one of the consultants (C4) and midwives (M6-2) they articulated how the ineffective effective DSCs who were unable to work in partnership with the registrars caused fragmented relationships and decision making:

You know you go onto a shift …. Registrars will ask who is the team leader on? And you will say…...so and so… and they will go …aww…. There are some who work with doctors and the ones who work despite doctors and ones who would almost prefer to work without doctors (C4).

Midwife: Rather than if they (referring to the DSC and registrar) haven't got a really good relationship, it tends to be really fragmented, this just an opinion here…And it's not as cohesive a vision of care. It's just like 2 ideas and they 'but heads'... And there might not be much conversation, it will be well…. You just do what you want then, rather than say this is what I'd like you to do….. Team leader to Dr (M6-2).

Registrars in particular, respected the expertise of DSCs, they viewed them as their equal and valued the opportunity to use this expertise by working together to solve problems and make decisions. The inability of DSCs to constructively use their expertise to support staff in decision-making fostered negative relationships, resulting in the SHO and registrar feeling excluded and undermined, potentially fragmenting decision making across the unit.

The DSC as a filter

DSCs who supported midwives in decision-making acted as an important filter for the doctors. Participants explained how good DSCs used their expertise to solve problems with the midwives by acting as the first line of advice for midwives. The good DSC fostered a balance between involving the doctors when required and not over relying on them for clinical decision-making, which could be resolved at a midwifery level. The following quotes from interviews with registrars and SHOs explain the impact of the effective DSC as a filter and the additional workload created by ineffective DSCs:

> *Registrar: Some coordinators I find if I know I'm on shift with them… So, the coordinator for the registrar is a brilliant filter because they can help the midwives and solve a lot of their problems without involving the registrar because they're such an important filter in a busy unit. Who is on will make a huge difference to what the workload for the registrar is like that day. Sometimes I find I'm on with coordinators who the midwives do go to them first, but they filter very little and pass everything onto me anyway, and I think that's a shame and not the best use of the role (R1).*

> *SHO: I think the team leaders in this hospital are really good, have worked in other units…. Where they (referring to the DSC) sort of on the wards they directly call the doctors to review CTG's and we are stuck in A&E. We would have to say I'm busy can you call the team leader? I think it should be a default position (S1).*

Participants identified how good DSCs used their knowledge to triage women, only involving the doctor when it was appropriate to do so. DSCs who refer to doctors for all the decision making may lack confidence or be reluctant to take responsibility. Doctors viewed good DSCs as being able to strike the correct balance between when and when not to involve the doctors.

As discussed in chapter 7, DSCs are the main conduit for information gathering and the facilitation of decision-making on delivery suite. With the less experienced staff band 5 midwives and SHOs, they were more involved in directing the decision-making, for the more experienced staff consultants, registrars, band 6 midwives, the good DSCs acted as a sounding board offering a second opinion to add clarity to the decision-making process.

In conclusion in chapter 7, I have discussed how staff viewed good DSCs operating at a macro-level, being SA aware of the activity on the unit. This chapter has examined how good DSCs supported staff on an individual level to fulfil their role to the best of their ability. Good DSCs support staff on 3 levels. Firstly, with the physical and emotional aspects of the role, secondly to feel part of the team and thirdly acting as a source of advice with decision-making relating to clinical care.

Good DSCs understood the nature of the work on delivery suite and the potential for staff to become physically and emotionally fatigued. They proactively sought to mitigate against the human factors that contribute to mistakes by ensuring workload was fairly allocated, their staff received breaks and they regularly checked on staff, providing support and avoiding isolation of midwives providing care. The excellent DSCs understood the implications of high workloads and the reduced probability of staff getting breaks and placed a greater emphasis on ensuring breaks were taken by staff during peaks of activity.

Good DSCs acknowledged the strengths and weaknesses of their staff and offered mentoring to ensure workload and support was allocated to maximise staffs' learning whilst avoiding stress for staff operating outside their comfort zone. The ability of the DSC to create a positive work environment facilitated a team working ethos, where joint decision-making and emotional support following adverse events was valued. The DSC was viewed as a source of expertise that staff used to support their learning and decision-making.

However, access to this expertise was linked to the term ‘approachable’ in both the SA and staff support categories. The approachable DSC is explored in greater depth in the following chapter 9.

Chapter 9.

Approachable

The focus of this chapter explores the explicit reference by participants of the term ‘approachable’ raised from the codes and how staff articulated the attributes of the DSCs whom they deemed to be approachable. The potential consequences of DSCs that staff found more challenging to approach is also explored. Theoretical coding identified how DSCs deemed ‘approachable’ was underpinned by 3 categories (table 25).

Table 25: Focused coding: Approachable

Overarching category from theoretical coding	Categories from focused coding
Approachable	Supportive and approachable
	Sharing of information
	Ability to challenge in a positive way

Early coding of the preliminary interviews identified ’approachable’ as an in vivo code. Through the iterative process of constructing grounded theory, the term was used as a trigger for exploration in future interviews, finally becoming a category of its own. Approachable was an adjective frequently used to describe DSCs. Memo writing during the analysis noted the term was used very explicitly in some aspects of the interviews and subtly applied in others. Within the categories of SA and supporting staff; the term approachable was used subtly within the context of approachable DSCs collecting clinical information from staff, balancing workload, supporting staff with complex care and supporting staffs’ learning.

As discussed earlier in the field note extracts in chapters 7 and 8, participants were reluctant to say anything negative, so positive communication predominated during the interviews.

Used within the context of general conversation, the term approachable provoked no emotive response and was merely a word used within the free flow dialogue of the conversation. However, when participants used the word as a specific term, I noted changes in the participants' body language from relaxed, to visually uncomfortable. Field notes referred to the visual

discomfort as participants recalled unapproachable DSCs. They would hesitate as they struggled to find the right words, disrupting the free flow of conversation. Some of the participant's voices would tremble slightly, and they would quickly compose themselves. Others would stop, pause and concentrate hard, often with twisted facial expressions, before answering. This was brief but very enlightening into the impact of unapproachable DSCs on them as individuals. Used explicitly participants were not just describing the persona of the DSC and how they conducted themselves for the duration of the shift but were articulating the personal impact on them as individuals.

Supportive and approachable

The term supportive and approachable within the context of this section relates to the DSC being approachable to staff seeking advice. In their interview this consultant explains how the approachable DSCs were able to develop the correct balance between being in charge, a position of authority whilst remaining friendly and accessible to staff:

> *Consultant: You know that they're in charge and yes their approachable, but ultimately they know they have responsibility for the unit (C2).*

The consultant explains how the good DSC's charisma radiates that they are fully responsible for the shift, referred to earlier as 'having a presence', but also remain accessible to staff. The consultant links approachability and responsibility. Other participants explain approachability more in terms of relationships. Explained by this midwife:

> Interviewer: Do you want to think of a DSC who you rate highly and perhaps those you don't enjoy working with as much. Can you think of their attributes?
>
> *Midwife: Yes, just being approachable on a shift makes a big difference. I think the ones that I find positive um… Just have that approachable manner for all staff and just even ask them…um… Recognise that some staff need more support. You feel you can ask please can someone just do this for me…or I can't take that woman*

because I got this this and this. And them (referring to delivery suite coordinator) understanding that. (M6-3).

Feeling comfortable asking questions and feeling that they have been understood was often expressed by the staff groups as feeling listened to.

They listen to what you have to say

The act of the DSC responding positively and proactively to staff's conversations and staff feeling comfortable to ask questions was a re-occurring theme. Many of the participant's responses were within the contexts of coming onto the shift, which would suggest good DSCs were consistent in their approachability, it was not shift dependent. This midwife and MCA talk about how by active listening translates to feeling supported by the coordinator because they are taking an interest in what they had to say:

Interviewer: What is it about the DSC that makes that shift go well?

Midwife: Some team leaders seem more interested than others. They have basically shown an interest in supporting you (M6-1).

In the following quote the MCA equates approachable as listening to everyone in the MDT:

MCA: She's been really approachable; she listens to what you have to say. Obviously, in terms of grade jobs, taking everybody's opinion that's really supportive (MCA-2).

'Takes everyone's opinion', suggests good DSCs make all the staff feel their questions are important, not that a particular staff group is more important than another. Midwives talked about the differences in responses they received from DSCs when approaching them for clinical advice in particularly if they wanted a second opinion about a CTG trace. The following extracts by a midwife gives an insight into how the good DSCs display that they 'listen to the staff' and what advice staff are seeking, and how this relates to feeling positive about DSCs when coming on to the shift:

Midwife: Somebody who when you say would you just mind looking at my trace (referring to the CTG trace). They say, "of course I don't mind" (M5-1). So….umm… Say I go to a team leader and I asked them to review my CTG for them to actually come and not ask me 20 questions. They don't want to review that woman from the staffroom. They want to come with me to see the woman. (M6-2)

The act of proactively taking time to listen to what staff were asking means the DSC focused their response to directly address the needs of the staff, the focus on the specific concern, for the midwife about the women's CTG, which impacts on enabling the staff to carry out their role effectively.

Not feeling silly asking questions

The approachable DSC was often framed within the context of staff not being made to feel silly or a pest in asking questions. This was particularly pertinent to more junior staff, band 5 and SHOs, who needed a greater level of reassurance. In the following extract the midwife talks about the importance of not feeling judged by the DSC for asking a question:

Interviewer: I think you said something about that person being very approachable?

Midwife: Yes, absolutely, approachable, It's just that they're really approachable; they are really friendly, you just know you can go to them with questions. For me, at my stage of qualifying (qualified less than 1 year), I feel if I have a question, I think it is a daft question and I can get laughed at here? But that's a "no, that's absolutely fine" and they would encourage you to ask. So being able to ask the questions without feeling fear of judgement or anything like that, so someone who is approachable (M5-3).

'Fear of judgement'. The importance of the DSC supporting staff with clinical decision-making has already been discussed. However, if staff are to seek support with clinical decision-making, they need to feel comfortable to ask the question first. A number of participants articulated the ability to feel comfortable to ask questions without the fear of judgement. Band 5 midwives and SHOs talked about the positive encouraging response they received from the DSC when they asked their questions which made them feel it was right to as the question, summarised in the interviews with M5-2 and M5-4.

This quote relates to how 2 midwives felt good about the DSC when coming onto a shift:

> *Midwife: So it's an offering of help saying, "don't worry, I can watch you or if you've got any questions just come and find me", or you might say to them, "I'm really sorry to bug you again "but they give you that reassurance I'm not being a pest. So to me, if I've had a coordinator that I found really supportive, I don't come home thinking I've annoyed someone, or I feel all I've done is bug someone. So personally, that's what I like about having a nice coordinator. I do feel that extra support is really nice when you have only been in the role for 6 months in a new trust (M5-2).*

> *Midwife: Good ones you can ask the silliest of things to and they will be "yes will get that sorted" it's just being able to talk to them, for them to listen to you (M5-4).*

The term 'silly questions' was used a number of times by the participants in the interviews to describe basic questions to which the staff felt the DSC might feel they should already know the answer. By the DSC being open and not getting irritated by the more fundamental questions, the DSC was giving the message that no question was 'too silly' or too basic to ask. The field notes noted fear of being judged harshly for asking something they did not know and the risk of being made to feel silly came across as real anxiety for the staff. The ability for the SHOs to feel comfortable asking questions of the DSC is seen as saving face, as explained by this 2 SHOs:

> *SHO: So the sharing thing and understanding for my questions. And I would say not being …um…um…. Harsh or critical because sometimes we (referring to SHO's) don't know what to do in certain situations. So some are really good and really supportive. And to be honest, sometimes they have more experience than us, so for me if she is open to my questions that she might find silly from her side, but she can take it and answer it without me feeling silly, so this is another good thing about good coordinators (S2).*

This SHO relates to DSCs supporting doctors when they seek advice:

> *SHO: I'm an ST3 (3 years into their training). So their experience (referring to DSC) really matters. Because I always take the opinion of*

my team leader too, because they have in all fairness, more experience than me (S1).

Field notes recorded how SHO's were in a particularly vulnerable position. In the interviews the SHOs talked about their juxtaposed position a qualified doctor but new to the field of obstetrics, they were expected to fulfil the doctor's role whilst working with coordinators with significantly more maternity experience than them. They recognised the DSC experience and were keen to learn from the DSC but felt easily undermined by unapproachable DSCs, preventing them learning for this expertise.

The quotes relating to not 'feeling silly' asking questions of the DSC came from more junior staff, SHO's and band 5 midwives. Both groups articulate the desire to build their knowledge and confidence by utilising the advice of the DSC, who they deem to have more expertise. It could be argued that a DSC who is coordinating a particularly busy may, due to the stress of workload, may betray a less approachable response to staffs' questions. However, comments about DSCs being approachable to staff's questions relate to participants feeling positive when they come onto shift, which implies approachability is more about the DSC than the effects of physical time to answer questions on shifts and stress associated with busy shifts.

Ability to challenge in a positive way

All staff groups talked about positive and negative observations relating to DSCs and how they approached conversations, usually with the doctors when they believe a different course of action to the one being suggested by the doctor was the correct pathway of care. The ability of the DSC to challenge decisions in a positive way was referred to by the participants as the manner in which the DSC challenged and debated the decisions with the doctor in a constructive way. In the following quote S1 verbalises 2 very different approaches used by DSCs to the challenge of decision making by the SHO. When probed by the interviewer about the use of the word 'approachable', the SHO gave the following examples:

SHO: Honestly, rather than being defensive and saying this, that, the other….. Even if they question things… It's to play with words… The way you say it rather than being very abrupt. For example, I'm not very sure about …could you kindly explain your thinking to me. That is a much better approach for my own learning, so I think it works both ways, not just the team leader (referring to communication)(S1)

Midwife (M6-2) explains the impact on the recipient of the manner in which the DSC challenges:

Midwife: It's fine if they want to guide you in a different direction because they can see it from a different point of view, but sometimes you do get belittled (M6-2).

'A play on words' is about how the message is delivered, not belittling staff. Negative DSC responses to questions had a lasting effect on staff. The following quotes related to the historical experiences of unapproachable DSCs by a registrar and midwife when they were junior in SHO and band 5 positions. Although the events had taken place several years previously, field notes noted how the individuals could recall the event as if it was yesterday, and 1 individual became emotional as they recalled the scenarios. The events they recalled had clearly impacted negatively on them and their confidence. Participants M6-1 and R3 go onto to explain. With the experience being recalled by the midwife relating to 8 years previously and the registrar to an experience 3 years previously:

Midwife: One of them did say to me when I asked a question..." Can't you think yourself?" I thought at the time that's not very nice but…. Goes on to explain the clinical scenario (M6-1).

Registrar: Those ones also tend to be a bit….. Slightly less approachable…. But not unapproachable……..(R-3)

The doctor tries to remain positive but, when prompted, relays a more encompassing answer:

Interviewer: Did you want to say a bit more about that?

So I think they tend to think they're the boss…..But I can remember when I was quite junior and I worked in another unit. I'd just started to introduce myself to the coordinator. She was awful, really awful (voice gets quite trembly). And she was just so unapproachable…… Like you're only the SHO are you.. You can go to such and such……. It just wasn't helpful she wanted to make it clear that she was top dog is not really about that. By the time I had worked there for 2 years and got to the end of it, she was fine, but I used to dread being on with her...(R3).

Over time the registrar, then an SHO, managed to conquer their fear of working with this DSC, but it took 2 years to develop a positive relationship. Another registrar recalls about it felt to work with an unapproachable DSC:

Registrar: When I have been on a shift with a coordinator who I felt intimidated by as a junior registrar, then that's difficult (embarrassed type of laugh) ….

Interviewer: Would you like to say a little bit more about intimidation?

I guess it's mainly personality, so it's…..um….. It would be someone who is very confident and errr……. Maybe bossy and maybe they will be more experienced than the junior registrar (R1).

Field notes from these interviews reflected that these quotes could be interpreted as bullying of the doctor by the DSC and whilst clearly unacceptable DSC behaviour, I had noted how both registrars seem to accept this was the norm for obstetric trainees and it was part of the training that they would come into contact with unapproachable DSCs.

Unapproachable in these scenarios resonates with DSCs who are trying to assert their status over the registrar by undermining them. The term 'bossy' is used in a negative context by the registrars, but not all participants viewed this 'bossy' DSC persona as a negative trait, suggesting sometimes it was necessary for the DSC to be 'bossy'. In their interview this consultant describes the 'bossy DSC' on an exceptionally busy shift in a positive light as helpful to give staff direction on the priorities, earlier in chapter 7 articulated as being able to decipher and communicate 'the wood from the trees'. In this quote a consultant refers to DSCs who stand out on a very busy shift:

Consultant: It is the fairly assertive midwife, the rather sort of 'bossy' midwife who can just say you do that…. You do that…… I need that that… And that for that…… Sort of midwife (referring to the DSC) stands out as being particularly good in those cases (C4).

The context of 'bossy' appears to be important. The consultant is differentiating between the coordinators who are trying to be the 'boss' in the day to day running of the shift and the assertive direct DSC when the unit is busy or in emergency situations which requires succinct, directive communication and prompt action.

