How do Surgical Trainees Learn in Outpatient Clinics? Making Learning Visible Through Video-Reflexive Ethnography

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The candidate confirms that the work submitted is her own, except where work which has formed part of jointly authored publications has been included. The contribution of the candidate and the other authors to this work has been explicitly indicated below. The candidate confirms that appropriate credit has been given within the thesis where reference has been made to the work of others.

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Abstract

Outpatient clinics form a significant workload within surgical practice for consultants and trainees. Though learning is visible in other areas of surgery, it is less apparent in outpatient clinics as work is generally more independent. While learning in outpatient clinics has been investigated, research lacks focused exploration of *in situ* learning by observing trainees in outpatient clinics; therefore, this research aimed to consider the elements that influence surgical trainees' learning in the surgical outpatient clinic.

Working within a constructivist paradigm, I utilised video-reflexive ethnography (VRE) to explore how trainees learn within outpatient clinics using three methods. First, I employed *video ethnography* to investigate the culture of outpatient clinics (38.5 hours) with the support of filming (12 trainee clinics). Second, *Interviews* with consultants and trainees (n=11) allowed surgeons to view their recordings and consider learning within clinics and their role in trainees' learning. Then in team-based *reflexive sessions* (n=6), the wider surgical team (n=18) discussed selected video clips from the video ethnography, considering broader influences on clinic practice and learning. Additionally, participants considered steps to ensure trainees meet newly introduced Capabilities in Practice (CiP) requirements. Through reflexive thematic analysis, I generated five themes from the interviews, focusing on support within the clinic, and three from the reflexive sessions, focusing on wider systems supporting trainees.

VRE highlights the value consultants place on trainees within clinics. Although many of the skills required to conduct clinics are not always apparent, the introduction of CiPs has highlighted areas where trainees should be supported and appear to act as a driver for learning. VRE allowed participants to recognise areas of excellence within their team while recognising barriers such as time and technology. The culture within the observed outpatient clinic was positive, driven by supportive senior discussions and trainees being allowed to develop an increasing autonomy in patient care, making the observed clinic a thriving community of practice.

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Abbreviations

CBD	Case Based Discussion
CCrISP	Care of the Critically Ill Surgical Patient
CCT	Certificate of Completion of Training
CiPs	Capabilities in Practice
CEX	Clinical Evaluation Exercise
CoP(s)	Community/(Communities) of Practice
COVID (-19)	Coronavirus Disease (2019)
CT (followed by a number)	Core Trainee/Training (Year)
CT scan	Computerised Tomography Scan
DNA	Did Not Attend
FRCS	Fellowship of the Royal College of Surgeons
HPB	Hepatobiliary surgery
ICU	Intensive Care Units
IT	Information Technology
GMC	General Medical Council
GP	General Practitioner
ISCP	Intercollegiate Surgical Curriculum Programme
JCST	Joint Committee on Surgical Training
MDT	Multi-Disciplinary Team
MRCS	Membership of the Royal College of Surgeons
NHS	National Health Service
NTN	National Training Number
PPE	Personal Protective Equipment
QIP	Quality improvement project
REC	Research Ethics Committee
RCA	Recorded Consultation Assessment

rTA	Reflexive Thematic Analysis
ST (followed by a number)	Specialist Trainee/Training (Year)
UK	United Kingdom
VFCs	Virtual Fracture Clinics
VRE	Video-reflexive ethnography
VREIA	International Association of Video-Reflexive Ethnographers

Chapter 1. Introduction

I (Aimee Charnell) was a registrar in upper gastrointestinal and emergency surgery. I arrived at the outpatient clinic away from the hospital where I usually work. The clinic staff were friendly, and there was often cake, so I did not mind working there. I had previously done a few clinics with this surgical consultant; I knew he liked discussing potential discharges and any concerns I had. Other consultants had different expectations.

I opened the first hospital Information Technology (IT) system, which held each patient's referral letter, results, and previous clinic letters. I also tried to load up the dictation program (which also contained the clinic schedule), but this crashed, yet again. I called IT services, who promised to fix it during the clinic. Luckily, a clinic nurse had recently taught me another way to access the clinic schedule on a different programme. The third patient was a man in his 60s. He was sent for an ultrasound by his GP due to weight loss and vague abdominal pain. The ultrasound showed that the patient had likely metastases in his liver. The GP had organised a Computerised Tomography (CT) scan, but this had not yet been completed. I looked outside for the clinic nurse, as I knew this would be a difficult conversation, but she was in with the consultant.

I called the patient from the waiting room and saw him with his wife. I obtained a history, examined the patient, and then asked about his understanding of what was happening. He was told there was 'something' in his liver but did not know what that meant. I asked what the patient would like to know and I explained that he almost certainly had cancer, although I could not tell him where the primary source of this cancer was. I explained what would happen next and gave him very clear timelines for the next steps since I could not give him more information on his primary cancer or prognosis. We talked about managing the lack of appetite. I wish I could have done more to explain what was going on.

I was angry at the General Practitioner (GP) for not explaining that it was cancer but glad I had the time in a comparatively relaxed clinic to do this properly. I was then angry at myself for taking the patient's word that the GP had not explained that the patient was likely to have cancer, as I know many patients do not always 'hear' difficult conversations. I was thankful that the patient respected my 'not knowing' was due to the lack of

investigations rather than my competence as a surgeon. As soon as the patient left, I called the multi-disciplinary team (MDT) coordinator to ensure that the MDT would discuss his case the following week. In the MDT, they would consider what further investigations should be completed and what management should be instigated; ultimately, they would consider whether this patient was a candidate for surgical management of his cancer. Although I regularly attended MDTs, I only knew how to book the patient directly onto the MDT as I had a similar patient earlier in the clinic and had spoken to the consultant.

I dictated letters to the GP and MDT (and dictated for previous patients now that the dictation system was working again). I saw the next patient with a smile on my face and only informed the consultant about my patient at the end of the clinic since he would be presenting the patient's information at the MDT. As I had explained my patient in detail to the consultant, he offered to sign an online assessment of the encounter. Portfolio assessments were difficult to obtain in the clinic as I had never been observed completing a clinic consultation as a surgical trainee. Although the consultant offered to complete an assessment, he made clear that I first needed to complete all sections, including his feedback. I made my usual joke that I would mark myself excellent for everything if completing the assessment. I didn't.

This vignette reflects my personal experience within a surgical clinic, which tells the story of a clinic patient included in my surgical portfolio. It is a clinic I thought back to when starting my PhD journey, despite it being a relatively typical clinical day as a surgical registrar. This reflection demonstrates many people and considerations are needed to conduct a surgical clinic, and my role within the clinic was vast, despite being a trainee within the department.

During my PhD, I moved from surgical training to general practice, but this reflection also resonates with my daily practice as a GP trainee. This thesis continues to tell the story of surgical outpatient clinics and trainees' learning within them. Before considering how trainees learn within outpatient clinics, this chapter discusses surgical training within the United Kingdom (UK) and the journey towards the thesis topic.

1.1 Background to surgical training and practice

Before commencing surgical training in the UK, doctors complete two years of postgraduate Foundation Programme training, comprising six four-month rotations in various specialities. After Foundation Programme training, trainees may then apply for surgical training, usually starting with two years of core training (CT1 and CT2) in various surgical rotations. Trainees then move into specialist training (ST3-ST7/ST8) in their surgical speciality after another national recruitment process and gaining a National Training Number (NTN). The process for general surgical trainees is depicted in **Figure 1-1**, although there is some variation between surgical sub-specialities. Alternatively, academic trainees may apply for an NTN immediately after Foundation Programme training and complete run-through specialist training (ST1-ST7/ST8) in selected surgical programmes.

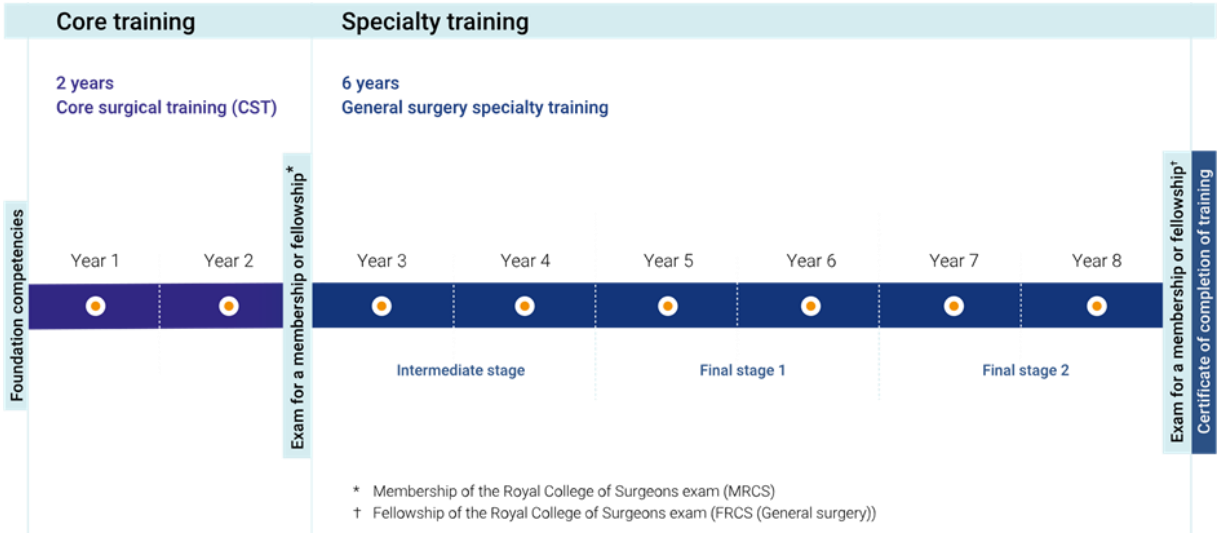

Figure 1-1: General surgical training pathway in the United Kingdom (General Medical Council, 2017).

Trainees complete two national examinations: Membership of the Royal College of Surgeons (MRCS) within the first two years of core training and Fellowship of the Royal College of Surgeons (FRCS) in the final two years of speciality training. The first examinations (MRCS) give the surgical trainee the title Mrs, Ms, Miss, or Mr. This is an old British tradition since surgeons were previously apprentices of other surgeons, occasionally holding a diploma but not a medical degree. Following completion of the FRCS and the training pathway, surgical trainees may apply for their Certificate of Completion of Training (CCT), allowing them to contend for consultancy.

I completed a registrar-level clinical fellowship year, from which the initial vignette above was derived, after two years of Foundation Programme training and my two-year core surgical training programme, which included my MRCS examinations. In the clinical fellowship year, I completed a simulation fellowship and postgraduate certificate in clinical leadership alongside my surgical training. Initially, much of my simulation teaching focused on exciting areas of clinical practice, such as trauma cases and acutely unwell patients on the wards. The simulation leads later asked where I wanted to focus my educational teaching and research as part of this role. This question led me to consider the surgical training pathway and where academic support is best placed for surgical trainees.

Before consultancy, adult and paediatric surgical trainees must develop the skills needed for operating (elective and emergency), endoscopies, ward rounds, management of emergency patients (acute surgical presentations and trauma), multi-disciplinary team meetings, and surgical clinics. Concurrent involvement in research, audit and teaching is also expected. I realised that in each clinical role, I had received clear educational support, even if not through direct teaching; however, during my postgraduate training, I arrived at a urology clinic as a CT1 and was asked to discuss a specific oncological treatment with a patient. As I worked in urology inpatient care, I had not heard of this treatment, let alone counselled a patient on its use. The consultant told me it was easy and to get on with it. This clinic was one of the very few I attended in my CT1 year, although I did observe some general surgery clinics later in the year. As a CT2, I was expected to conduct clinics alongside the consultant. At this point, no one had ever observed me complete a clinic consultation after completing medical school (and at medical school, it was only during my general practice placements). Therefore, I felt unprepared to undertake clinics when I started my CT2 year. Speaking to colleagues, I found that other trainees felt the same.

To understand the gravity of the role of a surgical trainee conducting a clinic, one must understand the nature and purpose of an outpatient clinic. An outpatient clinic is a place where clinicians from a hospital speciality may see patients in short appointments. These clinics include new and follow-up patients with a wide range of presentations. The overall setup of these is fairly similar to a general practice consultation. The patient is sent an appointment to see a clinician, who will see them in a small consultation room, usually comprising chairs, a desk with a computer, an examination bed, and any specialist equipment required for the clinic. However, unlike in general practice, the surgeon is

ordinarily aware of the reason for the patient's attendance, whether to answer a question posed by a GP or to review a patient following investigations or surgical intervention.

Overall, medical and surgical clinics are similar, although surgical clinics may potentially lead to an operation. The surgical clinics are where decisions to operate are made (or perhaps not to operate, which may be a more difficult decision) and communicated to the patient, thereby starting the consent process. The types of consultation within the surgical clinic are highly variable. One small aspect of this variability is the method of patient referral to the clinic, which is summarised in **Figure 1-2**. Increasingly, it is not only surgeons who review patients in surgical clinics. Other professionals provide input, including specialist nurses (e.g. stoma nurses and community outreach nurses), physiotherapists, and doctors from allied specialities such as oncology and gastroenterology (Waghorn et al., 1997).

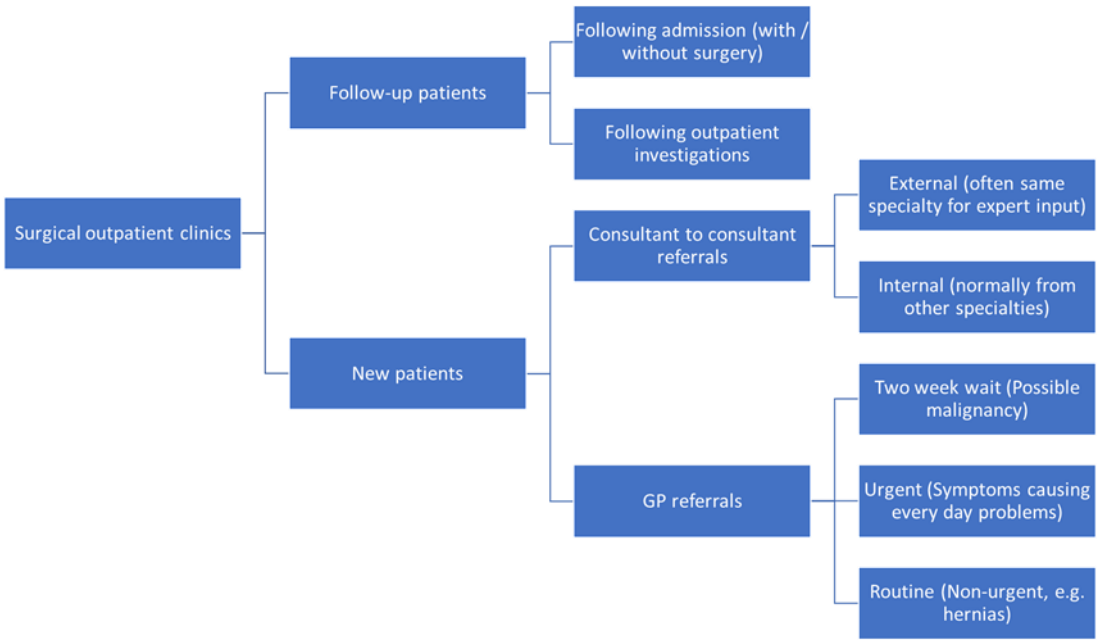

Figure 1-2: Summary of categories of patients typically seen in general surgery outpatient clinics

When a GP refers a patient to a surgical clinic, the patient should be seen in their clinic appointment within particular time limits according to the National Health Service (NHS) constitution (Parkin, 2020). For routine appointments, such as herniae, benign skin lumps, and haemorrhoids, patients should be seen within 18 weeks; however, for investigation of potential malignancies, patients should have their initial appointment within two weeks. The

clinic lists are occasionally categorised by the type of clinic, such as new patients, follow-up, or breaking bad news (which might allow more time for consultations and appropriate support staff in attendance). These decisions are often Trust specific and are decided between the clinicians and business managers depending on the local needs and availability. The clinics are not typically dedicated entirely to one group, but set clinics can allow for specialist support (such as appropriate clinical nurse specialists) on set days.

I needed a vast amount of knowledge to conduct surgical clinics within my practice. Many of the conditions seen were different from those I would typically see in hospital wards. As core trainees rotate specialities every six months, clinics require a comprehensive understanding of varied, complex sub-speciality knowledge. This complexity may explain why junior surgical trainees find it daunting to conduct clinic consultations unsupervised when they begin new rotations within new surgical specialities, especially as these clinics are conducted without trainees observing consultants or being observed.

Thinking back to my simulation fellowship role, when considering educational gaps, I decided that surgical outpatient clinics were the area of surgical practice that most warranted further education support. I decided to create a training day for surgical trainees and considered what the content should be. My experiences made it seem obvious that some sessions should include the management of outpatient conditions, so I incorporated this into the programme. Additionally, I recruited a simulated patient to help run a filmed mock clinic in the afternoon so trainees could reflect on their clinic consultations and following dictations. I also knew that time management was complex in clinics, especially when starting as a surgical trainee, so I was keen to approach this topic too.

Over 30 years ago, Duncan (1988) suggested that a reasonable time to allocate for patients in UK surgical clinics is 20 minutes for a new patient and 10 minutes for a follow-up appointment. Waghorn and McKee (1999) found that, in reality, the median consultation time is 4.3 minutes for new patients and three minutes for follow-up patients within the UK. However, they reported this time varied significantly between the grade of the surgeon and the type of patient seen. Other factors that take up a significant amount of time in surgical clinics were not considered, such as reviewing patient notes and dictating clinic letters, which may add a substantial amount of time to the appointment.

Outpatient clinics generate a large income for NHS Trusts, with revenue of approximately £200 for first outpatient appointments and £100 for follow-up patients (Dafydd et al., 2016). It is easy to see why clinics often feel rushed and why many patients are often booked into clinics when there are financial and clinical incentives for the Trusts. Keen to address this time pressure during my clinic training sessions for surgical trainees during my simulation post, I also recruited a GP trainer who had planned to discuss time management in clinics, especially with complex patients.

The course was free, although we asked for a £10 refundable deposit to help determine accurate attendance numbers. Most surgical courses cost (many) hundreds of pounds. Two weeks before, we had meagre numbers, and after a failed recruitment drive, we decided to cancel the event one week before it was due to run. If I had run a trauma or surgical emergencies course, I expect the event would have quickly sold out. However, I was not disheartened, as I understood that many surgical trainees deem clinics as the mundane part of surgical practice. I occasionally shared this belief, especially when asked to attend a clinic instead of an operating list. I did not always appreciate the privilege of working in outpatient clinics until clinical cases such as the patient presented in the vignette came along.

A few months later, when I decided to study for a PhD in Medical Education, I sat down with Professor Roberts and considered my potential thesis topics. I considered whether to focus on my primary interest in trauma-based education or whether to focus on surgical clinics. Despite many surgical trainers and trainees having strong opinions on outpatient clinics and their training, there was very little research on them, meaning that conducting a literature search was much less fruitful than my one in trauma. Very few quality papers existed on learning in surgical outpatient clinics. Instead of worrying about the lack of literature, I decided to use this as an opportunity for a PhD, providing unique perspectives on learning.

This topic led me to my PhD question: how do surgeons learn in outpatient clinics? I wondered whether the lack of literature was due to surgeons learning everything they needed to know elsewhere or whether surgical outpatients was an area requiring independent consideration. I knew *what* to study but not *how*. The *how* came much later and had its own journey and story. Having started the PhD from a lab-based and statistics background, which I now understand reflected my natural position as a positivist, I had not understood how complex asking 'how' would be (Cunningham and Wilson, 2003).

Additionally, I could not have realised how much I would change as a person and researcher due to my research journey. This thesis details my research journey and how I came to understand more about learning in surgical outpatient clinics.

As I began my PhD, the surgical Royal Colleges were also working towards supporting trainee education within specific areas often neglected within surgical education. These areas included outpatient clinics, managing an operating list, and managing ward rounds and the ongoing care of inpatients. In August 2021, three years after my PhD began (and during a global pandemic), these areas were introduced into the surgical curriculum as competency-based Capabilities in Practice (CiPs) by the Joint Committee on Surgical Training (JCST) (ISCPa, 2021). Therefore, I considered the introduction of these CiPs during my research. I explain the CiPs and their role further in the next chapter.

1.2 Introduction to the thesis structure

Chapter two of this thesis discusses the role of the surgical trainee within the clinic, considering how this might be influenced by individual factors (Billet's work) and the surgical outpatient department as a Community of Practice (CoP). It considers that although surgical outpatients have been studied, this is often superficial. Although more research emerged through the pandemic, it was often pandemic-specific and of limited value when considering learning beyond the pandemic, although its influence on my study has been discussed. The current literature leaves a gap for both in-depth and *in-situ* work, considering how trainees learn within outpatient clinics. The chapter ends by introducing the aim and research questions used to explore how trainees learn using a qualitative study in an *in-situ* environment.

Chapter three discusses my journey from a positivist orientation towards embracing a constructivist paradigm. I justify my reasons for choosing a methodology encompassing my participants' views while supporting the department. Co-construction of knowledge became important to me, which led me towards video-reflexive ethnography (VRE) methodology. This post-qualitative methodology makes the mundane visible through collaboration and participant care. I explain my role within my VRE and my methodological considerations as a partial insider and *clinalyst*.

Chapter four explains how I negotiated access to the research site for my PhD study. I also consider the impact of the pandemic on my research, including completing a quality improvement project (QIP) to support the team. I justify how spending time with the paediatric surgery team supported my decision to adapt the research for completion during the ongoing pandemic.

Chapter five then explains the methods within the VRE methodology: video ethnography, clip selection interviews, and video-reflexive sessions. It reports how these methods were undertaken within my PhD context of the tertiary paediatric surgery department. I explain how I selected and recruited the participants for my study. My main considerations included conducting my research as a clinician-researcher and the resulting ethical factors which required consideration.

Chapter six focuses on the ethnographic method used in my PhD in greater detail. I describe how I negotiated access in the department and explored the setting and culture within the paediatric surgery outpatient clinics through 38.5 hours of step-in, step-out ethnography. I explain how my field notes helped me understand the clinic's culture. I clarify how collecting video footage from 12 clinic appointments supported the later ethnography, including discussions in later interviews and reflexive sessions. I then provide a case study clarifying how I considered trainee learning events within the clinics and the practicalities of collecting footage during the clinics.

Chapter seven refers to the clip selection interviews, which focused on the individual considerations of support within the clinic by interviewing seven trainees and four consultants I had filmed in the previous stage. The purpose of the interviews was first to consider what the participants considered to be learning events, and second, to ask semi-structured questions considering the impact of filming and the support the trainee receives within the clinic. These findings are discussed within five themes, which I generated through reflexive thematic analysis (rTA). The resulting themes are: (1) Knowing your and other team members' roles and responsibilities, (2) VRE provides space for reflective conversations about learning, (3) "Moving with the times": developing understanding and approaches to learning and practice, (4) The child's care as the goal provides the context and framework for paediatric surgery clinics, and (5) The clinics are a distinct place to develop surgical autonomy.

Chapter eight explores the wider considerations of learning external to the surgical team within the reflexive sessions. The six sessions included 18 participants: consultants, trainees, and a research nurse. I shared clips to demonstrate learning, facilitating collaborative discussions and allowing participants to consider their own practice. Again, I generated themes to consider this higher level of support using rTA. The resulting themes are: (1) Supporting trainees' development towards independent outpatient practice, (2) Clinic learning is influenced by wider systems, and (3) Educational interventions make learning visible within outpatient clinics.

Chapter nine then brings the findings together: the video ethnography, interviews, and reflexive sessions, to determine the factors influencing learning and how these findings answer my research question by addressing each objective. Based on these findings, I have considered implications for surgical practice and other perceived stakeholders, including educationalists, VRE researchers, and patients. Before presenting my thesis conclusions, I ponder my reflections on my thesis journey.

These chapters lead to the end of my thesis, where the reader will better understand stakeholder roles, reflecting on their role in supporting trainees in clinics and contemplate how my thesis may help strengthen their practice. Although medical educationalists have used the VRE methodology to explore clinical practice, this thesis explains how the methodology may be used to explore learning in various clinical settings and may be led by the departments following minimal support. Furthermore, I completed this thesis during the COVID-19 pandemic. Consequently, findings should be contextualised, considering adaptations required for completion.

Surgeons may use this thesis to recognise that many trainers have similar difficulties when supporting trainees within clinics, even when keen to have trainees in clinics. Additionally, surgeons might consider how to address the newly introduced CiPs within their department and how this impacts trainee support. The hospital Trusts, surgical Royal Colleges and the JCST may use this thesis to understand how surgical teams address CiPs and the wider barriers to their implication. Finally, patients and their carers may use this thesis to understand outpatient appointments better and the role a trainee may have in a team supporting their care.

Chapter 2. Learning in the Outpatient Surgical Clinic

In the previous chapter, I explained my PhD journey in relation to surgical training and outpatient clinics before outlining the chapters of my PhD thesis. In this chapter, I consider the role of surgical trainees within outpatient clinics and introduce current literature. I also outline the relevant literature and theories relating to general education in clinics and how this changed during the pandemic. I will then connect learning theories and explain how these theories relate to learning within the clinic yet leave gaps which would allow a fuller understanding.

2.1 Background

As my research was conducted during the pandemic, I present findings from two literature reviews. The first represents learning in clinics before the COVID-19 pandemic, which helped develop my initial research (Webster and Watson, 2002). These papers are integrated throughout this chapter when considering learning in clinics and perceptions of learning. I also present updated articles representing clinic changes during the pandemic within this chapter and explain how this influenced my updated research questions. Suppose I had known the pandemic would have impacted my research. In that case, a scoping review may have been a more suitable option and one less representative of my original positivist stance. However, I was keen that the literature guided my research and thus completed reviews which supported my research question development (Gordon, 2016; Xiao and Watson, 2019). The search strategy for the original review, exploring trainee learning in surgical clinics, is provided in **Figure 2-1** as a PRISMA diagram (Page et al., 2021). Further detail of the search strategy is provided in Appendix 1. Additional papers were later included to give more context where appropriate.

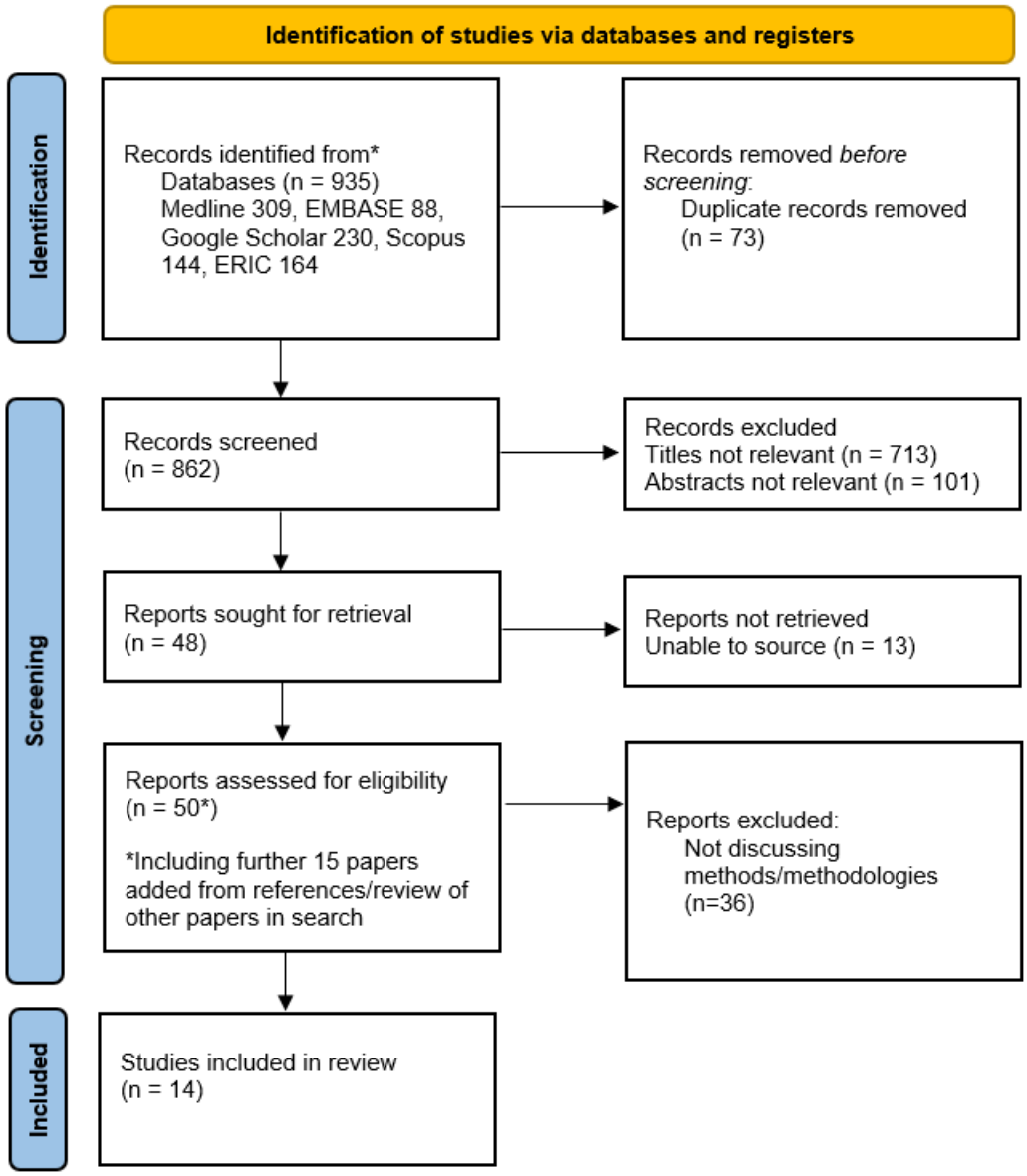

Figure 2-1: PRISMA diagram demonstrating one search strategy used within this thesis to identify papers sharing methodologies/methods exploring surgical trainees' learning in outpatient clinics

2.1.1 Surgical trainees within outpatient clinics

Being a surgeon requires combining many clinical roles, with surgical outpatient clinics making up a large proportion of this workload. It is recommended that general surgery consultants spend two half-day sessions per week in clinics and that paediatric surgical consultants spend 20% of their rostered time in clinics (Royal College of Surgeons, 2017). From personal experience, I have found many consultants spend much more time in the

clinic than this, especially when working electively, i.e. when they have allocated time for managing patients who have not been acutely admitted to the hospital. Each clinic usually constitutes one half-day session, but the number of patients seen in each is highly variable; my experience has found this may be between five and 25 per clinician. This variability of patient numbers may be due to the number of expected clinicians available to review patients in clinics or the need to 'over-book' clinics so unwell patients can be reviewed sooner. Conversely, at the other extreme, there may be long gaps between patients due to short-notice cancellations.

Hospital-based trainees often spend much of their training within the outpatient clinic. Surgical trainees complete around 3.2 clinics a week, compared to 2.3 for their medical counterparts (Dafydd et al., 2016). An Australian study found that the number of patients seen by surgical trainees in the clinic varies greatly (range 0-22), and trainees will see both new and follow-up patients (Goh et al., 2020). It is recommended that UK-based core surgical trainees attend two clinics per week. Still, as this is not a requirement, it varies significantly between training posts (Joint Committee on Surgical Training, 2018). As a Core Trainee Year 1 (CT1), I attended two clinics in 12 months, but then as a CT2, I completed clinics at least, and often more than, twice weekly. Since a hospital can receive up to £2,000 from a trainee reviewing ten patients in a clinic, this work is often seen merely as service provision by trainees (Dafydd et al. 2016).

General Practice training is very different, with teaching on consultation skills being a significant component of their training. Within general practice, many clinical consultations are recorded to help guide the trainees' development. A GP trainee's consultation videos are often discussed with the trainer and sometimes other GP trainees to improve the trainee's consultation skills. During the pandemic, GP trainees' clinical exams were replaced with assessments reviewing submitted videos of standard patient consultations, known as the Recorded Consultation Assessment (RCA). Therefore, videos are used to provide feedback and assess GP trainees.

When using videos for trainee feedback, Eeckhout et al. (2016) found that although only 70% of trainees felt positive about using video consultations to improve their practice, almost 90% felt that their communication improved, and 85% believed their professional attitude improved as a result. The size and position of the camera were often stated as a concern for the clinicians, for themselves and for their patients. However, over 90% of

patients filmed in another study thought it was a valuable educational tool, and most patients 'forgot' that the camera was present (Martin and Martin, 1984). A small proportion of patients (<5%) perceived that the doctors changed their behaviour (Martin and Martin, 1984). In contrast, Pringle and Stewart-Evans (1990) found no difference in the consulting behaviour of GPs who were aware of recordings and GPs who were not. More recent research focusing on the acceptability of video-based research suggests that video recordings are considered acceptable, although little research exists on the risks of filming (Parry et al., 2016). On balance, in reading about the benefits of GP trainees filming and discussing their consultations, I was struck that this seemingly simple way of supporting the trainees' development in clinics is not utilised to the same degree within surgical training.

2.2 How is surgical training in outpatient clinics perceived?

Although I viewed the surgical outpatient clinic as a learning context that does not utilise formal teaching, I recognised this might not necessarily be a problem for others. It was vital for me to ascertain whether other surgical trainees found concern about the lack of training within outpatient clinics. Although I was concerned by the lack of training in the outpatient clinics, I did not know if this concern was shared more widely and consequently, I reviewed the literature to explore this further.

2.2.1 Trainees' perceptions

The literature suggests that trainees' experiences of clinics are variable, and the perception is sometimes negative. Even McKee and Waghorn (2000), who have completed a large amount of research on surgical clinics, state surgical clinics are often deemed a Cinderella service, merely a stumbling block to more exciting work. One surgical trainee shared the following extreme reflection on his experience as an American surgical trainee, comparing the clinic to a war zone:

> *"Transfer the same surgical intern from the climate-controlled architecture of the modern US city to a sweltering cinderblock box. Transfer to this village and its adjacent camp of refugees recovering from what the United Nations called the most brutal civil war of the '90s. You are now in Sierra Leone, not far from the Liberian border (where another brutal civil war just officially ended), and you are once again on clinic day."* - (Capriotti, 2004, p.1017)

This statement struck me when I started my PhD. I must admit I was shocked to see this quote. It gave me a new perspective on how much some surgical trainees dislike surgical clinics. However, this view is not shared by all. In reply to Capriotti's reflection, Friedman acknowledged clinics as a place of *seemingly endless paperwork* and *unglamorous scutwork*, but stated that there is a constant opportunity to make a difference (Friedman, 2005, p.40). Khalid et al. (2013) also recognised the importance of outpatient clinics for training yet see the role as the 'service provision part of the job', stating that this work leads to less time in theatre and therefore detracts from the operative experience. It appears that the negative views surrounding clinics are due to them being deemed service provision only. This takes away from operating time, which trainees (perhaps with a somewhat skewed view) consider most important.