Assertive communication

In the category of staff support, participants valued the ability to discuss ideas and 'bounce ideas off' with the DSCs. How the DSC responds to these questions and differences of opinion, particularly with medical staff, appears to be key to positive team dynamics on the shift. In this interview the midwife (M6-3) explains the negative dynamics between DSCs and doctors and the impact this style of communication has on open communication and mutual discussion:

Interviewer: You have spoken about the DSC and communication with the midwifery staff, but is there anything you have noticed about the way they liaise with medical staff?

Midwife: Everyone has their own style of liaising with the medical staff some are quite….um….. Quite …um…. I don't quite know how to word it……. Assertive with the medical staff, I think sometimes that can be a positive, but sometimes I feel isn't always necessary…. Sometimes it could just be that there are other ways of getting that information across without being so firm. The ones I find difficult to work with are the ones that maybe have that more aggressive….. No….. Aggressive is the wrong term…… That more assertive manner and are not always approachable really (M6-3).

Field notes from the interview with this midwife identified she was very reticent to say anything negative and used the term 'assertive' to avoid using the term aggressive, then used the term assertive to mean a more passive

communication style. The midwife goes on to explain it's about the way the DSCs challenge:

> *The more approachable…. Perhaps less assertive staff have a better relationship because they don't challenge in the same manner they have more of a discussion and an open relationship to question things (M6-3).*

An 'open relationship' with medical staff where differences of opinion are 'discussed'. The right of the DSC to challenge never seemed to be in question by any of the participants, it was the manner in which that challenge was delivered. Some DSCs appeared to have better relationships with staff when they challenge decision-making compared to others. This observant MCA gives an insight into a DSC communication style who is able to positively challenge without causing offense to the doctors and thus affecting their working relationships:

> *MCA: Yes, I think,….um…. It's about confidence, how long they've been here… Knowing when to say something. Seen a few team leaders that like are really confident, that can… Not challenge… But… Challenge what the doctors or consultants are saying (MCA1).*

In their interview the MCA explains it is the focus of the DSCs challenge which results in a positive or negative dialogue clarify it is the doctor's decision the DSC is challenging, not the individual doctor. These midwives explain how the effective DSC gains mutual respect by listening to the different opinions and works towards a mutually agreed plan:

> *Midwife: Sometimes, I think it's a battle of egos between senior midwifery staff and obstetric teams', not necessarily senior obstetric medical staff. It's when team members are equally respected for their role, their opinion. I think mutual respect really (M6-4).*
>
> Interviewer: You said something about a mutual respect. Is there anything in particular about those individual team leaders that have gained that respect?
>
> *Yes, by listening to each other and taking on board each other's opinions in decision-making if they don't necessarily agree with one another because I don't agree with you because of this, and they can*

say I don't agree with you because this because they can mutually agree a plan in a reasonable, rational way, as opposed to I'm senior so I think we're doing it that way. I don't agree with you…... (M6-4).

The following response relates to how effective DSCs approach doctors when they don't agree with the plan of care being proposed:

Midwife: Go if necessary to advocates as to why we are doing certain things, so basically having an opinion on the plans of care. So, for example saying 'should we try this? Should we try that? (M5-4).

Earlier in this chapter, registrars recalled the negative connotations of 'bossy' DSCs seeking to establish authority through seniority. Here midwives articulate how assertive DSCs seek to gain agreement with medical staff by offering, rather than dictating solutions: 'should we try this?' should not be confused with compliance to medical seniority. Consultants in particular respected DSCs who questioned doctors. In their interviews, the consultants were quite adamant that they were not averse to being questioned by DSCs. They respected the coordinators who did and were keen to encourage this approach. In their interviews C2 and C4 talked about respecting the DSC who challenged and debates clinical decisions:

Consultant: There is strong policy here of always questioning the doctors, and I'm keen on that. I would rather a team leader who didn't agree with what I thought.... they need to come and speak to me about it then we need to talk about it (C4).

Consultant: They tend to be a quieter personality... Or personalities that... Like to keep the peace, we tend to agree with what you're saying... Whereas a team leader who will challenge a consultant is a very good thing (C2).

'Likes to keep the peace' as a negative connotation suggests consultants valued the DSCs who did not shy away from potential conflict, they welcomed the opportunity to debate differences of opinion. The good DSCs stop, listen, and acknowledge differences of opinions and work towards a mutually agreed plan as an equal in status within the team. Negative

examples from the participants explained how some DSCs compete with the medical staff or override them in a disrespectful and undermining way.

Respecting each other

All staff groups talked about the importance of respect between the DSC and doctors. In the following extracts, the doctors explain how important mutual respect between doctors and DSCs is to resolving differences of opinion. In the following interview the SHO is keen to explain how they learn from the DSC through debating decisions about clinical care. They wanted to be part of the team in that decision making process. Within the context of mutual respect between DSC and SHO they explain:

> *SHO: The most important thing is that we are not competitors, by any means, we are complementing each other and if I am working with that team leader, I'm definitely happy to receive her input about anything, if it's constructive and if she is teaching me something that I'm not aware of, that they are as midwives. If you can deliver this message (referring to the DSC), "it isn't a competition". I feel like if you're in a war, supporters have a good colleague beside you watching your back. I'm happy to have a good team leader but am not happy to have a competitive one (S2).*

Earlier in chapter 8 I have discussed the importance of the SHOs feeling part of the team, which is more complex to achieve due to their short rotations. The reference to a 'war' and needing colleagues to support them gives an insight into the pressures staff feel working on the delivery suite and the potential consequences if the staff do not work together. The potential for increased casualties. In the delivery suite environment, the casualties are women, babies, and staff who have made mistakes. In chapter 8 the registrars talked about working as an equal with the DSC and how they valued the ability to bounce ideas off the DSC. In the following registrar interviews they talked about how the DSC has a different perspective on the clinical situation being discussed due to their helicopter view of the delivery suite. This wider SA and ability by the DSC to pre-empt the potential consequences of the current decision making on activity in 2-3 hour time was important for the registrars to know and understand the potential

consequences, but it was about how it was done. The registrars explain how DSCs resolve disagreements in decision-making through discussion:

> *Registrar: They might think they know when certain things are indicated, but it might be different to what we think. So I think it's about respecting each other and be able to have a conversation, it is a critical part of it (R3).*

> *Registrar: There isn't conflict, there is agreement that decisions can be discussed and there can be a path of escalation if you can't agree. That's not necessarily acrimonious, for example, if I'm really sticking to my guns and the team leader says I'm going to check that with the consultant, there are 2 ways that could be done. It could be very acrimonious from the registrar's perspective that can be very undermining, or it can be, but I respect you, I can see what you're saying but from my perspective that's not a decision I'm used to … I would like to check that with the consultant? (R2).*

The registrar goes on to explain the contrast with excellent DSCs who disagree with a decision and their ability to articulate and pre-empt the future state and potential consequences of the proposed registrars plan. The following comment relates to an excellent DSC when the unit is busy with the potential for several women to require a caesarean section in 1-2 hours' time (unit had 1 theatre) if pre-emptive decisions were not made in the here and now:

> *Yes, I can think of one, in particular, remains calm but is very assertive, and in that situation, that's what you need, this one particular speaks their mind I've had at least one situation I found very challenging, where she's been very challenging of a decision of mine, but I look back and think fair enough. None of its kind of panic, it's being assertive, and she can explain why she's being assertive and it's because we've got X, Y, and Z so we have to decide and you can't wait until this one because what's happening here….. (R2).*

Rather than overriding the registrar's decision by going directly to the consultant, this DSC explains why they believe their course of action is right within the context of the current and potential future situation. The example given by R2 relates to when the unit is busy and the registrar articulates SA attributes, the ability to stay calm under pressure and use their SA skills to

project into the future and the potential consequences if particular decisions are taken.

Midwives talked about the correct balance of assertion and its effects on the atmosphere of the shift, M6-3 struggled to articulate why some DSCs adopt this more aggressive style of communication. They refer to not coping under pressure and how this seems to manifest in abrupt communication and the associated impact on staff morale who witnesses these exchanges. The ability to cope under pressure was an attribute of SA. The inappropriate human reaction to the stress of work pressures from the DSC may explain why these DSCs are not rated highly by staff. The following midwife extract makes reference to overly assertive behaviour as a defence mechanism:

> *Midwife: I think more for the more junior members (midwives). I think sometimes when they get stressed (DSC), their responses to…um…. to becomes a little bit more direct and a little bit more assertive and just give orders… I suppose. I think that could be quite difficult….. I'm trying to be diplomatic. Even if they were 'self-aware' when they are quite negative, they just don't seem to have the self-awareness. I think that's absolutely massive for a team leader. Being really self-aware of the way you talk to people (M6-2).*

This participant crystallises a lack of 'self-awareness' of their behaviour and its impact on other staff was a trait of the unapproachable DSC. The following consultant did not perceive any DSCs as unapproachable, suggesting it was more to do with personality:

> Interviewer: Is there anything about the coordinators that midwives will perhaps speak to the DSC more readily about their ladies than others? Is there anything you've noticed?
>
> *Consultant: So I think they are all approachable, they will have their own personalities, I don't think anybody at the minute who is overtly scary, or standoffish so I don't think that in general, that happens that people don't come and tell the coordinator things (C3).*

However, in the following midwife and MCA interviews the participants suggested when negative behaviour by the DSC to other staff was witnessed

by the midwives and MCAs this influenced their decision about the DSC and how receptive they would be to approach that DSC if they too had questions:

> *Midwife: Sometimes….um…. I haven't had it, but I know you can go to people and you don't get that same reaction to asking questions, especially if it is something that you are not sure about (M5-3).*

> *Midwife: I think so. Yes, definitely I think the more junior members of staff, maybe they might not even have had that response from the team leader, but they've witnessed it and therefore that makes…. It puts up a barrier... That's they're fearful of having that response in turn…(M6-3).*

Importantly, staff may not have personally had a negative interaction with a particular DSC but witnessing their interaction with other staff, influences their judgement of the coordinator's degree of approachability. This MCA articulates how she has witnessed midwives' conversations drying up when they try to approach unapproachable DSCs for advice.

> *MCA: I think it's about confidence (referring to the midwife), it's about being approachable (referring to the DSC), and people come to them and then say nought because they might get scowled at (MCA1).*

This preconceived idea about an unapproachable DSC by a midwife puts up barriers to them asking questions, even though they have not been personally party to this type of behaviour. In this interview the midwife talks about feels relaxed about being on shift with an approachable DSC in comparison to the anxiety of working with an unapproachable DSC which would require her to seek advice from the DSC in question.

> *Midwife: Back to the support, I think I worked better if I think I got a good team leader on. I'm not worried, thinking, "oh, I've got to go and get them; I think that is key for me" (M5-2).*

This sense of 'worry' about sharing information with DSCs perceived to be unapproachable was identified in the analysis of the earlier interviews and revisited as part of the theoretical sampling in the recruitment for subsequent interviews and discussion.

Sharing of information: Trust by staff to share information with the delivery suite coordinator

During the iterative process of the grounded theory approach, the potential consequences of an unapproachable DSC was explored through additional midwifery interviews. The sharing of information by the midwives with the DSC appeared to be dependent on the level of trust the staff had in the DSC to respond to their conversations in a positive and constructive way, e.g. their perceived level of approachability. When working with unapproachable DSCs, an interesting pattern of strategies used by midwives to seek clinical advice emerged from the data. In their interviews these 2 junior midwives explain:

> Interviewer: Would you be more reticent to share information with a DSC who is less approachable?
>
> *Midwife: I think if I had that, I think I would just probably go elsewhere, go and ask the question of another midwife who I trust, who is quite senior, or if there was another band 7 on who wasn't coordinating, ask them. Yes, I think that is what I would do. Yes, I would seek advice from elsewhere (M5-3)*

The following quote from a midwife relates to how they would approach shifts with a DSC they deemed to be less approachable:

> *Midwife: There are certain team leaders that I would always go to someone else first and have had situations where I've gone to another midwife and say, let me run this past you, would you go to the team leader for me with this? And if they say yes, I think I need to 'grow some balls 'and go to the team leader myself, however stupid to go might make me feel (M5-4).*

'Grow some balls' suggests the level of courage that is required to approach some DSCs. They go onto talk about the value judgements they make about the approachable and unapproachable DSCs and how they decide who they will ask for advice to support them with decision-making:

> *Midwife: I think as a junior member of staff, you kind of get the gist of who you can ask and who you can't. That kind of goes from there, so*

you'd go to other colleagues with experience. You just get a general gut feeling, really (M5-4).

All these extracts relate to band 5 midwives. It would be easy to assume that it would be expected that a junior midwife with less clinical experience would 'go to someone else' ask a band 6 colleague, who had worked on the delivery suite for longer. However, interviews with the band 6 midwives with many years of experience confirms they to used similar strategies of avoiding the unapproachable DSC for advice. Midwives M6-4 explains how they would go directly to the doctors bypassing the DSC:

Interviewer: would you be more reticent to share information with DSCs who is less approachable?

Midwife: I think I might be more inclined to speak to the obstetric team directly in favour of some team leaders. I would find that a more constructive route to go down. Then once I discussed whatever concerns I've had with them (referring to the obstetric team), and the decision has been reached, I would then involve the team leader. Not meaning to be underhand, but sometimes that's just a more effective route. I would just share with other senior colleagues as we have quite a lot of senior midwives who are not team leaders who can help decision-making (M6-4).

This pattern of bypassing the DSC going directly to the doctor is confirmed by this registrar. When relationships between DSCs and midwives are less positive, the registrar explains the effects this has on decision making pathways:

Registrar: So sometimes I find the midwives bypass a coordinator and come straight to me, which is frustrating for me because I feel if you'd asked them (the coordinator), they'd probably been able to tell you what to do, that's maybe because they don't have a good relationship with the coordinator (R1).

In chapter 8 doctors talked about the frustration of DSC not filtering information and all decision making being passed onto them and the associated workload.

Field notes noted how the midwife in this interview tried to avoid negative comments about the term approachable. However, with prompting, this midwife goes on to articulate how a DSC deemed less approachable affected their actions. The following quotes refers to a conversation about the actions they would take if working with an unapproachable DSC:

> Interviewer: Does it influence how much information you would share with the team leader about your woman?
>
> *Midwife: I think it's about having an open relationship with the other members of the team, including the medical staff, where they feel they can approach them and sometimes…..(M6-2).*

This midwife happily talks about open relationships and approachable midwives but requires more support with the 'and sometimes':

> *Umm….(thinks very carefully before she speaks)... If I'm going to say something about a woman, I'm probably the type of person that would tell them exactly what I'm thinking, I probably wouldn't withhold information. I probably…. In fact….. Probably thinking about it, there is 1 or 2 …….but I absolutely would withhold information….Yeah, because I would feel stupid. They would make me feel stupid. They would make me feel as if what I was saying was completely ridiculous (M6-2).*

The avoidance of seeking and sharing information with a DSC who midwives perceived to be unapproachable was not limited to the more junior staff but also midwives qualified for many years. Both band 5 and 6 midwives would avoid seeking advice or sharing information with the unapproachable DSC. Strategies used by the midwives typically included seeking advice elsewhere from another midwife or the doctor and not sharing the information directly with the DSC. In their interview this consultant interprets the withholding of information from the DSC as midwives wanting to keep the DSC away from their women:

> *Consultant: There has got to be an element of trust both up and down. You know... The team leader trusts that the midwife knows that she will come and tell her. But there are other midwives who will…… you know will hide things, keep things in their room, not quite know what's*

going on… or the importance of what's going on. You know who will think…. I'm going to get this delivery; I'm not having anyone in here. The Mavericks …(C1).

However, the interviews with the midwives suggest it is more related to the confidence to approach the unapproachable DSC for fear of being made to feel stupid rather than deliberately withholding information, which is succinctly articulated by this band 6 midwife after being asked about sharing information and seeking opinions from DSCs:

Midwife: Yes, so some team leaders (DSC) I very much need to know the answer before I ask the question because if I get this wrong…. You know, if I'm in the environment at the time, I might be shot down in flames or made to feel stupid (M6-4).

In conclusion the DSC role supporting staff in decision-making has been discussed in chapter 8.However, a key element of that decision making process involved the ability of staff to ask questions and bounce ideas off the DSC. Midwives, SHOs and MCAs, deemed the approachable DSCs as being open to questions from staff and having the ability to make them feel comfortable and confident to seek advice. Consultants and registrars defined approachable DSCs as demonstrating mutual respect by being open to debate differences of opinion. Good DSCs were able to clearly articulate the rationale for their suggested plan of action whilst listening to suggestions from others. All staff groups identified unapproachable DSCs as using seniority to assert their position, which undermined the mutual respect of the team.

The importance of obtaining information to maintain SA has been discussed in chapter 7. An unapproachable DSC is less likely to be fully informed, as staff choose to bypass them to seek advice and guidance from other staff members. Critical pieces of information may not be communicated. Relating to the jigsaw analogy in SA, if staff do not feel comfortable to share information/seek advice of their piece of the jigsaw, the DSC cannot construct the jigsaw and risks either having an incomplete picture or

mistakenly assume they have an accurate picture, which may not be the correct assumption as crucial pieces of information are missing.

Chapter 7, SA identifies how the DSCs uses the communications board to collate key information which is fundamental to decision-making by the MDT on delivery suite. An incomplete picture can have a significant impact on TSA and making the right decisions and planning care for women.

What differentiates an excellent from a good DSC?

The findings from the interviews have presented the attributes of good DSCs as viewed by the MDT. All the MDT were unanimous the difference between the excellent DSC and good DSC was the DSCs ability to use the information gathered and presented on the communications board to pre-empt situations, utilising their situational awareness skills to take preventative action. This instilled a level of total confidence by the MDT in the DSC because they were not only situationally aware and in control of the current situation but in control of potential events.

Midwives and MCAs also identified the excellent DSCs as having a heighted awareness of the cognitive fatigue associated with staff not getting breaks and the links to potential clinical errors, putting strategies in place to ensure staff had the opportunity to rehydrate and rest. This was of particular relevance when the unit was busy and breaks less likely to be taken. The following chapter 10 summarises the findings from this study within the context of the current literature.

Chapter 10.

Discussion

The research question was:

> 'What are the attributes in DSCs that the MDT perceived to be important for the effective coordination of their shift'?

The aim was to understand how these leadership and management attributes impacted on staff efficiency and contentedness. By embracing the constructivist paradigm, the research explored the DSC attributes articulated by the MDT through their lived experience of working with DSCs past and present within the social context of the delivery suite (Charmaz 2000; 2014). From the interviews, without exception, all the individuals from each of the staff groups were unanimous in their admiration for the DSCs, whose role was unequivocally deemed to be pivotal to a well-coordinated shift and positive staff experience. An experience that was not influenced by how busy the shift was or the complexity of the women, but the DSC's ability to manage fluctuations in workload and activity whilst supporting and leading the staff through the shift as a team.

In attempting to provide clarity to the research findings, the findings have been presented as 3 categories, namely situational awareness, staff support and approachability. However, the DSC role is multifaceted and complex, with interdependent relationships between the categories and leadership styles.

The literature search identified colleagues of midwives providing clinical care, a fundamentally different role to DSCs viewed transformational leadership and emotional intelligence (EI) as positive attributes (Bryom and Downe 2010). Unpublished work on perceptions of midwifery leadership on the delivery suite suggests clinical leaders adopt a heroic and values-based leadership style (Parkin 2016). The heroic leadership style is synonymous with saving companies and self-promotion (Alimo-Metcalfe and Alban-Metcalfe 2005), a very reactive leadership style. The findings from this research suggest that participants associated heroic leaders with ineffective DSCs. These DSCs operated in a reactive capacity because they had failed

to manage and pre-empt the situations. This inability to plan ahead resulted in their inability to prevent unnecessary situations from occurring. The findings from the research suggested that excellent DSCs oscillate between a variety of styles (appendix 15) and will be discussed in detail later in this chapter. I acknowledge that no 1 individual can possess all the qualities discussed in this chapter. However, I intend to present the MDTs perceptions of the excellent DSC.

In control of the delivery suite

All the participants related professionally to DSCs who were in control of the delivery suite. In her unpublished work on clinical leadership, Parkin (2016) refers to control as ' having the finger on the pulse'. Resonating with the findings of this study which gave staff a sense of control provided structure and organisation, enabling staff to understand their contribution to the MDT, supporting them to plan and carry out their work with a sense of pride, as a team to the best of their ability. Effective collaboration, role clarity and control over one's workload are all factors identified in health care as contributing to increased staff satisfaction, reduced burn out and stress for staff within the workplace (Rafferty, Wall and Aitken 2001; Rushmer 2005; Mc Naughton, Chrevin and Bourgeault 2013; Thumm and Flynn 2018; Albendin-Garcia *et al*. 2021). In contrast to the ineffective DSCs, whose lack of control left staff frustrated and unfulfilled in their role, an Australian based study on midwife stress in the workplace identified the inability of the shift coordinator to manage events on delivery suite was a direct stressor for midwives (Geraghty, Speelman and Bayes 2019), but did not extrapolate to explain how good management was delivered. The findings from this study found that DSCs who were deemed to be in control managed the delivery suite by maintaining a ‘helicopter view’, reducing staffs' stress levels.

Memo writing during the analysis phase pinpointed ‘the helicopter view’ as a generic term used by participants to differentiate between good and ineffective DSCs. Symbolic interactionism underpinning constructivism suggests humans make sense of the world through shared experiences and

language (Bulmer 1969; Howell 2013; Lincoln, Lynholm and Guba 2018). In her approach to constructive grounded theory, Charmaz (2014) advocates that the researcher focuses on the participants' language to inform the coding and theory generation. Although individually constructed, participants collectively used the 'helicopter view' language to create the visual analogy to underpin their explanation of a situationally aware DSC. In keeping with the philosophy of constructive grounded theory and the co-constructed meaning between researched and researcher, the discussion of the findings will use situational awareness (SA) as the theoretical framework to shape and integrate the multifaceted aspects of the DSC role and its impact on staff (Charmaz 1995; 2000).

The helicopter view

The use of the term ‘helicopter view’ SA used by the participants, may be explained as it is synonymous with the nationally recognised maternity PROMPT emergency training (Winterton *et al.* 2017). The term is used widely in the training material as a colloquial term for maintaining SA so the participants would be familiar with the term within the context of the MDT which may explain the shared language used. This presented a dichotomy, the leader who maintains a helicopter view within the context of the maternity setting relates to the management of a woman in an emergency, whereas an individual in the MDT deliberately avoids being directly involved in the emergency care. By maintaining the overview of events, this individual is tasked with the overview of the situation to avoid fixation on individual tasks or problems commonly associated with decision-making errors (Bristowe *et al*. 2012; Cornwaite, Edwards and Siassakos 2013; Cornwaite, Alvarez and Siassakos 2015). Participants in this research used the term to explain an overview of multiple women in a non-emergency situation, contradicting the reactive term ‘helicopter view’ advocated by the PROMPT course. The helicopter view was being utilised as a preventative term, an overview to prevent problems from occurring. SA is widely defined within maternity as:

> ‘An appropriate awareness of the situation’ (RCOG 2017. p 60).

Literature on the application of SA in maternity care is limited to an awareness by the MDT providing 1 to 1 care often in emergencies (Siassakos *et al*. 2011a; 2011b; Bristowe *et al*. 2012; Morgan *et al*. 2015; RCOG 2017). The lack of research into the DSC role renders the association of the terms SA and DSC void of explanation. However, within the context of 1 to 1 care, SA is widely recognised within patient safety literature as an important component in human factors (Mitchell 2013; Green, Tsiroyannis and Brennan 2016; Yoong *et al*. 2020) and involves the ability of the individual to create an awareness of all the factors associated with a complex and dynamic healthcare working environment that need to be considered to avoid errors in clinical decision making (Wright, Taekman and Endsley 2004; Stubbings, Chaboyer and McMurray 2012; RCOG 2017). This is highly relevant to the delivery suite, where the transition for women from low risk to high risk care can be swift with potentially catastrophic consequences if mismanaged by the MDT (Edozien 2015; RCOG 2016a; HSIB 2020a). Within surgery and anaesthetics, SA has been developed to prevent surgical errors (Singh, Peterson and Thomas 2006; Fioratou *et al.* 2010), resulting in the WHO checklists being used nationally to prevent wrong site surgery (WHO 2009).

Within maternity, the attempts to understand the causative factors for errors and ineffective decision making has focused on loss of SA by the MDT providing care to the woman, as opposed to loss of SA of the overview of the delivery suite (DH 1989; CESDI 1998; Knight *et al.* 2015a; 2016; 2019). The microanalysis of CTG interpretations and delays in the management of care by the MDT has been primarily driven by the maternity incentive scheme standards (NHS Litigation Authority 2012; NHS Resolutions 2021; Health and Social Care Committee 2021) and the use of focused investigation tools for example root cause analysis (Talaulikar, Lowe and Arulkumaran 2013; Cook 2017). Although the National Perinatal Mortality Review Tool recommends a wider focus of individuals involved in the reviews of poor neonatal outcomes, to include families and the involvement of the risk

management team, the focus continues to be on the 1 to 1 care of a woman as opposed to the wider events taking place on delivery suite and the potential impact for the women (Kurinczuk *et al*. 2020).

The importance of the team's wider SA of all delivery suite activity and its consequences is starting to gain traction within maternity services, and whilst the importance of the DSC maintaining a supernumerary status, free from direct 1 to 1 care, is recommended (HSIB 2020b), why and how the DSC role contributes to SA and the wider team situational awareness (TSA) is poorly understood. Limited observational studies of delivery suite team communication and TSA (MacIntosh, Berridge and Freeth 2009) concur with the findings from this study in identifying the DSC as the main conduit for information exchange and maintenance of the communication board, placing the DSC role at the centre of the socially negotiated MDT decision making on delivery suite (Lankshear, Ettorre and Mason 2005). All of which are key factors underpinning TSA promoting a positive safety culture through informed decision making (Abbott, Rogers and Freeth 2012). However, the studies do not explain how the DSC collects and uses the information effectively to achieve and maintain SA or how this influences TSA.

The ‘helicopter view’ situational awareness as a theoretical framework.

The concept of SA and its influence on safety originated from the aviation industry, from the health and safety investigations work into air crash disasters (Mitchell 2013). From her research within the aviation industry Endsley (1995) developed a 3 stage process of SA to understand the human cognitive processes that make an individual situationally aware. I intend to apply the 3 steps of SA to add clarity to the finding of this study and explain why the participants viewed the helicopter view as a key attribute in the excellent DSCs and how this influences the safe provision of care and staff job satisfaction.

Levels of SA.

Level I: Perception

Level 2: Comprehension
Level 3: Projection

Each level is influenced by cognitive factors, preconceptions, memory formation, complexity, stress and workload collectively affecting decision-making (Flin *et al*. 2008), factors which resonate with the DSC identified in the research. Excellent DSCs were identified as having the ability to maintain SA by using strategies to maintain and mitigate against the loss of SA during peaks in activity and will be discussed under each of the SA levels.

Participants viewed SA by DSCs as broader than just an awareness as defined within the maternity literature (RCOG 2017). The DSC's ability to collect, collate, and succinctly articulate key information to the MDT to facilitate decision-making was important. Excellent DSCs extrapolated the information beyond the immediate situation to project into the future to pre-empt and plan ahead to mitigate against problems occurring. These findings concur with Pew (2000) and Endsley (1995; 2000) work within aviation, which are critical of the sole focus of awareness of elements, proposing elements in the environment are not static and are influenced by time and space, arguing a fluid state requires a variety of cognitive processes and abilities to extrapolate knowledge to understand how events could impact on objectives, (Endsley and Rodgers 1988; Endsley 2000). Related to the delivery suite within this study, elements, such as activity, are not static and fluctuate throughout the shift, requiring the DSC to maintain capacity and staffing within safe limits. Comprehension of the current situation is important, but complex environments require strategies that adapt to the dynamic and constantly changing environments (Stanton, Chambers and Piggott 2001) which pertain to the dynamic and multiple complexities of the delivery suite environment (Wright, Taekman and Ensley 2004). Excellent DSCs understand the need for strategies to manage the delivery suite beyond the current situation.

Situational awareness level 1-Perception

Proactively leads on collecting information.

Level 1 SA relates to the individual's ability to recognise the relevant information, environmental data, or elements. An example within the context of 1 to 1 health care may include changes in patient's vital signs, a raised temperature or dashboard instruments/ radars in the context of aviation (Endsley 1995; Fore and Sculli 2013; Mitchell 2013). Perception of relevant information within aviation research relates to visual information immediately available to the operator (Rodgers, Mogford and Strauch 2000). Within the health care setting, midwives and nurses physically visualise the woman/ patient and perform vital signs. DSCs work blind, as intrapartum care is delivered in individual rooms. Whilst providing privacy for the women, the physical environment provides additional challenges for the DSC to ascertain clinical information on care conducted behind closed doors (NMPA 2019). A delicate balance is required between the maintenance of women's privacy and the need to know. This is particularly challenging for the DSCs who rely on the midwives to physically leave the room to relay clinical information or physically go to the room to collect and collate the relevant information. Related to the jigsaw analogy within the findings section, this is the manual collection of the right number and pieces of the jigsaw to complete the overall picture, 'the helicopter view'.

Proactive DSCs

DSCs admired by the participants were described as proactive in collecting and recording critical information on the communications board to maintain the helicopter view, a prerequisite for the DSC role identified in job descriptions (table 26). Strategies used by proactive DSCs included going to the delivery rooms to collect information and phoning or visiting clinical areas, which fed into the delivery suite. They avoided getting involved in complex or time-consuming tasks and made sure they were available at handovers, ward rounds and huddles to contribute to information sharing and decision making. The information they collected was not restricted to clinical information about women but also considered the MDT staff on shift and the

level of support they too required. The ability to form an awareness of their staff and appropriate levels of support relates to the attributes of a servant and situational leaders, whereby the leader anticipates the support their followers/staff require and actively engages with the staff to deliver this support (Greenleaf 2002; Van Dierendonck 2011; Hersey, Johnson and Blanchard 2008; Northouse 2016) and the social awareness of the wider workforce demonstrated by emotionally intelligent leaders (appendix 16) (Bar-on 2000; 2010; Goleman 2001; Goleman, Boyatzis and McKee 2002a; 2002b). Good DSCs proactively engaged with and interacted with staff; they knew their staff and the support they may require, demonstrating an interest in their staff's wellbeing. This engaging and transacting approach are attributes associated with transformational and engaging leadership (Burns 1978; Bass 1985; 1988; Alimo-Metcalfe, Alban- Metcalfe 2000). This proactive approach to information collection was viewed by participants as supportive, in contrast to the less proactive DSCs described as office based.

Table 26: Mapping of study findings to the precis of the job descriptions (logic modelling)

Situational awareness			
Findings from this study	Proactively collects information relating to activity and staff	Proactively creates a share 'helicopter view' of the delivery suite	Proactively projects and plans into the future
Findings from the Job descriptions	Conduit for information Maintains the communication board	Coordination of the unit Communicates with the MDT	Not identified
Staff support			
Findings from this study	Supports staff with the physical, emotional aspects of the role	Creates a positive working environment where staff feel part of a team	Supports staff in decision making
Findings from the job descriptions	Manages staff	Promotes team working	Creates an environment for decision making
Approachable			
Findings from this study	Supportive and approachable to questions by staff	Trusted by staff to share information	Ability to challenge in an assertive rather than

			aggressive manner
Findings from the job descriptions	Not identified		

Note: Staff support and approachable are discussed in the recommendations section.

Office-based DSCs

DSCs viewed less positively were not proactive in collecting the relevant information. They worked on the assumption that staff would bring the information to them, staff serving them, in direct contrast to the servant leadership of the proactive DSC serving staff (Greenleaf 2002; Van Dierendonck 2011). They failed to recognise that it may be impractical for the MDT staff member to leave the delivery room to relay clinical updates. They were often absent from ward rounds, engaged in other activities. Office based DSCs were perceived to be disinterested and unsupportive, demonstrating a lack of EI within the domain of social competence (appendix 15) (Bar-on 2000; 2010; Goleman 2001; Goleman, Boyatzis and McKee 2002a); lack of service orientation and organisational awareness was a cause of frustration for staff, in particular medical staff who were unable to ascertain information on the progress of women in the individual rooms or have the relevant information (pieces of the jigsaw), to inform care planning and associated workload. In direct contrast to the proactive DSC who had the information and knew what was going on, these office based DSCs operated with a fragmented picture puzzle of information.

The potential for human errors on a delivery suite if SA level 1 in the DSC is underdeveloped

Within maternity, the focus for the causes of MDT errors in decision-making centres on level 2 SA, the comprehension and synthesis of the collected data by the health professionals (Lankshear, Ettorre and Mason 2005; Rowe *et al*. 2001; Bristowe *et al.* 2012; Cornwaite, Alvarez and Siassakos 2015; RCOG 2017; HSIB 2020a; 2020b). The aviation industry maintains its focus on human errors at level 1 SA, 70% of decision-making errors within aviation are attributed to the inability of the pilots and air traffic control staff to operate effectively at level 1, the perceptions and the relevance of data/ information, consequently leading to decision-making errors (Jones and Endsley 1996;

Jones 1997; Endsley 2000; Grabber 2005; Mitchell 2013). Likened to the jigsaw analogy, the failure to collect all the pieces, making a decision on what the picture is with missing puzzle pieces.