It seems that clinics may be perceived to be beneficial to trainees when integrated with other elements of the training program. When Maker et al. (2005) questioned surgical trainees about their dream surgical rotation, attending outpatient clinics correlated highly with their dream rotations. Wirth at al. (2013) assigned duties to trainees one day in advance to clinical tasks based on their educational needs. The single act of assigning trainees according to needs led to trainees' perceived value of clinics more than double ($p<0.001$). The value of clinics may depend on the trainee stage; junior trainees tend to find clinics a less valuable educational experience than their senior counterparts (Goh et al., 2020). The authors explain this may be due to a larger case mix being afforded to more senior trainees within their study. Unsurprisingly, the study also found that trainees found a greater educational value when consultant input was given (Goh et al., 2020).

In addition to the appropriate timing of clinics, focused training played a large part in trainees' perceptions of clinics. Harris (1999) emphasised the importance of outpatient clinics under an experienced surgeon's guidance. He stated that as attendance at outpatient clinics is often sporadic, decisions such as when or when not to operate and decisions surrounding peri-operative care are best learnt when under the guidance of an experienced surgeon. This opinion is reinforced by Cox and Swanson (2002), who found that giving trainees positive reinforcement ($p<0.01$) and providing ongoing feedback on progress ($p<0.01$) were the two best-discriminating factors for strong teaching in outpatient clinics. This research emphasised the need for careful integration of surgical clinics into the training programme and personalised feedback to benefit trainees the most. The extent to which this happens in routine outpatient clinic practice is yet to be fully explored.

2.2.2 Consultants' perceptions

Even if trainees do not always recognise the importance of their participation in surgical outpatient clinics, consultants place value on trainees gaining clinic experience beyond easing their own workload. In an American study discussing factors contributing to surgical trainees' strengths and weaknesses, Macsata and Fernandez (2016) found that the single statistically significant factor contributing to perceived weaknesses in junior vascular surgical training was *"not enough time spent in outpatient clinics"* (P=0.01).

When Baldwin et al. (1999) asked a group of surgeons to list desirable clinical skills in trainees, skills needed in the outpatient clinic ranked highly. Items such as history taking, examination and extraction of relevant information were *absolutely essential,* and factors such as using information from the referral letter and knowing when to follow-up or discharge patients were *important*. On review of these factors, I found 16 of the 21 skills found to be *absolutely essential* or *important* are easily attributable to work completed within outpatient clinics.

Despite a collective understanding of the importance of good training in clinics, consultants identify that training within clinics is a concern. Masood et al. (2006) found, in a multi-centre trainee questionnaire, that trainees only reported training episodes in 11% of consultations within urology outpatient clinics, which were sometimes initiated by the trainee and other times by the consultant. This study did not define 'training episode'; individuals' perceived meaning may vary. I suspect a training episode might involve an element of instruction, such as patient review with senior supervision, watching a consultant review a patient and then discussing this, or discussion with a more senior clinician (usually the consultant) after the trainee has reviewed a patient. Masood et al. (2006) admitted that the close supervision of trainees often appears neglected and also suggested the importance of clinic-based logs in this article before the introduction of CiPs.

Literature on surgical trainee learning within clinics indicated that consultants recognised that training could be improved in clinics while also having an additional insight into the benefit to trainees in attending the clinic. This consultant insight is more apparent than the perception among trainees. However, there is a lack of quality research exploring how trainees learn within outpatient clinics and how this may be further supported.

2.2.3 Regulatory body perceptions

It has been recognised by the heads of the surgical training portfolio, the JCST, that managing the outpatient department is difficult for a trainee. Therefore, Capabilities in Practice (CiPs) were introduced for surgical trainees within the Intercollegiate Surgical Curriculum Programme (ISCP) in August 2021 (ISCP, 2021b). These were introduced to address areas not always managed well but essential for surgical training, such as emergency surgery shifts, management of patients on a ward round, and management of outpatients. I communicated with the JCST heads before designing my research questions, meaning I was aware of the CiPs and their introduction, thus enabling me to consider their introduction within my research questions. The CiPs for the surgical outpatient clinic, decided by a focus group of surgical trainers, are summarised in **Table 1**.

Table 1: Summary of the Capabilities in Practice (CiPs) for the surgical outpatient clinic (ISCP, 2021a).

CAPABILITIES IN PRACTICE FOR THE SURGICAL OUTPATIENT CLINIC
Assesses and prioritises referrals
Assesses new and review patients: including history, exam, and creating a plan, communicating this to the patient
Completes necessary documentation
Manages time in the clinic setting
Delegates and trains on appropriate cases
Applies syllabus knowledge and skills both to straightforward and unusual cases
Accommodates all levels of communication and involves relatives and friends, especially when breaking bad news
Recognising patient with urgent conditions which should be admitted from clinic
Takes co-morbidities into account
Requests appropriate investigations and do not investigate when not necessary
Manages potentially challenging situations in patients with complaints

CiPs were first used in postgraduate medical training in the UK to assess trainees' development within medical registrar training in August 2019 (Joint Royal College of Physicians Training Board, 2019). Medical training domains also include outpatient clinics, and many elements are similar to the CiPs within surgery. Although CiPs have been recently implemented, there was little guidance for trainers and institutions on supporting trainees to achieve CiPs. One year after hearing of the CiP components, I attended a workshop at the Edinburgh Royal College of Surgeons' education conference in 2019 where trainers and trainees discussed how these could be achieved. For most CiPs, the responses comprised activities usually undertaken by trainees, such as the trainee leading the theatre morning huddle (individual theatre meeting) or being relieved from their daily duties whilst on emergency shifts. However, other activities discussed were not typically standard practice in surgical training, such as asking the trainee to pick a patient to be seen under supervision, allocating the trainee to appropriate clinics for learning, or even filming the trainee in clinics. As CiPs have only recently been introduced within surgery, they have not yet been formally evaluated to determine how each competence is achieved or their acceptance by trainees. Although this PhD focuses on learning (rather than assessments), the timing of this thesis meant it essential to consider the introduction of CiPs within this PhD, including their impact on learning within surgical outpatient clinics.

2.3 Remote clinics

The literature reviewed above relates only to face-to-face clinics. That was not deliberate but reflective of when I began my PhD journey. Although remote clinics occurred before the pandemic, they were uncommon. During the COVID-19 pandemic, remote clinics quickly became the norm. This change led to a change in my PhD, which I discuss further in the next chapter. Here, I discuss how remote clinics became commonplace in surgical outpatient clinics and the learning which occurs in these.

2.3.1 How are remote clinics utilised?

Within the literature, there is a definite shift in the voices used to present the feasibility of remote clinics. Pre-COVID, much of the language was hopeful but cautious, for example: *"virtual follow-up should suffice"* (Healy et al., 2019, p.30) or *"in some circumstances, telehealth interventions can be effectively used"* (Caffery et al., 2016, p.511). When the pandemic began, papers on remote clinics suddenly appeared on a much larger scale, and the language changed. Articles regarding remote clinics seemed to express an effortless integration and acceptance of remote clinics during COVID. One group who presented a

service evaluation on their clinics during the COVID lockdown explained that *"by default, all patients were offered a telephonic consultation. Telephonic consultation covered all the essential questions required for usual consultation"* (Dhahri et al., 2021, p.956). I suspect that much of the shift in language suggests an acceptance of virtual clinics due to the pandemic and a tendency to accept papers celebrating short-term achievements during the pandemic; however, it is hard to determine at this stage whether this acceptance is short or long term.

2.3.2 Remote clinics prior to the pandemic

Although most outpatient clinics in hospitals were completed face-to-face before the pandemic, remote clinics are not new. Alternatives to face-to-face consultations include telephone, text messages, email, online portals, telemedicine, telehealth, or combinations of the above (Greenhalgh et al., 2016). Even before the pandemic, remote consultations could offer advantages to both patients and to the healthcare system as they may be more cost-effective and convenient (Greenhalgh et al., 2016).

Paediatric specialist services have used remote consultations for some time in areas where geography means long-distance travel for face-to-face consultations. Echocardiograms and cardiology consults have been delivered via telemedicine by conducting a medical consultation with a patient and their local clinician, followed by patient transfer if required (Justo et al., 2004). Smith and colleagues reported they have remotely reviewed distant patients with acute surgical pathologies for many years within paediatric surgery, particularly burn patients, with local clinicians in attendance (Smith et al., 2014). They utilise remote consultations to review children referred for elective surgeries, such as undescended testes. The children attend for face-to-face review if appropriate and receive a same-day operation if required.

Within Leeds Teaching Hospitals, some areas of surgery, such as Virtual Fracture Clinics (VFCs) within orthopaedics, utilise telephone consultations. In VFCs, the orthopaedic team review the patient's notes and images after an emergency department admission to determine whether ongoing care is needed. These VFCs are used both for adults and children. One team within paediatric surgery, the urology department, had completed remote clinics for many years and had clear guidance regarding these and addressing any safeguarding concerns. I worked with this team and an international paediatric urology

group to publish this guidance (Charnell et al., 2021). Supporting this team allowed for in-depth discussions with various paediatric urologists regarding their concerns about remote clinics. They discussed the difficulties of obtaining up-to-date investigations, which are often completed on the same dates as face-to-face clinics. They also explained that much of the understanding of family interaction is lost during remote clinics, the dynamics of which are often informally assessed, meaning that safeguarding concerns are less apparent when clinics are undertaken remotely. Thus, good communication with other healthcare professions is essential.

2.3.3 Creating platforms for remote consultations

As explained, remote communication with patients was difficult before the pandemic. Telephone consultations were possible, although guidance on conducting remote consultations was sparse. Before the pandemic, many did not have available systems to support remote video clinics, meaning that early adopters sometimes used WhatsApp or Facetime to conduct remote clinics (Pencle et al., 2018). Early in the pandemic, one organisation developed a remote video platform through the social media platform, Facebook (Viray et al., 2021). This remote platform seemed to work well in the Philippines when introduced, with 98% of patients thinking it worked well during the pandemic and the same proportion thinking it would work well following the pandemic. Still, the rush to integrate remote platforms meant that security was not always considered even when conducted in the UK. Within another group of London-based surgeons using platforms such as Zoom, FaceTime, and Skype for their remote consultations, almost half had not considered General Data Protection Regulation (GDPR) compliance, and a third had not considered security (Sinha et al., 2021).

Within Leeds, the platform Attend Anywhere was available before the pandemic. Paediatric surgeons utilised the platform to complete video consultations for complex patients, where telephone consultations were inappropriate, such as discussing difficult diagnoses. The remote platforms also benefited from allowing three-way conversations with consultants within different specialities and hospitals. Once remote consultations became established, teams started realising the benefit of these beyond the pandemic. During the pandemic, surgical teams used remote platforms to develop operative discussion groups (Quilez-Orden et al., 2020) and to monitor patients remotely by collecting post-operative observations through a mobile phone application (Chevallier et al., 2020).

2.3.4 Surgical training within pandemic telephone clinics

I personally observed that remote clinics were introduced quickly during the pandemic, so their unfamiliar nature meant that many early remote clinics were entirely consultant-led. My QIP within the department (explained further in Chapter 4) demonstrated that consultants became the learners and were reluctant to take trainees into unknown areas (Charnell et al., 2020). In addition, many surgical trainees were redeployed to other areas, such as acute medicine and ICU (Lion et al., 2021). For those staying in surgery, much of their activities and learning stopped (Khan et al., 2020). Elective surgical lists halted, and emergency operations were completed with personal protective equipment (PPE). As PPE was sparse and hot, most surgical departments encouraged operations to be entirely consultant-led, meaning that the surgical trainees gained much less operative experience and lost operative confidence (Vailas et al., 2021).

Surgical teaching opportunities became more limited during the pandemic, as smaller teams operated and conducted ward rounds. The clinic, thought by many trainees not to be a place of learning, quickly became one of the few areas where contact teaching could occur. One group recognised the learning potential of remote surgical clinics, describing them as one of the few places where learning could happen during the pandemic (Westley et al., 2020). Unfortunately, there was a delay in this realisation for many, as the pandemic demands took priority over teaching. I have previously explained the clinic-based CiPs which have recently been integrated into surgical practice. The CiPs were developed before the pandemic, meaning remote consultations were not prioritised in the list of competencies. This omission may have stemmed from and further contributed to a lack of recognition of remote clinics as an opportunity for learning.

There are, however, many ways that teaching can occur within surgical clinics, even outside the norm. One team filmed themselves, pre-pandemic, completing outpatient procedures to develop their knowledge and consider improvements (Lin et al., 2019). Unfortunately, although the authors explained the learning benefits, the authors did not consider the ethics of recording patients or storing the videos. The paper shows a patient image with their face blocked out, suggesting it was visible in the recording. It is clear how remote learners may be supported by using video recordings, but ethical considerations need to be considered in much greater depth if used as a general tool for learning in surgical outpatient clinics.

It is important to remember that surgical teams were not unique in their transition to remote clinics and that lessons can be learnt from elsewhere. GPs spend extensive time completing clinics, and many moved remotely during the pandemic. GP trainees normally take clinical exams during their training, but this was replaced by evidence of consultations during the pandemic within the RCA examination. Telephone consultations were recorded (with patient permission) and held on a secure server for review by the trainer and trainee before submission for assessment.

A similar initiative was developed to support medical students who missed out on their GP placements (Medical Schools Council, 2018). The Virtual Primary Care platform shows recorded GP consultations to medical students and uses consultations from the creators of the television series GPs: Behind Closed Doors. Within Leeds, the surgical teams have discussed how undergraduates can learn in clinics and are considering recording their clinics, or even using virtual reality headsets to allow the student to have the clinic experience. It is clear that similar techniques may also be used to aid trainees' learning both in and for clinics. Videos could demonstrate the clinic set-up and outpatient procedures for new trainees.

Having considered both face-to-face and remote clinics, it is evident that they are both places where trainees can learn. However, they are both areas that have received little dedicated study regarding surgical training. Allowing me to consider how best to explore learning within surgical clinics, I needed to understand how surgeons learn more generally and what methods could be used to explore this learning further.

2.4 Apprenticeship, an outdated model in surgery?

Historically, surgeons learnt by apprenticeship. They were not doctors but barbers or butchers who developed their surgical knowledge by assisting a more experienced master (Fu, 2000). The idea of apprenticeship was formalised and used to formulate a surgical training system with graded responsibility by Professor William Halsted in the United States in 1889 (Reznick and MacRae, 2006). This type of learning is still evident today in some areas of surgery, such as completing surgical operations.

Within the operating theatre, Bezemer et al. (2014) portrayed learning as *retractor to scalpel*, which refers to a trainee initially holding a retractor and observing the operation, to

later having an increased responsibility, completing the procedure with decreasing supervision. They stated that when the transition to holding the scalpel in a surgery occurs, the trainee plays as important a role in patient care as the consultant. In theatre, the trainee often starts by observing the consultant complete the operation and later completes increasing elements with guidance until they can complete the whole procedure (and manage complications) independently. In other areas, such as endoscopy, the process is also gradual and supported with trainees completing training on endoscopy simulators before performing supervised endoscopies, or part of them, on patients (Axe et al., 2015).

The apprenticeship model may be relevant in consultation training in areas such as general practice to describe the learning relationship where training often occurs mainly under one supervisor in each practice (Neighbour, 2020). However, while apprenticeship may still be relevant in some areas of surgical practice, such as procedural skills, it is perhaps less apparent in other areas, such as outpatient clinics. In outpatient clinics, responsibility and independence occur much sooner. The surgical trainee may review patients independently from day one, with support only when the trainee perceives that this is warranted and thus approaches the consultant. The apprenticeship model's diminished relevance in surgical training may be partly due to the change in surgical training structure towards a competency-based system (Stevens et al., 2012). This change included a move from firm-based learning (one trainee working under one consultant) to rotational placements (multiple trainees working for many consultants over a fixed term). It may also reflect the perceived service-provision nature of clinics, where trainees separate work and learning.

2.4.1 Communities of Practice: a way forward?

A potential way to overcome this separation between learning and service provision, and highlight the learning potential of outpatient clinics, is provided by Lave and Wenger's concept of the Community of Practice (CoP). They developed their theory after analysing previous ethnographic studies exploring apprenticeship models (Lave and Wenger, 1991). They examined various apprenticeship practices, including those that occur in African midwifery, the butchery industry and even those that arise in Alcoholics Anonymous meetings. They consider that some apprenticeships fail, such as those in butchery, as trainees are often only used for service provision and not provided with teaching opportunities from their masters. The authors posit that the commonality among these studies is that learning occurs in some form during (these) apprenticeships, although there is not often evidence of teaching.

Lave and Wenger (1991) suggested that when a group of people come together to pursue shared learning, this can be defined as a CoP. Within these CoPs, members have roles where the newcomer begins by observing tasks and develops an increasingly active role, becoming both a part of and evolving this community. CoPs may be considered a more relevant development of the apprenticeship model to explain how development occurs in modern surgical practice. If surgical practice is understood as a CoP, all surgical team members have the experience to play an essential role in training. Unlike the apprenticeship model, this learning comes from the surgical community or team rather than from one particular 'master' and may be two-way based on the trainee's previous experiences.

Lave and Wenger (1991) describe the important role of the newcomer as *legitimate peripheral participation*. This term means that the newcomer (which in this case may be the junior surgical trainee) is valued as contributing to the team's work due to their shared understanding of a goal, in this case, patient care. One of the studies they described demonstrating apprenticeships (Marshall, 1972) emphasised how this differs from the traditional apprenticeship model. They consider a quote where one trainee butcher stated, *"I'm scared to go into the back room. I feel so out of place there. All those guys know so much about meat cutting and I don't know anything"* (Lave and Wegner, 1991 pp.78). This comment would suggest that the trainee butchers do not feel part of the butchery culture in the early stages.

The butchery culture presented in the example above is a stark contrast to surgical training. Although hierarchy occurs, there are no 'rooms' that the trainee does not attend. There are many examples of legitimate peripheral participation in surgical training, such as operating, multidisciplinary teams (MDTs), and ward rounds. During ward rounds, structured training may not occur to allow the trainee to complete ward rounds; however, the progress towards independently leading ward rounds is gradual. The Foundation doctor will typically update the team on recent results and scribe on ward rounds; the core trainee might make a note of and complete some of the more advanced tasks from the ward round, such as consenting the patient for theatre. This gradual progression gives the specialist training registrar knowledge and skills needed to review a patient appropriately during the daily rounds, supported by observation and feedback from the consultant during consultant rounds.

The outpatient clinic may, in some respects, be considered as a CoP as the trainee enters an existing group of experienced surgical practitioners who run the clinic with established

practices for the purpose of delivering outpatient care, even if many of these practitioners typically are members of other CoPs within their day-to-day clinical practice. These practitioners may include the consultant's secretary (who will type and send the dictated letter), the outpatient department staff, including clinic nurses and healthcare assistants, and the consultant, with whom the trainee may (or may not) have worked closely elsewhere. In the outpatient clinic, the trainee will demonstrate legitimate participation as they will often review potentially complex patients. However, despite the clinic being an area where multiple members of the surgical community reside, the trainees tend to review patients independently, meaning the *peripheral* element of *legitimate peripheral participation* is less visible than elsewhere.

Surgical trainees may enter a community of outpatient clinic staff when working in the clinic, and they are immediately closer to the centre of practice than the newcomers described in Lave and Wenger's CoPs. Initial expectations are high, with trainees expected to perform skills for which they have not received formal training, such as dictation. As much of the trainee's work is independent and develops somewhat through working in the clinic, the trainee's individual background and motivation are likely to influence the speed at which clinics are completed efficiently and to a high standard. In their earlier work, Lave and Wenger (1991), and later Wenger (1999), suggested that the individual's performance is based on the communities they have engaged with rather than resting on the individual. Wenger later explained that he viewed the theory as occupying a middle ground between individual experience and broader social practices (Farnsworth et al., 2016). Clinics are a primarily individual activity, with the trainees mostly managing patients independently, often being responsible for seeking advice when needed. Therefore, I propose the trainee must be considered as an individual acting inside a CoP with influence from their social surrounding.

2.4.2 Outside the surgical CoP: The individual nature of learning in outpatient clinics

To further consider the degree to which learning in surgical outpatients is more individual than other aspects of surgical practice, I reflected on my experience of clinics at the beginning of this thesis. Even in the first full clinic I attended as a CT2, I was expected to review patients, dictate clinical letters, and make clinical decisions. I only had consultant support (i.e. discussing a patient after review) when I thought I needed and sought it. The lack of observed practice during training resulted in a vast increase in responsibility from

observing a clinic as a medical student to completing a clinic as a trainee. A trainee in the outpatient clinic needs to be aware of when to seek advice from their senior, as the cost of not doing so is high, even if not immediately apparent. For example, a patient presenting with a new malignancy would not usually accept their missed diagnosis was acceptable as the trainee and not the consultant saw them. Therefore, while elements of CoPs are highly relevant to outpatient clinics, such as the various staff members within the clinic, and a consultant available to guide and support trainees when approached, the individual learning of the surgical trainee is critical. When Wenger described plug-and-play, he proposed this to allow diversity in social theories (Farnsworth and Solomon, 2013). However, I plug-and-play CoPs with Billet's work to enable focus on the individual to support the existing CoP theory rather than refute it.

Billett (1999) places a greater emphasis on the individual in his theories of workplace learning. He highlighted the interaction between the individual's engagement, through their knowledge and values, and the workplace affordances such as tools, goals, and activities with various levels of relatedness leading to co-participation. He later (2004) explored the link between the workplace and its staff: the learners. The workplace imposes expectations on the staff based on its needs, meaning that learning opportunities are not always offered nor signalled; this means that staff will act according to their own needs and goals, which may be harmful to both parties. Billett's work did not state that learning will not occur in these instances and may occur despite limited dedicated training. There is a possibility that learning will occur despite a restrictive environment if individuals are motivated to develop themselves.

Relating Billett's theories to the surgical clinic, optimising both the individual and, by extension, the environment is likely to provide optimum learning and the best care to the patients. Unlike the apprenticeship model, using Billett's work would suggest that the role of the clinic and the seniors within that clinic should be more explicitly educational to allow this full participation through additional learning opportunities. Additionally, it recognises the emphasis on the individual aspects of learning beyond that provided by social learning theories such as CoPs, which I suspect may be of great importance within the clinic. Furthermore, Billett further considered how individuals actively construct knowledge through their own learning and through culturally derived practices within their workplace (Billett, 2008). He explained that these individual and workplace practices are interdependent but have different roles in developing the learner. This interdependence

may occur in clinical settings. For example, GPs can develop their learning through individual endeavours such as leadership roles and facilitating lectures alongside workplace affordances to their learning, such as the flexible provision of mandatory training at various times and learning resources alongside local support (Stabel et al., 2022). Billett explains that when this interdependence occurs, the resulting experience and construction of knowledge for the individual, and the resulting transformation and trajectory, are inevitable outcomes (Billett, 2008). This interdependence is an interesting perspective which I consider in this thesis.

2.5 How does learning occur in outpatient clinics?

Each of the theories reviewed: the apprenticeship model, CoPs, and Billett's theories on workplace learning, have elements relevant to learning in surgical outpatient clinics. While each does not entirely cover how learning occurs in outpatient clinics, they each have vital elements for consideration. The resulting conceptual framework used to frame this study is provided in **Figure 2-2**. It demonstrates the main bodies of literature that initially informed my research on learning in the surgical outpatient clinic in the smaller circles, contributing to learning in the clinic. The rectangular boxes, shown peripherally, demonstrate the anticipated influences on learning, or influences that result from the theories and how I suspected these might be demonstrated. The external influences based on the literature are listed in white, with additional factors based on my experiences and observations while in surgical training in blue.

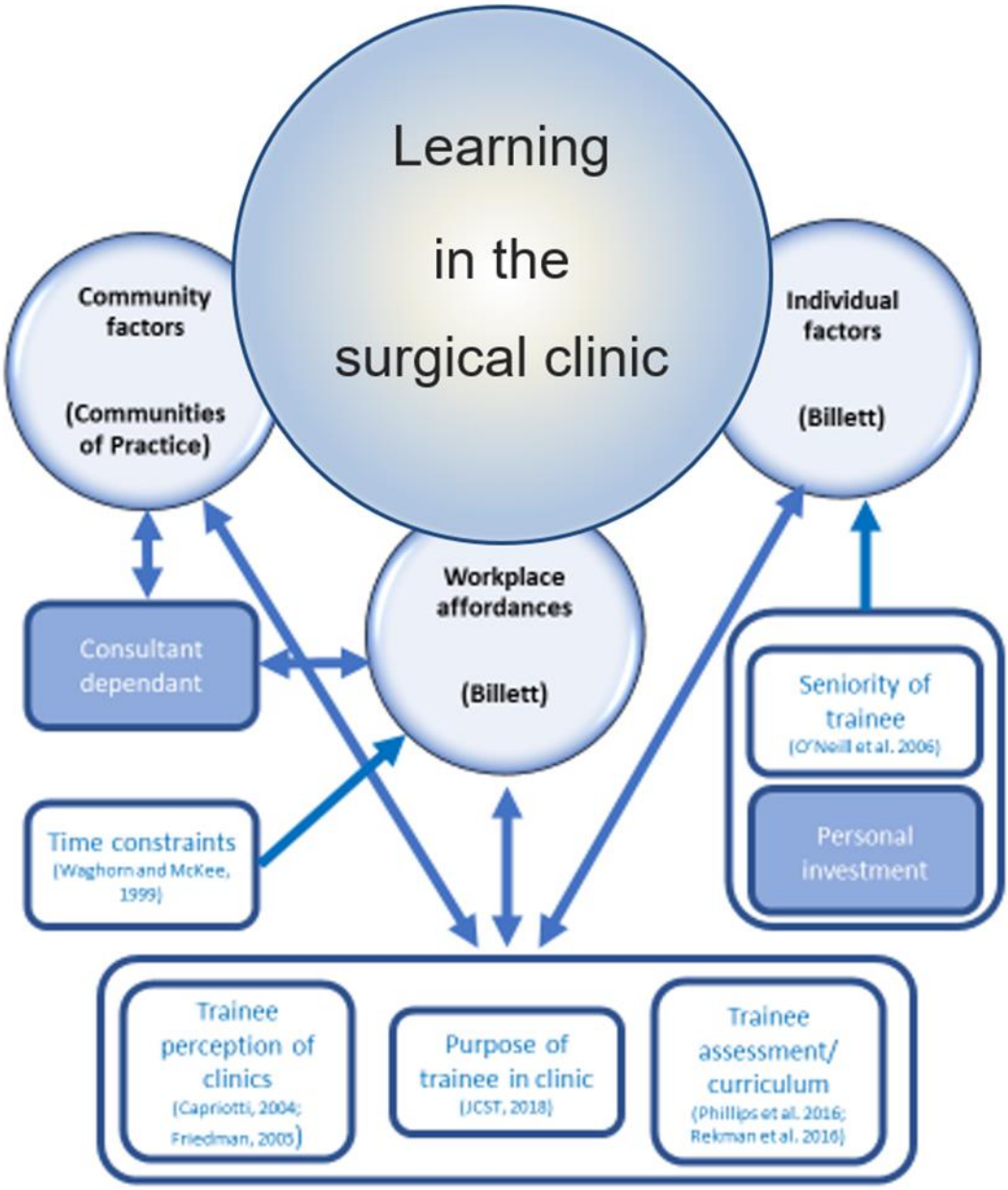

Figure 2-2: Conceptual framework used within this study

Education in the outpatient clinic likely comprises a combination of some learning from the outpatient surgical consultant, some aspects of support from the outpatient surgical team combined with knowledge gained from the wider community, and some elements of the prior and ongoing ability and understanding of the trainee. The overall culture and climate of the outpatient clinic may further support each of these. Therefore, the theoretical framework within this study is not guided by one theory or philosophy but is instead made up of multiple perspectives and considerations.

The two main theories underpinning this thesis are communities of practice and workplace learning. Billett's work encouraged me to consider the role of the trainee and the factors impacting their ability to conduct clinics. Considering the CoP theory encouraged thinking about the social aspects of learning within clinics. These theories guided my research questions used within the study. They ensured I chose an appropriate methodology and methods to answer these research questions, being mindful of where these theories supported my research and led to further questions.

2.6 What methods have previous researchers used to study learning in outpatient clinics?

There have been studies that explore surgical clinics, and the learning that occurs within them. Various methods (surveys, interventions, focus groups, interviews, and observations) have been used to explore learning in surgical outpatient clinics. Much general research into clinics stopped during the pandemic, focusing instead on the changes that occurred and how the pandemic impacted training. I considered these changes previously, as many studies were completed quickly and reflected a change in practice rather than typical training. Here, I will discuss the papers in this section that provide interesting insight when considering my own methods. Although some research has been completed on learning and training in outpatient clinics, no studies have taken a holistic view, observing the everyday learning in outpatient clinic work, which my study proposes. Additionally, my study combines the trainee and consultant perspectives plus those of the wider surgical team.

2.6.1 Consideration of the clinic as a workplace

Waghorn and McKee (1999) used observation of surgical clinics to determine the time spent with patients in outpatient clinics. They observed that the duration of each patient's appointment might not necessarily depend on whether the patient is new to the clinic or a follow-up (both for consultants and trainees). However, in follow-up patients, timing was variable amongst trainees but almost bimodal in consultants; consultants often spent either a couple of minutes or more than 10 minutes with patients. This simple study, using small numbers (nine clinics completed by four consultants), demonstrated the variance in time spent with patients in clinics in each category. Interestingly, in addition to their quantitative data, they explored other factors affecting clinic learning. These reasons included juniors appearing to discuss concerns about ward patients (which may be with either the registrar or consultant) and registrars being on call and therefore needing to have conversations with GPs and medical colleagues about new referrals or provision of surgical advice. These

distractions from the outpatient clinic and its patients may easily divert the trainees from reflecting on each case and their own development.

2.6.2 Perceptions of learning in clinics

The perception of learning has been considered in two ways: the trainees' perception of clinics and the patient's evaluation of the trainee, which trainees then use as a learning tool.

2.6.2.1 Trainee perceptions

Barker et al. (1994) and Dafydd et al. (2016) used interviews to consider post-graduate training in hospitals. Both interviewed a wide range of trainees and activities, of which surgical training in clinics was a small part. Barker et al. (1994) found that outpatient clinic experience varied greatly between hospitals, and trainees criticised their ability to manage complex cases. Interestingly, Dafydd et al. (2016) found that surgical trainees had more direct supervision than their medical counterparts within training, although less time in clinics, with the article suggesting this supervision is more for the technical aspects of surgical training. Barker et al. (1994) used semi-structured interviews with trainees selected by consultants to participate in the study, which raised concerns about its methods. Dafydd et al. (2016) are less clear in their approach, stating they used questionnaires, which were completed face-to-face or via telephone interviews. Both studies' lack of clarity concerning their methods, making consideration of their findings complex, although their results made clear the comparisons of the time spent in clinics by medical and surgical trainees, as discussed previously.

Similarly, Baldwin et al. (1999) explained they used pilot interviews and questionnaires to explore opinions of surgical training in a 2-staged data collection process. In their paper, they did not describe their pilot interviews, only explaining the purpose of these being to determine the qualities sought in basic surgical trainees. After a list was created, a survey was used that asked similar questions but grouped under the domains identified in the interview. A second questionnaire was then used to determine the consultants' perceived importance of these skills. These methods resulted in several listed attributes, many of these non-technical and applicable to training in outpatient clinics. This study was interesting when considering the skills needed for outpatient clinics, but their results referred to general learning in surgery. In each of the three studies presented using interviews/questionnaires, they seem useful to perhaps gain an understanding of

perceptions of training, but their wider focus and methods provide limited insight into surgical training within outpatient clinics.

2.6.2.2 Evaluation of trainees in clinics

Interestingly, Stausmire et al. (2015) and McKee and Waghorn (2000) used surveys to consider patients' perceptions of the trainees they had seen in surgical clinics. Bonanno et al. (2019) also used surveys to explore surgical trainees' comfort when breaking bad news in clinics. They asked closed and open-ended questions when considering the need for further support for trainees. Surveys have a clear purpose when considering a particular topic, and the question is clear. Each of these studies had something specific that they wanted to ask of participants. My research questions are more exploratory and concerned with the phenomenon of learning in outpatient clinics, which requires a more subtle method of data gathering than a survey.

2.6.3 Observing learning in the clinic

Both Reid et al. (2000) and O'Neill et al. (2006) considered *how*, rather than *what*, trainees learn in the surgical clinic. The first, by Reid et al. (2000), identified the need for a qualitative approach to explore the attributes required for surgical trainers, although their focus on surgical training only marginally explored surgical clinics. To explore training, they used a combination of 'observation' and interviews; observation was in the form of analysis of trainee logs after identification of the need for an exploratory study. The authors support their observations with semi-structured formal interviews with registrars and informal patient interviews. This approach recognised that trainees did not always feel help was given by consultants, explaining that consultants sometimes refused to see the trainee's patients or chided the trainees for seeking help. They suggested that regular supervised clinics would benefit learning. It was interesting to see how they studied trainees prospectively in their natural setting, inspiring my own research methods.

O'Neill et al. (2006) are the only authors discussed here who have used an *in situ*, observational approach. However, they deemed this an observation rather than ethnography, perhaps due to their strict selection of research sites, only exploring areas of excellence. They seemed to follow a genuine qualitative methodology to address questions relating to learning in outpatient clinics. They did this using focus groups, observations, and questionnaires. Focusing on their observations, clinics were selected and reviewed to

identify areas of good educational practice. O'Neill et al. (2006) did not pre-define their definition of a learning event, although they discussed what constituted learning in surgical clinics by referring to work by Biddle et al. (1998), who explored clinic learning in medical students. Biddle et al. (1998) suggested that clinic learning may occur through modelling, supervision, validation, consultation, and general teaching. This approach allowed them to conclude that learning through consultant interaction was much less predominant than reported by the consultants.