By focusing on decision making by the MDT at level 2 (Siassakos *et al.* 2013; Edozien 2015; Winterton *et al.* 2017), assumptions are being made that all the relevant information is available to the team to plan care. The findings from this research suggest a potential oversight or gap in the medical literature about the importance of level 1 collection and collation of all relevant data to inform decision-making. It could be argued that in comparison with aviation, there is an even greater margin for error in data retrieval at level 1 SA. Pilots and air traffic controllers are fed information via automated systems (Rodgers, Mogford and Strauch 2000). Whereas the MDT are reliant on the physical and manual collection of information by the DSC. This may explain the participant's lack of confidence in DSCs who failed to perceive the importance of staff engagement to collect comprehensive data and the anxiety caused to staff by office-based DSCs coordinating with only part of the overall picture, feeding into key decision-making the MDT. In summary, if level 1 SA, a comprehensive helicopter view is to be achieved by the DSC, they are required to be proactive in data and information collection before accurate decisions about the delivery suite activity and care plans can be made by the whole MDT.

Situational awareness level 2 -Comprehension- Proactively creates and shares the helicopter view.

Participants identified how the good DSCs used the information they had gathered to proactively create a shared MDT view of the situation, facilitating TSA and subsequent decision making. This skill resonates with a higher level of SA, level 2, the cognitive ability to process and synthesise information to create a holistic picture (Endsley 1995; 2000). The job descriptions cited the importance of coordination of the unit and MDT (figure 5), this study identified the ability of the DSC to operate at level 2 was described from 3 perspectives, firstly the ability of the DSC to comprehend multiple streams of

information to synthesise and communicate the priorities to the MDT (creating a shared mental model and juggling balls). Secondly, the comprehension and synthesis of information about staff and the support they required to fulfil their role (fair workload allocation, proactively creates breaks) and thirdly, supporting staff to comprehend and synthesise clinical information to support decision making about individual women (bouncing ideas).

Creating the right mental model by deciphering the relevant information

The communication board is acknowledged in the literature as the central focus for information collation on delivery suite (MacIntosh, Berridge and Freeth 2007; Berridge, MacIntosh and Freeth 2010; Liberati *et al.* 2019). The excellent DSCs identified in this study did not just use the communications board as a visual tool, they were fastidious about personally updating the board acting as a conduit for all information, they maintained total control by vetting and prioritising the information that was written on the board, ensuring only the most current up to date information was used to hand over care to the MDT. Ineffective DSCs relied on their working memory. The excellent DSCs were able to maintain this under pressure, articulated as the ability to 'juggle balls'. This ability to prioritise and focus on key information is consistent with findings from aviation research. The working memory comes under increasing pressure during peaks of activity (Guerty and Tirre 2000; Monks and Maclennan 2016), air traffic controllers who maintained SA and safety during high peaks in activity were found to have the ability to prioritise information and give less attention to less important information (Endsley and Rodgers 1988). The good DSCs in this research appeared to understand the limitations of their working memory and its impact on the accuracy of current information required for decision-making utilising the communications board to reduce their mental workload.

The good DSC understood TSA was at greater risk of failing as activity and dependency levels increased and greater amounts of information were required to be synthesised. They did not rely on their own comprehension and synthesis of information and events, by adopting an engaging style of

leadership (Alimo- Metcalfe and Alban- Metcalfe 2000), they created a shared understanding through team involvement of the MDT. This was articulated as proactive impromptu huddles. Unlike the formal handovers (table 27), the huddles provided short briefings for MDT updates to ensure all information available was shared to forward plan (Edozien 2011; Spranzi 2014; Fenci and Willoughby 2019). Huddles at designated times throughout the shift as a strategy to improve TSA is advocated nationally within maternity care (NHS improvement 2019b). However, when surges in activity and demand increased, the good DSCs did not wait for the next planned huddle, they instigated an MDT huddle around the communications board to re-establish TSA. The importance of the communications board in maintaining TSA is acknowledged in the literature (Macintosh, Berridge and Freeth 2009; Liberati *et al.* 2019). However, the credit for maintaining the accuracy of its information is not credited to the DSC. Self-awareness of one's limitations and the connection with others for support demonstrates attributes of an authentic leader (Anonnson *et al*. 2014; Thompson 2016; Northouse 2016). These DSCs understood their ability to formulate the wrong mental model, so they used the MDT to validate or correct their understanding of events. Likened to the jigsaw analogy, but without the picture on the box, they constructed the jigsaw together to ensure everyone's understanding of the picture puzzle was the same.

Table 27: Difference between handovers and huddles

Handovers	Huddles
The formal transfer of clinical responsibility	Short briefing while maintaining clinical responsibility
A succinct overview of : -Current inpatients, their risk and location, investigations, and proposed plan of care	-Share clinical information, review events -Plan for the day ahead
Focus on: -Transfer of information and responsibility to another clinician	Focus on: -Sharing key information and TSA -Identifying concerns, -used to predict issues

(Adapted from NHS Improvement 2019)

Within health care, 70% of errors leading to adverse outcomes are attributed to the inability of the MDT to maintain TSA and the application of the wrong mental model to decision-making (Wright, Taekman and Endsley 2004; Grabber 2005; Edozien 2015; HSIB 2020a). Observational research of delivery suite communication concurs with the communications board operating as the central point for MDT decision making (Berridge, Macintosh and Freeth 2010; Liberati *et al.* 2019). Notably, when the DSC role was underdeveloped, the consultant would step in to fill the communication gap (Macintosh, Berridge and Freeth 2007). The additional workload and associated anxiety for the staff when the DSC fails to maintain the 'helicopter view' was identified by the participants, particularly the registrars at night, as the most senior obstetrician on site. A disorganised working environment and the associated increase in workload is associated with stress (Thumm and Flynn 2018; Albendin-Garcia *et al.* 2021) and may account for the frustrations articulated by staff, particularly senior medical staff in this study.

Participants identified how the good DSCs used their mental model of activity to articulate the key priorities to the team, especially during extreme peaks of activity. When exposed to high levels of information streams, juggling balls, good DSCs maintained TSA by very direct and succinct closed communication referred to as 'getting to the nitty-gritty', a very transactional style of leadership (Bass 1985; 1988; Bass and Avolio 1994), viewed as a negative trait by the founder of transactional and transformational leadership (Burns 1978) because of its lack of staff interaction, thus contradicting the finding of this study. These DSCs understood the limitations of the working memory of their staff, intuitively focusing the staffs' attention on the priorities and away from less important information which could lead to cognitive overload and errors in decision making (Gugerty and Tirre; 2000 Monks and Maclennan 2016), mirroring the strategies used by air-traffic controllers during peaks in air traffic (Endsley and Rodgers 1988;). In essence, the DSC understood when to be consultative and when to be directive.

Ineffective handover of care between the MDT is a common cause of medical errors, missing or misinterpreted information leading to errors in decision-making (Leonard, Graham and Bonacum 2004; White *et al.* 2005; Collins 2008; Garner, Murphy and Parisaei 2019). The SBAR handover tool (table 10.3) (NHS Institute for Innovation and Improvement 2010) is nationally advocated to mitigate against the incomplete or misinterpretation of information by the clinical team and subsequent errors in decision making (Leonard, Graham and Bonacum 2004; White *et al*. 2005; Collins 2008; Garner, Murphy and Parisaei 2019). The SBAR tool aims to simplify information, reducing cognitive overload to avoid crucial information being missed (Amirchetty and Rutherford 2008; Jackson *et al*. 2014; Monks and Maclennan 2016). However, the good DSCs under pressure did not go through the details in SBAR but moved straight to the recommendations stage (Table 28) communicating the immediate action required. For example, 'which woman needs to be reviewed now?', 'which women were not causing any concern at present'. This research suggests that a modified version of SBAR may be helpful for DSCs who are not as proficient with succinct coordinator briefings.

Table 28: SBAR handover tool

Pneumonic	Example
S= Situation	Identify ward, patient's name and your concern
B= Background	Give reason for patients admission and significant medical history
A= Assessment	Vital signs, clinical impression, concerns
R= Recommendation	Explain what you need, make suggestions, clarify the expectation

The ability of the DSC to create a shared mental model for TSA and succinctly articulate the clinical priorities had a direct impact on staffs' ability to fulfil their role. This was particularly relevant for the doctors who used the TSA of clinical priorities on delivery suite to plan patient reviews on other wards, timed around the delivery suite activity, also by the MCAs and ward clerk to prioritise their support for midwives with discharges and admissions. Lack of control by staff over their work and workload planning was a

significant cause of frustration, factors commonly associated with stress, burnout and poor job satisfaction in the work environment (Thumm and Flynn 2018; Hunter *et al*. 2019; Albendin-Garcia *et al*. 2021). The findings from this study revealed how doctors were called back to the delivery suite to review women who could have been identified as requiring an assessment at handover, delaying assessments on the delivery suite and disrupting reviews on the ward. MCAs felt pulled from 1 job to another without giving their best to the task in hand, as suddenly something more important would be discovered and disrupted the MCAs work schedule. The ward clerk articulated the frustration associated with women unexpectedly arriving at the unit and the embarrassment of ascertaining if a midwife and room had been arranged. Midwives would suddenly find they had been allocated additional work with minimal planning time. Such firefighting measures could have been doused at a much earlier stage by an efficient DSC.

Fair workload allocation

Understanding capacity relates to more than just the number of women on the unit. The job description analysis identified the role of managing staff (figure 5), but not how this was done effectively. Good DSCs understood workload and its consequences on their staff providing care. They proactively used their comprehension of the staffs' expertise to allocate workload fairly, mitigating against fatigue. This was of particular importance to midwives but also observed by the doctors, MCAs and the ward clerk. The individual's ability to maintain control over their workload is associated with a reduction in stress and personal sense of achieving quality of care and increasing job satisfaction (Fenwick *et al.* 2017; Thumm and Flynn 2018; Geraghty, Speelman and Bayes 2019). The participants in this research focused on the 'fairness' of workload. They perceived avoidable inequity of workload allocation as a cause of frustration. Band 6 midwives felt disgruntled when allocated a disproportionately amount of high-risk cases than the band 5 midwives. Equally, the band 5 midwives felt overwhelmed when allocated complex women and the associated intensity of care associated with such conditions with no support. The ability for midwives to practice within their comfort zone is strongly associated with midwives wellbeing, particularly

newly qualified staff (Bedwell, McGowan and Lavender 2015). However, this creates problems long term, if never exposed to complex cases, how staff then gain the experience for their development, avoiding the default position of disproportionally increasing band 6 midwives' workload.

The good DSCs understood this dilemma, if staff were to learn and gain confidence with complex clinical situations, they needed to be exposed to learning outside their comfort zone, acknowledged within educational psychology as the place where meaningful learning takes place (Dweck 2017; Duckworth 2019). The good DSCs proactively identified the most appropriate shifts. When the activity allowed, they would allocate complex cases to the band 5 midwives, taking them out of their comfort zone, but ensured they were supported by the allocation of a band 6 'buddy', thereby forward planning to upskill staff for the busier shifts so work could be evenly distributed reducing the stress levels associated with high workloads (RCM 2017). A strategy adopted by midwives identified as leaders by Parkin (2016) referred to the allocation of a 'wing man'. This approach extended to the SHOs, the doctors identified how good DSCs would 'proactively bleep' the SHO to ensure they were available for learning opportunities, for example, forceps births and involvement with care planning. In summary, they understood the balance of when it was and was not appropriate to expose junior staff to new learning opportunities and the importance of ongoing staff development.

Proactively creates time for breaks.

The collection and synthesis of clinical activity to create TSA has already been explored. Participants also identified how good DSCs could extrapolate the impact of the activity on the staff's wellbeing, understanding the impact of fatigue and the importance of breaks, hydration, and nutrition on staff' cognitive processing. Fatigue and inadequate hydration are known human factors within the literature as contributing to the loss of SA and impact on decision making, exacerbated by the increased demands in mental cognition by the individual as events and the dynamics of the working environment become more complex (Endsley 1995; Mitchell 2013; Yoong *et al.* 2020;

RCM 2021b). How this is achieved in practice is less clear. The findings from this research found that good DSCs were proactive, they allocated breaks to mitigate against cognitive fatigue. Breaks became a greater focus as activity escalated. The emotional demands of being with women and the human emotions to stay with them during labour and the stress this places on midwives is widely acknowledged (Hunter 2004; 2005). Participants articulated how the excellent DSCs understood nonvisible staff were most prone to loss of SA due to emotional fatigue, confined to their room due to the complexity of care. Their understanding of the problems staff face, caring approach and supportive strategies resonate with the servant and compassionate leadership styles (Greenleaf 2002; Van Dierendonck 2011; Hopkinson 2014; Massie 2016).

Physical nourishment, synonymous with staff wellbeing, is particularly important during peaks of activity (Wood, Chambers and Marshall 2021). Strategies used by the excellent DSCs included allocating a midwife to cover their colleagues work to ensure the midwife achieved a physical break from the intense situation. This feeling of support was in stark contrast to the feeling of vulnerability expressed by staff when working with a DSC who was unable to make the connections between the human factors of long hours, lack of nutrition, cognitive processing and poor decision making, factors widely associated with stress and burnout (Pezaro *et al*. 2015; Pezaro, Clyne and Fulton 2017; Hunter *et al.* 2019; NHS employers 2019; Albendin-Garcia *et al.* 2021). The findings of this research suggest that the ability of the DSC to use strategies to mitigate against the effects of fatigue is key in influencing the human factors on the delivery suite associated with errors in clinical decision making.

Bouncing off ideas

All staff groups admired DSCs who adopted a personalised approach to support staff with decision making. Good DSCs used their constructed mental model of staffs' abilities to judge the most appropriate approach, the less experienced staff, junior midwives and SHO's, the DSC involved them in decision-making, offering learning opportunities, support and advice by

screening concerns prior to escalating to the senior medical staff. For more experienced staff, they acted as a sounding board, this group of staff had the capability to make autonomous decisions but valued 'bouncing' their ideas off the DSC. This was particularly important for the registrars and consultants but also articulated by the band 6 midwives who valued sharing their clinical plan to ensure nothing was being missed and that their plan was compatible with the overall plan for the delivery suite. This proactive approach to decision making by the DSC facilitated collaboration between the different disciplines, reducing negative power struggles between the midwives and doctors, viewed as so divisive in delivery suite working (Hastie and Fahy 2009; Kirkup 2015) and reduces staffs' stress levels associated with miscommunication, tension, antagonism and poor team working (Firth-Cozens 2001; Sexton *et al*. 2006; Downe *et al.* 2010).

The practice of 'bouncing ideas off' the DSC by clinical colleagues correlates to the importance of staff striving for a shared understanding of a patient's condition, whilst supporting the individual's decision making and increased TSA (Stubbings, Chaboyer and Mc Murray 2012). The notion of experience is discussed later in the chapter. However, nursing literature identifies a direct correlation between time spent as a nurse and their confidence to ask questions to support decision making. Namely the more experienced a clinician, the more likely they are to seek advice on clinical decision making and vice versa (Cappelleti, Engel and Prentice 2014; Nibbelink and Brewer 2018). The lack of confidence in newly qualified midwives and doctors makes them particularly vulnerable to not questioning or seeking support with decision making (Pinki *et al*. 2007; Bedwell, Mc Gowan and Lavender's 2015). Unapproachable DSCs who were identified in the study as making staff 'feel a pest' or 'silly' exacerbate this feeling of vulnerability. In naturalistic decision making, discussion and debate with work colleagues, it is the preferred method for health professionals seeking support with clinical decisions (Rycroft-Malone et al. 2000; Cappelletti, Engel and Prentice 2014; Samuriwo and Dowding 2014). This research upholds placing the DSC in a

vital role to facilitate the social interaction process of decision making on delivery suite.

DSCs identified by the participants as unapproachable were problematic for staff. The DSC avoided discussing care planning and supporting staff with decision making, so staff avoided approaching them for advice. Such DSCs were a source of frustration, particularly for doctors, whose workload increased due to dealing with clinical queries that could have been triaged and resolved by the DSC. Described as 'Teflon DSCs', these DSCs avoided taking responsibility for decision making, findings which resonate with Deary and Fisher's (2017) work suggesting midwives avoid offering advice for fear of the associated responsibility. The link between experience and confidence to ask questions is recognised within nursing (Cappelleti, Engel and Prentice 2014; Nibbelink and Brewer 2018), however the link between knowledgeable DSCs and their confidence in fielding questions was less clear within this study and further research is required to understand the confident DSC and its impact on accepting responsibility.

Highlighted in the findings section, further research is required to understand what makes a DSC confident and its influence on SA. In summary, the ability of the DSC to function at level 2 SA is important from both the MDT and individual staff perspective. Firstly, their ability to synthesise, communicate clinical information and priorities, providing direction and clarity to all staff within the MDT. A clarity of expectations empowers staff to take personal control and have a degree of autonomy in how they plan their work, secure in the knowledge that this meets the broader needs of the delivery suite and MDT. Secondly, fairness of workload allocation mitigates against the resentment of feeling overworked in comparison to others. Thirdly, positive approaches to breaks, particularly during extreme activity periods, ensure staff's cognitive functioning is maintained mitigating against human errors. Fourthly, support with clinical decision making is key to TSA, individual staff confidence and staff development.

The potential for human errors on the delivery suite if SA level 2 is underdeveloped

The DSC appears to be key to the comprehension and communication of information vital to maintaining TSA, ensuring the MDT use the right information to create the correct mental model of activity and dependency levels. The inability of the DSC to operate at level 2 potentially results in the MDT applying the wrong mental model to care planning, a common error associated with decision-making errors (Jones and Endsley 1996; Wright, Taekman and Endsley 2004; Grabber 2005; Edozien 2015).

Within the field of patient safety, the effects of workload, fatigue, lack of hydration and nutrition on individuals cognitive function are recognised as human factors contributing to errors in decision-making (Mitchell 2013; Kharoufah et al. 2018). The inability of the DSC to recognise and comprehend the importance of breaks and proactively ensure they occur increases this margin for error.

Finally, the DSC is viewed as key to staff advice. Failure by the DSC to proactively engage in these discussions has 2 potential consequences. Firstly, staff avoid seeking advice, potentially leading to errors. Secondly, the DSC is not party to the clinical information being discussed as part of the decision-making process, resulting in an incomplete picture of delivery suite activity.

Situational awareness level 3- Proactively plans and projects into the future

All the participants interviewed were unanimous in their understanding of the attributes of excellent DSCs. These DSCs instil total confidence in the MDT through their ability to use a helicopter view to forward project events, to create a mental model into the future. This sense of comfort and reassurance was articulated by all the professional groups within the MDT and is succinctly expressed in this quotation:

The prioritising, it's the ability to see further down the line and that's what makes them….oh yes… that makes me feel…. I am comfortable….(Consultant).

The non-verbal communications by participants who described these DSCs left no doubt that these were the DSCs the MDT wanted to be leading their shift because they had total confidence that the DSC had everything under control. Individuals operating at level 3 SA could project the consequences of the current situation into the future, forecast situations, events and the potential dynamics (Endsley 1995; Mitchell 2013). In her research within the aviation and powerplant industries, Endsley (1995; 2000) concluded: Operating at level 3 SA defines the experts within their field. She refers to this higher level of cognition as the 'temporal aspect of SA'. The ability to understand how much time is available until events occur within a dynamic and constantly changing environment. Endsley's work (1995; 2000) resonates with the findings from this study, DSCs viewed with the expertise to manage delivery suite. Excellent DSCs had the helicopter view but also the ability to pre-empt events and make contingency plans to either prevent the problem from occurring or arrange for additional facilities and staffing to be in place in preparation for the event. For example, whilst current activity was under control, in 2-3 hours, there was the potential for several women to deliver at the same time or simultaneously require access to theatre. They understood the potential problems of rising complexity, particularly if junior staff were providing care and would require additional support in that time period. They put plans in place and communicated the appropriate level of support to the MDT ahead of the event, reducing anxiety for the member of staff concerned.

The potential for human errors on the delivery suite if SA level 3 is underdeveloped

The failure to think ahead, pre-empt events, and waiting for events to happen may result in not taking evasive action. Delays in treatment are commonly associated with poor outcomes for women and babies (HBIS 2020a; 2020b). For example, at night the inability of the DSC to factor in travel time for the on-call consultant results in more junior staff managing very complex situations while they wait for senior support. Thus leading to anxiety and

frustrations for staff as the correct lines of treatment for their woman are delayed due to potentially avoidable bottlenecks in the system. Essentially this is the difference between a proactive and reactive leader.

The expert practitioner

In her work Endsley (1995) equates individuals operating at level 3 as the expert in their field. However, the notion and use of the term expert DSC in the context of this research was predominantly associated with clinical expertise, DSCs 'knowing their stuff'. An attribute identified by women in midwives providing intrapartum care (Borrelli 2015; Borrelli, Spiby and Walsh 2016), articulated as professional knowledge and wisdom by Halldorsdottir and Karlsdottir (2011), suggests a comprehension of clinical knowledge is fundamental to the midwives role. Fore and Sculli (2013) suggest the picture is more complex as experts require a combination, both the ability to pre-empt events and provide a knowledgeable response to the information to mitigate against the potential consequences. Historically, experience, expertise, intuition, and its influence on decision-making were understood as a process that was learned over time, as the nurse/ midwife transitioned from novice to expert, generally accepted as time served in the role (Benner 1984). More recent findings within the fields of medicine (White *et al.* 2005; Singh, Peterson and Thomas 2006; Flin *et al*. 2008), nursing (Traynor, Boland and Buus 2010; Stubbings, Chaboyer and McMurray 2012) and simulated emergency training in maternity (Siassakos *et al*. 2010), suggests experience and intuition are used less frequently and does not always have a positive effect on clinical decision-making, instead it is the individual's ability to pre-empt events or forecast patient care which has a more significant impact on positive decision-making than experience in the role.

The debate between expertise and the ability to pre-empt situations and its influence on DSC decision-making is of interest to the findings from this research. Participants did not appear to make the connection between expertise 'knowing their stuff' and SA level 3 projecting into the future. 'Rather knowing their stuff' was associated within the context of an individual they would approach to support decision-making. The interconnection

between expertise and level 3 SA in the DSC was more challenging to decipher. Long-term memory plays a significant role in classifying information gained through experience and can be used to circumvent the limitations of the working memory (Endsley 2000; Gugerty and Tirre 2000; Sohn and Doane 2004). It could be argued that knowledge stored in the long-term memory of DSCs, based on time served and exposure to similar situations over time informs the DSCs ability to pre-empt situations. Indeed, several of the participants referred to individuals who had a 'wealth of experience'. On the contrary, both consultants and registrars noted how some of the more junior midwives displayed level 3 SA whilst providing 1 to 1 care. Demonstrated by their ability to articulate the future consequences for their woman if a particular course of action was not followed. Participants equated these attributes in these individuals as having DSC role potential. It is possible that these more junior midwives also had a good knowledge base. Understanding this phenomenon would have involved probing more into the clinical backgrounds of the individual DSC and ethically risked breaching confidentiality within this study. Further work is required to determine if SA is an innate skill in midwives who may choose a career pathway as a DSC or whether clinical knowledge and skills is the primary route to SA in DSCs. By understanding the interconnections, it may be possible to identify DSC potential in junior staff as part of succession planning.

The 3 levels of SA and its application for the DSC role

Ensley's (1995) 3 level SA model provides a valuable framework to understand the complexities and levels of SA. However, limitations of the aviation model centre on the aviation industry automated information streams, limiting its transferability to the delivery suite setting. In keeping with the literature on SA, the participants in this study identified the helicopter view of delivery suite as the precursor to creating TSA and an accurate mental model to inform MDT decision-making (Endsley 2000; Wright, Taekman and Endsley 2004; Rizo-Parse 2018). In adopting the 'helicopter view' term participants used their knowledge from emergency training to explain how DSCs use SA to create the right mental models for the MDT on

delivery suite, in the day to day management, to provide safe and effective care through team decision making and staff support. The importance of TSA by the MDT of activity on delivery suite is acknowledged as important in the literature (MacIntosh, Berridge and Freeth 2009; Abbott, Rogers and Freeth 2012) but viewed from an independent observer perspective, offers no evidence on how the DSC operates to ensure SA of the delivery suite. The findings from this study securely place the DSC as the pivotal role to champion SA on the delivery suite and shape MDT decision-making fundamental to safe care. Importantly, the participants identified 'how' DSCs effectively used SA about staff workloads to mitigate against the human factors associated with decision-making errors.

The approachable DSC

The terms approachable and unapproachable were cited by all participants, throughout the findings, either as an adjective as part of the general conversation or specific terms to describe DSCs. In keeping with the philosophy of constructive grounded theory's attention to participants language (Howell 2013; Charmaz 2014; Lincoln, Lynholm and Guba 2018), this section explores the term approachable. Approachable as a term to describe practitioners is not unique within midwifery to the DSC role. The notion of an 'approachable' midwife is acknowledged in the literature as a term used to describe midwives as a colleague (Hastie and Fahy 2009; Reiger and Lane's 2009), a midwife admired by students (Carolan 2011; 2013), a midwife providing care to women (Bryom and Downe 2010) and group practice managers managing community staff (Hewitt, Priddis and Dahlen 2019). Within the context of this research, the approachable DSC is related primarily to joint decision making. Approachable DSCs listened and made the individual feel comfortable to ask questions. They were trusted by staff to share information, they assertively debated differences of opinions relating to care planning with clinical colleagues. In contrast, unapproachable DSC communicated more aggressively, trying to assert themselves as the boss, creating an unpleasant atmosphere for the MDT, affecting the pleasure associated with working as a team. Whilst important to all groups of staff, this

was particularly important to registrars and consultants who valued the opinions and challenges of the DSC, which they believed to enhance care planning and joint decision-making, which was debated and not forced. This finding runs contrary to some of the midwifery literature, which suggests medical staff want to impose their medical model onto care (Foley and Faircloth 2003, MacKenzie, Bryers and van Teijlingen 2010).

The term approachable midwife within the current literature describes an approachable midwife (as opposed to DSC) as pleasant colleagues to work with (Hastie and Fahy 2009; Reiger and Lane 2009; Bryom and Downe 2010), a role model midwife for students (Carolan 2011; 2013) and a supportive community manager (Hewitt, Priddis and Dahlen 2019). However, this offers little insight into the consequences of the unapproachable midwife. The findings from this study provide an insight into the impact on MDT staffs' experiences and reluctance to share information with unapproachable DSCs, ultimately affecting clinical decision making. The term unapproachable within the context of this research resonates with research for the commercial sector into incivility. Incivility is defined as:

> 'Acting rudely or discourteously, without regard for others'
> (Andersson and Pearson 1999 pp. 455)

Within the commercial sector, incivility is directly linked to staff's level of trust in their line manager, stress levels and job satisfaction (Leiter *et al.* 2011) and influences staff's perceptions of their managers as leaders (Porath, Gerbasi and Schorch, 2015). Significantly incivility by line managers influences individual's choice as to whom they will approach to seek advice (Porath, Gerbasi and Schorch, 2015), which supports the findings of this research where participants described how they would avoid liaising with unapproachable DSCs who displayed unpolite, dismissive or undermining behaviours, thereby opting to seek support from other work colleagues. Within the commercial sector, incivility is directly linked to employees cognitive function and quality of work. These effects were found to be not purely limited to individuals directly experiencing incivility, but also those

witnessing this behaviour (Porath and Pearson 2013) and mirrors the finding from this study if participants observed uncivil behaviour to work colleagues by a DSC, they would avoid approaching the DSC themselves in future.

It would be reasonable to assume that if incivility affects staffs' cognitive function in the work environment, a civilised polite manager will have the opposite effect. However, the picture appears more complex. Research within the healthcare setting (Liu *et al.* 2020) found that civility positively affected human cognition when fewer complex tasks were performed. However, as the tasks become more complex, civility becomes a negative influence on performance. Direct communication, less civil communication, minimised the consequences of superfluous communication on staff's cognitive process. The more information an individual was given under pressure, the more likely they were to make a mistake. This may offer an explanation to the dichotomy in this study where staff wanted very direct communication when the unit became busy, requiring point pin clarity on the expectations of them, in comparison to very polite supportive communication by DSCs to give them confidence when seeking advice.

A leader's ability to understand their impact on others is a mark of an emotionally intelligent leader (appendix 16) (Goleman 2001). Within the midwifery literature, emotional intelligence (EI) is acknowledged as important for the emotional strength of midwives engaging in 1 to 1 intrapartum care (Hunter 2004b; Paterson and Begley 2011) and by midwives as a work colleague (Bryom and Downe 2010), but little is known about the DSC as an EI leader. This research suggests EI, particularly self-awareness, is an important attribute in DSCs and influences their approachability to staff. Within nursing, EI leaders correlate to the fostering of a healthy workforce environment through shared decision-making, resulting in increased staff job satisfaction, self-efficacy, and organisational function (McCallin and Bamford 2007; Riggio and Reichard 2008; Akerjordet and Sevenrinsson 2010). Any inability of the DSC to comprehend their impact on others and the lack of EI is therefore problematic. The semantics as to whether EI is a leadership trait

or a leader's personality (Goleman, Boyatzis and Mc Kee 2002b; Cherniss 2000a; 2000b; Hurley and Linsley 2012) is a debate I acknowledge but do not intend to cover. What is of importance is that EI is deemed to be an attribute that can be enhanced (Bar-on 2000; Goleman 2001), so it offers a potential opportunity for DSC development. This could be incorporated as part of MDT 360 feedback (Roberts *et al*. 2007; Sikes *et al*. 2015) at DSC appraisals to support them in developing self-awareness and a greater persona of approachability.

Leadership

The implications of clinical leadership within the wider health care setting, positive and negative, are acknowledged to directly impact on patient care (Francis 2013; Kirkup 2015; Ockenden 2020; CQC 2021) and continues to be a focus for the NHS (Kings Fund 2011). Limited published studies into midwifery leadership suggest midwives as leaders display EI and adopt a transformational style of leadership (Bryom and Downe 2010; Hewitt, Priddis and Dahlen 2019; Hewitt *et al*. 2021); a style supported in the nursing literature on ward managers as creating a positive working environment contributing to nurses' confidence (Malloy and Penprase 2010; Bamford-Wade and Moss 2010). Findings from this study suggest good DSCs adopt a number of leadership styles (appendix 17), succinctly articulated by this participant's response to a question about the DSC attributes that make the shift go well:

> *I think it's um……seamless leadership. Midwife (Band 5).*

This may be reflective of the MDT perspective of this research and the wider professional groups involvement, viewing clinical leadership differently to the midwives interviewed in Bryom and Downe's (2010) and Hewitt, Priddis and Dahlen's (2019) work. However, whilst the impact of the DSC on the different MDT subgroups may be subtly different, there was remarkable consistency in the attributes identified by the MDT, which are all marks of a leader,

suggesting a diverse range of leadership attributes relate to the DSC role compared to the 1 to 1 clinical role.

Good DSCs in this study were also identified as possessing transformational leadership qualities by transacting with colleagues and encouraging them to succeed the finding concur with the transformational leadership literature (Burns 1978; Bass 1985; 1988; Bass and Avolio 1996) but also were admired for their very direct communication and task orientated approach during very busy periods, a very transactional style of leadership (Bass 1985) which bypasses staff involvement. The situationally aware DSCs who involved the MDT in collating and comprehending information to facilitate TSA identifies with a very engaging leadership style, the creation of a shared vision of activity on delivery suite which resonates with Alimo-Metcalfe and Alban- Metcalfe's (2000) study into engaging leadership within the public sector, a style associated with high levels of job satisfaction and wellbeing at work (Alimo-Metcalfe *et al.* 2008). The ability to conceptualise information and possess the foresight to understand its potential implications, the key to level 3 SA, are hallmarks of the servant leadership literature (Greenleaf 2002; Van Dierendonck 2011). DSCs admired by the participants demonstrated a genuine concern for staffs' physical and emotional wellbeing, the impact of workload, fatigue and nutrition, and an awareness of the implications, if not addressed, are synonymous with work into compassionate leadership (Hopkinson 2014; Massie 2016). In supporting staff with decision-making, good DSCs demonstrated servant and situational leadership traits by listening and using gentle persuasion skills to support staff and the MDT decision making (Greenleaf 2002; Hersey, Johnson and Blanchard 2008; Van Dierendonck 2011; Northouse 2016).

The approachable DSC who connects with staff on an individual and team level to create a positive working environment resonates with work into EI, particularly the self-awareness, self-management and relationship management skills of EI and authentic leadership (Bar-on 2000; Goleman 2001; Goleman, Boyatzis and McKee 2002b; Cherniss 2000a; 2000b;

Anonson *et al*. 2014; Thompson 2016; Northouse 2016). The authentic leadership style is linked to the reduction in medical errors and staff turnover (Wong and Cummings 2013) and improvements in quality of care for patients in health care settings (Wong, Spence-Laschinger and Cummings 2010). The finding of this study did not discover leadership attributes that were not already within the literature but found the DSC required the ability to oscillate between numbers of leadership styles to be effective in the role, in contrast to the narrower leadership skill sets of other midwifery roles.

This research shows that the leadership styles adopted by the good DSCs are more complex than midwives providing 1 to 1 care (Bryom and Downe 2010) or managing community teams (Hewitt, Priddis and Dahlen 2019) reflecting the multifaceted nature of this role. In his work on the reflective practitioner Schön (1983) talks about how professionals subconsciously reflect on action in practice, changing how they practise based on their 'feel' for the situation, which resonates with the attributes identified in this study. Good DSCs demonstrate the ability to reflect in action ‘seamlessly’ oscillating between a variety of different leadership styles. They understand when it is appropriate to engage and support staff with open communication styles or when a direct closed style is required to reduce cognitive overload. Within the limits of this thesis, it is not possible to explore DSC leadership or the ability to transition between styles in detail but offers an area for further research.

Comparison of the findings to the literature

The aim of this study was to understand the MDT views of their DSC colleagues and would appear to be the only study from an MDT perspective of the DSC role. Studies on midwives as intrapartum work colleagues are limited, Reiger and Lane’s (2009) Australian based study sought to understand the MDT views of midwives as a work colleague, found that midwives and doctors viewed the relationship differently. Midwives valued flexible, approachable midwifery colleagues, concurring with the approachable findings in this study (table 29). Doctors valued midwives who

communicated with the MDT and had good relationships with their medical colleagues, resonating with the SA level 2 and staff support findings (table 29).