Interestingly, the physical position of the researchers in the consultant's consultation room suggested that learning events for the trainee only occurred when trainee-led consultant-trainee discussions occurred. The only exception to this would have been those trainees completing consultations under direct supervision. However, in their study, this tended only to happen with the most junior clinical staff (usually medical students) (O'Neill et al., 2006). The authors were selective in their clinic choices, using only clinics deemed a good teaching environment (although they do not discuss how they decided this). It is clear why these methods were used so that they could consider the learning occurring from multiple trainees/students at once; however, it would be interesting to consider other influences that may impact trainees' learning. For example, did the trainee use guidelines in the clinic to gain answers or contact other clinical teams? This consideration of influences could only be studied by observing the trainee *in situ* within the outpatient clinic. One might also observe various teaching qualities to determine the contrast of educational experiences, which may provide additional insight into the factors affecting learning. O'Neill et al.'s (2006) study provided a strong basis for employing qualitative methods to explore the learning that occurs in clinics, as they could analyse the trainees' comments and compare these to their observational findings. As a British study focusing on surgical clinics, it is easy to understand how others may extrapolate the methods provided by O'Neill et al. for further studies exploring surgical trainees in UK-based outpatient clinics.

2.6.4 How do these methods relate to my research?

When considering the learning within outpatient clinics, much of the previous work focuses on one element of the clinic rather than concentrating entirely on surgical trainees within outpatient clinics. In general practice, where much of the focus considers the trainees' development, videos are often used in training. For my study, filming the trainees in the surgical clinic made it possible to discern the individual elements of learning more clearly while also considering the wider surgical team. This thesis' observational and participatory

methodology allowed me to explore the individual and team aspects of learning in surgical outpatient clinics.

2.7 Evidence of originality within my study

Having explained why I chose my research topic and methodology, it is important to consider how this methodology can be used to provide a unique perspective on trainees' learning within the outpatient clinic. Although some work has been undertaken surrounding surgical outpatient clinics, they are often a forgotten aspect of surgery. In a nine-month ethnographic study of surgical practice, in the book *The Social Meaning of Surgery* (Fox, 1992), surgery, ward work, and multiple other aspects of surgery were explored. However, clinics seemed to be overlooked and mentioned only in passing three times within 135 pages, merely addressing their path as a stepping stone to surgery, further stating that consultants are often tied-up in outpatient clinics. When learning in surgical outpatient clinics has been studied, the studies usually focus on a particular element of the clinic rather than providing an overview of training. To my knowledge, no studies have taken a holistic view of learning in clinics to date, which I did with the additional insight of the trainee and the consultant, and then the larger surgical team using a combination of methods, including observation. Furthermore, due to the unique timing of this thesis, this project has utilised the variable nature of my methodology to include interviews during the clip selection phase and varied the methods to reflect the times by completing interviews and reflexive sessions online.

2.8 The research question

I explained in my first chapter that my research had undergone a vast journey before reaching its final destination. Agee (2009) explained that defining research questions should be a reflective and interrogative process to give shape and direction to the study. I defined my aim early on, but this reflective (and reflexive) process has encouraged me to revisit my research objectives many times while keeping the overarching aim to consider how surgical trainees learn in outpatient clinics.

This research initially aimed to ask the question, which remained constant throughout the research process:

- What elements influence surgical trainees' learning in the surgical outpatient clinic?

Although the overall objectives remained constant throughout the research, the pandemic posed changes to my study regarding the practicalities of conducting research and how surgeons conducted outpatient clinics. Incorporating these changes within my PhD research resulted in the following objectives:

1. Explore the culture of the surgical outpatient clinic using ethnographic methods.
2. Understand the trainees' roles within the outpatient clinic and how this has been impacted by COVID.
3. Explore the extent to which trainees and consultants share an understanding of learning in the surgical outpatient clinic.
4. Consider learning events and the factors affecting learning at video-reflexive multi-disciplinary meetings.
5. Devise suggestions of how learning in general surgical outpatient clinics may be improved and how the current general surgical curriculum may be enhanced.

Having now considered the literature that allowed me to develop my research question and objectives, the next chapter will explore the methodology employed to consider these.

Chapter 3. Methodology

In the previous chapter, I explained how the literature led me to my research questions. Here, I will explain my thoughts as I began my journey as a qualitative researcher, having previously completed research mostly from an objectivist epistemology and a positivist paradigm.

3.1 Research philosophy and methodology

As I learnt about different ontologies underpinning medical education research, I understood quickly that my research question should be considered using qualitative research. As my research sought to gain an understanding of training using a range of perceptions, I initially thought that this work would adopt a constructivist paradigm using qualitative methods (Denzin and Lincoln, 2011). From this stance, it would be expected that different individuals would hold different understandings and views on surgical training based on their specific backgrounds and work roles. The constructivist epistemological worldview recognises that the investigator and investigation are linked, allowing the co-creation of findings throughout the study (Denzin and Lincoln, 1994).

However, reading more about possible methodologies, I was struck by the ontological position that human nature is based on the struggle between power dynamics, as in critical theory (Denzin and Lincoln, 1994, pp.106). There was the possibility for many power differentials within this study, such as the researcher and clinician, trainee and consultant or patient, and the surgical team with the establishment (NHS hospital) and the surgical training pathway. This critical theory lens initially struck me as I had originally planned to attend to these power dynamics in the study and analysis of findings. However, although I aimed to challenge the current understanding of learning within the surgical outpatient clinic, I was keen to regard my clinical participants as co-researchers. Therefore, my research focused on understanding their practice and the shared ideas between participants at all stages.

More reading led me to the fairly new research approach, video-reflexive ethnography (VRE) (Iedema et al., 2019). I chose this methodology as it provided a unique perspective on learning in surgical outpatient clinics while covering all objectives set for the study. It also allowed me to use methods that aligned theories underpinning this research. More

importantly, VRE allowed the participants to reflect on practice within their surgical outpatient department by viewing filmed trainee consultations, using these as a basis for discussions about support. My chosen methodology of VRE led me back to realising the importance of holding a constructivist view.

The frame of constructivism acknowledged the potential for the co-construction of knowledge on clinic learning between the trainee and consultant. The constructivist paradigm also encouraged me to consider my role in constructing knowledge with research participants. It was vital that I continuously reflected on my position within the study and the team and continually adapted myself and the research accordingly. I did this with ongoing support from my supervisors, clinical participants, and the ethics committee when I understood that my research should change given the pandemic.

3.2 Video-Reflexive Ethnography

It was essential for me to consider VRE's history and philosophical underpinnings when adopting this methodology. VRE was first described in 2008 as a new methodology enhancing clinicians and researchers' understanding of the increasing complexity of hospital practices (Carroll et al., 2008). VRE is a post-qualitative methodology (Wyer et al., 2017), allowing the move from linear programmes and methodologies towards more flexible and creative approaches that enable more possibilities to understand and reshape practice (St. Pierre, 2014). Based on this, not all users of VRE approach their studies from a particular paradigm. However, they might utilise appropriate paradigms, such as constructivism or grounded theory, to guide their analysis (Hor et al., 2017). Although alignment with a paradigm is not essential within VRE, I started my PhD journey from a constructivist position.

Coming from a constructivist paradigm, I was keen to allow my participants to develop their understanding of learning and develop my own learning. I initially explored ethnography and video ethnography as methodologies to understand learning in clinics but felt they missed the opportunity to support my research participants fully. I wanted to do research *with*, rather than *on,* my participants. I discovered VRE when exploring how ethnography has been used in other aspects of surgery. VRE is a methodology encompassing ethnographic methods to support the clinical team by providing further data and practical recommendations for development (Carroll and Mesman, 2018).

Further on in this chapter, I compare VRE with similar methodologies and explain that VRE allows multiple units of analysis by considering (various groups of) individuals and collectives. Within this study, using VRE allowed me to truly consider the individual trainee and their learning within surgical outpatient clinics, while also considering the broader implications and factors influencing their learning within their surgical department. Even with one surgical team as research participants, I was able to explore the team-based, institutional, and surgical college guideline influences on training. The research supported learning and improvements at an individual and team-based level, while providing data that may be presented to a wider audience, giving me confidence that shared outcomes with the research participants were fulfilled.

3.3 The principles and practice of VRE

The VRE methodology involves producing video footage followed by reflexive conversations about actions that are 'taken as given' in everyday clinical practice (Iedema et al., 2019). After recording clinical activities during the video-ethnography phase, relevant parts are selected to show to participants in filmed reflexive sessions, who then interpret and discuss these, providing further data and practical recommendations for development (Carroll and Mesman, 2018).

VRE was developed from Professor Rick Iedema's work on complexity theory after his recognition that complexity theory often considers situations that are impossible to anticipate and control (Iedema, 2019). He posited that videoing in-situ clinical environments allows individual reflective deliberation of actions or, in collaboration, allows a reflexive process where individuals can learn collectively. Uncertain and unstable situations may be moulded into a mutual agreement of processes. This process is often utilised in post-qualitative research, where the unpredictable nature of healthcare practice means it is not possible to dictate the research journey in advance. However, being placed in the middle of clinical activity means it is possible to produce thought through the research process (Carlson et al., 2021). Within VRE, this process may be utilised by a clinical team to develop their future practice, often through the collaboration of researchers and participants (Iedema, 2019).

One example of this uncertain process is from Dadich et al. (2018), who observed palliative care practitioners in a combination of routine and atypical practices. The researchers hoped to capture episodes of brilliance for their clips, requiring collecting large amounts of data across multiple sites. The data collection was compounded by the complexities of gaining trust from clinical participants who often work with patients alone and by the researchers not being aware of when brilliance might occur. The researchers worked with participants to recognise clips portraying 'brilliant' palliative care, although practitioners did not always agree on what brilliance entails, making clip selection difficult. Once clips were identified, they allowed reflexive discussions of care provided by the team, which held additional complexities as participants worried about disciplinary action for deviating from standard care. However, the safe space offered by this process allowed clinicians to feel better positioned to recognise and provide the best care with increased confidence.

As a *"methodology-to-come"*, it is complicated to neatly describe VRE, as the process evolves from the research questions and the research environment allowing the researcher to apply these to each research project (Iedema et al., 2019, p.12). VRE relies on the user shaping the methods based on four principles: exnovation, collaboration, reflexivity, and care (Iedema et al., 2019). *Exnovation* involves every day (perhaps even mundane) but complex processes within healthcare being made visible. The research permits both the researcher and the clinicians to collect and analyse data through *collaboration*. Both the researcher and the participants must be reflexive to recognise the clinical processes the team is doing well and which may be improved in clinical practice. Finally, as the participants will discuss their individual and team's practice in depth, ongoing care for the research participants should be considered. The researcher must be *reflexive* throughout the research process, maintaining a careful balance between participant care and their role in exnovation. By embracing these four principles, VRE researchers endeavour to go beyond understanding complexity and empower clinical practitioners to consider and modify their practice (Ajjawi et al., 2020).

3.4 Previous examples of the VRE methodology

Early clinical use of VRE by Carroll et al. (2008) looked at communication within the ICU setting. They explored communications between medical practitioners to determine how these conversations occurred and selected good and bad examples of communication to give feedback to the team, encouraging consultants to discuss their own practice. In other areas, VRE has been used to explore physician and nurse communication by Manojlovic et

al. (2019), leadership in healthcare by Gordon et al. (2017), end-of-life communication by Collier et al. (2015), perceptions of simulation training by Gough (2016), and infection on the ICU by Iedema et al. (2015). In each of these studies, the researchers extrapolated findings from individual (or a small group of) practitioners for discussion within the larger team setting. The purpose of these video-reflexive sessions was never to criticise individual practitioners. The sessions allowed the group to relate these findings to their own and the group's clinical practice. This consideration permitted the group to ponder their collective areas of good practice and areas that may be improved and develop ways of enhancing practice moving forward.

Within surgery, the use of VRE had only led to one publication before I commenced my research: an account of improving infection control in various hospital wards, including surgical wards. This study by Hor et al. (2017) observed the use of personal protective equipment on the wards. They studied ICUs and surgical wards separately. Clips were later selected to draw attention to particular behaviours or when participants were keen for the video to be shown. Video-reflexive sessions were then conducted with members of the appropriate teams, followed by the analysis of both the initial observations and the video-reflexive sessions, allowing contribution to the literature on infection control practices. This process allowed clinicians to recognise that various parts of their body (other than hands) could contribute to contamination and that cross-contamination could occur when patients had multiple sites of infection (e.g., a urinary catheter and a wound) if not managed separately.

3.5 The unit of analysis in VRE

Within VRE studies, exnovation, making the mundane visible, requires the methods and data collection to be variable to highlight clinical practice (especially practices not always immediately apparent) and address the projects' research questions. Therefore, VRE studies to date have not made a defined stance on their unit of analysis (whether the individual or the collective).

I propose that in VRE, both the individual impact and social construct are recognised and considered to highlight practice. VRE allows an account to be filmed, which may involve the individual or collective, but then allows a two-fold analysis. Firstly, when individuals

from the clinical team or patients review the clips, the researcher can delve into their thoughts behind the filmed events:

- Why did they make the decisions they did?
- What was happening in their day that led to these actions (including things at home)?
- Have they had the correct training and support to manage the clinical situation?

When discussed in the reflexive sessions, the clips will give a different perspective; they will allow a team to consider their actions as a collective and determine what they are doing well and not so well.

Although the findings from the reflexive session consider the collective viewpoint, a well-run session will also allow the individual to ponder their own practice and the factors affecting it. In addition to VRE considering both the individual and group aspects of learning, it also combines research and practice optimisation (Carroll and Mesman, 2018). Analysing the findings may lead to considerations that may support the team but may also consider individual factors. For example, only specific individuals might have difficulty wearing particular gloves, which may affect the team's ability to provide safe practice. Similarly, no matter the level of team support, a clinician might react to a situation in a way that reflects individual difficulties such as illness, mental health, and out-of-work commitments, even with the most supportive clinical team. In this way, the unit of analysis in VRE is normally both the individual actions and beliefs and the collective's.

3.6 How does VRE relate to similar methodologies?

As an evolving methodology, many questions arise about the role of VRE and how it compares to other similar methodologies. Having explained VRE's methodology and unit of analysis, next I provide an overview of institutional ethnography, activity theory, and simulation teaching plus their similarities and differences to VRE.

3.6.1 Institutional ethnography

Institutional ethnography arose from Dorothy Smith's lifelong work in the sociological field, considering how an individual's everyday worlds may be explored to uncover invisible determinations and generalisations within the institution (Smith, 1987). Like VRE, institutional ethnography is an evolving methodology which explores everyday activities that

clinicians perform: VRE explores work undertaken in clinical areas, and institutional ethnography explores the processes by individuals leading up to work (before working) in clinical areas (Kearney et al., 2019). It uses methods such as ethnography and interviews to determine how an individual's actualities are connected with others' doings. Smith explains, *"learning from actualities means treating them beyond what the researcher already knows what to think and utter",* meaning that within institutional ethnography, the researcher takes the individual's lived experience and uses this to consider how this impacts the work conducted within an institution (Smith, 2005, p.57).

The title 'institutional' gives the impression that the unit of analysis is the collective; however, quite conversely, institutional ethnography eloquently considers the details relating to the individual and instead considers how these may impact their work-based activities. Comparing institutional ethnography with VRE, both consider the individual and the collective; however, they approach this from contrasting perspectives. VRE works with both the individual and collective to determine practice and how individuals may be supported, whereas institutional ethnography works with individuals to determine how to support the collective. Kearney et al. (2019, p.23) suggested that institutional ethnography comes easily to clinicians as it is intuitive to those who have found their *"philosophical home in a less traditionally positivist paradigm"*.

3.6.2 Activity theory

Arising from Vygotsky's work on sociocultural theories, activity theory allows the exploration of activities, allowing an understanding of learning and development (Engeström et al., 1999). Although there are many camps within activity theory, Engeström is well recognised within the medical education community due to his (and his colleagues') tradition of applying activity theory within organisational settings within their research group (CRADLE, 2022). It was developed to consider actions within education through Change Laboratories. Within clinical practice it may be used to consider how clinicians' actions are driven; patients are often the centre, and therefore object, of a clinician's work. To manage the patient, several factors, plus a collective of people, are required (Engeström, 2000). Activity theory can utilise a range of methods, and ethnography may be one of these. When considering how activities may be supported, those using activity theory often utilise change laboratories, which support teams in redesigning and organising their work. One example of its use within clinics was by Skipper et al. (2016) who used activity theory to analyse and redesign their paediatric outpatient clinics using Change Laboratories. This resulted in the

recognition of the clinic's activity system, areas for improvement, and assigning key persons to implement these changes, mainly around structuring to allow for more clinical supervision.

There are clear links between activity theory and VRE. Both consider practice within clinical settings and use a group setting to allow reflection on this practice: VRE using reflexive sessions and activity theory using change laboratories. However, there are also some apparent differences between the two methodologies. Firstly, Engeström makes clear that he agrees with Lektorsky's theory that the collective subject is due to collective activity rather than individual consciousness, even for activities such as communication (Engeström et al., 1999).

Regarding the group sessions, Change Laboratories, as explained in their title, support teams to make changes through use of mirror data, where the data-gathering process provides information which may be used to trigger conversations about challenging problems (Engeström et al., 2014). This use of mirror data is not dissimilar to the VRE process, although VRE often (not always) includes clinical or patient participants in selecting the clips. Change Laboratories consider factors making up activities (plotted on an activity system diagram). These activity systems are the basic unit of analysis within cultural historical activity theory, a social theory that *"consists of a subject aiming to bring about a change, which is termed the object"* (Qureshi, 2021, p.927). Although VRE may be used to consider and recommend change, VRE's reflexive sessions focus more on the use of clips as a basis for discussion about areas which are often perceived as mundane within clinical practice. Overall, there are many similarities between Change Laboratories and VRE. However, VRE was more suited for this project given that participants were required to give less time and could join at various points of the research process relevant to them.

3.6.3 Simulation teaching

Cleland et al. (2016, p.1) define simulation as *"a means of allowing deliberate hands-on practice of clinical skills and behaviours prior to, and alongside, entry into clinical environments"*. The similarities between simulation and VRE are evident. In both, hands-on practice is reflected on by clinical staff, often with the support of video footage. A team does not run a simulation exercise to identify what a clinician should improve; however, it might be used to determine what a clinician is doing well and what others might gain from

viewing this, as is the case with VRE. Therefore, this method is often used to reflect on (or may be used to research) one's own practice.

There are, however, some apparent differences between simulation and VRE. Firstly, simulation is an imitation of clinical practice, although often completed in high-fidelity ways, such as using high-quality equipment or in high-pressure, in-situ environments. Conversely, the purpose of VRE is to consider natural activities within clinical practice. Secondly, the purpose of a simulation is to allow joint reflection (and perhaps critique) on clinical management; this process is often performed in conjunction with the person completing the simulation and those viewing from the sidelines. With VRE, attendance of the person filmed during the video ethnography stage is possible during reflexive sessions but not essential (although the clip may be discussed with the individual separately). The purpose of the reflexive sessions is not to critique an individual's practice but instead to consider enablers and barriers to performing well within their clinical environment. They support individuals to reflect on and perhaps develop reflexivity as a result within their own clinical practice.

3.7 The next chapter

Having considered how my research paradigm and research questions have led me to use the VRE methodology, my next chapter will explore how the pandemic impacted my project and how I have used VRE in my research setting.

Chapter 4. Negotiating access during a pandemic

In the first chapters, I considered how learning occurs in surgical outpatient clinics, both face-to-face and remotely. In Chapter 3, I considered how my research paradigm led me to VRE and how it can be used in clinical settings. My PhD was undertaken amidst the global COVID-19 pandemic. Given the risks and restrictions placed, my PhD project changed to fit with national and local guidance and to ensure my participants were not at increased risk due to my research. In this chapter, I introduce my fieldwork site and the value of undertaking a Quality Improvement Project (QIP) to guide my research.

4.1 Research setting

The study occurred in a single setting: the paediatric surgical outpatients' department at Leeds Teaching Hospitals. Leeds Teaching Hospitals is one of the largest trusts in the UK, having managed 1,180,687 patients in outpatients of all specialities in 2017/18 (Leeds Teaching Hospitals Trust, 2018).

I have explained surgical training in Chapter 1 and my role as an adult general surgical trainee. Despite the research setting being a different speciality to my own, I chose to undertake my fieldwork with the paediatric surgery department for multiple reasons. A paediatric surgery setting allowed me to study surgical trainees in an environment set apart from my usual working environment, which I perceived to enable trainees to feel more at ease and discussions to occur more freely. I chose to work with paediatric general surgeons as there was some overlap in the training pathways and clinical presentations I had experienced, meaning that the assessment structures, overall clinical competencies and conditions were ones with which I was somewhat familiar. Also, in a tertiary centre for paediatric surgery, presenting pathologies and communication needs (with the parent and child) were likely to be very complex, exaggerating certain skill sets such as communication, knowledge use, and acquisition.

I had a good working relationship with the department, which allowed support in participant recruitment, interviewing trainees and consultants during working hours, and my undertaking video-reflexive sessions during surgical meetings. At a medical education conference at the beginning of my PhD, one ethnographer gave a talk and explained that

in her experience, no one asks a researcher to come and do an ethnography. I understood that I was in a very privileged position when conducting my data collection by being invited to do my research. I will discuss how having supportive research participants helped me gain valuable data throughout my thesis moving forward.

4.2 My initial research

To study how trainees learn in the clinic, I originally planned to observe surgical trainees in outpatient clinics, utilising the VRE methodology. I expected to observe face-to-face clinics. These clinics typically have the parents and children in attendance in addition to the surgical team. I also planned to hold clip-selection discussions and the video-reflexive sessions face-to-face.

Observing trainees completing face-to-face clinic consultations would have meant filming children. The process of gaining ethics for a project using both a novel methodology and involving children was challenging. In the early research design phase, I afforded the children great consideration.

Although the patients were not the focus of my study, I originally planned to film the families as part of the ethnographic observations and thus prepared information to give to families and children, allowing them to consent to their participation. I considered that being filmed and my presence may have some influence on the consultation. I had planned to give each family a red card, as described by Nightingale et al. (2014), which could be shown/used at any time during the consultation to instigate the video being turned off and my leaving the room without question.

Due to the involvement of children, I had originally thought an NHS Research Ethics Committee (REC) would be preferable for my study. However, after receiving advice from those within the University ethics boards and the research manager from the hospital, it was decided that University ethics would be suitable since my focus was the surgical trainees and not the children. I received the University of Leeds' ethical approval fairly quickly (MREC 18-104) and submitted the approval forms to the hospital to begin my research.

The head of paediatrics then decided that my project should go through an NHS REC before I was allowed to start my research. When I submitted it to the REC, they decided that my research should go through a proportionate review despite my request for a full review. Later, I was asked to change to a full review and was awarded REC approval (254224): one year after the process began. This approval is provided in Appendix 2. Just as I received my ethical approval in February 2020, COVID-19 arrived in the UK. I met with my key contact, who approved the start of my research. However, two days later, after emergency national guidance, elective face-to-face clinical consultations were stopped within the Trust (House of Commons, 2020).

4.3 Reviewing my project in light of the COVID-19 pandemic

When the pandemic began, I was torn. I knew that I needed to return to clinical practice but did not want to leave my research behind, especially given the work I had done to achieve ethical approval. I was happy with my methodology and methods, so I wanted to continue this project, although I knew this would mean putting my PhD on hold as face-to-face clinics had stopped. The Trust halted most research projects, although they did allow emergency COVID-based research projects and QIPs.

I worked in the emergency department early in the pandemic, often as the COVID doctor, reviewing patients who potentially had COVID. I became used to wearing personal and protective equipment (PPE) to keep my colleagues, patients, and myself as safe as possible. Focusing on this allowed me to consider things I had not considered previously, such as the need to sanitise my cameras and the feasibility of social distancing in a small clinic room containing the patient, their carer(s), the clinician, and myself.

Although my PhD halted and I spent a lot of time clinically, I did not want to lose the relationship I had developed with the paediatric surgery department. In the first few weeks of the pandemic, my departmental key contact asked me to help the department transition to remote clinics. As the Trust allowed COVID-specific work, I was able to help the department by completing a QIP, optimising support for the department when conducting remote clinics in the first stages of the pandemic.

4.3.1 Changes to clinical practice during the pandemic

During the pandemic, clinical teams tried to limit face-to-face contact as much as possible. In a time of already clinically complex conversations, remote clinics led to immense communicative complexities for staff in various specialities who were often asked to work in new clinical areas and complete unfamiliar tasks with minimal support. I experienced this myself when reviewing an adult patient with COVID early during the pandemic. He was deaf but could lip-read, although not through my mask. I was asked to explain his diagnosis by his initial treating doctor, who was going home and did not want to rush this conversation. I knew how difficult the conversation would be, so I offered to have this conversation to dedicate the appropriate time. In similar situations in the past, we would communicate through a face-to-face interpreter or a family member if desperate. I had neither option. I needed to write down a whole conversation for the patient, discussing his end-of-life decisions if needed. My ability to sign the odd phrase was the only way I could communicate without spending a minute or two writing a response. It felt cruel, as it did to relay the whole conversation to his wife by phone shortly after. Telephone conversations seemed impersonal and went against much of our training relating to difficult conversations and breaking bad news; however, telephone and video conversations quickly became the norm through necessity. I was beginning to come to terms with the possibility that my study may shift to a remote clinic-based study.

We quickly became accustomed to a new way of working in many areas: remote sessions, PPE use, and more camaraderie than typically seen within medicine. Supportive guidance quickly emerged from other clinicians fighting the same battles as us, supporting those working with new challenges. During the pandemic, remote surgical clinic descriptions quickly appeared with guidance on how to complete remote clinics. I attended many early remote lectures by organisations (mostly indemnity groups) on the complexities of conducting remote clinics. Completing the QIP gave me an understanding of the organisational, team, and individual challenges of completing remote clinics. It was fascinating to see first-hand how remote consultations resulted in a massive transition for many surgeons: from expert to learner. It was interesting to experience the vulnerability of senior surgeons when they needed to quickly change a practice that they had developed and perfected over many years, using some skills that were comfortable to them in a way that was very new for many.

Although many teams discussed their transitions to remote clinics early on, reflections focused on the clinician completing the clinics without considering other key players (Rimmer, 2020). Grenda et al. (2020) described their transition to video remote outpatient clinics in adult thoracic surgery. This study considered the institutional and infrastructure changes when implementing remote clinics. They have moved entirely towards remote clinics for new referrals to determine management plans.

4.3.1 Completing a quality improvement project

As explained above, I did a QIP for the team. QIPs are often completed by insiders who aim to improve a specific element within their department. Thus, I considered whether supporting the team in this way would be appropriate in a researcher's role; however, as I had worked in the department many years prior as a clinician, I was a partial insider. I focused on fulfilling one of the VRE's four fundamental principles, *participant care* (Iedema et al., 2019). I was in the best position to support the department, given my understanding of learning in clinics, albeit primarily face-to-face. I sought guidance from my tutors and the International Association of Video-Reflexive Ethnographers (VREIA) research group on how best to maintain my research role and knew that reflexivity during the QIP was key.

The paediatric team and I quickly obtained local approvals as I worked clinically for the Trust. We sought REC approvals, but ethics was not required because the project was not research. I spent time with the consultants in clinics, observing and supporting them in any way that I could (such as telling them how to access alternative phone numbers and where to get lists of patients in the clinics). I phoned patients after the clinics to discuss how we could make clinics better. I found that surgeons new to remote clinics felt their consultations took longer and were reluctant to discharge patients. The calls did not always occur at the appointed time, causing some upset to parents. I called families after the clinic and found that all of the parents liked remote clinics, as they were often easier to attend remotely, but they did feel that they did not always understand the terms used by the surgeons. As a result, I produced some local guidance for the paediatric surgery team and created a record sheet which was sent out to families in advance and encouraged families to record information before the clinic and list questions to ask during the clinic consultation. We published our QIP in a paediatric surgery journal (Charnell et al., 2020).

When I presented my quality improvement findings at a paediatric meeting, a paediatric urologist, Miss Radford, also gave her findings on early remote clinics. She concluded that we (clinicians) like seeing patients face-to-face, but patients do not like visiting us. The paediatric surgery department is a tertiary centre, meaning families travel many miles to see the team. After travel, families must find parking and sit in a noisy and busy waiting room before seeing a surgeon, sometimes only for a few minutes. It is, therefore, easy to understand why parents would rather have telephone consultations if suitable, rather than face-to-face clinics even in normal circumstances, let alone during the pandemic. Still, there are times when face-to-face clinics are better suited and essential, such as for those needing a clinical examination or having scans or other investigations on the same day as their clinic appointment. Surgeons tend to show the images to the families during the consultations and might even draw a picture for the patients to take home and explain to other family members. This visual representation is nearly impossible by phone. Even at the beginning of the pandemic, there was vast information about patients sending images to clinical teams both before and during the pandemic (Corden et al., 2020), but not about clinicians sending images to patients. That said, information can be passed back to patients; GPs often send texts and emails to patients with links to websites for information and referrals.

4.3.2 Safeguarding within remote clinics

Additional safeguarding needed to be considered in particular remote clinic contexts; for example, the exchange and review of images between clinicians and patients. It is important to note that many decisions made in outpatients are typically made after seeing and examining the patient. Within paediatric surgery, The European Association of Urology guidelines panel for paediatric urology recommend that consultations should occur via video or telephone call with prioritisation by clinical need; photographic documentation may be uploaded to the child's file in advance if needed (Quaedackers et al., 2020). It is important to consider how surgeons receive images from patients and other clinical teams and the considerations of transferring images, especially of children. A significant element of any paediatric clinic is safeguarding. The clinic allows the family dynamics to be explored. The recognition of safeguarding concerns is much more difficult during remote clinics.

Paediatric surgical examinations are often intimate, especially those within paediatric urology. Although remote platforms are usually secure, there are clear concerns about asking a child to allow intimate body parts to be photographed or to show these to a clinician

during a video consultation. Both lead to fears for the child's understanding and safeguarding (Charnell et al., 2021). Careful discussion and family consent play a large consideration when transferring sensitive images and are deemed essential for clinical care (Rimmer, 2020). Clear documentation and good communication are crucial between clinical teams when considering child safety and safeguarding reviewing children remotely.

4.3.3 Remote clinics within the paediatric surgery department

Although remote clinics were new for many within paediatric surgery when the pandemic began, they were not new for all teams. Nonetheless, I was shocked that the number of remote clinics did not quickly increase significantly across the whole department as the pandemic began. However, as face-to-face clinics began to decrease, the proportion of remote clinics later increased. These figures are summarised in **Table 2**. Although most remote clinics were completed by telephone, some were video consultations. During my QIP, only senior clinicians used video consultations, as they were generally saved for the most complex consultations, such as explaining complex surgical procedures or breaking bad news during the pandemic. In addition to the needs posed by the pandemic resulting in increased remote clinics, the mean monthly number of patients requiring clinic appointments with the paediatric surgery team also increased during this time (44.6 in 2018, 42.2 in 2019, and 69.1 in 2020)[1].

Table 2: Average monthly numbers of paediatric surgery clinic appointments before and during the pandemic. Information provided by the paediatric surgery business manager.

	Pre-COVID*	Peri-COVID**
Telephone	194	253
Video	1	25
Face-to-face	440	90

* Monthly average number of clinics between April 2019-Feb 2020

** Monthly average number of clinics between March 2020-May 2020

[1] Information provided by my key departmental contact, who is also setting up yearly MOT style clinics for paediatric surgical patients with complex needs to ensure they are not missed given the increased numbers.

4.3.4 My learning from quality improvement

Completing the QIP allowed the department to view me as a researcher, despite having worked in this department previously as a clinician. They viewed me as someone who could provide support, would seek me out for guidance and share their worries and frustrations about completing remote clinics. They could see that I was keen to provide the department with ongoing support and that my presence in clinics was not to judge or interfere. I discuss my role further later in this chapter. I also met many staff members who are vital to clinics: managers, secretaries, clinic nurses, reception staff, and specialist nurses, with whom I have since developed a good rapport. Thus, although the QIP was separate from my research, some parts were invaluable to my ethnographic work: understanding the key players, the room set up and being visible without interference by recording naturally occurring events as the participants become used to my presence (O'Reilly et al., 2021).

The QIP also helped me better understand my role and position as a researcher. At one point, the clinical lead emailed me to ask if I would write some guidance on paediatric surgery conditions seen in clinics. Although I explained that I could support a trainee with this, I clarified that I would not be able to provide any clinical content in my researcher role. I used my experience to deliver a national presentation on the differences between researcher and clinician roles during quality improvement at a military QIP conference (Charnell, 2020).

4.4 Adapting my PhD project

Even as I began the QIP, I had been keen that my PhD research still focussed on face-to-face clinics, so I was planning to wait until the pandemic ended to recommence my PhD project. Some face-to-face clinics slowly recommenced, but we quickly moved into the second wave of the pandemic from September 2020 despite having expected the effects and timing of the pandemic to be much less prolonged. The QIP also made me realise that the team quickly embraced remote clinics.

Considering the paediatric surgery department, and other hospital-based clinical teams, I suspected that remote clinics would continue beyond the pandemic; however, I was unsure in what capacity. I felt privileged to have joined the paediatric surgery team during their transition, allowing me to make and understand that observation. Given this, I decided to adapt my project and only view trainees completing remote clinics, especially given this new

period of learning. I focused on telephone clinics, as video consultations were often used for the most complex of patients and so were often only completed by consultants, sometimes from home. This change required a substantial REC amendment which was granted in November 2020. The REC amendment approval is given in Appendix 4.

This decision to research remote clinics was bittersweet: the consent process was much easier and safer as there were fewer people in the clinic room. Conversely, I lost the overview of the consultation as the observed conversation suddenly became one-sided. In my new research project, I only heard the trainee speaking to the patients, but not the other side of the conversation. This decision related to considering the wishes of the ethics committee when I submitted my ethics revisions, alongside considering my research aim, exploring how trainees learn in clinics. This revision meant that hearing both sides of the discussion was not essential; however, I lost some understanding surrounding the interaction with the patient and their families.