The remaining 2 delivery suite based studies focused on leadership in emergencies (Bristowe *et al*. 2012) and midwives as clinical leaders (Parkin 2016). Midwives as leaders supported staff and directed decision making, mirroring the staff support in this study (table 29). However, the midwives who challenged doctors were viewed positively by Parkin (2016). This study suggests how midwives' challenge is more important and can be a negative attribute if carried out aggressively. Bristowe ***et al's.*** (2012) work on the views of leadership in delivery suite emergency situations demonstrated that staff valued the direct and clear communication and a leader who understood their capabilities which is synonymous with the findings on SA level 2 and staff support in this study.

None of the studies identified the importance of SA or how this was achieved by the DSC. Neither was the importance of approachability concerning information sharing within the team identified in the previous studies. Whilst the importance of support and direction with clinical decision making is recognised (Parkin 2016), the importance of staff support to mitigate against the human factors of the physical and emotional aspects of the role was not articulated, which suggests the DSC role is broader than a work colleague or clinical leader and requires a different skillset to midwives providing 1 to 1 care.

In conclusion, the findings from the study indicate that excellent DSCs proactively maintain a 'helicopter view'. They are situationally aware of both the activity on delivery suite and the staff morale on shift, pre-empting and forward planning to mitigate against problems occurring. They are pivotal to the creation of TSA, which enables staff to maintain control, plan and carry out their work to the best of their ability. They are approachable for staff support with decision making, which creates a positive working environment.

Table 29: Mapping of study findings to research on midwives as work colleagues on the delivery suite

Situational awareness			
Findings from this study	Proactively collects information relating to activity and staff	Proactively creates shared 'helicopter view' of the delivery suite	Proactively projects and plans into the future
Findings from the literature	None found	Doctors value midwives who communicated with the MDT (Reiger and Lane 2009) MDT value clear and direct communication in emergencies (Bristowe *et al*. 2012) Midwifery leaders on the delivery suite keep their fingers on the pulse (Parkin 2016)	None found
Staff support			
Findings from this study	Supports staff with physical and emotional aspects of the role	Creates positive working environment where staff feel part of a team	Supports staff in decision making
Findings from the literature	The MDT view the leader in an emergency situation knowing the teams' capabilities as important (Bristowe *et al.* 2012) Supported junior staff by allocating senior midwives as a buddy (Parkin unpublished 2016)	Doctors valued good relationships with midwives (Reiger and Lane 2009**)**	Midwifery leaders give support and direction to midwives (Parkin unpublished 2016)
Approachable			
Findings from this study	Supportive and approachable to questions by staff	Trusted by staff to share information	Ability to challenge in an assertive rather than aggressive manner
Findings from the literature	Approachable as a work colleague (Reiger and Lane 2009)	None found	Midwives who challenge doctors decisions are viewed positively by other midwives (Parkin unpublished 2016)

Organisational management, control over workload, support and breaks are all factors associated with stress, fatigue and job satisfaction; good DSCs are aware of the associated human factors and mitigate against their impact. It is a role that requires the individual to develop relationships and be proactive to achieve SA.

Theoretical module

Data conceptualisation of the study findings was shaped by the constant comparison of the emerging categories to the literature (figure 6), which informed the theoretical module (figure 7), providing a pictorial of how an excellent DSC fulfils this role. The triangle has been deliberately chosen as it represents safety, if any of the sides are not robust, the structure (delivery suite) becomes unstable.

Figure 6: Data conceptualization

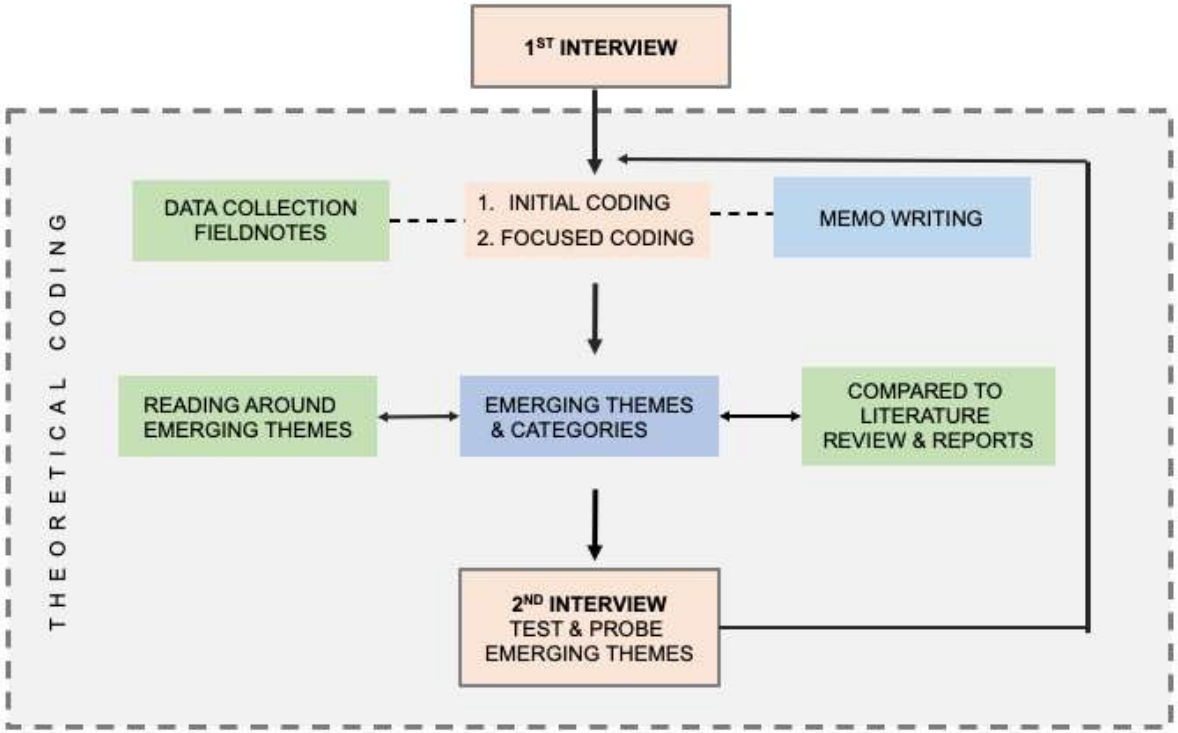


Figure 7: Theoretical model of the excellent DSC

Strengths and limitations of this study

The strength of this study is its representation of the views of all the professional groups which contribute to the core MDT on the delivery suite preventing a distortion of the DSC role viewed by 1 professional group only.

The limitations of the study relate to the qualitative methodology, which sought depth, not breadth of understanding of the research phenomenon, resulting in a small number of participants in the study. Attempts to mitigate against this weakness of limited views of a small sample size were made in the inclusion criteria, recruiting participants who had only worked at other units to increase the number of DSCs exposed to during their career. However, this was only possible for the doctors and midwives, therefore the views of the MCAs and ward clerk are limited in their transferability.
The findings from this study conclude that the attributes of the DSC have a direct impact on staff wellbeing, TSA and potentially the safety of women and babies on delivery suite and would explain why all staff groups have a vested interest in which DSC is running their shift. The following chapter 11 examines the unique contributions this study makes to the literature and presents recommendations for practice, education and further research in light of the findings from this study.

Chapter 11.

Recommendations, concluding arguments and remarks

This study started with a curiosity to understand why MDT staff were so interested to know which DSC was coordinating their next shift. I wanted to understand the attributes of the DSC, which influence staffs efficiency and contentedness for the duration of their shift. Based on this observation, the research used a constructive grounded theory approach to understand the research question 'what are the attributes in DSCs that the MDT perceive to be important for the effective coordination of their shift'? The methodology allowed me to use purposeful and theoretical sampling to represent each staff group, generating categories of theoretical interest and a depth of understanding for this role.

The findings from this study suggest that the DSC plays a significant role in the organisation of the delivery suite and how the MDT functions. The manner in which the DSC fulfils this critical role has a significant impact on TSA, decision-making, staff support and individual staff's ability to function in their role, influencing staff's sense of fulfilment and job satisfaction. Despite the MDT staff acknowledging this role as pivotal to the safe functioning of the delivery suite, the literature and maternity policies have failed to recognise this role as key to MDT working despite public enquiries into poor outcomes for women and babies in dysfunctional units (Kirkup 2015; Ockenden 2020).

There is a lack of evidence on what constitutes a good DSC, particularly regarding the understanding of this role by the MDT who work alongside these individuals. Current evidence focuses on midwives views of leaders on delivery suite (Parkin 2016) or the leader in emergencies (Bristowe *et al*. 2012). The only research identified seeking the views of the MDT is an Australian based study of midwives as a work colleague (Reiger and Lane 2009). Despite the national drive to improve MDT working in maternity (NHS England 2016a), research continues to focus on emergency training (Siassakos *et al.* 2010; Cornwaite, Edwards and Siassakos 2013; Siassakos *et al.* 2013; Cornwaite, Alvarez and Siassakos 2015).

Unique contribution to the literature.

This research is an addition to the understanding of management and leadership on the delivery suite. Current maternity literature focuses these roles on the consultant obstetrician, consultant midwife and delivery suite manager (RCOG 2007; King's fund; 2008; Gov. UK 2010); roles which do not involve a permanent presence for the duration of the shift. The findings of this study have provided a unique and in-depth insight from the MDT perspective into how good DSCs lead and manage their shift to maintain a cohesive team with a shared understanding of events and expectations. As such, the MDT identifies this role as pivotal to the management and leadership of the shift, a role that directly impacts on staff contentedness and stress levels.

One of the findings of this study has highlighted SA attributed to the DSC of the unit and their staff to be critical to a safe delivery suite environment. The importance of SA on delivery suite is recognised in the obstetric literature (Abbott, Rogers and Freeth 2012; Morgan *et al.* 2015; Edozien 2015) but does not explain how this is achieved on a practical level. This study has provided a unique insight into the importance of a proactive approach to SA by the DSC and how the ability of the DSC to achieve and maintain SA is vital for TSA, accurate clinical decision making and staffs' ability to function and feel fulfilled in their role.

This study has also added to the literature by gaining an understanding of factors that influence information sharing between the DSC and the MDT, the precursor to team decision making. Current healthcare literature focuses on errors at level 2 SA, namely the comprehension of clinical information and decision-making errors (Grabber 2005; HISB 2020a). This study suggests the current literature is making assumptions about the availability of information in decision-making and the foundation of accurate decision-making. A shift in focus is therefore required by maternity providers to ensure the MDT are party to the importance of level 1 SA, the collection of the right information before they move to level 2 of the decision-making stage.

Approachability of the DSC also appears to be a significant factor in MDT information sharing with the DSC. This study adds to the current literature on civility and EI regarding the impact of approachability on staff, suggesting the development of the less approachable DSCs is an area for improvement that would enhance clinical decision making. Human factors associated with long shifts, fatigue and their impact on the cognitive process of decision making are cited in the literature (Kharoufah *et al.* 2018; Yoong *et al.* 2020). However, this study further provides a unique insight into strategies used by the DSCs to mitigate against these factors in staff.

This study would appear to be the first study to ascertain an MDT perspective on the DSC and how the roles impact on staffs' contentedness. A role that appears to require different skill sets to manage staff and information to those of the midwife providing 1 to 1 clinical care. The clinical leadership role of the DSC is not unique to midwifery. Coordination roles within rapid churn areas, for example, Emergency Departments, Acute Medical units and Intensive Care units require the shift leader to adopt a helicopter view of activity and engage in multiple MDT decision-making conversations. Consideration should be given to the findings of this study and the transferability of the findings to nurses operating in these roles.

Finally, this research adds to the literature on safety on delivery suite and the unique role the DSC plays in mitigating against the human factors associated with poor clinical outcomes, SA, decision-making, fatigue, lack of nutrition and stress. The study has identified a number of areas that, due to the limitations of this thesis, have not been possible to explore in depth.

Contribution to theory

This study aimed to explore the attributes of the DSC that the MDT staff perceived to positively or negatively influence how their shift functioned. The theoretical model (figure 7) represents the 3 key elements identified by all the professional groups within the MDT. When the DSC displays all 3 elements,

staff felt the delivery suite was in 'safe' hands, which contributed to staffs' confidence in the DSC.

The pictorial representation of a triangle adds to the theory on how the DSC role contributes to safety on the delivery suite. The DSC must display all 3 elements (sides) if accurate decisions and cohesive plans are made. This theoretical model would, in part, explain staffs concerns for which DSC is coordinating their shift.

Implications for further research

DSC confidence

The terms confident and experienced were used to describe DSCs; further research is required to understand what makes DSCs confident, what constitutes experience and what level of experience is required to fulfil the role.

The impact of the DSC role on team working.

This study has implied the DSC role impacts on team working. This will potentially become more challenging for the DSC as the maternity workforce, band 5 and 6 midwives move into the community based teams, providing a more fluid delivery suite workforce in line with the continuity of care agenda (NHS England 2016a). Further research is required to understand the wider impact of this role on the culture of the delivery suite and its impact on team working.

SA development and succession planning

SA by the DSC is key to the effectiveness of the role. However, further research is required to understand the link between SA and experience and whether this is an innate skill or if it can be developed in individuals. Further work should be undertaken to understand how band 5 and 6 midwives with SA can be identified and developed as part of succession planning.

Support for the DSCs

This study has focused on the MDT and the support the DSC provides to the team; further research is required to understand this role from the DSC perspective to understand the support required by the DSC to fulfil their role to its full potential.

Contribution to practice

The findings of this study have concluded that accurate TSA on the delivery suite is fundamental to decision-making, which can only be achieved if the DSC proactively gathers and concisely communicates the relevant information to the MDT. The level of foresight of the DSC to anticipate future events and their potential outcomes is vital to the implementation of early strategies to prevent capacity issues, potential delays in treatment and the associated poor perinatal outcomes. The complete collection of information is only possible if the DSC is approachable to the staff. EI is a critical element of this approachability.

Finally, human factors of fatigue, lack of nutrition and associated decrease in cognitive function leading to poor decision-making are widely recognised (Mitchell 2013; Kharon et al. 2018; Yoong et al. 2020). However, prevention of these human factors requires a proactive approach by the DSC to ensure staff support and breaks happen if decision-making errors are to be prevented.

Implications for practice

Super numerary status of the DSC

DSC SA appears to be fundamental to TSA and reduction in decision-making errors. If the DSC is to achieve and maintain SA, the DSC must be placed in a supernumerary supervisory role free from the allocation of clinical cases, supporting the HSIB (2020a) recommendations. Strategies should be in place to ensure the DSC is able to maintain this supernumerary status, particularly when activity escalates to avoid the temptation of the default position of the DSC taking on clinical care.

Development of DSC self-awareness

360 evaluation EI tools are available to provide feedback to individuals on their self-awareness which is synonymous with approachability. Trusts should give consideration to incorporating this type of 360 feedback from a selection of the MDT as part of the DSC's annual appraisal to support EI development in DSCs.

Recruitment to the DSC role

In recruiting midwives to the DSC role, an assessment of SA skills should be incorporated into the interview process. Vignettes or scenarios of delivery suite situations could be used to fulfil this purpose.

Secondment opportunities

The management and leadership skill sets required to manage staff and activity is fundamentally different to those necessary to provide 1 to 1 clinical care. Secondment opportunities for band 6 midwives interested in promotion to a band 7 DSC role may afford the midwife time to decide if the role was the right choice for them, and a probation for the organisation before recruiting to a substantive post, thus avoiding the potential humiliation for midwives being asked to stand down from the role or experiencing additional stress from undertaking a role that does not match their skills.

Opportunities for the consultant midwife role

Currently, career progression for the excellent DSCs is limited to management roles taking them and their coordinating skills away from the delivery suite environment. In line with the RCM manifest for more consultant midwives (RCM 2019), there is the potential to develop consultant DSC midwives roles. The role could incorporate clinical shifts as a DSC to maintain their skills and the development of current DSC and midwives viewing the DSC as a career choice. Posts could be developed by the Local Maternity systems (NHS 2017b) supporting DSCs across more than 1 maternity unit.

Contribution to education

The findings from this study identified the importance of both SA and EI in effective DSCs. Leadership and management are not unique to the DSC role. Opportunities to incorporate SA and EI into both the undergraduate and postgraduate programmes would enhance all midwives' leadership and management skills.

Implications for education

Incorporation of SA into undergraduate and mandatory staff training

The importance of SA and its influence on decision making from the wider perspective, in addition to direct clinical care, should be incorporated into undergraduate midwifery and medical education, and included in the annual mandatory updating for staff with particular reference to level 1, collection of the right information and level 3 projecting into the future, in addition to the current level 2 focus.

Support for current DSCs

Additional support should be provided for DSCs who lack SA, this may involve shadowing opportunities and/or training.

EI student feedback

In addition to incorporating EI into the midwifery curriculum, EI self-assessment tools provide valuable feedback to students and could be used in each year group of the undergraduate programme to support EI development in the midwifery student population.

Adaptation of the current PROMPT and human factors training programmes

Simulation training currently used in emergency training could be extended to simulate a busy delivery suite, to train the DSC and MDT in SA, decision-making and communication under pressure.

Changes in my educational practice

As a result of the findings of this research, I have incorporated EI self-assessment and challenge students to consider and operate at all 3 levels of SA, particularly during practical sessions. This has enabled the students to

comprehend the clinical situation beyond the 'here and now' and understand how their persona may directly affect teamwork.

Finally

This study has used a constructive grounded theory approach to provide an in-depth analysis of the MDT's views of what constitutes both good and excellent DSCs, the impact this role has on the delivery suite and the MDT staff as individuals. Theory has been generated to develop the theoretical module of the 3 elements underpinning the role (figure 10.1); SA, staff support and approachability. Underdevelopment of any of these 3 aspects in the DSC renders the role as ineffective, impacting directly on TSA, clinical decision making and staffs' abilities to carry out their role effectively. Attention and support needs to be given to this role if the safety for women and a positive working environment for staff is to be achieved.

Personal reflections

Conducting this research has provided me with a unique opportunity to understand why the DSC role is so important to the staff working on the delivery suite. After 40 years in clinical practice, management and education, I had a 'hunch' that this role was important to the MDT and the provision of intrapartum care. As I explored this curiosity, it had never occurred to me the degree of oversight in both the literature, policy documents and strategic maternity direction that has afforded this role. As I started out on this journey, I could not have predicted how pivotal this role is for the MDT and how the individual DSC's ability to fulfil the role has such a profound and direct impact on staff fulfilment and the human factors affecting safety.

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Appendices

Appendix 1a: Role of MDT staff by group

Role	Areas of responsibility	Working hours
Non medical staffing		
Delivery suite manager	-Resource management -Risk management -Resourcing of equipment. - Ensuring support systems in place to mentor new, junior & student midwives. -Responsibility for the non-medical staffing of the unit.	Monday to Friday
Delivery suite coordinators (Band 7)	-Coordination of the delivery suite shift & MDT -Facilitates communication between MDT and support services -Allocation of staff and resources	Shifts (Typically 12-hour shifts) 24/7 cover
Midwives Band 6	-Provision of 1-to-1 care for women in labour -Expert in uncomplicated childbirth -Refers complications to appropriate MDT member in consultation with the DSC.	Shifts (Typically 12 hour) 24/7 cover
Midwives Band 5	Provision of 1-to-1 care for women in labour -Expert in uncomplicated childbirth -Refers complications to appropriate MDT member in consultation with the DSC .	Shifts (Typically 12 hour) 24/7 cover
Maternity care assistant	-Supports midwives with the care of the women in labour maintaining a safe and clean environment. -Supports parents with initial newborn care.	Shifts (Typically 12 hour) 24/7 cover
Ward clerk	-Admin clerical support for the delivery suite. -Clerical receptionist duties.	Depending on size of unit may be Monday to Friday or 24/7 cover

(RCOG 2007).

Appendix 1b: Role of MDT staff by group

Role	Areas of responsibility	Working hours
Medical staffing		
Lead consultant for delivery suite	-In conjunction with the delivery suite manager responsible for organisation, setting standards and auditing of delivery suite.	1 programmed activity (PA) for delivery suite responsibility.
Obstetric consultants	-Overall responsibility of medical staff on the shift -Provides and plans care for women and babies with complex medical and obstetric needs -Available for acute, severe or unpredictable emergencies. Supports and supervise trainees.	Dedicated sessions for delivery suite, will also contribute to the out of hours on call rota
ST 6-7 (Advanced) Registrar	-Middle grade rota Undertakes operative births and perform routine decision-making Refers to consultant for complex decision-making.	Shifts (Typically day or night cover) 24/7 cover
ST3-5 (intermediate) SHO	-Middle grade rota -Undertakes some operative births and performs basic decision-making. Refers to registrar for complex decision-making.	Shifts (Typically day or night cover) 24/7 cover
ST1-2 SHO	Previous experience of obstetrics limited to placement as FT1/2 in a learning capacity works with registrars and midwives.	Shifts (Typically day/night cover) 24/7 cover
FT1-2	No previous obstetric experience newly qualified doctor on placement as part of post registration consolidation	Shifts (Typically day/night cover)

(RCOG 2007).

Appendix 2: Definition of smaller, medium and larger units

Smaller units	2500-4000 births per annum
Medium units	>4000- 5000 births per annum
Larger units	5000-6000births per annum
Largest units	>6000 births per annum

Adapted from The Future role of the Consultant report. (RCOG 2005)

Appendix 3: Definitions of maternity units

Obstetric unit (OU):

Maternity unit where care is provided by the MDT. Midwives provide care for all women primarily taking responsibility for women with straightforward pregnancies labour and birth. Obstetricians take responsibility for women at high risk of complications during labour and birth.

Other services available 24/7 include neonatal team and neonatal unit, anaesthetic team, and access to diagnostic and other medical services.

Alongside midwifery units (AMU):

Maternity units in which midwives provide care for women with straightforward pregnancies, labours' and births. Access to the obstetric unit is in the same building or on the same site.

Freestanding midwifery unit (FMU):

Maternity units in which midwives provide care for women with straightforward pregnancies, labours' and births. The FMU is located geographically on a separate site requiring transfer by ambulance to the OU should facilities be required. In some units GPs may be involved in the care.

(Rowe 2011; NMPA 2017, 2019)

Appendix 4: Critical tools

JBI Critical Appraisal Checklist for Systematic Reviews and Research Syntheses

Reviewer_____Date_____

Author _____Year_____Record Number_____

		Yes	No	Unclear	Not applicable
1.	Is the review question clearly and explicitly stated?	☐	☐	☐	☐
2.	Were the inclusion criteria appropriate for the review question?	☐	☐	☐	☐
3.	Was the search strategy appropriate?	☐	☐	☐	☐
4.	Were the sources and resources used to search for studies adequate?	☐	☐	☐	☐
5.	Were the criteria for appraising studies appropriate?	☐	☐	☐	☐
6.	Was critical appraisal conducted by two or more reviewers independently?	☐	☐	☐	☐
7.	Were there methods to minimize errors in data extraction?	☐	☐	☐	☐
8.	Were the methods used to combine studies appropriate?	☐	☐	☐	☐
9.	Was the likelihood of publication bias assessed?	☐	☐	☐	☐
10.	Were recommendations for policy and/or practice supported by the reported data?	☐	☐	☐	☐
11.	Were the specific directives for new research appropriate?	☐	☐	☐	☐

Overall appraisal: Include ☐ Exclude ☐ Seek further info ☐

Comments (Including reason for exclusion)

_____

_____

_____

(Joanna Briggs Institute 2017)

Summary criteria for appraising qualitative research studies

Stages	Essential criteria
Scope and purpose	Clear statement of, and rationale for, research question/aims/purposes
Design	Method/design apparent and consistent with research intent Data collection strategy apparent and appropriate
Sampling strategy	Sample and sampling method appropriate
Analysis	Analytic approach appropriate
Interpretation	Context described and taken account of in interpretation Clear audit trial given Data used to support interpretation
Reflexivity	Researcher reflexivity demonstrated
Ethical dimensions	Demonstration of sensitivity to ethical concerns
Relevance and transferability	Relevance and transferability evident

(Walsh and Downe 2006)

Appendix 5: Job descriptions by size of unit

Size of unit by births per annum (RCOG 2005)	**2500-4000**	**4000-5000**	**5000-6000**	**>6000**
Number of job descriptions analysed	3	3	6	3

Appendix 6: Example of field notes and diary entries

Field notes

Context: Senior registrar on final rotation in the registrar role prior to applying for a consultant post.

They were very intrigued about the research, and clearly surprised that no research had been done into this area.

When explaining ineffective coordinators they were extremely keen to offer an explanation as to why these individuals may be responding to certain situations. They were clear to acknowledge it's a very difficult role to undertake but equally frustrating for the registrar if not undertaken well.

Non-verbal communication

When asked about a good shift and the coordinator on duty, their face was incredibly revealing, a broad smile which almost broke into laughter implied they knew exactly what I meant, and they immediately launched into the attributes of excellent and ineffective coordinators with no prompting.

They were very keen to articulate how much they had learnt more about managing the delivery suite from the really excellent coordinators and why they made certain decisions, than they had from senior doctors.

Areas of importance

The importance of working together as a team with the coordinator. Was very clear of the importance.

The ability of the coordinator to maintain the helicopter view without getting embroiled in rooms was very important as they clearly saw the maintenance of the helicopter view of delivery suite as fundamental to the role.

Post interview

We walked out of the hospital together, and they were clearly quite stunned about the lack of research into the role or investment in the individuals, as they clearly saw this role as fundamental to how the delivery suite functions.

Area of reflection

This registrar was very insightful and had clearly watched coordinators in action and picked up a number of nuances. They had learnt a significant amount about managing the delivery suite ward as a registrar from excellent coordinators and reflected on how some units the opportunity to learn from coordinators were greater than others.

They were very clear that effective decision-making on the delivery suite as a registrar includes the coordinator and their overview of activity.

Example of diary entry

1st interview

This was my 1st interview and I was nervous that it would go well, the tape recorder would work, and the participant would not feel I was taking up their time.

Following the introductions the consultant politely explained that they were on call and may get called away. They appeared polite and happy to contribute to the research, but this seemed more as a courteous thing to do rather than being interested in the research.

As the interview progressed they became more animated and clearly keen to contribute. It was clear from the conversation how important they viewed the role to be and how a good or ineffective coordinator affected their role when working on the delivery suite. Very little probing was needed. The conversation was very animated and free flowing.

During the interview their bleep went off and they apologised that they needed to answer it. I paused the interview and in my heart thought that this would be the ideal excuse for them to give me their apologies having contributed to the research as a polite thing to do.

To my amazement they came back, sat down, said it could wait, this (the research interview) was important, asked where were we at? then continued to give me as much time as was need for the interview.

Their parting comments were that they were amazed that research had not been done before because the role was so important, they were aware the doctors had been sent the email to be involved in my research and comments how inevitably these sometimes slip to the bottom of the email box. They explained that the doctors were meeting in a couple of days and that they would pass on the message about my research.

Within 3 days several emails followed from colleagues offering to take part.

Reflections on the interview and areas for improvement

I had introduced myself as a midwifery lecturer who maintained clinical practice on the delivery suite. Whilst this was helpful for them not having to explain maternity technical terms and explain how the consultant and delivery suite coordinators interacted, they did cover aspects of student midwifery training which was not relevant to the study.

Plan: Next interview to explain my background but explain the focus of my research was on the DSC role, not students.

Appendix 7: Participant information leaflet

Code

Teesside University is sponsoring this project for the purposes of research governance

INFORMATION SHEET
(IRAS reference 246685)

What are the attributes of delivery suite coordinators that staff perceive to have a positive or negative influence on the functioning of the shift, team working and individual confidence?

Student researcher: Debra Bunford

Academic supervisor: Prof. Sharon Hamilton

I would like to invite you to take part in a study, which will explore the attributes of delivery suite coordinators. Before you decide whether or not you would like to take part please read the following information, if you would like more information please do not hesitate to contact me via email or telephone (details are at the end of the sheet).

What is the purpose of the study?
The purpose of the study is in part fulfilment of the student's Teesside University award of a PhD.
Anecdotal evidence from staff working on delivery suites indicates that delivery suite coordinators have a significant influence on how smoothly the shift runs, staff moral and team working for the duration of the shift. Despite staff identifying this as an important role, there is currently no research evidence to indicate what makes an ideal delivery suite coordinator. Also training for midwives who undertake this important role is limited. The purpose of this study is to understand what makes an ideal delivery suite coordinator from the perspective of the multidisciplinary team members who work alongside these individuals on a daily basis.

What would taking part involve?
An interview with the student researcher, which, with your consent would be recorded. If you prefer that I do not record the interview I would like to take notes of the session. The interview would be held at a place of your choice and convenience. A private room within the hospital, either on the delivery suite or a venue on the hospital site away from maternity unit. Alternatively a private room at the University can also be arranged. Please note if you choose to be interviewed in the delivery suite environment your anonymity in

relation to other staff knowing that you have taken part in the study cannot be assured

Do I have to take part?
No. Participation is voluntary. If you reply to the researcher by email to say that you are happy to take part in an interview, a time to meet up will be arranged at your convenience. I will explain the study to you and then ask you to sign a consent form prior to the interview commencing.
If you decide to withdraw from the study after you have taken part in the interview, please contact me by email within 2 weeks and tell me the unique code number written on the top of this sheet which corresponds to your consent form. I would then destroy the data collected from you and remove you from the study.

What will happen if I decide to take part?
The purpose of the interview is to explore your experiences of working with different delivery suite coordinators. The interview is expected to take approximately 30 minutes, depending on how much you have to say about the topic. Your name and job role will not be revealed to anyone. Confidentiality will be maintained by the use of the unique code number, which you will be given. However an exception to this will be if you reveal any information about poor or dangerous practice. Should any abusive or unprofessional behaviours or actions be disclosed and/ or discovered then confidentiality will be breached by the student researcher and the PhD supervisor will be informed (in the first instance) and if deemed appropriate further action may be taken.

What are the possible disadvantages or advantages and benefits of taking part?
I don't think there are any disadvantages or advantages for you; however it will give you the opportunity to add your voice to the research, which could support the future development of delivery suite coordinators. There are no financial incentives or rewards for taking part. Every effort will be made to protect your anonymity (your name will not be published).

What will happen to the information collected from me?
Your non-identifiable information, audio recordings, notes and transcripts for your interview will be stored indefinitely on a password protected server at Teesside University or stored in a locked filing cabinet in my supervisor's office at Teesside University. This is in case other scientists wish to raise questions about the results that need checking against the dataset. In the event that the study is published in a scientific journal, the non-personally identifiable research dataset may be made publicly available (for example as a supplement to the Journal article or stored on an online scientific data repository). Access to the study materials and data, while the study is underway, will be restricted to the student researcher and my supervisor. Your data will not have your name on it but will be linked to you by a unique code number, which will be stored separately from your data. Identifying references will be removed as far as possible but your complete anonymity cannot be guaranteed. All findings will be reported anonymously. Some

quotes from what you have said might be used in the final PhD thesis, available on request from the University of Teesside, but will not be attributed to you.

Compliance with the amendments to the Data Protection Act May 2018.
Teesside University is the sponsor for this study based in the United Kingdom. We will be using information from you in order to undertake this study and will act as the data controller for this study. This means that we are responsible for looking after your information and using it properly. Teesside University will keep identifiable information about you for 3 months after the study has finished.

Your rights to access, change or move your information are limited, as we need to manage your information in specific ways in order for the research to be reliable and accurate. If you withdraw from the study, we will keep the information about you that we have already obtained. To safeguard your rights, we will use the minimum personally identifiable information possible. You can find out more about how we use your information by contacting Sharon Hamilton.

Teesside University will collect information from you for this research study. Teesside University will keep your name and unique code number and contact details confidential and will not pass this information to South Tees NHS Foundation Trust. Teesside University will use this information as needed to contact you about the research, and make sure that relevant information about the study is recorded to oversee the quality of the study. Certain individuals from Teesside University may look at the research records to check the accuracy of the research study. Teesside University will only receive information without any identifying information. People who analyse the information will not be able to identify you and will not be able to find out your name or contact details.

Teesside University will keep identifiable information about you from this study for 3 months after the study has finished.

Personal data including special category data obtained for the purpose of this research project is processed lawfully in the necessary performance of scientific or historical research or for statistical purposes carried out in the public interest. Processing of personal data including special category data is proportionate to the aims pursued, respects the essence of data protection and provides suitable and specific measures to safeguard the rights and interests of the data subject in full compliance with the General Data Protection Regulation and the Data Protection Act 2018.

Who has approved this study?
This project was approved by the School of Health & Social Care Research Governance and Ethics Committee at Teesside University, and the Research and Governance department at: South Tees Hospitals NHS Foundation Trust and the HRA.

Who is organising and funding this study?
This study is a university part-funded PhD study based at the University of Teesside.

Who can I contact for more information or if I have any concerns?
If you are interested in taking part please reply to the researcher.

The student researcher's contact details are: Debbie Bunford email: d.bunford@tees.ac.uk

Telephone on 01642 384537.

If you have any further queries or concerns please contact my supervisor Professor Sharon Hamilton via email: Sharon.Hamilton@tees.ac.uk or telephone 01642 384124.

Contact address: School of Health and Social Care, Teesside University, Middlesbrough, TS1 3BA

Or if you have any concerns and would prefer to contact someone at Teesside University who knows about the study but is not directly involved in it, please contact

Dr. Alasdair MacSween (Chair of the Ethics Committee) via email: A.Macsween@tees.ac.uk or telephone on 01642 342965.