Prior to the pandemic, I created separate information sheets for parents and children, containing images and age-appropriate language for various ages. When creating the patient information sheets for children, I sought advice from a paediatric research nurse. As a result, I changed the document, explaining exactly how the children's information would be used, removing terms with multiple meanings, such as 'examination', where relevant. The research nurse suggested that I should add that their details will be 'kept secret'. However, having worked closely with vulnerable children, I did not think that word would be appropriate due to similar wording sometimes being linked with sexual abuse of children, so I used alternative wording (Donalek, 2009).

Children from the hospital research group reviewed the patient information sheets. They liked that I introduced myself by name, rather than referring to myself as 'the doctor/researcher.' They felt that the 'over 16' information sheet contained too much information and should be replaced by the '12-15' information sheet, which they much preferred. One child worried I might film them in their sleep if later admitted to the hospital, so an extra sentence was added making clear that I would only film the clinic appointments. I also made some key sentences bold at their request so they could focus on the critical points of the study. I have included the initial age 12-15 consent form in Appendix 3. The project change meant that the children's information sheets, which had initially taken

significant time and consideration, were no longer needed. These were replaced by a letter sent to families before the clinic and gaining verbal consent at the start of the call.

Some face-to-face clinics had recommenced when I completed my research, but research access was still limited. For those who did attend clinics face-to-face, only one parent was allowed to attend with the child as infections continued. Therefore, this project was undertaken by observing remote (telephone) clinics and with online clip selection interviews and reflexive sessions. Although this was not the vision I had when I commenced my PhD, it is a decision I am pleased with. I was able to make the most of the challenging situation posed by the pandemic, supported by a flexible methodology to ensure that my research aim changed the same, with only minor changes to the research questions. In the next chapter, I will explain the methods utilised within this project.

Chapter 5. Methods

Within the previous chapter, I explained how the pandemic influenced my project and the changes needed to conduct the research. In Chapter 3, I explained my reasons for utilising VRE as the methodology within this thesis. This study employed three stages to complete the VRE: video ethnography, clip selection interviews, and video-reflexive sessions, which I discuss further below. Within this chapter, I explain the overall way in which each method was utilised within this project. I conducted this study using theory-informed inductive research based on the initial theoretical and conceptual frameworks (Varpio et al., 2020). However, each method was completed reflexively, considering the findings and experiences from each method when thinking about and conducting the next. Thus, while this chapter provides information about the overall methods used within VRE, I consider each in further detail in each relevant chapter.

I have summarised each of the methods making up the VRE process within my study in **Figure 5-1.** PhD data collection began in February 2021 and ended in February 2022.

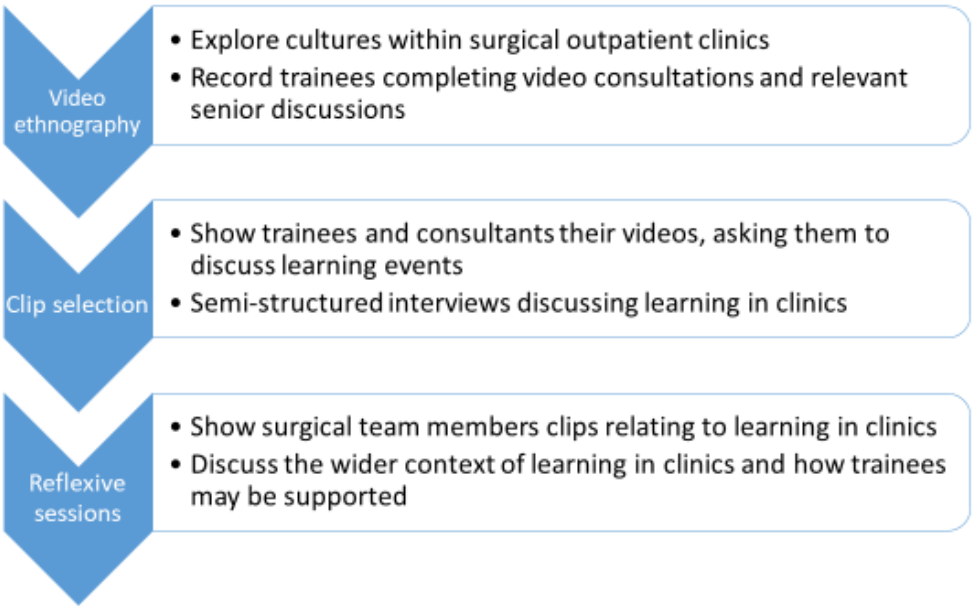

Figure 5-1: Three stages of video-reflexive ethnography in relation to this study

5.1 Methods used within VRE studies

Based on the four principles of VRE (exnovation, collaboration, reflexivity, and care), the research normally takes place using three discrete methods:

1. Video ethnography
2. Clip selection
3. Reflexive sessions

As an emerging methodology, these steps may be completed in various ways based on the researcher's questions and objectives. When conducting this research, it was vital that I used each method as an appropriate tool to collect data which was congruent with the research question and philosophical underpinnings of this research (Caelli et al., 2003). Therefore, the following sections explain how these methods are generally conducted within VRE studies, followed by how I utilised each method to answer the study's research questions.

5.1.1 Video ethnography as a method

The first phase of VRE is called 'video ethnography'. When one considers ethnography, one might think of the traditional methodology, perhaps where a Western researcher spends a prolonged, immersive period in a foreign land to understand a culture different from one's own. While ethnography now has broader uses and implications, these continue to be united by the understanding that ethnography is a 'first-hand exploration of research settings' (Atkinson et al., 2001). In the case of VRE, ethnographic methods are utilised with the addition of supportive video footage. Like traditional ethnography, the VRE researcher will spend time in the clinical setting to understand the culture; however, this is often shorter and more intensive than in traditional ethnography. Some users of VRE come from a clinical background and will explore environments similar to their own clinical practice. Researchers in VRE have used their ethnographic phases to explore various areas of clinical practice, such as communication in the ICU (Collier et al., 2015) and how children's autism assessments are conducted (Lenne, 2018).

When the researcher is integrated into the clinical setting, they begin to film parts of the clinicians' daily activities or communication elements until they gain a varied sample based on their research question. Here, considerations must be made relating to the ethical deliberations (such as whom to consent and the necessary actions if an unsafe practice is

viewed) and the practical elements of filming within a clinical area (such as film and audio quality and who might be filmed in the peripheries).

5.1.1.1 Video ethnography within this project

As explained in the previous section, VRE involves an ethnographic approach, though one somewhat different from traditional ethnography. When I considered how best to define my ethnographic approach, I initially thought that an appropriate term would be focused ethnography: short-term ethnography often supported by additional audio-visual equipment (Knoblauch, 2005). However, due to the intense nature of focused ethnography, it may be questioned whether true reflexivity and time for my own reflections would occur. I came across *step-in, step-out* ethnography while on an ethnography course, which I was drawn to as it allows the researcher to learn more about a community in a place that is only open at distinct time points. Madden (2017) posits that step-in, step-out ethnography may be used to explore a familiar field, allowing the researcher to consider the overarching questions by returning to their homes to write notes and debrief. He stated that this flow of observing conversations, interactions, and sensations, in addition to flowing between the mundane and familiar allowed him to be 'ethnographic.' Compared with a focused ethnography, time away from the clinics allowed ongoing reflections and reflexivity to optimise my understanding of the clinic through the lens of a researcher. Furthermore, the intermittent nature of step-in, step-out ethnography reflects the everyday nature of the surgical clinics. I discuss my role as a researcher when I discuss my ethnography in Chapter 6.

Before I started recording video footage, I spent time in the surgical outpatient clinics from February 2021 to develop a complete understanding of the set-up of the clinic, get to know the staff (and identify the key players within the clinic), and begin deciphering the culture of surgical training within this area. When I started collecting video data from the trainees' clinics, I captured video footage of the consenting trainee's telephone consultations and senior discussions. I spent time in various aspects of the clinic, making field notes to ensure a complete understanding of the clinic culture and any potential external influences on trainees' learning. In addition to attendance on ethnography courses, I used Emerson et al. (2011) and Madden (2017) to guide the content of my field notes. I explained the room set-up, my objective and subjective observations, and relevant quotes (about learning events), and allowed time for documented reflexivity either during gaps in the clinic or after each session.

Each filmed consultation employed two small cameras set up in clinic rooms to oversee the full consultation, along with field notes made from the corner of the room. Field notes started before the consultation to make notes on information, such as when the trainee reviewed the clinical notes or looked at resources. I chose to use GoPro 9 cameras to record the consultations and senior discussions, as I could stick one camera to the wall and control this remotely and wear the other camera on a chest strap. I only switched the cameras on during the consultation once the patient consented. I only made brief notes during the consultation (if any) but recorded more detail afterwards. When the consultation ended, I turned off the cameras. Still, I kept the camera attached to my chest strap, meaning I could easily follow the trainee with the camera when moving rooms for senior discussions (although I would always turn off the camera when moving between rooms). I made the staff in the clinic aware that I was filming and that they would not be filmed without consent. I also had posters for the clinic doors explaining the same to other patients attending face-to-face appointments in the same area.

5.1.2 Clip selection as a method

Once video footage has been collected within projects using VRE, relevant clips should be chosen to move forward. The next stage of VRE requires selecting clips for discussion at the reflexive sessions. These clips are selected from the videos recorded during the video ethnography phase. Decisions about how clips are chosen and by whom depend on the research purpose and vary significantly between projects. Still, in each, it acts as a practical step preceding the reflexive sessions, which is often the focus of data collection after the video ethnography stage. However, I explain in Chapter 7 how this clip selection is a distinct stage for data collection and analysis within my thesis. Many VRE studies select clips based on criteria derived from their objectives for the reflexive sessions, but how they do this differs. For example, Gordon et al. (2017) chose clips based on their consideration of leadership. Both Collier et al. (2015) and Wyer et al. (2017) allowed patients to select clips they wanted doctors to see and used them for the reflexive sessions. Carroll et al. (2008) selected clips based on two questions derived from a combination of initial analyses and their research question.

5.1.2.1 Clip selection within this project

The clip selection stage aims to edit footage based on its suitability for the intended focus of the reflexive sessions (Carroll and Mesman, 2018). Within VRE, the *"process of clinical reasoning gives you [the researcher] considerable freedom when choosing how to edit your footage"* (Iedema et al., 2019, p.84). Within this study's clip selection phase, I selected relevant clips relating to the learning objectives for later reflexive sessions. I held these meetings via an online platform, which allowed me to safely share the videos and minimise contact, given the ongoing pandemic. These meetings allowed review of the clinic videos and also some semi-structured interview questions about learning in the clinic. The interview questions related to the research objectives and semi-structured questions permitted exploration of the individual's perspective of learning (and teaching) within the clinic while allowing me to explore relevant digressions (DiCicco-Bloom and Crabtree, 2006).

I explained in the previous section that the clips might be selected in various ways and by various people but always relate to the research objectives. Within this study, I viewed the videos following the clinic while considering my objectives while pondering what constitutes a *learning event*? For this study, I defined a *learning event* as a discrete event involving a learner, which is facilitated by people or materials, and in a learning context (such as the clinic for this study). The consultant and trainee viewed the video separately to provide an individual perspective on the sources of learning for outpatient clinics and the support provided to the trainees within outpatient clinics. I have summarised the questions in **Table 3**.

Table 3: Questions asked to consultants and trainees during the clip selection interviews.

I defined a learning event and asked participants to consider learning events, or where they use information from previous learning events, as I showed the videos to the participants. I then asked the following questions, probing the participant (why was this?).
1. You said … is a learning event. Why is this?
2. How typical a learning event was this consultation for you/the trainee?
3. How typical was the senior discussion?
4. Is there anything about the clinic or senior discussion which strikes you in particular?
5. How valuable is the clinic to the trainees' learning?
6. To what extent does the clinic facilitate trainees' learning?
7. How about telephone clinics? (How do they facilitate trainees' learning?)
8. How would you describe the support you have received in clinics in relation to your level of training?
9. Are there any clips you would not like me to show?
10. Is there anything I haven't asked you that you would like to add, or do you have any questions?

With each of the questions above, I allowed the participants to interpret them as they wished, only providing clarity when asked. However, clarification was typically to confirm if the participants had heard me or the video correctly rather than due to not understanding the question. The questions provided a helpful guide to the discussion, which often felt more like a chat than an interview, perhaps due to the rapport I had developed with participants. Although I only filmed telephone clinics, I wanted to ensure I asked questions about all clinics to address my research questions.

Based on these discussions, I identified clips for use in the next stage of the study, the video-reflexive sessions. The additional semi-structured interviews discussed questions about the clinic as a place to use and facilitate learning in clinics, both face-to-face and

telephone clinics. As *care* is one of VRE's key principles, I allowed all participants the opportunity for their clips not to be used; I understand this option eased some surgeons' worries when initially consenting to be filmed. I discuss this further when I consider the clip selection interviews in more detail in Chapter 7.

5.1.3 Video-reflexive sessions as a method

The third stage of VRE is video-reflexivity, which occurs in sessions not dissimilar to focus groups. The filmed reflexive sessions allow discussion of the selected clips between various team members in a broader context, e.g., a community of practice. The reflexive sessions aim to open a dialogue between different team members to explore what is working well or not in their practice. Those invited to attend these sessions will depend on the research purpose but may include any multi-disciplinary team members, the researcher(s), and even the patients. These sessions are not a critique of an individual but instead consider the clinical team, workplace factors, and individual deliberations, which will make up the supported reflexivity element of the session. These sessions allow the group to collectively ponder their areas of good practice and areas that may be improved and develop ways of enhancing practice moving forward. Traditionally, reflexive sessions were typically completed face-to-face. The researcher and participants sat in the same room and were shown clips and filmed during this process. However, during the pandemic, some VRE researchers began to complete their reflexive sessions online via platforms such as Teams or Zoom.

5.1.3.1 Video-reflexive sessions within this project

When Blommaert and Jie (2010) considered ethnography, they suggested that it allows consideration of micro contextual factors: variable factors that define the situation, such as the weather. It also considers macro social factors: the cultural, political, and institutional contexts delineating a situation. The purpose of the reflexive sessions was to consider how the macro factors influence learning at an individual level. They built on the work of ethnographic methods used in the clinic when discussed amongst a larger sample. As any surgical team member could attend the reflexive sessions and share their considerations of the wider influences on surgical training, the sessions allowed a different perspective to the clip selection interviews, which explored the individual views of learning.

Within this project, the video-reflexive sessions allowed discussion of the selected clips between various surgical team members in a broader context, considering influences beyond the clinic. Like the interviews, the video-reflexive sessions were facilitated via an online platform. They were attended by a range of participants invested in surgical outpatient clinics: surgical trainees, consultants, plus other people involved in outpatient clinics. I showed a range of the clips selected after the clip selection interviews with the trainee and consultant. I was mindful of the clips shown, having discussed these during the interviews. For example, I selected clips to generate discussion but not create undue friction within the surgical team. These clips and topics were chosen to encourage discussion within the group with the research objectives in mind.

The video-reflexive sessions aimed to open a dialogue between various team members to explore what is working well, or not so well, regarding training and learning within the surgical clinic, by identifying influences on support and learning that may occur in surgical outpatient clinics. I did have some topics for discussion to aid with facilitation if needed, but I aimed to have little input beyond showing the clips to participants. I discuss this further when I consider the reflexive sessions in greater detail in Chapter 8. I hoped to consider the learning and the influencing factors with various surgical team members with varying seniority. It is a combination of these considerations: the group, workplace factors, and individual deliberations, which made up the supported reflexivity element of the session. Additionally, the sessions explored perceptions of trainees in surgical outpatient clinics, with some reference to the newly introduced CiPs, considering how learning and training within the surgical clinic may be locally optimised.

5.2 Research participants

Having explained the methods employed within this study, I will now discuss the considerations made when deciding how many clinics to film and who should be recruited within each method.

5.2.1 Sample selection

My PhD research aimed to explore how surgical trainees learn in outpatient clinics. Although my study focused on surgical trainees' learning, it is important to appreciate the large influence on their training: the patients they reviewed, the consultants that oversaw

their practice, and their Trust (institution). Therefore, my sampling was purposive, to ensure that selected consultants, trainees, and patients were in joint attendance in the clinic.

The sample size for the video ethnography phase was based on a combination of previous VRE studies and ethnographic projects studying surgical outpatient clinics. The studies I used to determine an appropriate sample size before data collection are documented in

Table 4.

Table 4: Previous papers and sample sizes used

Paper	Sample timings (length) for ethnographic element of study
Video-reflexive ethnography	
Carroll et al. (2008)	12 days on the intensive care unit
Collier et al. (2015)	13 patients filmed
Gordon et al. (2017)	12h37 of footage
Gough et al. (2015)	21 simulation sessions recorded
Iedema et al. (2015)	Three months on the intensive care unit
Manojlovich et al. (2018)	12 ward rounds (7h53 of footage)
Ethnography in surgical clinics	
O'Neill et al. (2006)	11 clinics observed (? Full clinics/consultations)
Waghorn and McKee (1999)	Nine clinics observed (each with 11-82 patients)

When choosing the sample size for this study, I aimed to ensure that I observed a representative variety of trainees to ensure I had a broad understanding of how the different individuals conducted their clinics. I sought to video the largest range of clinics possible, both concerning the range of seniorities of trainees and observing various surgical sub-specialities; therefore, this consideration meant I filmed an extensive range of trainees and consultants within the team. I explain this further in Chapter 8 when I discuss the reflexive sessions in more detail. When collecting data, I aimed to support the ethnographic approach by filming 12-15 paediatric surgical clinic consultations. I chose this sample size by considering the authors from Table 4's approaches and what was feasible within my PhD time frame.

I was keen to review a variety of trainees within the paediatric surgery department and ensure that I could consider how trainees learn at various training stages and within different sub-speciality teams. I ensured each trainee was filmed for a maximum of three consultations and that the clinics occurred under at least three different (in total) supervising consultants for video recordings. This practice resulted in 38.5 hours of ethnographic data (in addition to the time spent during my QIP) and 12 filmed video consultations conducted by eight trainees. This number was also dictated by feasibility; the trainee rota was released

in the first week of each month, providing a limited window of opportunity once their clinics were identified, clinician approvals received, and letters sent out to patients after meeting with the secretaries. I had finished filming 12 clinics at the end of one month and on reviewing the videos, I felt I had enough representative video to use later by those who had consented to be part of the study.

5.2.2 Recruitment

Following ethical approval, I sent out a participation information sheet via the departmental contact to the paediatric surgery staff. I discussed the project at invited team meetings and provided contact details to discuss the project further if needed. I emphasised the voluntary nature of participation in all recruitment material and encounters. However, I did offer a £5 coffee voucher for clinical participants attending the interviews and reflexive sessions as agreed during my ethical approval. I received funding for refreshments during the interviews and reflexive sessions as part of a surgical education research grant I was awarded, but I changed this to coffee vouchers (with ethical approval) when I conducted the sessions online.

I was given the opportunity to present my research proposal at the team's audit meeting, which allowed the team to ask questions about the research. Some clinical participants contacted me via email, and others approached me while I collected consent forms in the department. A total of 22 consent forms were returned, and there were 21 clinical participants across all phases: some clinicians completed one phase, some also completed the clip selection interviews, others completed the reflexive sessions only, and others completed every phase. Together, this represented the majority of the paediatric surgery team. When consultants and trainees consented, the rota coordinator sent me the team rota, allowing me to identify clinics involving both consenting consultants and trainees, including patients receiving telephone consultations.

Before filming and during the QIP prior to the PhD research (described in Chapter 4), I spent time in the paediatric surgery outpatient clinic to gain an appreciation of the clinic's set-up and meet the staff and key players. I began to view the outpatient department through the lens of a researcher, supporting my understanding of it as a previous trainee.

Following selecting appropriate clinics (with the attendance of participating consultants and trainees), the consultants' secretaries were asked to send an information sheet to parents/carers of children listed for telephone clinics. Trainees read a brief script prior to commencing the research to ensure that families were happy for me to record the trainees completing the clinic (Appendix 5). After recording, I sent a letter to participating families (via the secretaries) thanking them for being part of my study and giving them relevant contact details as needed.

A lot of flexibility was needed, as some trainees could not attend specific clinics, and some were cancelled for unforeseen reasons. As the research was undertaken during the pandemic, there were often last-minute changes in the clinic due to staff needing to self-isolate, meaning that the team needed to cover other clinical commitments with short notice. At other times when the clinics were conducted, but I could not complete observations or video recordings, I explored other elements of the clinic, such as speaking to consultants and gaining an overview of the clinic's running.

Part of the recruitment process involved asking trainees and consultants from the initial filming to review the video clips during the clip selection sessions. However, this was not an essential criterion for filming. Following the clip selection interviews, anyone involved in clinics, such as surgeons, clinic nurses, specialist nurses, and secretaries, were separately approached regarding recruitment for the video-reflexive sessions. The filmed trainees and consultants could also choose to be part of the video-reflexive sessions, but this was not essential.

The video-reflexive sessions were undertaken online. I facilitated six reflexive sessions with 18 participants, made up of a variety of staff within the department. To recruit these staff, I discussed my project at another audit meeting. As I needed multiple people to attend each session, I asked people what times they were available and grouped participants based on their availability. Initially, recruitment was mostly of those who had been part of the earlier stages, but some opportunistic recruitment happened when I would take consent forms to clinics and when I took coffee vouchers to participants in the staff office.

The recruitment process is summarised in **Figure 5.2.**

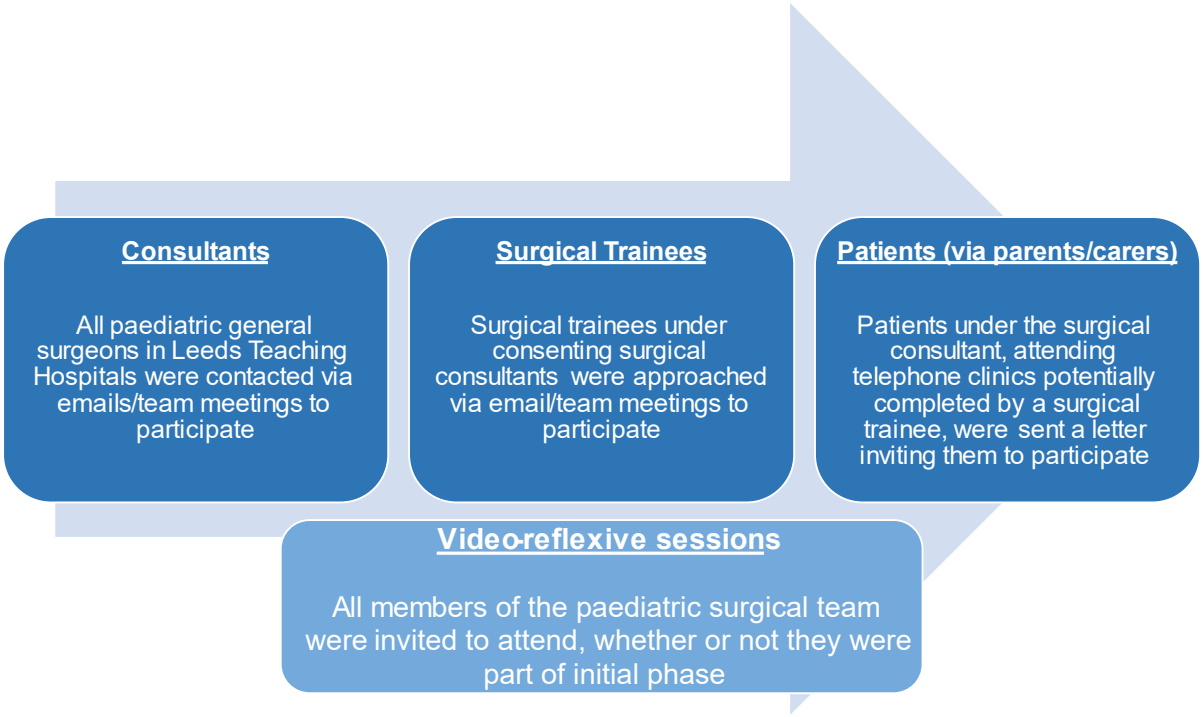

Figure 5-2: Summary of recruitment stages for the study

5.3 Addressing possible concerns

Having now considered recruitment within the study, the next section will consider both the acceptance of my project amongst surgeons and the ethical considerations made during the project.

5.3.1 Stakeholder engagement

As a surgical trainee myself, there was a risk I may have assumed that the methods I found acceptable would be acceptable to others; therefore, in addition to recognising the need for constant reflexivity, I sought opinions from a wide range of people about my research: outpatient department staff, surgical consultants, surgical trainees, patients, and members of The University of Leeds Patient and Carer Community. These discussions allowed me to focus my research appropriately and ensure I provided clear information on the information sheets. I found that surgical trainees were more engaged with my research than expected, often with them comparing it to their simulation teaching. Additionally, conversations with the Patient and Carer Community informed the positioning of my cameras, encouraging me to show research participants in my filming as much as possible to ensure their actions and movements could be considered if needed. I discussed how additional conversations with others influenced my research decisions in Chapter 4.

I also discussed my research with the two heads of the surgical training portfolio, who supported my research and provided me with the list of CiPs before public release. As these CiPs were decided based on expert-opinion focus groups of surgical trainers, the heads of the training portfolio were keen to see if the learning identified matches these, or if different/new themes arose.

5.3.2 Ethical considerations

Ethical approval was sought through NHS ethics, Integrated Research Application System (IRAS). The ethical approvals took up a significant proportion of my research time and required amendments when the project was amended due to the pandemic. Here, I discuss the main ethical considerations in my final research project.

5.3.2.1 Informed consent for clinicians

Gaining informed consent from all clinical participants in my study was vital for multiple reasons: it ensured all participants had a good understanding of the study, and only participated if they chose to, thereby allowing participant autonomy. A participant information sheet was provided to all clinical participants before the study. The General Medical Council guidance, *Making and using visual and audio recordings of patients* (2013), was adhered to at all times. I clarified that participants could ask me to stop filming and leave for any reason. Following the study, I explained that clinicians could leave the study at any time, but I would keep data already held. No clinicians asked to withdraw from the study.

5.3.2.2 Identifying issues of concern

My main concern as a researcher and a practising surgical trainee was what to do if I saw what I deemed dangerous clinical practice. If I felt any action put the patient in immediate danger, I clarified to the trainee that I would address this with them during the clinic, escalating to the consultant only if essential. This concern would have been the only time I would have intervened within the surgical clinic as I was aware that it would have likely jeopardised my position as a researcher. Still, I was aware that patient safety must always come first. I made this escalation process very clear in the participant information sheet and verbally, allowing them to ask questions as required. I did not need to escalate any concerns at any point during my research, although many trainees did ask about it and, to

my surprise, always seemed pleased when I explained the process. I suspect it was reassuring to them that they would be made aware if I had any concerns immediately rather than wondering if they might be approached later.

5.3.2.3 Data storage

I did not have details of potential patient participants before the study. Information was sent to the relevant patients' guardians via the surgical team secretaries. All data stored were kept as per local University and Trust guidelines, and I ensured my training in data protection remained up-to-date throughout the study. Data collected was encrypted and stored on the secure University server using pseudonyms. Each folder contained video data and clinic field notes, recordings of the clip selection conversation, and videos from the video-reflexive sessions. The consent forms were kept separately from these files.

The University-based OneDrive was used to view data externally, although I could use a University laptop and USB stick using The Sophos *SafeGuard* Enterprise Suite, as per University guidelines. However, holding the clip selection and reflexive sessions via Zoom meant that I could minimise the transfer of files between devices. The files contained a study number and pseudonym only. The consent forms contained the clinician's name and contact address/email in case the participants needed to be contacted later. For the patients who verbally consented via the surgical trainee, I only made a note of the child's age, and all other identifying information was immediately removed from the video clips. The videos from the clip selection and reflexive sessions were stored on OneDrive, using the same considerations as above. Consent forms were kept in a separate folder from other study information.

General Data Protection Regulations will continue to be adhered to by storing participant data in locked cabinets for five years only. Videos will also be kept only for a maximum of five years. The only exception to this is where participants have given permission to disseminate findings following the research, either in a publication or educational material (although clinician consent may be withdrawn at any time, as with all other aspects of the study).

5.3.2.4 Working with children and their families

There are multiple ethical issues relating to working with children. These were considered fully early on, with considerations made regarding child safety and comfort and how I communicated the study to the children. Later, on deciding to film the trainees completing telephone clinics, I thought it better that the patient side of the consultation was not heard as I could not explain the study fully to them beforehand, except by sending a letter. However, it was still essential to consider the children and their families, and the relevant ethics at all stages.

Consent

Patient information sheets were sent from the secretaries to patients' parents/guardians before the consultation. This sheet stressed the voluntary nature of the study. The notice given to the participants depended on the type of clinic, as their appointment was provided with varying notice, and the clinics often changed with short notice due to the pandemic. Regardless of the time, I ensured the patients received the information sheet and had time to contact me with questions if required before the consultation. On the clinic day, the trainee asked if the families had received an information sheet and if they were happy for me to film the trainee, know the child's age, and send them a sheet following the study. The trainee recorded consent in the patient's electronic record. I did not receive any demographic information about the patient other than the child's age, which was beneficial to know when considering their inclusion in the consultation (as all filmed consultations were completed via the caregivers). I only turned on the cameras once consent was given.

Following the clinic

Based on work from Nightingale et al. (2014) and Lenne (2018), I discussed with the paediatric surgery team who best to direct families to if they wished to discuss the research with an external party. These studies gave families access to a clinical psychologist, although no participants in either study used this service. One of the Trust's clinical psychologists, Dr Louise Maclean, was happy to support the research. Her details were made available to all families that participated in the study so they could contact her by phone or email to arrange a consultation if needed. I gave these details to the participants following the clinic, plus my contact details. No patient families contacted Dr Maclean following the study, which is consistent with the other studies that offered this service (Nightingale et al., 2014; Lenne, 2018). I anonymised the patient data straight after the

clinic but allowed the families to withdraw consent before this point (as it was only the surgeons that I could see and hear). No families withdrew consent.

5.3.2.5 Selection of clips

As the paediatric surgery department is one where all surgeons (both consultants and trainees) work closely, the consultants and trainees would be aware of the trainee's identity. Thus, I was very mindful of which clips I showed. I ensured that the consultant and trainee were happy for the clips to be used during the clip selection process. Despite this, I asked video-reflexive session participants not to use the names of any individuals in the clip. When names were used, I cut these out.

As a regional paediatric surgery team, I was mindful that team members may likely be identified during presentations at conferences/publications moving forward. Therefore, I allowed members to participate in the project without allowing further dissemination and was, and will be, mindful of the potential impact of any clips shared on members of the team and department. I accept that this resulted in some limitations of my research, but I will be open about this whenever I present my research findings. No staff members denied their videos to be shown at external events, although two (who only participated in the reflexive groups) did ask to be informed before sharing.

Iedema et al. (2019) have discussed the concern of clip selection in great length, suggesting that being selective when choosing the clips is important to ensure that the participants feel safe. Discussing clips during the interviews allowed the participants to discuss any concerns. Iedema et al. (2019) explained instances where although the reflexive sessions were not intended to be critical, some participants did not want specific clips shown to the management team through fear of repercussions. Iedema et al. explained an instance where one participant made a significant clinical error but was keen for this to be shown and discussed to allow consideration of changes both locally and with wider dissemination to help prevent others from making the same mistake (Iedema et al., 2019). Thus, I was open when discussing the clips but ensured that this was participant-led, as participant empowerment and engagement are of the utmost importance to me as a constructivist, even considering the limitations.

5.4 Researcher position

As an evolving methodology, VRE may take place in multiple forms. For those hoping to bridge the clinician-researcher gap, research may involve setting an agenda upfront *("we'd like to work with you on….")* or can be fully clinician and patient-driven (Iedema et al., 2019). There are multiple ways that VRE can enhance the researcher-clinician relationship through varying levels of involvement in clinical studies.

As explained earlier in the previous chapter, VRE is post-qualitative and therefore allows flexibility in its approach, the researcher adopts a position from a spectrum of three roles when using VRE to fit their research environment best: the *clinalyst*, *affect-as-method*, or *planned obsolescence* (Carroll and Mesman, 2018). The first role, the clinalyst, is an ethnographer that uses inside knowledge to analyse healthcare professionals and act as a catalyst for profession-led change. The other extreme is planned obsolescence, where the clinical team is empowered to make VRE a structural element of their work, developing a 'video team' to organise and oversee VRE projects, regardless of the researcher's presence. Taking a middle ground, engaging as affect-as-method, the researcher develops strong collaborations with the clinical team, building relationships and, as such, becoming immersed within the clinical team. Considering the stance early on is crucial and should consider the researcher's background, the collaboration with the clinical department, and the study's outcomes.

Throughout my study, I engaged with an affect-as-method approach. I was very open about my project and found that the trainees often spoke aloud about learning as a result. Examples included multiple trainees showing me the information they had written beforehand and trainees thinking aloud as they planned to read about something after the clinic or as they bought up images and blood results. During the reflexive sessions, the teams talked about integrating video learning into their future practice. In affect-as-method, researchers become immersed in the team, as I did during my study. During the video ethnography, discussed in the next chapter, I consider my role in relation to my insider/outsider position. During the clip selection, my immersion was evident, given the clinicians' effort to attend sessions due to their investment in the project. Finally, in the reflexive sessions, this became clear in how relaxed the conversations often were and when one reflexive session included me as part of the discussion. I will discuss each of these points further in the relevant chapters.

5.5 Data analysis

Analysis occurred at multiple time points: during the video ethnography with a review of the field notes, in the clip selection both through identification of learning events and following transcription of the interviews, and finally in the reflexive sessions where I analysed the reflexive sessions.

Data analysis for the video ethnography and the video-reflexive sessions is variable in VRE studies but includes thematic analysis, conversational analysis, or development of themes by the research groups. I attended various courses to explore multiple types of data analysis such as thematic analysis, conversational analysis, and Nvivo coding. Having considered my data and learning objectives, I decided that thematic analysis would be the best to help consider the participants' perceptions of clinic training and the support trainees receive when conducting clinics. Therefore, thematic analysis was used to analyse my clip selection interviews and the reflexive sessions. I discuss my use of thematic analysis further in Chapter 7 and Chapter 8, where it is used to analyse findings from the clip selection interviews and reflexive sessions.

5.6 The next chapter

I have now explained surgical clinics, and how previous studies have considered trainees' learning. In this chapter, I explained how I chose my research setting and the considerations I made for the research participants' data. Moving forward, I discuss my research findings, starting with the ethnographic fieldwork in the next chapter.

Chapter 6. Phase one: video ethnography in the surgical outpatient clinic

In the previous chapter, I discussed the methods making up this PhD project. In this chapter, I begin by discussing the first method, video ethnography within the surgical outpatient clinic. I consider the practical considerations when completing a video ethnography and share the findings from the first phase of my research.

6.1 The setting

The paediatric surgical clinic is held within the paediatric outpatient department alongside clinics for other paediatric specialities. The clinic has over 20 rooms within the main hospital, including one specially dedicated to video consultations and others for collecting child measurements, such as height and weight. During a typical clinic session, multiple paediatric specialities were overseen by the clinic Sister, who knew which teams were present and which clinic rooms they occupied. The surgical teams often had their clinics together, meaning there were often as many as eight surgical consultants and their trainees. Other clinics only had one member of the surgical team in attendance.

These clinics were loud and busy, full of excitable children even during the pandemic, albeit sat much closer to their parents and without the toys normally available for entertainment. The clinic rooms greatly varied in size, but each had the same equipment: a desk with a computer, a telephone, a drawer for paperwork, a sink, a couch (for examination), and at least two chairs. Except for the video consultation room, every room had a large window, which opened over varied hospital entrances, allowing the sounds of the city and traffic, including regular ambulances sounding their sirens as they headed towards the nearby emergency department. In the paediatric clinic, each room had a large picture and asked whether children could find a certain number of images, such as 13 umbrellas or five snails[2].

Some clinic appointments were held in one of the small peripheral clinics attached to the Trust in smaller hospitals in nearby towns. These clinics were in a general outpatient clinic but with separate areas for each speciality, meaning that the clinic had its own healthcare

[2] These images kept me entertained during quieter moments in clinics, and the reader may be happy to know I found all the objects in each room, albeit occasionally with more difficulty than one might have hoped.

assistant to support the surgical clinic, made up of one surgical consultant and one surgical trainee on the day I attended. These clinics were much calmer, with larger rooms containing separate examination bays. The single clinic I attended felt much more peaceful and quieter but did not have anything to keep the children entertained. As soon as the surgical consultant and trainee arrived, both they and I were offered a hot drink:

> *"There was a very different feel here. It reminds me of my old clinic in a peripheral hospital: guaranteed coffee, cake, a walk at lunch and, most importantly, more time for teaching as a registrar [is] not always present, so [there is] more time when they are."* [Researcher field notes]

My ethical approval was only for one Trust (which included the central and smaller peripheral hospitals within the city). Many consultants also did hospital clinics in different Trusts in nearby towns, often taking trainees. I noted that not being able to attend and film in some external clinics meant I was likely to miss some unique learning opportunities.

6.2 Getting started

When setting up a VRE project, there are many considerations, including institutional and departmental access. I now discuss these considerations before considering my role as a researcher.

6.2.1 Negotiating access to the department

> *"In our experience, setting up a VRE project requires time and patience and much tenacity. You can never start talking too early with the people you are hoping to involve in your study. Try to draw on and build existing relationships and partnerships."*
>
> Excerpt from Video-reflexive Ethnography and Health Research Improvement (Iedema et al., 2019, p.36).

As explained in the previous chapter, I was approached by one of the department consultants and asked to complete the project within the paediatric surgery department. He became my key contact in the department and was incredibly supportive early on, even writing a letter to the Research Ethics Committee to support my research in a paediatric

surgery department (Appendix 6). He set up links with various key players, including one of the hospital managers and the team's clinical psychologist. Even with this support, due to ethical approval delays and the pandemic, it was three years before my data collection began. Interest in the study could have easily been lost, but completing the QIP (as described in the previous chapter) helped me to stay in touch with the department. It also made access to the team much easier when I began my project, as I had already met the consultants and many of the clinic's key players.

I was given the opportunity to present my project at the department's morbidity and mortality meeting. Many consultants involved with the Quality Improvement Project (QIP) signed up early on. When I started attending clinics, one of the consultants asked, *"isn't that what you did at the start of the pandemic?"* but offered to sign up when I explained my PhD project, even though he did not have trainees during his telephone clinics. This consultant also later came to a reflexive session.

It was not just the surgical team who were helpful during the ethnography. Before starting, the hospital managers provided up-to-date information about clinic numbers during the pandemic. They helped to ensure that the information sheet was sent out to families following our QIP. During my PhD research, the consultants' secretaries helped by accessing details of patients in each of the telephone clinics and supported me in sending out letters with patient information sheets to the families, often with fairly short notice. From my own experiences and the QIP, I knew that the clinic staff (receptionists and nurses) ran the clinics from behind the scenes. I introduced myself early on and explained what I would and would not be doing in the clinic. The sister was incredibly helpful, pointing me in the right direction and even coming in with a dual headset in case I wanted to listen to the telephone conversations. She supported my presence but worried I might slow clinics down *"if they [the doctors] put on an act."* I explained that I would mostly be there as a 'fly-on-the wall' and would only film a small number of clinics. She pointed me to clinics as soon as I entered and provided company when I stood in the corridor waiting for the surgeons to finish their current consultations before entering the room.

6.2.2 Negotiating access with trainees

As explained in the previous section, I initially presented the project at the department's morbidity and mortality meeting, after which most consultants consented to be part of the

research. However, the trainees were a little slower to sign up; therefore, I spent quite a lot of time in the clinics before filming, which held a dual purpose: understanding the clinic culture and for the clinicians to become more comfortable with my presence and research. Initially, the staff clearly viewed me as another surgeon, often asking about my clinical work. As time progressed, they asked more about my research and seemed to become increasingly invested in my research progress and results. Of the trainees that did sign up initially, they made clear they were happy for me to be present, but I know they were still worried about me judging them. For one trainee who expressed concern, I made sure I only asked questions about learning, and I showed the trainee my page of field notes that I had made while observing (only the notes pertaining to their clinic) and explained that my field notes focused on learning. The trainee laughed and commented that I had only documented things, such as when they had discussed the previous patient letters, rather than judgements. The trainee then seemed much more relaxed and even swapped some clinical commitments around so they could be filmed later.

About six weeks after observing clinics, I suddenly had most trainees sign up for the research within a week. I explained how happy I was to one trainee.

> *"Trainee: You know why that is?*
>
> *Me: Why?*
>
> *Trainee: That's because you're nice. We like you."*
>
> [Excerpt from field notes]

Until this point, I had not considered that the trainees would talk about my research, but they seemed to speak positively about my research to the other trainees. I talked to one trainee after filming another. The trainee asked their colleague how the filming was and explained the other trainee had been nervous before but later explained there was no reason to worry. I emphasised throughout that the trainees could choose which clips would be used in the later phases, and I think this also eased their worries. Conversely, another trainee who understood education research explained they perceived me being a partial insider (rather than an insider) as a bad thing as they would *"want to know if [they were] doing something wrong".* However, I explained that I would still step in if I observed something I considered unsafe practice, and the trainee seemed happier.

A couple of trainees also seemed to be a little reluctant due to the nature of the research. One trainee had consented to be part of my research but asked me to leave after frustrations with their computer and asked me to attend another day. I had never worked with this trainee before, so the trainee saw me as a researcher. When I arrived the next time, the trainee asked how I could understand clinics since I am not a paediatric surgeon. When I explained that I was an adult surgeon but had worked in paediatric surgery previously, and therefore understood enough to consider learning within the clinics, they asked me, *"so if I said [named condition], you would know what I mean by that?"* When I said I understood some paediatric surgical conditions (including the one they listed), the trainee seemed happier about me being there but still seemed a little dubious about the study. However, as I spent more time in clinics, they would talk to me more about their educational roles and would talk about how support compares between institutions. Similarly, another trainee seemed unsure about the role of educational research and asked about surgical college interest in the project. When I explained that the cameras were funded by a joint grant, including funding from the Royal College of Surgeons' Faculty of Surgical Trainers, they suddenly became very interested in research and asked about how similar methods could be used in other areas where trainees receive little support, such as during the consent process:

> *"You could use this work for consent. No-one has ever watched me do a consent form. It's just something that it's assumed you can do, but it's really important. Doing a project like this while people are taking consent would be really useful. I'd like to know it's something I'm safe to do."* [Trainee, field notes]

Although there was some initial reluctance to be part of the study, the trainees did go on to support my research in every way they could. Many trainees and consultants also had higher degrees, so they often explained that they were happy to support my research as they understood both the importance and difficulties presented within surgical research. The trainees' investment in the study was made clear during the clip selection phase, where trainees made every effort to attend despite difficult circumstances. I will explain this investment further in the next chapter.

6.3 My researcher role

Within a VRE study, the researcher's role may be considered in two ways: firstly, as the traditional insider/outsider position, often considered in ethnographic studies. Secondly, it may be considered in terms of the researcher's influence on the research project. I discussed the researcher position in the last chapter but now consider my position as an insider/outsider here as it became most evident during my ethnography, and I provide examples from my ethnographic field notes. I will also consider beginning to consider reflexivity, although I will discuss this further in later sections.

6.3.1 Insider/outsider

One of the main ways that researchers characterise their position in ethnographic studies is either as an insider or an outsider, which describes the researcher's relationship with the research setting and participants. There is much discussion about the advantages of each position, with those advocating for the insider view arguing that only those immersed in the field can give an authentic account. Those who argue for the outsider position state being an outsider removes a potential bias and prevents researchers from 'going native' (Allen, 2004). Others argue that you cannot truly be either, and while researchers may be closer to an insider or an outsider position, most researchers occupy multiple positions or the space between (Dwyer and Buckle, 2009; Ledger, 2010). They argue that anyone with any experience in an area can never be a true outsider. For example, no parents can be outsiders when exploring parenthood, and no individual can be a true outsider when investigating death. If one were to take this stance, no clinician could be a true outsider when exploring a clinical setting; however, when considering my research project, I was not part of the paediatric surgical team and chose that setting for this reason. I was worried that the relationships I developed in adult surgery might represent my norm and, therefore, findings may be less apparent. In addition, I think the trainees may have been less open to their vulnerabilities to a colleague who may have worked with them clinically. Thus, when completing this research, I considered myself a partial insider, able to act both as an insider and an outsider. Others using VRE have taken a similar stance, such as Lenne (2018) when exploring autism assessments as a sociologist and Gordon et al. (2017), whose position as an ex-physiotherapist allowed an understanding of the language while being unfamiliar with the research settings.

In the video ethnography phase, I felt both an insider and an outsider. I knew the consultants from previously working in the department, but not many trainees. Luckily, the

team often introduced me to new members early on. Before my QIP, I did not know how the clinics were run in this department. I never attended the clinics when I was a Foundation doctor in the department (although I know that many juniors do attend clinics now); I did not know when they started or where they were held. I quickly learnt that consultants tended to have specific rooms for clinics, and morning clinics began a little earlier than listed, and the afternoon ones started later.

The times when I felt like an insider were sometimes due to clinical reasons and occasionally personal. I understood the surgical language, and there were very few terms that I did not understand. The only times that I did not understand terms were a few times in the paediatric urology clinics. In adult surgery, urology is a different speciality. I only had one clinical placement in urology as a core trainee in a district general hospital, meaning the conditions reviewed were not as specialised as within a tertiary centre. In addition, the conditions that impact adults in urology are very different to those seen in children. I also understood the clinic etiquette. I knew not to enter the room when the consultant had a patient (but they are happy for you to enter quietly as they dictate). As a clinician, I understood clothing regulations, such as bare below the elbow. I also understood the up-to-date guidance regarding the use of masks and glasses due to the pandemic, and the importance of good hand hygiene, even when not touching patients.

On a personal level, I believe that the consultants were a little more relaxed as they knew me, making conversations and jokes similar to those in my clinical training. One of the consultants is a keen football fan, alongside myself and my surgical PhD supervisor, and so many initial meetings involved discussions about football. Even in clinics, he joked about football given we all support different teams:

> *"We realised family, cons[ultant], trainee all Liverpool fans, so laughing at me 'Wolves supporter.' It was nice to be included in the chat within consultation."*
> [Researcher field notes]

At one point, there was a mention that I might be asked to chaperone a patient with a different consultant, although, ultimately, this was not required. I documented that *"if I was asked to chaperone, I think it would be important to say no"*. As the chaperone is present to protect the patient and the clinician, I did not think it was appropriate for me to do this as

a researcher. In deciding on an appropriate action, I considered whether it would be something that a non-clinical researcher would do. I do not think they would have been asked in this case, so I would have asked the clinician to get another chaperone if needed.

There were also multiple times that senior team members confided in me and shared some very personal stories, making me reflect on how few people generally talk about needing support in the surgical setting. I felt privileged to be in a position where they felt comfortable doing that. I think they did this as I was someone who 'gets it' without being part of their direct clinical team. When they spoke to me, I did not feel they were in a position that required me to signpost them to other sources; instead, I think they just welcomed the chance to talk freely. Although I did not need to signpost them elsewhere, it did make me think about what resources are available, as I had included a list of resources in the information I sent to clinicians following the study. However, I am unsure whether these were utilised by any clinicians who participated in my research.

Although it might seem natural that one might become more of an insider throughout the research, I think this was not true in how the team saw me. I noted during my first observation that *"there is definitely a feeling that I'm seen as a surgical trainee here"* after the surgeon, who I had not seen in a little while, spent a while asking about my surgical career, but not my research. During the project, I tried to ensure the conversations generally focused on my research, not with the hope of creating boundaries, but to remind the clinicians of my research role when in the clinics. Later, even if I bumped into clinicians in the corridor, they would quickly ask how my research was going. I believe this change in focus was also due to their own investment in the project.

6.3.2 Researcher reflexivity

Atkinson and Hammersley (2007) describe reflexivity as a process acknowledging that researchers are shaped by their socio-historical locations, including their values and interests. I approached this research aware of my position in a surgical clinic team and as an employee within the same Trust. My reflexivity meant paying attention to every step of my research process and taking responsibility for my research (Subramani, 2019). More specifically within VRE, the methodology can enhance people's (researchers and participants) vulnerability (Iedema et al., 2019). Therefore, reflexivity was vital, especially during the ethnography phase since I was new to research in this area (VRE and the

setting), and this research involved lots of one-to-one discussions with the participants. I ensured that I took time after each clinic to consider reflexivity if I had not done this already during the clinic at quieter moments.

Being reflexive allowed me to consider the best position for the cameras after realising the patient's *"name is very visible on the screen, [so I] will need to position cameras away [from the computer screen]*". I realised this early on and began to draw each room in my notes and mentally consider where a camera might be well placed. I used the time within the department to consider filming in addition to the early considerations I had made. At one point, I thought about how my view of the research had changed. Initially, I believed it was very important to know about the patient demographics and their condition for my research. At one point, two months into my ethnography, I realised:

> *"I did not focus on the conversation during the appointment. It made me realise that the things I wanted to know before, such as the patient's age, or previous patient condition, really doesn't matter."* [Researcher field notes].

At this moment, I realised that I was focusing more on what the trainee was doing before and after the consultation. However, some points of the consultation, such as when asking specific questions and sharing information, were relevant to the learning. The main reason the child's age was helpful was considering their participation in the consultation. However, age was not always an indicator of whether the child should be included in the consultation, as many had additional learning needs meaning their inclusion would not have been possible. I discuss these points further as I share my experiences and field notes throughout this chapter.

6.4 Collecting data during the video ethnography phase

During the first phase of my research, I collected data in two ways: initially, I sat in consultations to gain an understanding of the department and my research. At this point, the field notes concentrated on the roles held by clinicians within the department and the potential practical elements of filming. Later I filmed some trainee consultations with the aim of creating clips for the reflexive sessions. Here I discuss how I decided to collect this data.

6.4.1 Making field notes

Within my PhD study, I utilised ethnography, or more specifically ethnographic method, as one element within the VRE methodology. Ethnography was a new methodology and method to me when I began my PhD; therefore, I spent time at multiple ethnography courses, workshops, and talks. I began to take field notes in exercises we were set, such as during conversations over lunch, to consider what things should be included within our notes and which were subjective and objective. Although many papers presented the results from their field notes, few explained how they compiled their field notes; however, books by Madden (2017) and Atkinson and Hammersley (2007) presented examples, which led me to question both what to include and how to write my field notes. These books also helped me question where and when to write these notes. I practised completing field notes by watching a clip from the medical television show *Bodies* and compared notes with my supervisors to learn new techniques. Through these techniques, I understood that I should document what I saw and heard, plus any other senses that pertained to the experience and my ongoing interpretations. In addition, I needed to sustain my reflexivity for my research participants and me to gain the most from my research.

When I started, I collected notes in black ink, like many examples I saw. Having dyslexia and relying greatly on the visual ease of data, I found it hard to separate the objective and subjective thought processes when I reviewed my notes; therefore, I tried using a four-colour retractable pen. I found that using this, and allocating a different colour to various considerations, helped me organise my thoughts even as I was writing my field notes. I had worried about when I would have time to write the field notes (having read about someone that did this in the bathroom). However, given the trainees spent a significant amount of time reading the patient notes, it provided me with ample opportunities to document my observations. When I did not have time, I would jot the odd word at the top of the page to remind myself to record my thoughts. When I did not have time to document during the clinic, I always went to the hospital's coffee shop to finish my documentation. I never left the hospital without completing that day's notes. I sent my first field notes to my PhD supervisor and tried to document more about the setting and what was happening in the clinic in later notes. I have provided an example page of my fieldnotes in **Figure 6-1.**

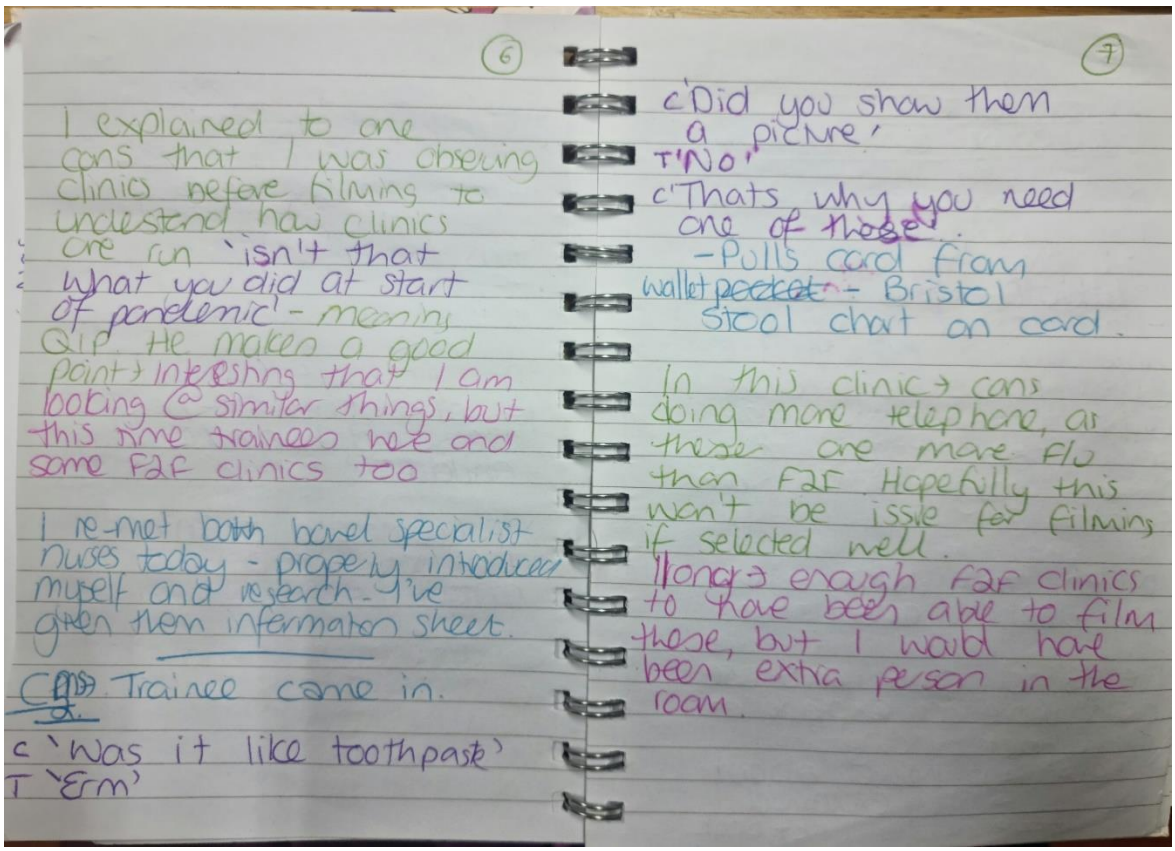

Figure 6-1: Example of field notes completed during the ethnography.

Blue = observations, green = subjective, purple = quotes, and pink = wider considerations/reflexivity.

6.5 Ethnographic findings

Within previous VRE studies, the ethnographic component is variable, with some researchers spending a significant time collecting ethnographic data before filming (Carroll et al., 2008) and others immediately focusing on collecting video footage for team learning (Hung et al., 2018). Within my research, spending 38.5 hours in clinics over three months (February to May 2021) allowed me to gain trust as a researcher within the department, consider the clinic culture, and make considerations for filming. Here, I share the elements of clinic culture that I observed during the ethnography before later providing a case study of a filmed consultation.

6.5.1 The impact of the pandemic on clinics

The ethnographic component of my research was conducted during the pandemic's second wave. There was some normality, with the team holding some clinics face-to-face, although they were completed with masks and PPE for examinations. Given the small rooms, I was

conscious that my presence could sometimes make distancing difficult. I would stand outside during clinic consultations where rooms were overcrowded, which allowed time for field notes and corridor conversations with various clinic staff.

During one corridor conversation, a nurse explained that the pandemic resulted in the need to distance patients within the waiting rooms, which was even more difficult during the school holidays, as parents had no option but to bring in siblings, making distance harder. Stressed moments like these were something I never noticed as a trainee, where I focused on what was happening in my clinic room. Within the clinic rooms observed, consultations were conducted mainly as normal when face-to-face (except with masks). The surgeons tried to normalise phone clinics, even passing the phone between the trainee and consultant in some instances. These actions suggest that they, too, did not consider some of the infection concerns posed by the pandemic within the general clinics in their own actions. The clinic Sister tried to support my research by giving me a phone extension allowing me to listen in to conversations if needed. Although this was not a required element of my research, it was comforting to know that people supported my research despite the added pressures. Additionally, the clinicians could have used this extension to support their distancing and reduce the need to pass the phone between themselves, but I do not think they knew it was available.

Although normality slowly regained during the pandemic, which was visible even during my observations, there were occasional reminders of the pandemic times. In my penultimate observation, I noticed the following:

> *"The only noise is the hum from the rooms and the nurses laughing from the treatment rooms. It is nice to hear them laughing, especially as tensions are very high at the moment given the pressures in hospital. It clicked I haven't heard people having a good laugh in the hospital for a while."* [Researcher Field notes]

Therefore, while I present general findings that I suspect are representative of learning in clinics, I concede that some of the impacts of the pandemic were not always immediately visible to me as I continued as a clinician, and therefore this was also my norm. As I did

not spend time in clinics in a research capacity before the pandemic, I can only draw tentative conclusions about the pandemic's impact on my ethnographic findings.

6.5.2 Conducting clinic consultations

Trainees who attended clinics had allocated time within the rota and did not attend clinics during on-calls. This protected time contrasts with my general surgical training, where we occasionally conducted clinics while on call, needing to answer the bleep between patients. Although time was dedicated to clinics, surgeons would sometimes attend late if theatre sessions had overrun or they were managing a patient from the wards. For example, one trainee attended clinic a few minutes late, having come directly from theatre, rushing into the clinic wearing scrubs. However, once trainees were in clinics, they were largely uninterrupted with external matters as they were directed to the ward doctors or on-call team. Before heading to the clinic room, trainees checked the room allocations as they arrived, which the clinic nurses listed on a board near the reception desk.

Many of the trainees undertook preparatory tasks before the clinics. Online notes and clinic lists enabled the trainees to review the patient records before clinics, allowing them to attend with a paper list or word document summarising each patient and their issues. One consultant kept an excel file of patients and noted that they were unable to prepare for a last-minute addition to the clinic list. These lists meant the trainees could clarify why the patient was attending the clinic when it was not clear from previous notes and clinic letters. There were times when the trainee did not *"understand why this patient has been referred"* and needed to review ample documentation before calling the patient. Multiple trainees commented that previous clinic letters could be helpful when done well but not if they did not provide a patient summary or clear plan. From informal conversations, I realised that the lists also allowed trainees to revise conditions they may encounter within the clinic.

Sometimes, the consultants attended the clinics after the trainee arrived and after they were due to begin. In one case that I observed, the trainee saw the patient, although they explained to me that they *"would have liked to discuss [the] clinic with [the] cons[ultant] first".* One junior registrar had no consultant present when they arrived in the clinic as the consultant was now on call (this was during a period when the team had integrated a secondary COVID on-call rota). The patient's scans had not yet returned, so the trainee decided to wait and review the notes together with the consultant when they arrived.

Although the consultant checked whether the trainee had seen the patient before their arrival, they seemed to understand and respect their reason for not doing so. In another clinic, when the consultant was not present, I asked a senior trainee what they would do if they had a problem, who explained they would call or email the consultant. Another senior trainee acted as the lead in the clinic when the consultant was off sick, discussing cases with the junior registrar, but explained they would discuss the patients when the consultant returned to work.

During the telephone consultations, trainees introduced themselves in various ways. Some would give their full name and grade, whereas one trainee only introduced themselves as *"one of the doctors from [hospital]"*, without giving their name or speciality. Trainees would share information in various ways over the phone, such as discussing relevant journal articles and referring patients to accessible paediatric surgery websites, such as ERIC (ERIC, 2021). At one point in my field notes, I commented that during a telephone consultation, *"the trainee pointed to [their relevant] body parts…, [although] the patient would not have seen this"*. I suspect this reflects how the trainee typically shared information visually with patients.

Telephone clinics came with technical complexities beyond the consultation. Trainees were not always able to contact families with ease. Quite often, numbers on the system were outdated, meaning that trainees tried various techniques to get up-to-date numbers, including speaking to the clinic secretaries, calling the consultant secretaries, and calling the GP for a phone number. These processes would often take up to 10 minutes. One new trainee to the UK vented their frustration at the difficulties of obtaining numbers within the Trust but explained they were unsure whether this was unique to the Trust as it was the first time they had conducted telephone clinics.

Telephone clinics did have the advantage of allowing the trainee to scroll through previous notes during the discussion, which was not something that I typically observed during face-to-face consultations, where they tended to maintain eye contact with patients and their families. Similarly, I wondered whether all examinations were needed or whether they were simply an expectation during face-to-face consultations. I pondered:

> *"I regularly listen to the chest of someone with a cough, but I get a chest x-ray regardless [within an acute setting]. Over COVID, we stopped listening to chests in most cases. In all honesty, it never changed my management. I wonder if others see this [the exam] as a way of learning about the patient, or a way of demonstrating their attention to the patient?"* [Researcher field notes]

I did not measure the time taken to conduct clinics. Still, the timing depended on various aspects, such as the acquisition of telephone numbers, waiting for a senior discussion, and patient complexity. Senior trainees and consultants did not necessarily spend less time in the consultations, yet were quicker with other elements such as senior discussions (for trainees), reviewing notes (when not listed in advance), and dictating letters. When clinics ran behind schedule, trainees often commented on this. I documented in my field notes that although *"the trainee was worried about running behind, the cons[ultant] seemed much less worried about this"*. Perhaps this worry is a reason for the trainees preparing notes in advance. Although trainees sometimes worried about running behind, this did not seem to impact their interactions with the patients, which is reassuring.

Following all clinics, whether telephone or face-to-face, the trainees dictated letters using a computer-based Dictaphone which would then be written and sent by the consultant secretaries. These letters would be shared with the GP and the patient. In addition to providing a summary of the consultation, it allowed the trainee to share further information with the families. In one instance, a trainee could not contact the family by telephone, so they arranged a scan and informed the family this way. Another trainee forgot to discuss consent for an operating procedure, so they detailed the procedure information and risks in the letter before obtaining written consent at a later date.

6.5.3 The senior discussion

The senior discussion played a large part in my observations. The consultants that I observed had one or two trainees within their clinic. Some consultant clinics did not have trainees, but I did not observe these during the research, although I did observe these during my QIP, where most consultants did not include trainees in clinics. During my research, around one year after the pandemic began, it had become the norm for trainees to attend clinics again, although telephone clinics were still new for trainees at the time. Although the trainees were still learning how to conduct telephone clinics, I had the impression that the

content and timeframe of senior discussions seemed typical for the department. The exception was during filmed consultations when I noticed that senior discussions were often longer. Some participants confirmed this during the interviews, stating that senior discussions were the only element of clinics that seemed different during filming. I will discuss this further in the next chapter.

The timing of senior discussions was variable and could be before the clinic, prior to individual patient consultations, after or during individual patient consultations, or following the clinic. This timing varied between consultants and depended on the time available and the trainee's needs. Typically, the trainee did their own consultation, even though one consultant watched the trainee during filming, although they explained this was not typical (in the next chapter). Interestingly, in the observed case, I noticed that the questions were much more related to the management and theory surrounding the condition rather than about the patient, perhaps because the consultant had already heard about the patient during the telephone consultation. Sometimes, senior discussions were held in the trainee's room and others in the consultant's room. When in the consultant room, the trainee would often stand outside waiting for the consultant's current patient to leave before they entered the room. When one consultant conducted a video consultation where I had been introduced, the trainee walked into the room to discuss a patient out of the camera view. The trainee was likely to overhear the consultation, although the patient's caregiver would not have realised an additional person was in the room.

The clinical nurse specialists were often present when senior discussions were held in the consultant's room. In one wash-up (a whole senior discussion after the clinic), the clinical nurse specialists knew every follow-up patient well, despite not being present in the consultations. In these wash-ups, staff often compared patients and their management; at one point, the consultant said, *"ya know, like [patient's] mum"* when comparing management techniques in different patients.

I noticed that when a senior discussion related to a telephone patient, the content of the conversation was unchanged, but the practicalities of conducting the discussions varied. Typically, in face-to-face clinics, the trainee would leave the patient and their family in a room and leave the room to speak to the consultant. For telephone clinics, if the trainee required advice during the consultation, the trainee would often call the patient after the senior discussion if needed. One explained to the patient:

"I'll run it by [consultant] and see if [they] have any suggestions. I will give you a call if they have anything to add on." [Researcher field notes]

In this case, the trainee had learnt something new, so the senior discussion was detailed and specific to answer their question about management. Other senior discussions were managed in different ways and had different focuses. Some focused on clinical management; others focused on communication (*"so how would you check [the mother's] understanding?"*), and others focused on the management of the clinic. In one case, the consultant explained that the clinic is made up of four processes: clinical outcome, resource use, clinical process, and patient care experience. The consultant related each process to the trainee's patient, leading to lengthy advocacy and letter-writing discussions. I saw the same consultant ask a different trainee to ask the secretary to send the completed letter to them before sending it to the family following a similar discussion.

When the senior discussion was held in the trainee's room during face-to-face clinics, the content was essentially the same but presented slightly differently. In one case, the consultant answered the question by explaining the following steps to the patient and their family, including the operation. The consultant then turned to the trainee and said, *"I'm explaining it to them, but I'm mainly explaining it to you"*. Interestingly, I later observed the same trainee presenting a similar patient to a different senior and confidently discussing the management techniques, mainly using the content from the earlier discussion.

Some senior discussions were more of an opportunity for trainees to sound out their thoughts, typically when the trainee was more senior. In one, the trainee checked the management plan with the consultant before the telephone consultation. I noted at the time that the trainee would have been likely to manage the patient the same without that discussion, but they wanted to seek reassurance. In another, the trainee discussed a case and outlined potential next steps before making the decision themselves, without active consultant input. This discussion was after a telephone consultation, leading me to wonder whether the telephone clinics meant that the thought process differed. I pondered whether the clinicians' thought process within telephone clinics were more relaxed (no patient in front of the trainee waiting for an answer) or more rushed (feeling the need to make a management decision during the phone call, without thinking space which can occur during examinations). Sometimes, senior trainees that had been with the team for a while did not

discuss all patients. This depended on the senior team and trainee. Some consultants still liked discussing all patients, even with very senior trainees, although this tended to be during a wash-up rather than between patients. I believe this may have been more for the consultant's benefit in these cases so that they knew the progress of each of their patients.

I completed the ethnographic phase just before the JCST introduced the clinic-based capabilities in practice (CiPs); however, trainees still had the opportunity complete other workplace-based assessments in clinics, including case-based discussions and clinical evaluation exercises. Interestingly, despite observing many lengthy senior discussions, some of which involved many questions to the trainee, neither consultants nor trainees discussed workplace-based assessments during any observed consultations.

6.5.4 Supporting trainees

Trainees made clear during various observations that they felt supported and respected by the consultants, which was demonstrated in the language used by the trainees and consultants both to me and between each other. Occasionally trainees did seem a little nervous when discussing cases with the consultant. In one example, a junior trainee spoke about a topic to me confidently, which appeared to be lost during their conversation with the consultant yet regained when they called the parent back. The trainee explained that they were unsure of this consultant's way of managing this presentation. I noticed a similar experience with another case. In both cases, these were trainees with less experience within the department; yet the consultants were patient with both trainees and did not seem to act in a way I expect would have added to this anxiety. Conversely, the language used by consultants towards and about their trainees was often positive. When one consultant spoke to a caregiver before passing the phone to the trainee, the consultant stated, *"I'll pass you to [trainee] who I completely trust. If I had a child, I'd let [the trainee] look after them"*.

More senior trainees worried about time, but more concerned about gaining independence. When one consultant offered support to help the trainee finish the clinic, they insisted they were able to manage:

> *"Consultant: Would you like us to see anyone?*
>
> *Trainee: No, I'll see the rest.*

Consultant: I can see some.

Trainee: Honestly, I normally do clinics myself for [another subspecialty], I'm fine."