Contact address: Constantine Building, Teesside University, Borough Road, Middlesbrough, TS1 3BA

Thank you for reading this information sheet and for considering whether or not to take part in the study.

Appendix 8: Consent form

Teesside University is sponsoring this project for the purposes of research governance

CONSENT FORM

(IRAS reference 246685)

What are the attributes of delivery suite coordinators that staff perceive to have a positive or negative influence on the functioning of the shift, team working and individual confidence?

Researcher PhD student: Debra Bunford,

Supervisor: Prof. Sharon Hamilton.

Please would you put your initials in the boxes to indicate your agreement with the corresponding statements:

1. I have read and understood the information sheet for the above study and have had the opportunity to ask questions.	
2. I know that I have the right to withdraw at any time up to two weeks after interview without giving reasons and without any of my rights being affected.	
3. I agree for the discussion to be digitally recorded.	
4. I understand that the non-identifiable research data would be stored indefinitely on a secure password protected server at Teesside University. This is in case other scientists wish to raise questions about the results that need checking against the dataset. In the event that the study is published in a scientific journal, the non-person identifiable research dataset may be made publicly available (for example, as a supplement to the journal article or stored on an online scientific data repository).	
5.I understand that my data will not have my name in it but will be linked to me by a Unique Code Number, which will be stored separately from the data until two weeks after my interview.	
6. I agree that the researcher and her supervisor will have access to the data and information collected as part of this interview.	

Name of Participant Date Signature

Name of researcher Date Signature

Appendix 9: information for gate keeper

Advice (via email) for the medical staff gate keeper on the distribution of the research participant information sheets

Thank you for agreeing to support this project and the distribution of the participant sheets.

The aim of the project is to interview a selection of staff, from the delivery suite MDT, to elicit their experiences of good and less effective shifts, particularly in relation to the coordination of the shifts, MDT working and factors contributing to a personal sense of ease or anxiety.

Please could you kindly email the attached information sheets to all the staff who have worked at more than 1 unit (any delivery suite in the UK) for a minimum of 6 months? I am aiming to interview members of staff from each of the following groups.

Consultants
ST1-3 Doctors
ST 4-7 Doctors

My contact details for any staff interested in taking part are on the information sheet. The plan is to interview the first member of each staff group who makes contact; if more staff than are required for the study make contact, I will add their names to a waiting list in case anyone drops out prior to interview.

I would like to take this opportunity to thank you for your support and time. Please do not hesitate to contact me if you require any further clarification.

Advice (via email) for the midwifery and admin staff gate keeper on the distribution of the research participant information sheets

Thank you for agreeing to support this project and the distribution of the participant sheets.

The aim of the project is to interview a selection of staff, from the delivery suite MDT, to elicit their experiences of good and ineffective shifts, particularly in relation to the coordination of the shifts, MDT working and factors contributing to a personal sense of ease or anxiety.

Please could you kindly email the attached information sheets to all the staff who have worked at more than 1 unit (any delivery suite in the UK) for a minimum of 6 months? I am aiming to interview members of staff from each of the following groups.

Midwives band 6
Midwives band 5
Maternity assistance
Ward clerks

My contact details for any staff interested in taking part are on the information sheet. The plan is to interview the first member of each staff group who makes contact; if more staff than are required for the study make contact, I will add their names to a waiting list in case anyone drops out prior to interview.

I would like to take this opportunity to thank you for your support and time. Please do not hesitate to contact me if you require any further clarification.

Appendix 10: Teesside University ethical approval

Teesside University
Middlesbrough Tees Valley
TS1 3BA UK
www.tees.ac.uk

Teesside University

PRIVATE AND CONFIDENTIAL

Direct Line: 01642 384124

25/07/2018

Sharon Hamilton
School of Health & Social Care
Teesside University

Dear Sharon

Study No 209/17: What are the attributes in a delivery suite coordinator that staff perceive to have a positive or negative influence on the functioning of their shift, team working and individual confidence: A scoping study. Researcher: Debra Bunford. Supervisor: Sharon Hamilton.

Decision: Approved

Thank you for submitting an amended application pack. I am pleased to confirm that the comments raised by the School of Health & Social Care Research Governance and Ethics Committee have been addressed in your amended application pack and your study has been approved through Chair's Action. Your study may proceed as it was described in your approved application pack. The application was presented on an IRAS generated NHS REC form.

Please note:

If another body was not named as the Sponsor, in the application documents reviewed, Teesside University, acting through its School of Health & Social Care, will act as Sponsor for the project.

Where applicable, your study may only commence after you have also received written approval/permission from any external stakeholders (e.g. HRA Approval, National Institutes of Health Approval for Conducting Research in the Ministry of Health Malaysia and/or Malaysian Ministry of Health Ethical and Medical Research Committee etc.) and/or any operational / management structures relevant (e.g. Heads of Dept., Service Managers etc.). A copy of this letter **must** be included in any applications to any external stakeholders. Copies of all approvals/permissions granted, by any external stakeholders, must be forwarded to the RG&EC Secretary (for inclusion in TU's record of the project) as soon as possible after you receive them.

If you wish to make **any** changes to the project methods and/or supporting documentation, (other than those required as urgent safety measures) you must obtain Ethical Clearance for those, from TU, (by application to the School RG&EC), **before** you may implement any changes, and (if applicable), **before** you apply for

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TS1 3BA UK
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approval/permission from any external stakeholders. Should you make any changes, without prior permission, as urgent safety measures; as soon as possible after the event you must provide details of those, in writing, to myself and all other relevant bodies. All substantive work on the project must be suspended and cannot restart until written approval for those changes has been obtained from the RG&EC and all other relevant external stakeholders. Please note: for certain DH classifications of study, the HRA (and other stakeholders) stipulate set time limits for such reporting, which you must adhere to.

On behalf of the School of Health & Social Care Research Governance and Ethics Committee please accept my best wishes for success in completing your study.

Yours sincerely

Dr. Alasdair MacSween
Chair
Research Governance and Ethics Committee
School of Health & Social Care

Appendix 11: HRA approval

Ymchwil Iechyd a Gofal Cymru
Health and Care Research Wales

NHS
Health Research Authority

Prof Sharon Hamilton
School of Health & Social Care
Teesside University
Middlesbrough
TS1 3BA

Email: hra.approval@nhs.net
Research-permissions@wales.nhs.uk

02 October 2018

Dear Prof Hamilton

HRA and Health and Care Research Wales (HCRW) Approval Letter

Study title:	**What are the attributes in delivery suite coordinators that staff perceive to have a positive or negative influence on the functioning of their shift, team working and individual confidence.**
IRAS project ID:	**246685**
Protocol number:	**NA**
Sponsor	**Teesside University**

I am pleased to confirm that HRA and Health and Care Research Wales (HCRW) Approval has been given for the above referenced study, on the basis described in the application form, protocol, supporting documentation and any clarifications received. You should not expect to receive anything further relating to this application.

How should I continue to work with participating NHS organisations in England and Wales?
You should now provide a copy of this letter to all participating NHS organisations in England and Wales, as well as any documentation that has been updated as a result of the assessment.

Participating NHS organisations in England and Wales will not be required to formally confirm capacity and capability before you may commence research activity at site. As such, you may commence the research at each organisation 35 days following sponsor provision to the site of the local information pack, so long as:

- You have contacted participating NHS organisations (see below for details)
- The NHS organisation has not provided a reason as to why they cannot participate
- The NHS organisation has not requested additional time to confirm.

You may start the research prior to the above deadline if the site positively confirms that the research may proceed.

Appendix 12: Email Trust research passport approval

Dear Team

RE: Local study ID 2018087/ IRAS 246685. Confirmation of Capacity and Capability for non portfolio research at [redacted] NHS Foundation Trust.

Full Study Title: What are the attributes of delivery suite coordinators that staff perceive to have a positive or negative influence on the functioning of the shift, team working and individual confidence?

This email confirms that [redacted] NHS Foundation Trust has the capacity and capability to deliver the above referenced study.

The Research Admin Team will send your Research Passport in separate email then you are good to start

Good Luck

Thank you for your support.

Best Regards

[redacted]

[redacted]
Research Project Officer
Research & Development
[redacted]
[redacted].researchdevelopment@nhs.net
R&D tel: [redacted]

Appendix 13: 9 Categories and sub categories

Final 9 categories and sub categories from the initial and focused coding

Number	Category
1	**Ability to make quick decisions**
Sub categories	Ability to prioritise & delegate/ escalate
	Ability to project into the future & act
	Why it is important
2	**Knowledge**
Sub categories	Knowledge equates to confidence 'knows their stuff'
	Knowledge of staffs' strengths & weakness
	Transfer/ sharing of knowledge
	Why it is important to staff
3	**Helicopter view**
Sub categories	Seeing the whole picture
	Projecting into the future
	Understanding areas which impact on Delivery suite
	Takes preventative action
	Staff need information to plan
	How does the DSC collect the information to be SA
	What does the DSC do with the information they collect
4	**Organised & in control**
Sub categories	Staying calm
	Knows what is going on (situationally aware)
	Clear communication
	Why is it important to staff
5	**Ability to challenge in a positive way**
Sub categories	Ability to challenge
	Style of communication
	Influence/ power
	Why is it important
6	**Proactively leads**
Sub categories	Being visible or being in the office
	Proactively seeks out who needs help
	Proactive about getting information
	Impact on staff of a proactive DSC
7	**Supportive & approachable**
Sub categories	Approachable for supportive
	Positive & negative responses to questions
	Fair workload allocation
	Supportive of staff in training ,new to the trust, newly qualified
	Checks on staff
	Ensures staff get breaks
	Positive reinforcement
	Impact on staff
8	**Team player**
Sub categories	Proactive in bringing team together
	Working as equals
	Importance of registrar/ DSC team working
9	**Sharing of information**
Sub categories	DSC conduit for information & shifting of information
	Keeps staff up to date with change
	Facilitates decision making through discussion
	Trust for staff to share information

Appendix 14: Examples of memo writing

Relates to reviewing early codes from the quotes in the supportive and approachable category

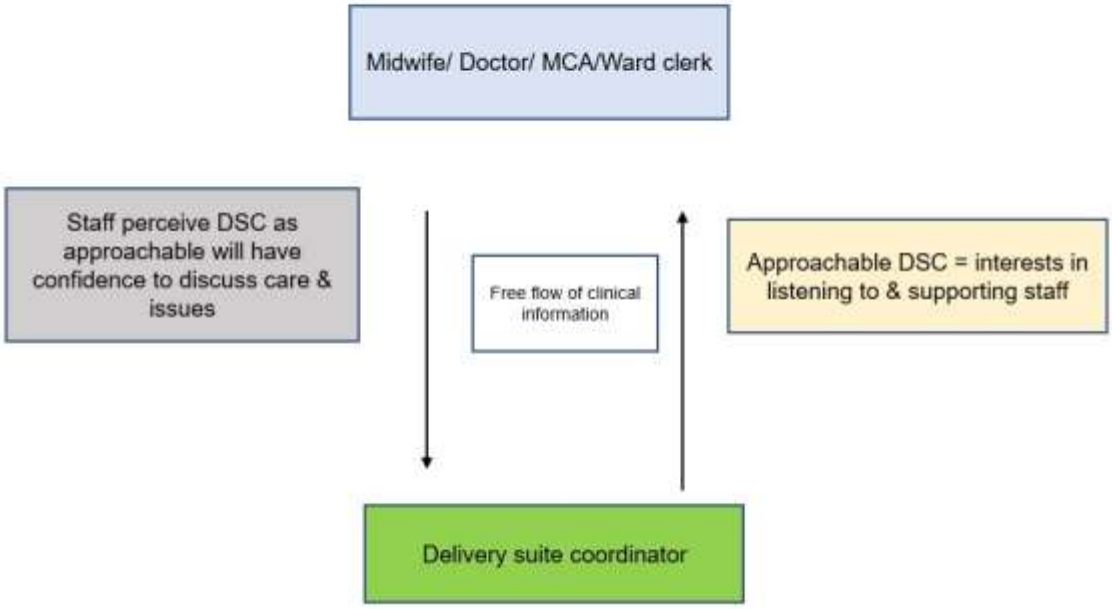
Several staff expressing the importance of the coordinator being approachable.

How approachable the staff perceive the delivery suite coordinator seems to affect confidence of staff to approach the coordinator. From SHO, Registrar and Midwives but more pertinent in 2 midwifery interviews. Doctors and MCA raised how coordinators gather information. Is this affecting the flow of information?

Thought/ Question: If coordinator is expected to have the overview 'helicopter view' (separate category) if they are not-seen as approachable does that affect free flow of communication, particularly clinical? What do staff do if a coordinator is not approachable?

Action: Probe at next interviews if raised. What will staff do if they have a question and they deemed the coordinator not to be approachable**?**

Sample: More band 5 & 6 midwives to interview.



Memo writing

Relates to reviewing early codes from the quotes
All groups of staff to date are using the term ‘Helicopter view’. There appears to be a link with staff confidence in the DSC and this overview of activity.
Helicopter view= Overview of women, staff and wider unit.
Thought/ Question: If coordinator is expected to have the overview ‘helicopter view’ How do they achieve this.
Action: Continue to probe at next interviews if raised. To define ‘helicopter view’**. What happens if the DSC does not have the overview?**

Sample: Continue to interview all groups to gain a clearer understanding of the significance of this term

Appendix 15. Mapping of leadership styles

Situational awareness						
Categories from focused coding	**Ability to make decisions under pressure**	**Organised & in control**	**Proactively leads**	**Helicopter view**	**Knowledge**	**Sharing of information**
Leadership styles						
Servant leadership				**x**	**x**	
Adaptive leadership						**x**
Compassionate leadership						
Authentic leadership						
Transformational leadership	**x**					**x**
Transactional leadership						**x**
Engaging leadership						
EI-Self awareness						
EI-Self management		**x**	**x**	**x**		
EI-Social awareness	**x**			**x**	**x**	
EI-relationship management			**x**	**x**		**x**

Supporting staff					
Categories from focused coding	**Supportive & approachable**	**Knowledgeable**	**Team player**	**Sharing of information**	**Proactively leads**
Leadership styles					
Servant leadership	**x**		**x**		
Adaptive leadership	**x**			**x**	
Compassionate leadership	**x**				
Authentic leadership	**x**		**x**		
Transformational leadership	**x**		**x**	**x**	
Transactional leadership				**x**	
Engaging leadership	**x**		**x**		
Situational leadership	**x**				
EI-Self awareness	**x**		**x**		
EI-Self management	**x**		**x**		
EI-Social awareness	**x**				**x**
EI-relationship management	**x**		**x**		**x**

Approachable			
Categories from focused coding	**Supportive & approachable**	**Sharing of information**	**Ability to challenge**
Leadership styles			
Servant leadership	**x**		**x**
Adaptive leadership	**x**	**x**	
Compassionate leadership	**x**		
Authentic leadership	**x**		**x**
Transformational leadership	**x**	**x**	
Transactional leadership		**x**	**x**
Engaging leadership	**x**		
EI-Self awareness	**x**	**x**	**x**
EI-Self management	**x**		**x**
EI-Social awareness	**x**	**x**	
EI-relationship management	**x**	**x**	**x**

Appendix 16. Emotional intelligence domains

Framework of EI

	Self: Personal competence	Social competence
Recognition	**Self-awareness** -Emotional self-awareness -Accurate self-assessment -Self-confidence	**Social awareness** **-**Empathy -Service orientation -Organisation -Organisational awareness
Regulation	**Self-management** -Self-control -Trustworthiness -Conscientiousness Adaptability -Achievement drive -Initiative	**Relationship Management** -Developing others -Influence -Communication -Conflict management -Leadership -Change catalyst -Building bonds -Teamwork -Collaboration

(Goleman 2001)

Appendix 17 Summary of leadership styles

Situational leadership	Adapts leadership style to the situation based on the competencies of their followers
Servant leadership	Empathy Listening Awareness of others needs Persuasion Building community- teamwork Conceptualisation & foresight
Compassionate leadership	Empathy Understanding the problems and situations of peers Want people to succeed
Authentic leadership	Self-awareness How they connect with others
Transformational leadership	Transacting with followers Individual consideration Motivates followers
Transactional leadership	Directive style with followers Use closed questions
Engaging leadership	Concern for staff's wellbeing Attends to the emotional & physical needs of staff Builds cohesive teams
Emotional intelligence (EI)	Self-awareness Self-management Social awareness Relationship management

Presentations and publication

Publication

Bunford, D. (2019) ‘How delivery suite co-ordinators create situational awareness in the multidisciplinary team’, *British Journal of Midwifery,* Vol 27, No 8, pp 497-505.

Oral Presentations at conferences

The role of the midwifery delivery suite coordinator in creating situational awareness on the unit and how this influences the Multidisciplinary Teams’ (MDT) ability to deliver safe care. Venue: National Conference. Mind the gap: integrating human factors and ergonomics into health and social care to improve safety and experience. 21st November 2019.

Situational awareness on the delivery suite the role of the delivery suite coordinator. Venue: The North-East strategy for maternity services conference. 7th February 2020.