[Researcher field notes]

More senior trainees seemed keen for more independence to see more patients and to discuss these patients only when needed. Another senior trainee explained that as they approached consultancy, they would like more independence, stating they sometimes felt micromanaged. It did make me wonder whether it might be appropriate for more clinics to be held where senior trainees 'ran' the clinic with support from a junior trainee. I questioned in my field notes, *"these would be interesting as transition clinics, perhaps"* towards the end of the training programme?

6.6 Camera use

Once I had spent time in the clinics, I began to film trainees consulting and the associated senior discussions. When considering camera use during the video ethnography phase, it was vital to consider what type of camera to use, the mount for the camera(s), and the impact the camera and recording may have on the clinical activity being investigated.

6.6.1 Decisions on filming

I spent 38.5 hours observing the surgical clinics in addition to the many hours spent observing the transition to telephone clinics during my QIP (see Chapter 4). These observations were supported by filming 12 clinic appointments completed by trainees, along with the corresponding senior discussion where appropriate. These videos were not used to replace my ethnographic notes and considerations but were instead used to help support discussions with the trainees and consultants during the clip selection interviews and to highlight points during the reflexive sessions later. As the filming occurred during my video ethnography, I will discuss the considerations I made for filming in this section; however, I will discuss the content of the videos more specifically in the next chapter, where I explain how the videos were reviewed and utilised.

As explained previously, I used two GoPro 9 cameras for filming, one attached to the wall and another on a chest strap. I used my mobile phone as a remote control for the wall

GoPro, meaning I could confirm the view provided by the camera before starting and start the filming without moving following consent. I explained that the initial part of the ethnography allowed me to consider the optimal camera set-up. As patient information was visible on the screen, I considered this when placing my cameras. I found the cameras occasionally needed to point in the screen's direction (due to the practicalities of the room set-up). Still, I ensured that at least one camera did not show the screen's contents. No clips showing identifiable information were shared (although on review of the footage, I realised that text on the screen could not be seen in any video).

I controlled the chest strap camera by hand, allowing me to quickly commence and stop filming, especially when moving between rooms. I found that trainees varied when they discussed the cases: some would leave during the phone call, some at the end of the call, and others at the end of the clinic; therefore, I kept one camera on a chest strap which enabled me to follow the trainees. I tried to wear black on clinic days, so the camera was less visible, although the trainees and consultants were always aware that they were being filmed. As I often needed to travel between rooms quickly, I kept the chest strap attached but turned off the camera and held my field notes book in front of the camera between the rooms. Although I did have posters on the clinic doors stating that filming would only take place in clinic rooms, and only for those who were part of the research, I wanted to ensure that clinic attendees and staff did not feel worried or uncomfortable.

I spent time before every filmed clinic showing the cameras to the trainee and consultant. When I started the research, even before filming, staff often commented on the nature of being filmed. One consultant said, *"you should have warned me you're coming so I can make sure I wear a tie"*, and another asked, *"does this mean I can't swear?"*. I spent a significant amount of time in clinics before I started filming, but as my cameras were small, their addition did not seem to impact the consultations. Two trainees clarified this when I explained I had stopped the recording. One exclaimed: *"oh, I hadn't realised that you were filming"*, which worried me until I realised that they had consented the patient's mum during the consultation, so they had definitely been aware of the filming, but they had not thought about the cameras as the consultation moved forward. Another trainee also stated that they had not realised that the camera was present, despite my checking they were happy with the position, and they had consented the patient's family. A third trainee demonstrated that they had forgotten about being filmed, as they quickly commented something unrelated to the consultation as soon as they put the phone down. While I must consider that filming

may have impacted the trainees' consultations, the comments suggested they quickly forgot about the filming.

6.6.2 The impact of filming

Despite the conversations relayed above, it is challenging to ascertain the impact of filming during my project, whether positive or negative. It is possible the cameras' presence encouraged participants to reflect on practices they might not normally consider. As explained in the methodology chapter, within VRE, this practice is termed '*exnovation*', making the mundane visible, which seemed to be an unintended consequence of filming within some studies. Carroll et al. (2008) used a small handheld video camera to capture ward rounds in the ICU. They stated that most participants ignored the camera, suggesting some awareness during filming.

Additionally, Lenne (2018) filmed children during their assessments for autism. She took cameras into the session before the recordings (cameras similar in size to an iPhone) to allow the children to explore these and view the set-up. She explained that the cameras were afforded little interest during the recordings but did not discuss this with participants later.

Similar to my study, Gordon et al. (2017), when exploring leadership, used small cameras to capture micro-level activities that may contribute to leadership emergence. During the video ethnography phase, they used small cameras, which the authors called 'handi-cams' to complete a 'fly-on-the-wall' style observation. The authors then placed these on tripods during the video-reflexive sessions. They noted that most participants seemed to ignore the camera but also explained that the camera presence appeared to play a role in helping the participants reflect on and understand their work (Gordon et al., 2017). This observation suggests that the participants remained aware of the camera, even if it did not appear to influence their actions at the time of filming. The comments from these studies suggest that the participants were aware of the camera. Still, it did not appear to influence their actions during filming, yet encouraged reflection after the process.

Beyond VRE studies, the use and impact of cameras on clinical practice and performance have been considered, often with studies based within general practice, given the common nature of filming trainees within this area. Eeckhout et al. (2016) found that although only

70% of trainees felt positive about using video consultations to improve their practice, almost 90% felt that their communication improved, and 85% believed their professional attitude improved as a result. The size and position of the camera were often stated as a concern for the clinicians, for both them and their patients; however, over 90% of patients who had been filmed for these videos thought it was a valuable educational tool, and most patients 'forgot' that the camera was present (Martin and Martin, 1984). A small proportion of patients (<5%) did feel that the doctors changed their behaviour (Martin and Martin, 1984). However, when Pringle and Stewart-Evans (1990) compared the consulting behaviour of GPs, by making some aware of the recordings and others not, they found no difference in the consulting behaviour between the two groups.

By selecting the correct camera and positioning, it is possible that recording clinical interactions (both clinician-clinician and clinician-patient) may have minimal impact on the participants and their actions. However, some previous studies indicated that cameras might have some effect even with careful planning. Therefore, it was necessary to constantly consider the potential impact that cameras might have on interactions and consider this both in terms of ongoing participant care and researcher reflexivity.

6.6.3 Who was filmed?

Having explained my considerations on 'how' I filmed, I will now talk about 'who' I filmed during the video ethnography phase. Having spent a long time in the surgical clinics, I determined which teams worked together and what type of patients they saw. When I filmed 12 clinic appointments, I ensured that I chose clinics that represented a mix of trainee levels, different consultants, and different sub-specialities. My original plan had been to film each trainee no more than three times and each consultant no more than five, but I achieved a greater mix of consultants and trainees. I have summarised those I filmed within each clinic in

Table 5.

Table 5: Demographics of trainees and consultants recorded during the video-ethnography phase

Recording number	Sub-speciality	Trainee number	Trainee level	Consultant number	Was senior discussion held?
1	Colorectal	Trainee 1	ST4	Consultant 1	Yes, with Trainee 2
2	Colorectal	Trainee 2 (Recording 1/2)	Post CCT fellow	Consultant 1	No
3	Colorectal	Trainee 2 (Recording 2)	Post CCT fellow	Consultant 1	No
4	Vascular	Trainee 3 (Recording 1)	Clinical fellow (junior registrar)	Consultant 2	Yes
5	Vascular	Trainee 3 (Recording 2)	Clinical fellow (junior registrar)	Consultant 2	Yes
6	Urology	Trainee 4 (Recording 1)	Post CCT fellow	Trainee-led clinic	No
7	Urology	Trainee 5 (Recording 1)	Post CCT fellow	Consultant 3	Yes
8	Urology	Trainee 5 (Recording 2)	Post CCT fellow	Consultant 3	Yes
9	Colorectal	Trainee 6	Non training registrar	Consultant 1	Yes
10	Hepato-biliary	Trainee 7	ST7	Consultant 4	Yes (two consultants present)
11	Urology	Trainee 4 (Recording 2)	Post CCT fellow	Trainee-led clinic	No
12	Thoracic	Trainee 8	ST4	Consultant 5	Yes

To this point, this chapter has separately considered the paediatric surgery department in relation to the video ethnography phase of my PhD. In the next section, I use a case study to illustrate how I combined each of these elements to explore how one trainee obtained knowledge for the clinic and shared their knowledge and understanding with their consultant during the senior discussion and the patient during the consultation.

6.7 An example of a filmed consultation

The case I present is of an adult general surgeon in the UK learning about managing children in the surgical setting; therefore, he is considered a trainee in the UK. The consultant overseeing the clinic is known to be a keen educator. The presented case is one I filmed; therefore, I will also consider the practicalities of filming within this case.

6.7.1 Before the clinic appointment

The trainee and consultant had already consented to my PhD study. Therefore, during this mixed clinic, I sent a letter (via the secretaries) to the only patient listed for a telephone consultation, and thus eligible for my study. I was unsure if I could film as I did not know whether it would be the trainee or consultant who would select and call each patient beforehand. The consultant was running late to the clinic and received a phone call on arrival but knew why I was there and told me that I could film before returning to his call. The trainee agreed to be part of the study and had planned to call the patient, so they marked this patient on the paper list as *seen,* meaning no one else would contact the patient. In some clinics, the patients seen were noted as seen on a live clinic list, whereas, in other clinics, the team shared a paper list and ticked off each patient as they picked up the notes.

The trainee showed me that he reviews every set of notes on the online patient notes system, PPM+, before attending each clinic. He had one sheet of paper with bullet points about every patient, which he prepared before the clinic. I set up my cameras, one on my chest and the other on the window. I found that setting the cameras up on the window would give me the best view of the room and the best lighting, although occasionally, the sound could be problematic if the windows were open. Although it might have seemed logical to close the windows, the rooms were in direct sunlight in the middle of summer and were incredibly hot; plus, given the pandemic, it was much safer to keep the windows open, given the confined space.

Once the trainee had brought up the patient's notes on PPM+, I handed him the consent script, and he called the patient. He explained that the patient had constipation after an anal fissure and then tried to call the mother's mobile phone. The number he called did not work, and there were no other numbers on the system. I had seen this happen many times, resulting in various responses from trainees: some called the patient's GP, and others

rearranged the clinic for a face-to-face appointment. This trainee went to reception, but they, too, had no other numbers.

> *"I mentioned that some trainees called GPs for alternative numbers, which [the] trainee said he had thought of doing. After about five minutes of being in a queue, [the] phone started ringing, but no answer after about two minutes."* [Researcher field notes]

The trainee explained to the consultant that he could not contact the family. The consultant had clearly seen this many times, so said: *"I'll call my secretary. She knows magic"*, and after a quick call from their mobile, had another number for the trainee.

6.7.2 The clinic appointment

When the trainee called the mother, the trainee confirmed the mother had received the study information letter and was happy for the consultation to be filmed. I turned on the wall camera using the remote on my mobile app and turned on the camera on my chest. The trainee asked the mother questions about the patient, including their symptoms and progression since the last consultation. Things had generally improved. Once the trainee had completed their fact-finding, they explained he would speak to the consultant and call the mother back.

The trainee walked to the consultant's room. I turned both cameras off but kept the chest strap with the GoPro on my chest. By this point, I had started wearing dark clothes, which meant the camera was less visible to those walking past, but I covered the camera with my field notes book anyway.

The consultant was with a patient, so they said they would come into the trainee's clinic room when finished. In the meantime, the trainee explained their thought process regarding the anal fissure, including the main two ways these could be managed. The trainee had never completed a clinic with this consultant where they had reviewed an anal fissure, so they were not sure how this consultant chose to manage these.

6.7.3 The consultant discussion

When the consultant came into the room, around 10 minutes later, I turned on the chest camera and filmed the discussion. I did not turn on the wall camera in case the conversation moved to a different room. Although the trainee had been reasonably confident in explaining the fissure management to me, they seemed much less confident when relaying their findings and thoughts to the consultant. The trainee did not seem to understand the meaning of the consultant's questions and seemed like a different trainee from the one I had observed and spoken with.

> *"I wonder whether this was due to the video or new consultant? I suspect [it was the] consultant. The consultant] was being very patient and supportive, but this may have been as [the] trainee is new to this team."* [Researcher field notes]

Although the trainee lacked confidence, the consultant and trainee had a very long chat about anal fissures. The consultant questioned the trainee's understanding, explaining each point in more detail relevant to the trainee's background, and portrayed knowledge during the discussion. They discussed issues concerning features when reviewing fissures, including which may lead to safeguarding concerns. They then considered management strategies (including non-operative management and what to do when anal fissures improve) and who should be copied into the patient's letter, that is, those who are important in the patient's multidisciplinary care.

The consultant asked the trainee if there was any benefit of offering a follow-up appointment to the patient. The trainee thought the patient should be offered an appointment in six months. The consultant asked what would happen if the fissure worsened, and the trainee said that they would want to see the child. The consultant then asked what the trainee would do in six months if it were the same and the trainee was unsure. Therefore, the consultant explained that safety netting should communicate when and how to return if the fissure changes, which was much more important than a routine appointment and might encourage the parents to take more action with any changes rather than wait until the next appointment. Given that constipation could worsen the fissure, the consultant advised that the trainee suggest the patient have a small stock of laxatives at home during the pandemic, as he had experienced other families having problems sourcing these given difficulties obtaining appointments and a national shortage in supply.

6.7.4 The follow-up phone call

Once the consultant had left the room, the trainee returned the call to the patient's mother. This call was between 20 and 30 minutes after the last call had ended. I did not note this at the time, nor think about this, but later considered that this large gap may have concerned the mother. This was recognised by the consultant and the trainee during the clip selection interviews. When the trainee relayed the information to the mother, he was clear and calm. He was able to answer the mother's questions before ending the call.

> *"This helps my suspicion that it was not the video that caused the anxiety, although I am still aware that it may have had some influence."* [Researcher field notes]

The trainee's confidence and competence were also noted in the later clip selection interviews. In the interview, the consultant stated that this conversation pleased him as the trainee had understood the information discussed by the consultant as they clearly relayed it to the mother. The consultant even commented that the trainee probably did this more succinctly than they would have.

6.8 The learning events in the clinic

I have explained that for the purpose of my PhD, I have described a learning event as a discrete event involving a learner, which is facilitated by learning content, including interactions with other people or learning materials, and a learning context (such as the clinic for this study). For this consultation, I considered the learning events to be the following points:

- Writing a sheet of notes summarising each patient before the clinic.
- Knowledge of diltiazem – discussion about the use of other agents.
- Discussion with the consultant about keeping laxatives at home.
- Weighing up the benefits of the patient returning versus another patient having the appointment.
- Safeguarding issues surrounding anal fissures.

I compiled the identified learning events in each of the 12 clinic consultations I observed using the videos and my field notes. Although the individual learning events were not the focus, they helped me to consider the questions and discussion points for the clip selection

interviews, where I considered what trainees and their consultants consider to be learning events and where they undertook and how they shared, this learning. These considerations allowed me to consider which footage would be suitable for use in the reflexive sessions.

6.9 The resulting video footage

During the video ethnography, I filmed 12 trainees completing their telephone appointments and any corresponding senior discussions. I filmed the telephone consultations conducted by the trainee using two separate cameras, one on my GoPro chest strap and the other fixed on the wall. As I only started filming after the parent or guardian gave verbal consent, this usually meant that the clips were anonymised from a patient's perspective straight away. However, in two clips, the trainee said the child's first name at one point (no other identifying information was heard). I tried to edit these out, but the video missed the surrounding information; therefore, I kept these videos for the clip selection interviews only and explained to participants that this information would not be used again, including in the reflexive sessions.

For some parts of the filming, typically the consultation, I had two separate recordings: one from the wall camera and one from the chest camera. I reviewed each of these files to determine which one was the best to show in the later clip selection interviews, considering camera position (good view of the trainee, but no identifying information visible), lighting, and sound quality. I needed to be mindful that the camera moved with my breathing for those videos taken from the chest camera. In one video, given the camera position, it was possible to hear the quiet rumbling of my tummy, which would have otherwise been inaudible. When I chose the clips to use in the clip selection interviews, they included both those taken from the wall camera and those mounted on the chest strap.

6.10 Chapter summary

I found this stage of the research fascinating. It allowed me to consider the clinic differently from that of a surgical trainee. Also, it aided the later stages of my research, providing data and the relationships I developed within my researcher role. When I was a surgical trainee, I did not fully appreciate the clinic culture, including the set-up of the clinic. At the time, my focus was that I had a clinic room to see patients. Now, I greatly appreciate the decisions made by the clinic nurses and reception staff to ensure the smooth flow of patient clinics to enable optimal patient care. Given this focus, it would be easy for them to dismiss training

for the trainees, but instead, they always tried their best to ensure they had a clinic room, even when incredibly busy. One of my objectives had been to explore the culture of the surgical outpatient clinic using ethnographic methods. I had thought at the time that I already understood the culture in clinics but watching and listening allowed me to gain a whole new perspective and appreciation of the work required to run a successful clinic and how to complete a research project within this.

6.11 The next steps

In this chapter, I have considered the video ethnography stage of my research. The primary purpose of the video ethnography was to aid the following two sections of my research: the clip selection interviews and the reflexive sessions. Therefore, as described above, I will not ask 'so what' here, beyond my considerations around culture, reflexivity, and learning events. Given that *collaboration* is one of the four key features of VRE, 'so what' is a question I considered once I received my participants' input. This collaboration also fits with my paradigm of constructivism, believing that knowledge is co-constructed. Considering my participants' thoughts, this construction will begin with my next chapter, where I consider the clip selection interviews.

Chapter 7. Phase 2: Clip selection interviews

7.1 Chapter introduction

In the previous chapter, I considered the video ethnography stage of my research. I discussed my role as a researcher and how that allowed me to develop a new understanding and appreciation within the clinics. Having viewed the clinics, I filmed 12 telephone clinic appointments conducted by trainees, which were edited into short clips used within the reflexive sessions, which I discuss in the next chapter. In this chapter, I consider how I used semi-structured interviews to determine which clips should be used within the reflexive sessions. I also utilised these interviews to explore individuals' perceptions of trainees' learning within the outpatient clinics. I then explain how reflexive thematic analysis (rTA) was used to generate themes relating to learning within the clinic.

7.2 How is clip selection completed in VRE studies?

Those using the VRE methodology choose the clips used within the reflexive sessions in various ways. For some, the process of this selection is not discussed in their papers (Wyer et al., 2015), although I suspect much thought has gone into their creation. For others, this step is reported in detail when they communicate their research. Carroll et al. chose clips that represented *"emergent themes"*, considering the sound quality and ethical considerations (Carroll et al., 2008, p.384). Each video represented one theme. Others involved their participants in the selection, with Collier et al. asking participants, *"If you were to make visible to clinicians what is most important to your care, what would you want them to see and to know?"* (Collier et al., 2016, p.67). Similarly, Hor et al. (2017) selected clips by considering if they related to their research objective and held interest for clinical participants when they viewed the footage.

I found it interesting that some VRE researchers, such as Collier et al. (2015), used interviews as an interim stage between the video ethnography and the reflexive sessions. They used semi-structured interviews, which they described as being more formal and prearranged with the patients. I knew that I wanted my research to examine the individual considerations for learning and the team-based (and higher-level) learning within the reflexive sessions. Therefore, I decided to complete semi-structured interviews with the participants filmed during the ethnography for two reasons: firstly, to help determine which clips should be used in the reflexive sessions, and secondly, to focus on the individuals and

their perceptions of learning within surgical outpatient clinics. Like Collier et al. (2016), I decided that the video clips for use in the reflexive sessions would be generated from the initial interview analysis. Like Hor et al. (2017), I ensured that these clips related to my research objectives, with input from my participants.

7.3 Conducting clip-selection interviews

Having decided that my interviews' purpose would be two-fold (clip selection and interview questions), I also wanted to ensure they helped me answer two of my research objectives in particular: firstly, to understand the perception of the trainees' roles within the outpatient clinic and how this has changed during COVID, and secondly, to explore the extent to which trainees and consultants share an understanding of learning in the surgical outpatient clinic. The next sections explain some of the decisions leading up to the interviews before presenting the research data and the themes I developed.

7.3.1 Conducting semi-structured interviews.

Having decided that I would conduct interviews, I first needed to determine whether this was an appropriate method to combine with the ethnography, given that I planned to interview participants from the video ethnography stage of my research. Whether ethnography is framed as a methodology or method, many researchers use interviews to support and triangulate their research findings. Sorrell & Redmond (1995) state that interviews are used to understand the shared values amongst members of one cultural group. Within qualitative research, interviews also allow researchers to explore the unique experiences of interviewees in an in-depth manner, allowing insight into each participant's experiences and perceptions (McGrath et al., 2019). These statements correlate well with the purpose of my interviews being to understand the trainees' roles in clinics, especially since the interviews focused on team-based support.

When considering how to conduct the interviews, like Collier et al. (2015), I thought that semi-structured interviews would be helpful in the context of my study. They would allow me to ask certain questions that answered my research objectives and explore the participants' responses by delving deeper into their thoughts, beliefs, and feelings (DeJonckheere and Vaughn, 2019). Various researchers use different terminology for interviews that support ethnographic findings, including *ethnographic interviews* amongst anthropologists or both *depth* and *qualitative interviewing* by sociologists (Newcomer et al.,

2015, p.492). Atkinson & Hammersley (2007) suggest that the important distinction in ethnographic interviewing is between pre-structured and reflexive interviews. They explain that within ethnography, the interviewers may enter the interview with a list of issues to be covered but allow for a more flexible and natural approach to questioning. I wanted to ensure that the questions I asked were reflexive and flexible. Taking each of these considerations into account, I used the term semi-structured interviews to explain my approach and was mindful of ensuring that my follow-up questions were natural and reflexive throughout.

I needed to be conscious that while I was used to interviewing via consultations as a doctor and some aspects such as body language, affirmation, and active listening were useful, qualitative interviews are different from clinical consultations. Therefore, I read multiple guides on conducting interviews, taking suggestions such as considering the importance of an even greater emphasis on active listening and reflexivity (McGrath et al., 2019). Additionally, I needed to consider how to interview through a constructivist lens by co-constructing knowledge and using a two-way dialogue to facilitate responses from the participants (Cleland and Durning, 2015, p.55).

Initially, I contemplated whether I should ask the interview participants (the consultants and trainees) about the learning events and the recordings separately to the considerations for learning. Upon further reflection, although I used an interview guide (as presented in **Table 3**), I allowed the interviews to flow naturally, meaning that these contemplations often overlapped. I designed my interview guide to consider what the participants interpreted as learning events, in addition to asking questions about the trainee role and learning within the clinic. Although questions regarding the recordings and learning within clinics are presented separately in the guide, I asked the questions at timings when they felt most natural within the interviews, based on the discussions that arose during the interviews.

7.3.2 Conducting interviews online

I planned to hold face-to-face interviews in my initial research plan (and ethical approvals). As explained in the methods chapter, this was not possible during the pandemic, meaning that the interviews were held online using Zoom. Although I made this decision due to the pandemic, many qualitative researchers have previously conducted interviews online, and this is not a new practice. Al-Saggaf & Williamson (2004) published their semi-structured

interviews held online in 2001-2002 and explained that they used local terminology to develop a rapport with their participants. However, online, they used MSN messenger rather than video to send the consent forms and conduct written interviews. Other researchers have recently utilised online video platforms to conduct semi-structured interviews with participants. Deakin & Wakefield (2014) argued that virtual video interviews are acceptable as rapport is established more quickly than face-to-face interviews, and participants can choose to have their cameras off if they wish. Thus, even before the pandemic, participants were happy with the use of online platforms to conduct interviews, with participants stating ease of use and being able to discuss sensitive topics in a comfortable environment (and the lack of travel associated with this) as the reasons for this comfort (Gray et al., 2020).

Although the decision to conduct my interviews online was made due to the pandemic, I was pleased that I made this decision and would happily interview online in future. Conducting these interviews online meant both the participant and I still had visual cues, and they could be done in a setting comfortable to participants. I could screen-share each filmed consultation with the relevant interview participant, i.e. the filmed trainee or consultant. After each interview, I could store and review each file as they were automatically saved after each interview and could be immediately uploaded to OneDrive, in accordance with ethical approvals. It also meant that when I reviewed and familiarised myself with the footage, having the video allowed me to easily remember points within the interview and even detect small cues of both the participants' and my body language, such as smiles and engagement.

7.3.3 Considerations for the data

The interviews were conducted with some of the participants I filmed during the ethnography (trainees and consultants). Given that the number of potential participants was limited, I was initially concerned whether I would have an adequate sample size to achieve "saturation" from the interview element of my data and expressed this concern to my tutors early on.

During my interviews, my PhD supervisors seemed less concerned about sample size than I was. Initially, I did not understand why. Coming from a clinical background that encouraged a positivist approach, the sample size is an important consideration of

quantitative research. Many believe that the same consideration should be given to qualitative research. For example, my funding application for research was unsuccessful from the Royal College of Surgeons of England. The only negative feedback from two of the three people assessing my application was that I had not used a power calculation to determine an adequate sample size for the filming.

As my understanding of qualitative research increased, so did my knowledge of sampling considerations. For the video ethnography, it was easier to determine how many clinics I should observe and film based on studies using similar methodologies and settings. However, for the clip selection interviews, I was limited by a set number of participants who had been filmed. The sample size was sufficient given the initial research objectives for the interviews: firstly, to understand the trainees' roles within the outpatient clinic and how this has changed during COVID, and secondly, to explore the extent to which trainees and consultants share an understanding of learning in the surgical outpatient clinic. With these in mind, I did not need to interview huge numbers; it was more important that I considered the opinions of those who had already been part of my PhD study during the video-ethnography phase.

LaDonna et al. (2021) explained that many see rigour as synonymous with saturation. Instead, they argued that analytical and data sufficiency can be used by qualitative researchers in areas where saturation is not possible. It was not until I completed my interviews that I fully understood this concept. Within the interviews, these came from thoughtful questioning, which encouraged participants' reflection concerning the videos and research questions, while allowing flexibility and time to ensure participants could share information they felt necessary. Additionally, as I explain later in this chapter, some of the most important findings were ones that were only mentioned once. Given the focus on the unique considerations from these interviews, I now embrace the findings of these exceptional cases and understand that it would be difficult to find these in limitless interviews. Therefore, by interviewing a wide range of participants and asking thoughtful and open questions, allowing them to share in-depth considerations and sharing an appropriate representation of these, I hoped to ensure that the data and analysis were sufficient to address my research question.

Malterud et al. (2016) proposed the concept of information power to consider the amount of data needed. They explained that a small sample might be appropriate when there is a

specific research aim, a small population to draw on, an established theory, strong dialogue, or case analysis. Information power focuses on the importance of the data within the sample, suggesting that the information held within each sample may allow for smaller sample sizes (Malterud et al., 2016). For my PhD, my interviews were used to ask specific questions to a select group. I did not know beforehand whether the dialogue would be strong or weak. However, having developed a good rapport with participants during my video-ethnography stage, I knew they were comfortable having in-depth discussions about the clinics and their feelings towards them. Having presented the theory in Chapter 2, I have articulated that while no specific theory exists on how trainees learn in clinics, I was likely to consider affordances (Billett's work) within the clinic. This theory may suggest that I did not need a large sample size to develop information power within my study, as long as the data was insightful.

One element of information power is considering the quality of the dialogue. Many qualitative researchers review whether they have collected enough data through *saturation,* just as I had early on (although I later realised this was not possible for my study). I had decided before starting my interviews that I would likely use thematic analysis to analyse my data. When considering thematic analysis, Braun & Clarke (2021b) consider saturation to be neo-positivist and discovery-orientated and not useful for messy data constructed through reflexive interviewing. These considerations validated my thoughts that saturation was not suitable for my study. rTA is a specific form of thematic analysis which represents the values and sensibilities of qualitative paradigms and one where saturation is not a measure of validity during its use. Additionally, they explain that concepts such as information power, as above, are more useful for those using rTA as it allows users to consider information richness (Braun and Clarke, 2021a).

Given the discussions on sample size and information power, I was happy to interview those from my video-ethnography stage with a focus on good quality data, which I knew must come from careful and reflexive semi-structured interviewing. Although I decided to use thematic analysis early on, I was unaware of the different approaches to this analysis initially. Like Trainor & Bundon (2021), I found that many papers did not explain their approach to thematic analysis but were drawn to rTA due to its reflexive approach. In addition, rTA is useful when researching under-researched areas or working with participants whose views are not known (Braun and Clarke, 2006). Given that my research

explores a topic with little in-depth research, alongside the additional impact of the pandemic, I perceived that rTA would be a good fit for my data.

In the next section, I explain the interview process and results before I explain how I used rTA to analyse my data and present the resulting codes and themes generated from the interview data.

7.4 Results from the interviews

During the video-ethnography phase, I filmed 12 video clinic consultations undertaken by eight trainees. There were ten corresponding senior discussions amongst seven different seniors (including one senior discussion held with two consultants and one with a senior trainee). For this stage, I emailed each participant asking them to be interviewed. I received 11 replies and held interviews with seven trainees and four consultants. I explained the interview's purpose and verbally reconfirmed consent before starting to record.

In each interview, I showed the participants their recordings in their entirety (including the consultation and senior discussion) before asking questions about what they considered to be learning events after giving the definition (as defined in section 5.1.2). I asked the participants questions to explore their reasons for choosing these and occasionally shared my observations of learning where a participant seemed to require prompting. I was aware of the surgeons' time pressures, so each interview lasted just less than one hour, although a couple of interviews were split due to the surgeons' time constraints. For those who had two filmed consultations (including the consultants), I varied when I showed the second recording depending on what felt most natural depending on their availability, i.e., either one more extended interview or split over two separate sessions.

7.4.1 The interview locations

As the interviews were held online, participants had greater flexibility regarding when and where they conducted the interview. I felt very privileged at the participants' dedication; many offered interviews during their annual leave, and others had interviews after long days on-call. One participant, who developed COVID and needed to rearrange their interview, contacted me with regular updates after cancelling their interview and messaged the day they felt well enough to conduct an interview despite still having COVID. I offered to postpone or cancel the interview, but they explained they were keen to participate in the

study. In addition, I noticed that one trainee was in the park during his interview, and he explained he was pushing a pushchair. I offered to rearrange the interview, but he explained that his wife would be giving birth in the next day or two and wanted to ensure I had my interview data before that point. At this point, I realised how invested the participants had become in my research, which became my driving force during more difficult moments of my PhD.

7.4.2 Interview transcription

I transcribed each interview 'intelligent' (or naturalised) verbatim (McMullin, 2021). This method of transcription is described as reflexive, as the researcher is conscious of their effect on the transcript and the representation of their participants (Bucholtz, 2000). I chose this method because I thought it necessary to recognise specific characteristics such as pauses and repeats. Still, I did not want these to distract from the overall voice of my participants. For example, sometimes, the interviewee might repeat 'I' four times mid-sentence or stop mid-word, and I only included these where I thought this was meaningful rather than distracting from the content. I felt this mode of transcription would work best given my advantage of reviewing video footage, where I had the additional benefit of viewing the body language. Additionally, I thought this mode aligned well with the constructivist paradigm, as it allowed a level of interpretation around the nuances of speech while still representing my participants' voices. Other educational researchers working within this paradigm have also used intelligent verbatim transcription (Olanrewaju, 2021; Greve and Tan, 2021).

7.5 Findings from the interviews

As explained earlier in this chapter, the purpose of the interviews was two-fold: firstly, to select clips for the reflexive sessions, and secondly, to discuss trainees and their position as learners within the clinics to respond to my research objectives around considering the perceptions of the trainee role and training within clinics. Here, I review each of these findings separately.

7.5.1 Clip selection

One goal of the interviews was to consider which clips should be used within the reflexive sessions, which are discussed fully in the next chapter. Like Carroll et al. (2008), the early pioneers of VRE, I was keen to choose clips that represented early developing themes, with

consideration of the sound quality and ethical considerations. The VRE principle of *care* was also vital; therefore, I did not include any clips the participants did not want me to use. The only two times participants asked me not to use clips were both trainees. One example was when the participant thought that spending a long time conducting a calculation would not benefit my study, and another time a trainee had not been able to answer a question posed by the consultant. I do not feel that anything was lost by respecting participants' wishes not to share data; conversely, I think this trust allowed participants to be more open.

Unfortunately, I feel that the time pressure within the interviews meant that although I could explore some topics in great detail, I could not always delve into participants' experiences of clip selection as much as I would have liked. I also needed to consider the length of the resulting clips following the interviews. I was aware that the reflexive interviews would be time pressured and therefore wanted to produce short clips which could represent the data without taking too much time from the discussion. I sat down with one of my supervisors after reviewing and transcribing the data. We discussed the data, and I explained the main findings from each interview. In **Table 6**, I have listed the topics identified from the participants' stories relating to the research objectives. I created two resulting clips which were shared during the reflexive sessions alongside one image. I will explain these in greater detail in the next chapter.

Table 6: Topics identified from the interviews for use in the reflexive session clips

Interview topics
Bowel nurses/MDT
Level of support from seniors (with reference to the CiPs)
Social interactions when training/educational approaches
Organisation of training
COVID/telephone influences

7.5.2 Generation of themes

To ensure quality within my analysis, Braun & Clarke's (2021a) six stages of rTA were adhered to when generating the themes. The six stages are familiarisation, coding, generating initial themes, developing and reviewing themes, refining, defining and naming themes, and writing up. I completed this process with support from my supervisor, who had much more experience in thematic analysis and talked me through my thought process and decisions at each stage. This process allowed me to generate codes and themes rigorously with consideration of the participants and their data concerning my research aims and objectives.

Although transcribing allowed some familiarisation of the data, I was also drawn to Matthew Wood's familiarisation doodles in Braun & Clarke's (2021a) text. I created a familiarisation doodle for each of my interview participants. I provide an example of a familiarisation doodle in **Figure 7-1**. I found this process incredibly useful as this allowed me to think about the meaning of each interview. I kept each image visible during the next steps of rTA.

Figure 7-1: Example of a familiarisation doodle used during the reflexive thematic analysis process from participant Trainee 1F (Method 1, Trainee F).

Once I had completed the familiarisation doodles, I made notes on various parts of each interview transcript text. These notes further supported my familiarisation and were then later used to develop codes. An example of this process is given in **Table 7**.

Table 7: Initial comments leading to codes during the reflexive thematic analysis process

Text from transcript	Initial comment during the familiarisation process	Final code
"making a point of taking an individual approach and thinking, the patient's independency and what's best for them rather than taking the blank statement of what needs to happen, and trying to learn how to work with the parents and guide them to the decision rather than telling them what to do." - **Trainee A**	1. Understands the need to take a tailored approach to communication and care. 2. Discussion about shared care rather than paternalistic care	Individualised patient care

Kiger & Varpio (2020) explained that codes might be considered in multiple ways. The resulting codes can either be *semantic*, which captures what was said explicitly, or *latent*, which reflects the underlying meanings within the data. In addition, codes can either be *inductive*, which comes from the data, or *deductive*, which arises from previously considered theories and theoretical frameworks. I was mindful when reviewing each code that I needed to consider the bigger picture, i.e. the influences both on and from the clinic beyond the trainee and the consultant. Therefore, although my coding process did not strongly lead to an ultimate association at the extremes of these distinctions, my codes may be considered somewhat latent and deductive. These processes and considerations resulted in 116 codes across the 11 interviews.

With the support of my supervisor, I linked multiple codes together to generate initial themes. I had been concerned about a large number of codes initially. Still, I was pleased that some similar codes fit into separate initial themes when organised with consideration of the data and research questions. When linking each of the codes, initial themes included titles such as 'learning through the process of Aimee's research' and 'prior medical knowledge and experience'. Each initial theme was scrutinised in relation to the research questions to consider how the initial themes could be combined to relay a message. I had been concerned about each theme merely repeating my interview topics early within the rTA process. However, Braun & Clarke (2021) emphasise the difference between early topic summaries (or data categories) and themes within rTA, which are stories or patterns of meaning within the findings. I was keen that my final themes represented my participants' voices rather than merely summaries of the questions I posed during the interviews.

7.6 The findings

Through the rTA process, I developed five themes related to considerations of trainees' learning which supports their training within the surgical outpatient clinic: (1) Knowing your and other team members' roles and responsibilities, (2) VRE provides space for reflective conversations about learning, (3) "Moving with the times": developing understanding and approaches to learning and practice, (4) The child's care as the goal provides the context and framework for paediatric surgery clinics, and (5) The clinics are a distinct place to develop surgical autonomy. In addition, some themes also had sub-themes, which are considered within each theme.

7.6.1 Theme 1: Knowing your and other team members' roles and responsibilities

An important aspect of clinic learning included recognising the various roles and expectations of each person within the clinic. For example, Trainee C referred to themselves as a *"very, very junior registrar"* who is *"developing all the time"*. This comment suggests that the trainee felt a responsibility for learning and developing. Expectations varied depending on staff members' roles and level of seniority. During the interviews, consultants and trainees reflected on the trainees' positions and perceived roles within the clinic. Although all trainees had a role within the clinics, both shared a perception that the trainee's level of seniority influenced what was expected from the consultants and from the trainees themselves, with independence growing over time with experience:

> *"And I'm still very, I keep laying it on that I think I'm very, very junior registrar. So I still feel like I'm developing all the time. So this [clinic recorded in video] is, was, what, a month, two months ago. Since then, I guess my independence, my confidence has grown a little bit more."* – Trainee C

> *"Depending on trainees and the level of experience, I think it works quite well by dividing and always setting expectations on the training, to say these are the patients that you're going to see"* – Consultant A

Regardless of seniority, certain expectations were placed on the trainee that both trainees and consultants understood. Consultants focused on the larger picture of how the day-to-day clinics are managed and considered how the trainee fits within this. In contrast, the trainees seemed much more concerned about the aspects that might impact their own clinics, such as time management and uncertainty, reflected in the quotes used throughout this theme.

7.6.1.1 Subtheme 1 – The trainee as a manager

In order to appropriately manage a clinic consultation, trainees were expected to prepare beforehand by reviewing the clinic list and reading about the patients and presentations to be seen. This preparation is seen as the norm by trainees within this department, one of whom explained, *"I'd obviously read the notes beforehand"* (Trainee C). The consultants recognised this preparation, though, one of whom explained: *"I must really commend the current a lot of trainees I have who are more enthusiastic who do put a bit more preparation*

into clinic" (Consultant A). This preparation had *"an effect on the quality of the learning event"* (Consultant B), which is further explained below:

> *"So, the whole domain about, you know, ensuring that there is a proper referral, understanding the referral pattern, and making some initial judgments about the reason why the patient has been referred in the first place. And then already you're trying to formulate, you know, what kind of questions you [the designated clinician] want to ask."* – Consultant A

Although trainees were expected to prepare, consultants played a role in selecting appropriate patients for the trainees to see. Consultant A explained how trainees' prior preparation, along with the trainee level, can help them to determine which patient is best for which trainee, and how clinic letters can help to support trainees before the consultation:

> *"They [the trainees] can spend a bit more time looking through the clinic letters for that patient and understanding that patient and knowing what questions they need to ask."* – Consultant A

The consultants and trainees agreed on trainee patient management expectations during the clinic appointments, with both groups emphasising the role of gathering a detailed history, considering how this fits into the overall consultation:

> *"So being able to attend clinic, communicate with families, gather information, process that information, and independently deliver management to the family is very important."* – Consultant C

> *"I have the opportunity to speak to the patient, take a proper history, and maybe do some physical examination if it was a face-to-face, maybe to put a plan in my head and then go and discuss that with the consultant so he can give me some of his experience."* – Trainee E

Following each consultation, trainees were expected to communicate information clearly to other teams, which was usually done via the clinic letter completed by the trainee. Patients also usually received a clinic letter, in addition to anyone involved in the patient's care, so this letter was important for communication. Interestingly, none of the trainees discussed clinic letters during their interviews, either as a learning aid for themselves or to share their knowledge with the recipients. This may be an area where the trainee and consultant's perceptions of important aspects of the role differ. One consultant explained that they encouraged their trainees to ask the patient who is involved in their care to understand the wider aspects of MDT support:

> *"I asked them who I should be writing to, I say, who are the most important people in your child's care? And they will not infrequently come up with people that I would have forgotten. Health visitor or something. And they also usually don't mention themselves and when I say that, it makes them think about it".* – Consultant B.

Many management responsibilities were expected of the trainee or the trainee perceived these to be expected. Firstly, the trainees focused largely on time management. One consultant explained that each clinic consultation has a *"15-minute slot"* (Consultant A). When reviewing the clips, multiple trainees reflected on the time taken. One stated, *"maybe I have to be more efficient in my history-taking, and stuff"* (Trainee C), and another commented, *"but it did appear to be quite a lengthy consultation"* (Trainee F) after a 14-minute consultation (not including the senior discussion). Although Trainee F expressed concern about time management, they also recognised that, *"with parents, sometimes you got to take your time. You can't really rush in, and it's not a race against the time"* (Trainee F), which provides useful insight into the need for individualised care within outpatient clinics.

Trainee A also focused on time management, stressing, *"obviously, that impacts all the rest of the consultations",* meaning that clinics *"start running late"* (Trainee A). Trainee A further commented that it would be more beneficial to allocate *"more time for more complex patients, especially when they're chronic ones and need more discussions".* They further indicated that time management might be important for trainees' learning too:

"If I'm honest... [if you're running behind] you don't get as much time to chat about things before and after." – Trainee G

In addition to time management, another important area was managing safety and making safe decisions. One trainee explained, *"it's not something you get lots of experience that as a more junior…but you suddenly are making decisions"* (Trainee C). As trainees often review patients independently, they must make safe decisions and understand when to escalate their concerns. One consultant explained that management planning is an expectation within the clinic, albeit one which is expected towards the end of surgical training:

"I would expect a trainee at that level [towards the end of surgical training] to be able to come up with a management plan that suits that particular patient and after coming up with the management plan, being able to provide the advice in order to proceed forward" – Consultant C

Participants deemed this management planning necessary for developing the trainees' decision-making skills, which are essential for practising safely and identifying when support is needed. As explained by Trainee F, an important decision was, *"are you going to offer surgery straight away? Are you going to watch and wait?"*. Alternatively, it might be preferable to refer some patients to another team. One trainee described part of their role as deciding *"whether to proceed with that patient, send him back to his general practitioner, or send them to another speciality to help me in that"* (Trainee E). Regardless of the decision made, trainees must know the limits of their abilities, which will vary depending on the trainee's stage. One junior trainee explained they "*run most things, if not everything, past senior colleagues*" (Trainee C).

When trainees sought advice on the next steps, being able to *"present key points [was] vital"* (Consultant C). Clear and concise communication was expected from trainees, not only to ensure safe care but also to facilitate learning through the trainee discussing their thoughts with the consultant:

"I will gather information from the parent first on the phone and then have this discussion where I summarise the case. Tell them what my impressions are

and what I would do about it and then see what would they think. Sometimes they'll ask me some questions to add a bit more information." – Trainee F

Seeking advice also allows the trainee to reflect on their consultation and consider points for improvement. One trainee explained how they acted on some feedback during their filming when confirming the patient's identity. They explained they were advised to check *"the date of birth for the phone consultations. I didn't actually do that, but I started to do that now"* (Trainee G). Another trainee explained the feedback given during the senior discussion was *"really valuable, as well as highlighting the cases so I can go away and learn more about them"* (Trainee C).

Both consultants and trainees explained that part of the role of the trainee is knowing when senior support is needed and when they can manage care more independently; however, in general, trainees were expected to develop independence through a supported process:

"[If you are supported to be independent] you feel part of it rather than an observer or a recipient. The fact that you've got somebody delivering independent practice produces a degree of, it pushes you [the trainee] within that envelope." – Consultant B

This support and graduated independence are important when supporting the trainee to develop management skills within the clinic. The comments above suggest it is crucial that trainees feel a valued part of a clinic culture in order for them to feel supported to safely develop and gain increasing scaffolding of their role towards consultancy.

7.6.1.2 Subtheme 2 – The consultant is the overarching decision-maker

Both consultants and trainees understood the consultant's role within clinics as the overarching decision-maker. The consultant made overarching decisions about patient care and oversaw trainees' learning, in addition to their own case management. The clinic management was variable between consultants but often included some patient selection for trainees and senior discussions when a trainee attended clinics.

Although the trainee's role within the clinic is important, the consultant is vital for trainee support and ensuring that patients remain safe during the trainees' consultations. Each consultant manages their clinics differently in relation to which patients a trainee can see. When the research was conducted, no trainees did video consultations, which is explored further in the next chapter. In addition, each consultant manages their individual patients differently; one team provided a guide for trainees attending clinics to help aid trainees' learning and manage expectations. Within the clinics were attended by trainees, a senior discussion usually occurred in this department, but the timing and content of this varied between consultants. The trainees are aware that consultants manage their patients differently, with one having explained, *"sometimes different surgeons have different approaches for the patient maybe for the same condition"* (Trainee A).

The consultants were the overarching decision maker on which patients the trainees reviewed in the clinic. At the start of clinics, some consultants allowed trainees to see any patients, but others selected the patients. Consultant A explained they tried to *"divide the cases as such that there are nice cases for the trainees to see"* depending on the trainee's experience. Interestingly, they did not define a 'nice' patient, nor did I explore this further at the time. I expected a shared understanding may mean a patient who was not overly complex yet would challenge the trainee's knowledge. It was only after that I realised that this mutual understanding was an assumption, perhaps not a definition shared outside of surgery or medical practice. The consultant explained they allowed the trainees to have a say about their patient selection: *"two of the three trainees would check the list beforehand and come in the morning vocal about knowing what cases they have got"*. Conversely, another consultant encouraged their trainees to see all patients or selected patients for their needs, advising, "*pick the ones that you want to do or just have it as they come up*" (Consultant B). They explained *that "unless there's a child protection reason not to, I would rarely select a patient"* Consultant B).

During the clinic, one of the consultant's roles was to support the trainee's decision-making, which generally happened during the senior discussion. They needed to make decisions about patients under their care following a short conversation. One consultant explained how they decided on the degree of support depending on the trainee's confidence in management planning:

> *"There could be two things: the trainee comes and tells me that this is what I think we should do. And if they feel completely confident, comfortable about it, I would say yeah, perfect just carry on with that. If they tell me that they want me to add them to the waiting list, I trust their judgement if I know they're quite experienced. If they're more of a junior trainee, and just not very clear about it, then I would go in and examine it with them and then give them options to discuss it with the patient. If it's completely a condition beyond their experience and expertise, then I will come and explain those to the parents."* – Consultant A

Trainees appreciated that the position of an overarching decision maker was difficult, as the consultant must often *"accept as read what [they are] being told, as the consultant in the circumstances"* (Trainee D). There was also an appreciation that the consultants must think about the patient's needs beyond the consultation, with one trainee explaining, *"I'm sort of thinking more narrowly, what we do right now for her bowel problems. She's [the consultant's] highlighting the next step"* (Trainee C). Sometimes, the senior discussions were more straightforward, especially for simple cases. One trainee explained that within their filmed consultation, they *"went there, just summarised, and then had the discussion and agreed on a plan, and then went back to convey the plan to the mum"* (Trainee F). This comment suggests that although the consultant is still the overarching decision maker, some trainees may only require simple discussions to confirm their decisions with the consultant, rather than the consultants needing to make the decisions for them.

7.6.1.3 Subtheme 3 – The MDT provides influential support

MDT members were also key players in supporting trainees, even though their role in learning or teaching was less formal within the clinic. Firstly, secretaries and bookings teams were recognised for ensuring that the appropriate consultant sees the appropriate patients. They might also consider which patients are suitable for telephone clinics. Trainee E suggested, "i*f the patient is suspected inguinal hernia, for example, they will not arrange for them a telephonic clinic*". Although this can be helpful, it meant the clinic list was not always decided by the consultant, meaning that the consultant had no control over the number and type of patients seen, as explained by Consultant A:

> *"Now sometimes the patients that come to clinic are slightly beyond my control in terms of, you know, I vet the patients who come so you get a referral from a GP, or whoever, you triage them, and then they go from the ether and the booking team just pick things up and then fit them into slots."* – Consultant A

The consultant explained that they often see the clinic list *"a week before, but not necessarily"* (Consultant A). This lack of oversight meant that it was challenging to plan clinics suitable for trainees, as the clinics often had variable numbers of patients and complexities. Therefore, it was hard to know in advance whether the clinics would have ample time for teaching from the consultant or whether the trainee may need to see the patient more independently given time pressures.

Participants identified other staff members they understood to aid trainees and whom trainees approached for clinic-based support. This support might occur from teams in other areas, such as the ward environments, which can be utilised within clinics. One trainee gave an example:

> *"I remember having a discussion with the dietician at the time, the dietitian about PN (parenteral nutrition) and the fact again, that PN can cause liver dysfunction and, you know, and how the things you've got to monitor on PN and things like that."* – Trainee F

There were two specialist teams within the paediatric surgery team who the trainees looked to for support within clinics when the patients required specialised long-term care: the bowel and urology specialist nurses. These specialist nurses' guidance was sought for two reasons: first, to support patient care, and second, to support learning. One trainee clarified that they regularly sought advice from the bowel nurses to help determine best-individualised care by asking, *"what do they think is right practice for this patient"* (Trainee A). They also explained that they sought advice from the urology and disability nurses *"essentially to learn how to individualise [their] approach*" when managing complex patients. They viewed the specialist nurses as those who understand the long-term care of the patients, explaining:

"That's mostly with probably talking to the bowel nurses, because they are the ones that deal with the long term, obviously, management of these patients we do the operation and we kind of take a step back. And so I did chat with them. What are the pluses and minuses? What do they think and things like this." – Trainee A

Within the interviews, the comments above explain that the participants mainly considered the booking team and specialist nurses directly related to care and learning within individual clinics. These comments reflected the considerations within interviews, where participants generally considered those who impacted their direct learning within clinics.

7.6.1.4 Theme 1 summary

This theme has considered the responsibilities of trainees, consultants, and the MDT within clinics, especially in relation to trainees' learning. During the video ethnography phase, it was evident how many teams supported the trainees within clinics. The interviews focused on trainees' learning through direct and individual experiences, so many conversations focused on individual trainees and consultants. Even with this focus, these other members' importance and roles were discussed and considered vital within the clinic. No participants raised doubt about the purpose of these roles, although if other non-surgical participants had been interviewed, their views on each role might have differed. This MDT role in trainee learning, and additional key players within this, were discussed in much greater detail within the reflexive sessions, which I present in the next chapter. The next theme continues to focus on individuals' learning, considering how the VRE process supported reflections contributing to the interviews and each surgeon's practice.

7.6.2 Theme 2: VRE provides space for reflective conversations about learning

There is often the perception amongst other medical professionals that surgeons do not tend to reflect on their behaviours and experiences. Written reflections are not compulsory within the portfolio except when forming specific work-based assessments; however, the new surgical curricula discuss reflections stating that "reflection in the oral form is very much an activity that surgeons engage in" (ISCP, 2021c). They also explain that written reflection offers different benefits, such as record provision and a reference point for development; however, written reflection is not a compulsory part of the surgical curriculum.

During the VRE interviews, I found that the surgeons were both reflective and reflexive, considering their position and relation to others within the department and elsewhere. Reflections often occurred even when unprompted; therefore, this theme ponders how the VRE process encouraged reflective discussions and whether the surgeons found this a helpful process. These considerations are divided into two subthemes related to the surgeons comparing and contrasting their learning in clinics with others plus considering their own 'performance' during the filming.

7.6.2.1 Subtheme 1 - Reflecting on the paediatric surgery clinic learning through comparison and contrast

During the interviews, many consultants and trainees compared paediatric surgery clinics to other clinical areas, specialities, and hospitals. Firstly, the surgical trainees tended to compare their clinic experiences with work done elsewhere within the hospital. They recognised that the case-mix in clinics allowed *"continuity of care"* (Trainee C) not seen elsewhere in their surgical practice and, as one consultant explained, *"the on-call is very different to managing elective patients"* (Consultant C). Although the caseload within clinics is elective and different to other areas, some reflected on how clinic learning is similar to learning in other surgical settings. When asked about dedicated time for training in clinics, one trainee explained that specific training clinics do not occur. Still, this lack of dedicated training time is not unique to clinics:

> *"No, we don't have a separate training. It's the same thing like when you say, you know, training operating lists, there is no such training operating list. You've got an operating list, which are not created based on the trainee you have on the day, or based on the needs of that trainee, it's an operating list based on waiting times or clinical urgency."* – Trainee E

Although clinics may not be primarily set up for the trainees' learning needs, there was a recognition that specific learning does happen within the clinics. This unique learning often relates to the dialogue during the senior discussions. Trainee G reflected on how the clinic provides opportunities for conversations not experienced on the wards:

> *"I think it consolidates a lot of things and also touches on bits. So on the wards when the consultants are making plans, sometimes you just miss, you miss that*

thought process because they do it all in their head so quickly and then they tell you this is a plan." – Trainee G

The extent to which clinics were organised to support trainees varied between consultants, resulting in contrasting trainee experiences. During the interviews, trainees did not often compare their learning to each other, except when considering that trainees of different seniorities may be afforded more responsibility with increased knowledge expectations. Conversely, the consultants frequently compared themselves to other consultants during the interviews, with one considering how a colleague demonstrated 'model behaviour' in the way they set up their clinics for learning.

"Again, I know, I suppose [other consultant] shares model behaviour in terms of how he sets it up, he goes through before the clinic, he goes through the patients decides he's going to see him. At the end does his 'wash-up' as he calls it, at the end of the clinic, you know, goes through it and use that as learning points." – Consultant D

After watching their filmed senior discussion, another consultant stated they would *"love to see what other colleagues do"* (consultant B), as consultant surgeons did not often have opportunities to view each other. This observation of others within the team is something I explore further during the reflexive sessions in the next chapter.

In addition to comparing how different consultants support learning, the surgeons also reflected on their clinical learning and practice in clinics in relation to other clinicians. Trainees recognised they have more time to conduct clinics than GPs, with one trainee commenting, *"if you think about GPs, they've got 10 minutes and I [have] 14 in an outpatient clinic"* (Trainee F). These minutes do not include the time to review the notes and write the clinic letter, which GPs' consultation time would.

The trainees also compared their clinical work to surgical trainees in adult specialities and explained that there is *"no senior contribution to your decision"* (Trainee A) in adult clinics. Therefore, they recognised the increased support within the paediatric surgery clinics, with one trainee stating that within *"paediatric surgery, I find the support relatively good"* (Trainee B). This support is something I noticed during my ethnographic phase; paediatric surgery

trainees were supported much more closely in clinics than I and others were within an adult surgical practice. This support is something that could be viewed as either negative or positive. In my trainee experience, there were many occasions where I felt very unsupported, such as when breaking news about metastatic malignancies with no support. Still, on the other hand, this has made me more confident in my general decision-making outside the clinic. One trainee shared a similar sentiment:

> *"I've been obviously in other specialities, which are much more hands-off, especially in adults during core training where it does feel that you're doing the job but you're trying to be safe but not really learning, a lot of it is just no senior contribution to your decision."* – Trainee A

In addition to reflecting on the varied support between adult and paediatric clinics, interviewees recognised differences in surgical management between groups. One trainee, who had senior experience both within adult and paediatric specialities, explained this difference:

> *"Now, regarding the treatment, usually, in the adult there is a medical and surgical treatment. And most of the adults and even the surgeon would prefer going for surgical treatment, just to stop that and stop or find a quick relief for that pain. For example, sphincterotomy or partial sphincterotomy to me is something not applicable in the paediatric age group, which is something different to adults."* – Trainee E

While reflecting on the differences between paediatric surgery and other specialities, there was recognition that learning occurs within paediatric surgery clinics, and trainees recognised this learning as vital. One trainee new to the UK recognised they had the *"opportunity to attend…clinics regularly"* (Trainee E). Another explained how having experience in a different country allowed them to understand how learning occurs within this department's paediatric surgery clinics and how this prepares trainees for consultancy:

> *"In the United States, it's probably the single biggest difference in how they train residents and fellows there compared to this side of the Atlantic, where they're very, very heavily operative focused. And they have to do a lot of their clinic*

learning as a consultant then, to some extent, a lot of that might be having to pop next door to another consultant to ask them to look at something actually quite anodyne or innocuous that they may not have ever seen during training by virtue of their lack of clinical exposure." – Trainee D

This comment highlights how trainees' views of clinics within the UK might differ from those elsewhere and the importance of considering the findings within my research setting. Furthermore, it suggests that even within surgical training, there are many different focuses between countries, which may reflect their curricula and surgical culture. By asking the trainee to view their own video in the interviews, they could consider how their consultation differed from other places they had worked and reflect on this during the interviews. Interestingly, these discussions about variations were unprompted by my questions but often occurred shortly after watching their consultations.

In summary, surgical trainees reflected on their learning and work practices through comparison and contrast. This process allowed the trainees to recognise the importance of the clinics to their learning and progression. This comparison happens throughout surgical practice: comparing complication rates to other surgeons within morbidity and mortality meetings and considering trainee competence levels within workplace-based assessments. This practice suggests this method of reflexivity might be somewhat comfortable and normal for surgeons. In the next subtheme, I explore this further by considering how filming during the VRE process allowed surgeons to reflect on their individual practice and consider the impact filming had on their consultations.

7.6.2.2 Subtheme 2 - Reflections on the video-ethnography process

Completing the video ethnography and clip selection interviews with each surgeon allowed trainees and consultants to observe their consultations and senior discussions, plus consider their execution. This sub-theme focuses on surgeons' reflections on behaviours observed and their feelings towards being filmed during this process. This sub-theme is summarised well by Trainee F's quote:

"I think it was quite impressively useful to see…., we don't ever get the chance to do that, isn't it? Because whenever you do something, you don't get recorded. So unless you've got someone with you in the clinic, giving you direct

feedback afterwards, you don't know how you performed. So I think it was useful in a way in retrospect, to look back at the consultation, both with the parents on the phone, as well as with the consultant, so medic-to-medic and medic-to-parents. So yeah, I think was a very useful experience." – Trainee F

The interviews allowed the consultants to view their trainees doing a complete clinic, which they often might not see them do otherwise. I stressed in the information sheets and before I started filming that this process might be an opportunity for the trainee to obtain a workplace-based assessment following the filming. However, informal conversations with the trainees after and with one trainee during the reflexive sessions (discussed in the next chapter) suggested that trainees did not embrace this opportunity. Although the trainees did not seek assessments, the consultants commented on the trainees and their learning during the reflexive sessions. Although the consultants were asked not to critique the trainees' performances, they often provided insight into their thoughts on the trainees' performances, as demonstrated by two consultants:

"Let's just say that the trainee appeared confident trained for the level of training, seemed to have a better knowledge than others I would have thought about that level." – Consultant A

"I think it was a pretty well run clinic, delivered nicely, presented appropriately, and, you know, it was fed back to the family appropriately." – Consultant C

These comments suggest that consultants were keen to consider their trainees' performance and provide positive feedback. Although surgeons are often not regarded as reflective practitioners (especially in comparison to their counterparts), I found they were thoughtful and reflexive throughout the process, considering the trainees' practice, their practice, and their team. Generally, consultants tended to comment on their own performance while watching the video, rather than the trainees. These were mostly simple reflective observations, such as "*it was a nice trainee-trainer interaction*" (consultant A), or thoughtful critique, such as: *"I managed not to swear for however long it was"* (consultant D). One consultant critiqued their own performance by comparing their actions with the trainee's, which they used to consider trainee learning during the process:

> *"I found myself critiquing myself, but also taught in the context of the many other times that you have a trainee and how I've done it [providing explanations to patients during the clinic] worse in the past or better in the past or terribly in the past"* – Consultant B

Although I used the same interview guide for both consultants and trainees, I found that the consultants were much more reflective and critical of their behaviour than the trainees, who openly discussed how they felt during filming (considered later in this section) and avoided critique of themselves. This may suggest that trainees are not as reflective as their consultant counterparts or are less comfortable sharing these reflections. An exception to this was a senior trainee, whose video led to them recognising their overuse of medical terminology:

> *"I occasionally use the medical jargon that I probably would normally avoid, like use the term perineum and that kind of thing."* – Trainee D

Although the clip selections aimed not to critique behaviour, it is interesting that this trainee was able to use this process to develop an aspect of their clinics, therefore using VRE as a space for learning and reflection about their use of language and jargon. During the interviews, one consultant provided a similar perspective, reflecting on the degree to which their behaviour was typical given the camera's presence during the video ethnography phase:

> *I'm glad that that [trainee] comes across as being relaxed, able to do it without seeming anxious or worried about the situation [video recording] which is which was good."* – Consultant D

This comment suggests the consultant thought the trainee remained calm even with the presence of a researcher (me) in the room and my recording equipment. During my ethnographic reflections in Chapter 6, I considered that trainee clinic consultations did not appear to change due to the filming and presented my suggestions about why this might be. Conversely, it appeared that the senior discussion did change when filmed. One consultant supported my observations, questioning, *"do I give that sort of support at the time? Probably not to that degree"* (Consultant D). Multiple similar consultant comments

made clear that although the trainee consultations did not seem to be impacted by filming, the senior discussion was. This impact suggests that consultants may have moderated their support during the filming process or reflected on the support given during filming. Although I explained before filming that I did not want to impact the running process of consultations and senior discussions, one consultant explained that the filmed consultation was not a typical set-up:

> *"So, I don't think was that typical. You know, I tend to, if it's telephone consultations of something so straightforward, I tend to just let registrars do them on their own. I don't necessarily supervise them to do it."* – Consultant D

In this case, the trainee wanted to be involved in the study and so used the consultant's room for filming with the consultant sitting in, so it is clear why the consultation was not typical; however, even when trainees had their own rooms and clinics appeared to run normally, both the consultants and trainees recognised that the senior discussions were longer and more detailed than usual. This difference was due to the trainee providing more information and the consultant giving more feedback and teaching than usual, as represented by Trainee C and Consultant B below:

> *"So I'd say that's pretty typical of a discussion. I would have with [consultant]. I might not run through it in quite so much detail, like a full history, if I'm honest. I guess part of that was for the filming process to say."* – Trainee C

> *"Perhaps I covered more, more issues, but in the same detail, so maybe what I would have done is picked two or three and then focused a little bit more on 'this what I think we should do there'."* – Consultant B

These comments demonstrate that the participants recognised that the video ethnography impacted the overall consultation, even if not the individual clinic appointments. I suspect this was because the consultants were trying to reflect the findings they considered important by emphasising learning. This was corroborated by consultant B, who explained their senior discussion was impacted due to the video, but only as he was *"trying to be helpful"*.

Although the filming did not seem to affect trainees at the time of filming, some felt uncomfortable when watching them back, describing viewing the video as "*slightly painful*" (Trainee C). Although Trainee D agreed, by saying *"it's really hard to watch yourself"* and explained that they *"hate watching [themselves] in general"*, after watching two consultations, they later said:

> *"I was surprised myself at how little I interjected because I normally can't keep myself quiet that long. So, it was kind of nice to see for once in a while."* – Trainee D

Unlike other clinical specialities, like general practice, surgical trainees do not routinely have their practice recorded outside of emergency simulation training. Given that filming had the potential to cause discomfort to the participants, their comments demonstrated how engaged with the process the participants were. One trainee, who was nervous about their video being shared, worried that their video's exclusion might impact my study. They stated they did not want a particular clip shared, but only *"if it won't make a big difference"* to my study (Trainee G). Throughout the process, trainees became increasingly engaged. One trainee, who had initially seemed reluctant to participate in the filming, explained how useful the process had been:

> *"The good things are not easy to organise, to set up. So I think it's a very, I think from my point of view, watching my performance, whether it was clinical, any other performance, I think it's a very useful, very useful thing. Thank you."* – Trainee F

The trainee explained during the filming process that it would be useful to use the VRE in other areas of surgery, such as consent. It was not only this trainee who considered how VRE might be used further within the department; one consultant pondered how to integrate VRE moving forwards:

"So how you would involve video ethnography, if that's the right term as part of your routine training and how you would use what you've done, sort of further develop it, you know, who would do it?" – Consultant B

This comment suggests that some team members would be keen to include similar processes in their practice after participating in this study.

7.6.2.3 Theme 2 summary

This subtheme demonstrated how VRE was used to support reflective discussions with consultants and trainees, how the process supported reflections on outpatient clinics for consultants and trainees, and the impact that filming had. This study, therefore, became its own learning process for the individuals involved in the research process, considering aspects of their curriculum and how their learning is organised. The surgeons considered their performance and reflected on the VRE process, with some considering how VRE might be integrated into their practice moving forwards. If integrated, this filming would be a move towards planned obsolescence, the ultimate goal of VRE (Carroll and Mesman, 2018). Considering the evolution of thoughts during this process moves nicely onto the next theme, which considers how trainees' learning and outpatient clinics adapted over time.

7.6.3 Theme 3: "Moving with the times": developing understanding and approaches to learning and practice

During the interviews and coding process, it was clear that evolution occurred within the clinic, both in how trainees learnt and within the clinics themselves, including the clinic set-up. The trainees' learning and development are gradual and somewhat standardised, partly due to the ISCP curriculum and the new introduction of clinic-based CiPs. How a trainee develops their learning for the clinic is probably not too dissimilar from the process undertaken by their consultants when they were trainees. Any changes to this learning are gradual, building on prior knowledge and skill development. Conversely, the way clinics take place has evolved rapidly, fuelled by the pandemic. This theme uses two sub-themes to consider this evolution in relation to trainees' learning and how surgical outpatient clinics were conducted (with rapid changes resulting from the pandemic).

7.6.3.1 Subtheme 1 - The evolution of trainees' learning processes for clinics

Before starting core surgical training, surgeons must first learn to become doctors and develop the required skills in all specialities, such as history taking, examination skills, and management of general medical conditions. Later, during surgical training, trainees must learn *what* information is needed to fulfil this role and develop the necessary skills to know *how* to be a surgeon. Cossart & Fish (2005) explain this as two separate phases within training: firstly, they describe the examination syllabus, which occurs early on and often in classrooms. Secondly, trainees must later learn how to be a surgeon, learnt 'on the job'. This sub-theme considers how surgeons feel their learning has developed, thus providing them with knowledge and skills to manage the surgical clinics (as discussed in theme 1). Unlike in other themes where quotes generally represent a range of participants, many quotes throughout this subtheme are from Trainee C, as this trainee explained how their learning developed over time in detail. Their quotes best represent the brief information provided by multiple trainees within this theme and tell the overall story I heard from trainees when considering how learning develops for clinics.

Those who described learning from medical school tended to discuss basic knowledge required to be a doctor, as explained by Trainee C, such as knowledge of medical conditions (*"my own learning from that [hydroceles] comes maybe partly from med school"*) and knowledge of medical management (*"from med school when we learn about pharmacology"*). They also explained that medical school teaches them to conduct focused history-taking by *"starting with some more open questions and then moving into some more closed ones"*. Before starting surgical training, surgeons may develop helpful knowledge and skills from other placements, including non-surgical rotations, which trainees may use within surgery. One trainee explained how these placements provide a stepping stone away from medical school:

> *"So you learn about it [nutrition in surgical patients] at medical school but the first time in a clinical setting and hospital setting as a qualified doctor was as an F1 in HPB (hepatobiliary surgery)."* – Trainee F

When surgeons start their surgical training, they need to develop specific knowledge of surgical conditions seen within the surgical clinics. Initially, this learning aims to gain an understanding of specific conditions within each speciality. Within adult general surgery,

we did not have a ‘go to’ textbook we used to understand common conditions seen on our rotations, but Trainee A and Trainee E explained that the standard textbook within paediatric surgery is “Ashcraft’s” (Holcomb et al., 2019). This book provided trainees with information about conditions they might encounter within the clinics, some of which they might not have seen in other settings.

It is not just knowledge that trainees need to learn to understand clinics. Trainees also require non-technical skills early on. Trainee A explained that the MRCS exam’s *“communication stations”* and *“courses like CCrISP (Care of the Critically Ill Surgical Patient)”*, were where they focused their surgical history-taking skills for the clinic. CCrISP is a course that began in 1998 and is undertaken during core surgical training, covering acute skills such as critical management and peri-operative communication, which trainees may use in various settings, including clinics. This course is completed once the trainees have attended some surgical clinics and been exposed to some surgical practices. Trainees can apply information from this course in combination with the practical and experiential surgical knowledge and skills from other aspects of surgical training. One trainee explains how learning for clinics can often be obtained from multiple various places:

> *“It’s [childhood hernia] something we see in clinic relatively commonly and we see acutely. We can see a lot of children with groin swelling, so we deal with them acutely. It’s still something that I do that is difficult. It can be difficult to differentiate between hydrocele, hernia. Yeah, learning on the job from more senior clinicians examining, following a patient through. So, examining a patient, going with him for a scan, see what scan shows, see what the operation shows sort of correlate what you’re feeling what you’re seeing with ultrasound findings and operative findings, and then other resources.”* – Trainee C

Although I explained at the beginning of this theme that the subject-specific knowledge obtained by surgical trainees is likely not too dissimilar to consultants, in that it is often learnt through books and courses, there is perhaps one way that trainees learn differently. Many trainees explained that they used online patient resources to aid their own learning. Multiple trainees explained that as well as recommending online resources such as ERIC (ERIC, 2021) to patients, they also used this to aid their own learning on how surgical conditions might impact children and their families, as described in the following example:

"Then there's a few websites. So, I know [colorectal consultant] recommends the ERIC website to a few of the parents so I've used that myself to have a look at what is recommended to parents. That's something I recommend for them, because it's quite accessible I think to the general population, so I learn from that." – Trainee C

Using online patient resources for learning is an exciting development in how trainees' learning resources have developed over time. As trainees use online resources for their learning and patient management, patients have also generally moved towards online resources. The benefits of trainees learning from online resources are two-fold: to aid trainees learning and so that the trainees know which sites are reputable for patients. This awareness of online resources is beneficial when patients might obtain misinformation when searching for themselves. Although these resources do not replace traditional textbooks, trainees gaining knowledge through online patient resources before attending clinics is an exciting reflection of current times. This subtheme has considered *individual* change and development by exploring how trainees approach learning and how this approach changes during training and during changing times. The next subtheme will consider *clinical* change and evolution.

7.6.3.2 Subtheme 2 - The evolution of surgical clinics in a pandemic era

As explained elsewhere, telephone clinics were not the norm within the paediatric surgery department before the pandemic, except for the urology team (Charnell et al., 2021). I was privileged to support the team through their transition to telephone clinics during the early pandemic by completing a QIP within the department, which I reported in Chapter 4 (Charnell et al., 2020). I have explained previously that the consultants transitioned from being experts to learners during this time. Consultant surgeons undertook early telephone clinics prior to trainees' attendance during my QIP, so I later considered the trainees' transition during the clip selection interviews, focusing on how this change impacted their learning. This subtheme considers the influence of the pandemic on trainees within clinics and the role of telephone clinics in learning within outpatient clinics.

Once consultants became more familiar with conducting telephone consultations, trainees were invited to participate in telephone clinics too. Trainees explained that the telephone

clinics were generally a new experience for those within paediatric surgery, meaning that most were *"not hugely experienced in telephone clinics"* (Trainee C). Trainee E explained that this experience was not unique to this department, but *"at least for me, and maybe for my practice back in [another country], it was a new approach, a new practice for me"*. They also explained that despite telephone clinics being novel, telephone discussions with patients were not entirely new, although before the pandemic, telephone discussions were previously for different purposes:

> *"I think telephone clinic, for me at least, was a new concept because usually, we used to see all the patients in a face-to-face appointment. Sometimes we have to make a phone call just to check for something or if she received a medication, which will be, like, not a complete evaluation or approach for a patient over the telephone."* – Trainee E

One trainee explained, "*it's still odd to me doing these by telephone*" (Trainee C), and although feelings about telephone clinics were mixed, they were negative overall. One consultant explained that *"the phones don't always work"* (Consultant A), which might add to the frustration, but the negative feelings towards telephone clinics went beyond technological issues. Many trainees expressed their general dislike of telephone clinics. Generally, frustrations focused on communication limitations within these. One example provided was that body language is missed during telephone consultations:

> *"Over the phone, there isn't even a body language element with communication. Somebody's just sitting there, taking it all in, which to some extent…you can spend more time just absorbing what's been said that in a consultation…where you have that element of, you know, the non-verbal communication to absorb as well, you know."* – Trainee D

There are other communication difficulties over the phone. One consultant explained that trainees tend to use more *"medical jargon…when they haven't got the patient in front of them"* (Consultant D). Trainee D explained this in more detail, stating that *"it's very hard to establish any kind of any doctor/patient rapport"* over the telephone. In addition to rapport and body language, telephone clinics also impacted how surgeons shared information with families. Surgeons often draw pictures to explain anatomy and surgical procedures to

patients. I did this in my own practice and gave the patient the annotated image to take home so they could explain things to their families. Visual representations, such as drawings, cannot be used during telephone clinics, making information dissemination more difficult for some surgeons. One trainee explained, *"whenever you have to explain anatomy to someone or a congenital abnormality, I think they fall short"*. Therefore, for certain complex *patients, "the first thing I do is say look, okay, I think we just need to see you face-to-face and talk it out"* (Trainee D).

In addition, one crucial element missed via telephone clinics was the ability to examine the patients. There is no alternative way for the surgeon to examine patients over the telephone. In some cases, this does not present an issue. One trainee explained that *"you don't have to examine every child, every time. Not every child needs an examination"* (Trainee F); however, another trainee explained that this is the main difference between face-to-face and telephone clinics:

> *"I think it's the same. Yeah, apart from missing the physical examination part, which sometimes we might do like a video call or sometimes we receive pictures of things. But yeah, but sometimes I feel I have to see the patient, I have to examine the patient."* – Trainee E

Although surgeons cannot examine patients during telephone clinics, those doing video clinics could see patients and visually review elements such as post-operative wounds. One consultant, who regularly used video clinics, explained that they *"could see them and interact with them"* (Consultant A). Despite the ability to view patients during video clinics, which might also reduce other issues discussed earlier, such as patient rapport and body language, trainees did not have access to video clinic software at the time of my study. This lack of access meant that trainees rarely conducted video clinics, which is why the pandemic alterations to my PhD focused on telephone clinics. This point around video clinics is considered further in the reflexive sessions in the next chapter.

In theme one, much focus was on trainee time management and time pressures within clinics. On a more positive note, surgeons felt that telephone clinics were quicker, which generally came across within the interviews. Even the language used when describing

clinics was more hurried, with one trainee having explained that they like telephone clinics for quick consultations:

> *"I think it's excellent for helping, you know, patients who have very, very benign problems that are likely to settle on their own anyways, you just calling to say 'has it got better yet? Great. Okay. Off the waiting list'."* – Trainee D

Consultant D explained that with telephone clinics: *"I suppose you can fit more patients*", meaning *"more exposure"* for trainees; however, this faster pace means that, as explained by previous interviewees, surgeons tend to *"rush people off the phone telephone calls"*. This reduced time was viewed as a benefit by some. Although many trainees disliked telephone clinics, one trainee explained that those who did faster consultations via the telephone could see more patients in a set time:

> *"I mean, they're better than nothing. (Laughs.) They, I guess, mean we can do more consultations in one clinic because of the physical capacity limits of bringing patients into the clinics so I guess they're good from that point of view."* – Trainee C

Interestingly, time was a recurrent consideration and deemed a positive aspect of telephone clinics. I did not examine the time taken for telephone clinics for this PhD. However, given the difficulties contacting some parents, I suspect the administration time is much longer, even if the clinics are quicker. One consultant explained that telephone clinics are likely to make up a significant part of surgical practice moving forward; therefore, regardless of surgeons' views of telephone clinics, training within clinics should consider this change:

> *"You're learning to learn for real life. Real-life is that they want us to do 40% of our consultations virtually. If we're gonna be doing that you need to know how to do a video, a telephone consultation to get as much out as possible."* – Consultant D

As remote clinics are likely to form a large part of a surgeon's workload moving forward, it is essential to consider whether trainees can learn and use their learning within them

regardless of overall thoughts towards telephone clinics. This critical change towards telephone clinics may prompt surgeons to reflect on surgical clinics and how they differ from their usual practice (even separate from this study). Although trainees made clear that they did not like telephone clinics, they did not feel they impacted their overall learning for clinics. One trainee explained, *"regarding the learning, I think it's the same opportunities in both face-to-face and the telephone clinic"* (Trainee E). One consultant agreed, explaining, *"in terms of trainee-trainer interaction, I'm thinking it probably was not any different to what I would normally do with any face-to-face"* (Consultant A). One trainee summarised their thoughts on telephone clinics and the learning within these:

> *"Obviously, with COVID we've had to do a lot more of them. I think, like [consultant] said, you tend to rush them a lot. And sometimes, maybe, you don't ask as many questions as you would or maybe the parents don't feel like they're able to share as much and of course, the consultants can't hear what the parents are saying on the other side. So, you know, honestly, I prefer face-to-face consultations, but there's learning to make it work, doing telephone ones as well."* – Trainee G

Another trainee explained that telephone clinics *"make the learning bit, a bit more difficult and less present"* (trainee A). These comments suggest that trainees perceived that certain elements were lost during telephone clinics, which may have impacted their learning experience. Within telephone clinics, the senior discussion is still face-to-face and, therefore, a place where educational support can be optimal. One trainee explained: *I think you learn just as much because you learn more from the discussion with the consultants after"* (Trainee G), stressing the importance of time for senior discussions within telephone clinics. The trainee might leave the consultation for discussion with the consultant within face-to-face clinics, which is much more challenging to navigate by phone as the process is less visible to patients. One consultant stated that trainees *"just put the patient on hold and say I'll have this conversation with the consultant then call back"* (Consultant A). Another consultant considered how a lengthy senior discussion might impact the patient:

> *"I hadn't thought how it must feel from a parent's perspective, to not know when a trainee disappears off to go and speak to somebody because they may, if they're already anxious about something, if it was a significant diagnosis, feel*

like if it was a prolonged period of time make things, made it like there was a worry." – Consultant B.

During the interviews, no participants reflected on whether this time might be better spent in an outpatient room or at home waiting for another call and how this might impact the latter conversation, but this is an interesting consideration. Additionally, during face-to-face consultations, the senior discussion is often held in the same room as the patient, although occasionally held elsewhere and relayed to the patient by the trainee after. Generally the patient is aware what is happening in these circumstances. As the senior discussion might disrupt the consultation during telephone clinics, rather than be a part of the consultation, there needs to be clear communication with the patients and their families to understand the process of senior discussion and how this differs within telephone clinics.

One trainee explained that it is not just their learning which has the potential to be impacted within clinics, but the patient's learning too, stating, *"it affects the learning of the patient, primarily. It's very, very hard to get what you're trying to explain"* (Trainee D). This comment and subtheme indicate that patient communication and learning are likely to be impacted within telephone clinics; therefore, it is vital to consider how best to support trainees in this complex communication environment moving forward.

7.6.3.3 Theme 3 summary

Changes in clinical practice, in particular the growing use of phone consultations, add complexity to what trainees learn and how the clinic and consultants support that learning. The first theme considered the trainee's role in developing their learning as a manager, whereas this theme focused on how trainees' learning and clinics have developed over time. The broader context is discussed much further within the reflexive session themes. The next theme considers the overall goal of care within the clinic, the child, and how trainees can be supported to optimise this goal.

7.6.4 Theme 4: The child's care as the goal provides the context and framework for paediatric surgery clinics

While each of the other themes might be somewhat generalisable within surgical practice, this theme is more specific to paediatric surgery. It may appear less linked to my objectives than the other themes, but may also be the most important to them, as it explains the

purpose of the trainees' learning in clinics: care of the patient, which in this context is the child. As I completed my PhD fieldwork during a move toward telephone clinics, it was clear that the patient group led to a different dynamic. As with the surgeons within this study, I found that telephone consultations highlighted the benefits of utilising clinics to assess the family circumstances and more about the child than their medical condition, which was perhaps taken for granted when face-to-face consultations were the norm. Families attending the clinic face-to-face often consist of multiple parents and children, whereas the phone consultation usually involves one person. Regardless of who the consultation is with (parent, another guardian, or child), the focus is the child; however, it is often difficult to include the child in telephone consultations, meaning these consultations are generally more complex. Considering the child, this theme considers three separate but interlocking elements within a paediatric surgery clinic: the trainee, the parent, and the child.

Before considering this theme, it is crucial to explain some of the terminology used here and why I decided to use these terms within my thesis. The surgeons used the terms 'patient' and 'parent' during the interviews. This use was despite each filmed consultation being with parents (always the mother when a parent) or guardians (foster mother or grandmother in two filmed consultations). I use the term parent within the finding sections to describe the caregiver and patient for the child, as these were the term used by my surgeon participants and the research site. I understand, however, that the caregiver may not always be the biological parent and thus use this term when sharing my thoughts.

Within the paediatric surgical clinic, the trainee must gather information about the patient, which is often via the parent when conducting telephone consultations. One consultant explained:

> *"To come up with the diagnosis and management, you know, you need to get the key information from the family. And that is sort of a skill. That's a combination of open-ended and closed-ended questions…he needs to then extrapolate…information from the family to either say, yes, they have this or no they don't have this."* – Consultant C

Before considering the next steps in management, trainees were often keen to ask questions to guide their thought process. One trainee described their frustrations when the

mother was very talkative during the consultation, stating, *"that was 15 minutes of me saying 'here, uh uh' which was a bit frustrating, it's like okay, not a lot we can get from this"* (Trainee A). This comment suggests that the mother talking was neither useful for them nor the parent; however, the trainee later recognised that it would have been necessary for the mother, explaining, *"it was more of a mum who needed to be listened to"* (Trainee A). This comment suggests a conflicting need, where the trainee feels that the consultation was not useful as the mother led it, despite the mother's focus on sharing her worries. Another trainee also implied conflicting agendas could exist between the trainee and the parent. They explained, *"I found her relatively challenging to always get the information that I need. And then it's not just about me getting my information, but often kind of difficult"* (Trainee C). These comments suggest that sometimes the child's caregiver and the trainee have perceived conflicting needs, despite both having a shared goal of patient care. These two examples suggest that instead of trainees being upset about caregivers sharing information, trainees may be frustrated when the consultation is not doctor-led. Despite these frustrations, Trainee D explained that listening could also be beneficial for the trainee, explaining, *"if they have a story to tell, just let them have it, and they usually tell you most of what you need to know"*.

Although the trainee's needs as a learner are important within the clinic, the focus is on the child; therefore, I posit that the comments above suggest that the parents have a challenging role of being the advocate for the child while also providing the information that the surgeons require to make a diagnosis and management plan. Each consultation is variable and will have a different focus, meaning that the balance of the needs of the surgeons and caregivers will vary within each:

> *"First of all, it depends whether they're new patients or follow-up patients. This was a new patient, obviously, and a new referral. And then second, I think it depends on the problem that you're dealing with. And third, it depends on the parents, whether they've got lots of questions or whether they already know about the condition. They've read about it, or things like that. I think it's quite variable."* – Trainee F

There are questions the parent will need to ask to support their child, which is encouraged within the consultations. As one consultant explained, advancements were achieved following our QIP, which provided parents with a question sheet that accompanied their

clinic letter*, "making sure parents are able to ask questions"* (Consultant D). We found this particularly important during telephone clinics, as parents explained they were typically more reluctant to ask questions during these. However, based on the comment above, parents need to be able to ask questions to advocate for their children by understanding their care.

One trainee explained that many parents ask questions about their child's future, stating, *"it's not every consultation that I've got parents worrying about the future, but certainly enough that I have to answer that question"* (Trainee B). They gave an example to explain how difficult these conversations can be, especially when the answer is uncertain. They described that one parent asked whether their child might ever be able to swim, and they explained, *"you need to think of a way to answer that without giving too definite an answer"* (Trainee B). Through my observations and personal experience, I have found that patients often cling to information provided by their doctors. Hence, it is essential not to give definite answers when the prognosis cannot be predetermined. This consideration links nicely to Theme 1 as there is only so much preparation that surgical trainees can do for clinics; however, balancing this lack of absolute certainty while ensuring safe practice is essential.

The introduction of telephone clinics during the pandemic added a new level of complexity to paediatric surgery clinics, albeit one which was interesting to observe within this research. As family dynamics are much more difficult to assess via the telephone, a significant level of trust goes into the parents' understanding of the content of the phone conversation. This understanding was something considered more by the consultants during the interviews. When asking the parents to consider signs of specific illnesses, it can be difficult to judge a parent's knowledge and understanding by telephone. One consultant explained, *"we're almost relying on the parent telling us they haven't seen it [the clinical sign which would typically be elicited on clinical examination]"* and then hoping the parents understand the red flags for re-presentation after the consultation. They explained the surgeon would hope they would return if any of those issues later became apparent to patients. They continued, *"I'm sure they will re-present if there was an issue"* (Consultant A). Another consultant commented, *"I think I remember the mum being sensible"* (Consultant B), emphasising the parents understood the condition and when to seek help.

One trainee explained that the parents asking complex questions and requiring explanations should not compete with but should instead complement the trainee's learning.

They explained that when trainees *"have to go through that with the families and try and answer the questions, then it makes you think about things more"* (Trainee G). Another trainee also recognised this benefit of working closely with the parents, explaining:

> *"I definitely learn from them [the parents]. It's hard to say, it's not like they're specifically teaching me new knowledge, but I guess I'm getting a feel for their confidence and how happy they are with what I'm saying to them and with the problem."* – Trainee C

Although parents were not typically viewed as someone the trainee might learn from within the interviews, the latter comments suggest that the comments and feedback received from the parent during the consultations have a role in experiential learning. Given the above statements, it is also understandable why the trainees might find these complex conversations complicated and harder via phone. They also assess patient understanding via the phone, which may be more difficult due to the lack of visual feedback. Trainees understood the need to confirm comprehension. One explained their role is *"very much checking parents' understanding"* (Trainee C), and another trainee explained the importance of this by stating, *"I do appreciate patient safety is the most important thing"* (Trainee A). These comments emphasise a vital point, that patient safety is fore fronted in surgical training within clinics.

This theme has focused on caring for paediatric patients during clinics. Yet including children in the conversations is an additional, perhaps even separate element of this theme, although one where patient safety is also paramount. Although the discussions with the parents can be challenging, this conversation can be even more complex when including a child, especially when completing the telephone clinics by phone. Trainee C explained the difficulties of incorporating a child within telephone consultations:

> *"You're just getting everything from a parent. At least in the clinic, even a five-year-old will give you a little bit of verbal information as well as all of the visual and examination stuff, so I think we're limited in that respect."* – Trainee C

He explained that *"you don't hear from the child the majority of the time, unless they're quite a bit older"* (Trainee C). When the trainee does not speak to the child, the parents must act

as their advocate, which can be difficult. Parents do not have the training for these complex discussions, yet they must balance their child's and the surgeon's needs. Trainees seemed to recognise this difficulty, how it impacts their consultation, and the communication within it. One trainee explained the problems when only hearing from the parent, stating, "*the mother is explaining to me…something that she usually sees rather than feels"* (Trainee E). Another trainee said that they have found, *"with older children you get a lot less bang for your buck out of a telephone consultation unless of course, you're doing well"* as *"they often won't tell their parents what's going on*" (Trainee D). They gave an example from a recent clinic consultation:

> *"One of those widely recognised things about older kids and adolescents and teenagers and stuff is that their parents have much less of an idea what's happening. Just yesterday in clinic the mum told me 'oh, he drinks loads'. And then it turns out the kid was just like, laughs, 'you know, I don't drink any of the water at school because I don't like how it tastes', and he was only drinking half a litre a day."* – Trainee D

During a phone consultation, some clinicians may only speak to the parent. The quote above emphasises the potential value of including a child in the consultations. This may be the norm during face-to-face consultations, and somewhat simple when the child is in the room. During telephone clinics, introducing a child introduces new challenges and complexities within the consultation, even if beneficial. One consultant described that it can be difficult to include the child during telephone consultations. They explained it is possible to have a *"three-way communication with parents, but less so with a patient"* (Consultant B). It is often difficult to ensure the child is present for the telephone clinics. It might seem odd if a parent arrived at a face-to-face clinic without the child, yet parents do not typically keep their children from school for telephone clinics. One trainee explained that they appreciate when they can include the child, stating, *"especially with telephone, sometimes the children aren't around at the time so it was quite nice that mum grabbed her and put her on speaker"* (Trainee B).

Even if children are present, it can be challenging to encourage children to speak on the phone, despite growing up in an era of technology. One trainee explained that she tried to include *"the child in the conversation as much as possible, even though she was a bit shy"* (Trainee B), but it is understandable how this is difficult. This challenge reflects where face-

to-face clinics may be much more helpful beyond physical examination. One trainee explained, *"if there's issues and they're older children there's no substitute really for getting them in and talking to the kids themselves"* (Trainee D). Determining which patients should be seen face-to-face is a difficult decision for any surgical trainee, but this decision cannot always be made in advance by the trainee for the current consultation.

7.6.4.1 Theme 4 summary

To summarise this theme, although trainees and the parents both have their needs within a consultation, the ultimate focus and goal of care within the paediatric surgery is the child. The observation here that the goal of care for the patient seemingly provides a framework for trainee learning can be understood as a facet of a CoP. Within paediatric surgery clinics, the community could be seen as learning together towards a common goal of the child's care. This comment reflects that not only the surgical team, but also the caregivers, such as parents, could also be considered part of a community of practice. This theme suggests that while child participation within clinics is preferable, it is essential that the caregiver is considered and included within this CoP and can collaborate with the surgical team to ensure maximal care for the child. Although these may not fit with traditional understandings, which might make up the framework of practice for many surgeons within clinics, this reflects the unique nature of paediatric surgery clinics and the novelty of conducting telephone consultations within these. Therefore, this theme and its findings would not surprise clinical participants in this study.

7.6.5 Theme 5: The clinics are a distinct place to develop surgical autonomy

In each of the other themes, interviewees have considered elements that make up the clinic and learning within it and reflected on the clinic's goal, the child's care. The surgeons recognised during the interviews that they must work closely with the parents to complete this goal, which was discussed in the previous theme. Having considered how the clinic works, this final theme ponders the ideal elements making up the clinic. It does this by thinking about the clinic's unique value and how it may be optimised for learning. This theme focuses on the individual elements within the clinic itself, i.e., the individual factors; the broader considerations in making a clinic successful are then considered further within the reflexive sessions in the next chapter. These elements include the introduction of telephone clinics, unique presentations and decisions within the clinic, identity formation within the clinic, and the development of independence within clinics.

Firstly, this theme examines what distinct learning clinics can provide. Other themes have considered how trainees apply learning within the clinics, but this theme presents ways that outpatient clinics are generally unique in the learning they offer compared with other areas of surgical practice. Perceptions of telephone clinics have been discussed ample times within other themes, so this theme focuses on clinics in general, and telephone clinics purely in relation to learning. The trainees showed insight regarding the benefits of clinics to their learning, more so than I had envisioned. One trainee explained*, "I mean, it's fun to operate, but I think clinic is where you really learn a lot of the follow-up"* (Trainee G). Another trainee also compared learning in operating theatres by considering how the two complement each other when providing information to parents:

> *"People say, 'well, what happened? What did you do?' and those are things you cannot do from reading a textbook sitting in a library, or even in an operating theatre. Operating theatres play a place for technical learning but clinic is where I think you learn how to manage patients, and your decision-making skills get honed in the clinic setting in a way that they can't be in the other environments."* – Trainee D

Although this decision-making may occur in various acute settings, trainees recognised how distinct patient presentations in the clinic aid context-specific learning of additional medical complexities. These additional medical complexities are often perceived to foster more patient-specific management skills in clinics than in other areas of surgical practice. One trainee explained they believed that clinics are *"very valuable because I think clinic is one of the sources of patients coming to the hospital"* (Trainee E). Another emphasised the added complexities within outpatient clinics, explaining that trainees see *"a different part of the patient's journey. So, you're dealing with different problems, compared to when they are acutely admitted with an acute problem"* (Trainee B). Trainees understood how this unique environment impacts their learning by stating, *"what's different is to see and learn from a senior specialist in that field, in the colorectal field"* (Trainee E). In addition to the learning within clinics varying from elsewhere within surgical practice, trainees recognise how education within surgical clinics will set them apart from those within other medical specialities. Trainees understood the conditions seen within clinics are vital knowledge. When receiving referrals from other specialities, recognising the ways conditions may

present is crucial, as *"GPs will refer a child and they don't know what the problem is. And it's your job to find the problem"* (Trainee F).

Earlier in this section, Trainee D explained how clinics provide patient presentations not seen elsewhere. Trainee D later explained how the specific patients seen within clinics impact their learning, as they can *"create mental associations between certain patients and conditions"*. They considered why this might be:

> *"If I get to see those patients back in the clinic once or twice more, it actually helps to reinforce my learning about whatever condition it is that they have. And I'll often see people, and I know, I recognise the parents, I recognise the child. And I just, it'll just take one quick glance for my own right handwriting, the charts, and then suddenly, I'll remember all sorts of weird things about the patient."* – Trainee D

Trainee B further explained that this is a strength of face-to-face clinics for trainees and patients, as *"a family might see different people each time and then at least you've got a face, you know to put to a voice"*. Trainees value the exclusivity of clinics as it provides unique patients and unique learning, as the patients present with distinctive conditions and allow continuity and a visual association when face-to-face. This visualisation is one area that telephone clinics lack, which resonates with my own learning experiences in surgery; I also often visualise particular patients when thinking about specific clinical conditions. When discussing the trainees' more limited experience within telephone clinics, Consultant B reflected:

> *"It's been interesting because in the pandemic, to a degree, trainees sort of backed off [the clinics], and to a trainee, that must have been quite de-professionalising. You know, particularly when adult services were up-regulating the amount of input trainees had, in paediatric services, well, I don't know, but it seemed to me that in some areas anyway, of paediatric surgical services, trainees seem to be asked to be at home more."* – Consultant B

This comment suggests that clinics play a distinct role in supporting the development of trainees' professional identities, which was made visible by their exclusion during the

pandemic. Trainees recognised the importance of clinics in their training too. One trainee explained that clinics *"prepare [me] to act as a consultant at some point"* (Trainee E). As indicated under Theme 1, trainees appreciated clinics as a place to develop their surgical autonomy as they can do clinic consultations *"alone"*, informing the consultant about *"the plan in general"* (Trainee E). Even when conducting clinic consultations alone, trainees understood that support was available if needed, as *"if you need to ask for help or you need to discuss a management plan, the consultant is there"* (Trainee F). They also recognised that providing support only on the trainee's request requires a level of trust between the trainee and the consultant, as it requires the consultant to have *"confidence in my judgement"* (Trainee D). This also requires the trainee to understand their ability levels. Clinics are one area where the trainee may feel independent but would typically have a consultant close by for support if needed. The comments above suggest that clinics often allow the trainees to choose when they receive this support, which might not be the case in other areas of surgery, such as the operating theatre, where the consultant typically dictates the level of support.

This consideration is shared by Consultant A who explained that with more senior trainees, they would have *"expected [the trainee] to come and tell me it's all fine, [they have] discharged them [without the consultant] particularly needing to know the full detail"*. Clinics are perhaps the only elective area where patients may be seen without review by a consultant. More senior trainees may review acute patients without consultant review, but consultants typically review elective patients at some point in their journey elsewhere. This comment suggests that the consultants consider the clinics as a particular place where trainees can develop supported independence for elective patient care. Trainees recognised that this independence increases with seniority. Trainee A continued, *"as you progress when things become more hands-off, there is a lot of learning to be done there as well by making your own decisions and making sure that you can justify them"*.

The clinic affords increasing expectations upon the trainee as they become more senior. As trainees spend more time with the team, their understanding increases, not just of conditions but how the consultant might manage them within the context of the outpatient clinic. One trainee described how independence and expectations of trainees within the surgical clinic increase during rotations:

> *"Very often, especially as I get towards the end of a placement. I think in the beginning, I tend to discuss each patient with a consultant so they can get a feel for what I'm thinking and if that's what they're thinking as well. And I found that as they got to know me and trust me, eventually it reached a point where they said just come to me if you feel I need to know something or you're unsure of something."* – Trainee B

This comment suggests an expectation which is not visible within the surgical curriculum. There is an expectation that surgical trainees need the skills to run a clinic, but this comment suggests that this requires much more than subject-specific knowledge. To run a clinic, trainees need to understand clinics, and the statement above suggests a shared understanding with the consultant allows the trainees the trust required to run clinics. Although this shared understanding is not unique to clinics, the afforded independence to the trainee to manage their own patient list with minimal input is somewhat unique.

In order to determine how much independence a trainee can have or what support they need, their ability must be informally assessed by their consultant. Although this consideration takes place within other areas of surgical practice, these considerations will be unique to the clinic; a trainee who is very good at operating might not necessarily be a proficient outpatient practitioner and vice versa. Within clinics, recognising each trainee's ability often occurs via the senior discussion, where the consultant can consider "*the baseline from which I'm starting here"* (Trainee D). This recognition varies elsewhere, where competence is often assessed through direct observation. When trainee support is needed, this can be provided by consultants or senior trainees in the clinic, depending on who is present. One senior trainee explained that *"if there are more than one of us in the clinic, then sometimes they can either come to me or to the consultant depending on who's available"*, which can be beneficial, *"especially if an SHO is there"* (Trainee B). Some clinics also have *"two consultants there in clinic"* (Consultant C). When more consultants are conducting clinics, the trainee can choose who the senior discussion is with, making senior discussions more timely (if one is free sooner) and may allow for more varied educational support.

The clinic allows a place for consultants to manage their patients, and the training provided to trainees, with more variability than in other areas with set expectations. Therefore, the freedom afforded to the trainee varies between individual consultants too. Different

consultants have different expectations of trainees and provide varying levels of support. One consultant described the independence they provide to trainees:

> *"On the scale of where I am on clinics, I like to think I'm halfway in the middle. Some people will just give the reg[istrar] the clinic and say 'get on with it and do it' and that's fine. Some people be the other way and will see all the patients themselves and the reg will just be sat there in the corner. I used to serve analogy of a dog on a lead. If you give them too much lead they run into the river and drown if you give them not enough lead they didn't learn anything. So it's trying to get that balance of where you, where you let them go on the lead if you like."* – Consultant D

In addition to allowing gradual autonomy, the clinic allows the consultant to identify a trainee's needs on a one-to-one basis and help the trainee meet their assessment and progression needs. When support is given, it is often subtle, meaning that when educational opportunities are provided, they are not always evident to trainees within the clinics. As the learning opportunities are not clearly presented as such, they are not consistently recognised by trainees, despite being a recognised element of workplace learning, which I discuss further within the discussion. One consultant thought that clinics do not *"facilitate"* education *"in so much as the learning is a by-product"* (Consultant D). Despite this, one trainee explained that although consultants do not always set up clinics for learning, opportunistic learning often occurs regardless:

> *"In a short space of time, you can actually you can learn a lot from each consultation and maybe you take it for granted sometimes. You just think, oh, it's another phone consultation, but it is an opportunity to learn a lot and that is just an example of."* – Trainee G

Learning within clinics is often distinctively experiential, too, meaning trainees can use experiences from within clinics to pass on to other patients. This sharing of knowledge is another way that learning occurs without trainees being taught directly. Furthermore, these experiences can even be learnt from some patients or parents to pass on to others in similar situations. One trainee shared their experience of experiential learning:

> *"I think that's kind of just what I've picked up, from reactions of parents in different consultations, to not understanding why we need to soften the stool further. So, I think I could pre-empt that with this mum, and I think she was thinking along those lines as well."* – Trainee B

This experiential learning does not need to come from within the clinics to be used within the clinics. It is important to remember that trainees can bring experiences to their clinical work from encounters outside of medicine to support their clinical practice. During one filmed consultation, a trainee checked a child's new weight and changed the medication dose for the child. The trainee explained they knew how to manage medication dose changes due to their own experience of having a son:

> *"It might have actually been the fact that I have a younger son. And I just keep more track, you know, they change clothes every three months. And they change antibiotic doses every three months."* – Trainee D

Away from passive, opportunistic, and experiential learning, education was often more explicit and more evidently tailored to the trainee in the paediatric clinics I observed, as the clinics often afforded some time for discussion. The explicit learning is usually during senior interactions, which varies significantly between consultants and their trainees, and due to the nature of clinics, this discussion is often between one consultant and one trainee, allowing it to be more tailored to the trainees' needs. Unfortunately, as trainees often discussed patients, they viewed themselves as burdens within the clinic and thought that their presence slowed the consultants down. One trainee stated that *"all of the consultants can do their clinics by themselves, and it's probably going to be easier for them"* (Trainee A). Another explained that consultants could not *"afford to have a trainee"* in busy clinics (Trainee F). Conversely, consultants see the trainee's presence differently, with one explaining, *"if you get a trainee then it's a bonus"* (Consultant D). Since consultants appreciate having trainees in the clinic (and have been trainees themselves), they often strive to support the trainees during senior interactions.

Like many areas of clinical practice, time available may act as a barrier to support and, therefore, impact the support consultants may give in clinics. This time constraint is not unique to the clinic but can affect the time for dedicated learning when present. Busier

clinics often tip the scales from being learning-focused to service provision. One consultant admitted that trainee support depended on *"how many patients we can see per clinic"* (Consultant A); however, despite trainees sometimes feeling like burdens, they appreciated that consultants provided educational opportunities when they attend clinics, even when focused on service provision. One trainee explained that consultants set clinics up as a *"learning opportunity rather than the service provision"* (Trainee A). Another explained that clinics they have attended *"haven't been too time-pressured, so there has been that time to discuss cases and discuss decisions"* (Trainee C). One trainee recognised that even when clinics can not be set up to identify them as training clinics, there is explicit learning to be had:

> *"You know, training clinics would be where the consultant stays there…and then they can see everything you say, you do, and your plans. That'll be a training clinic. These are clinics where, in my opinion, they're non-training clinics but you then have the opportunity to convert the non-clinic into a training clinic by seeing the patient yourself and chatting to the boss. That's the way I see it."* – Trainee F

Therefore, even with time pressures, there will always be the opportunity for some form of education within the clinic. When time is pressured, this learning might be less visible, meaning the apparent focus is service provision. However, the comments above suggest that this lack of senior interaction allows the trainees to develop and forces autonomy. In these cases, trainees will need to decide when a discussion is essential. The impact of time pressures on learning differs from other surgical practices, such as the operating theatre, where the consultant might lead the surgery when time pressures occur, and there may not always be time for discussion.

When time allows for dedicated educational opportunities within the clinic, the senior-trainee interaction within the clinics can take multiple forms. Firstly, it can take place through the consultant observing the trainee. One consultant explained that they allow the trainee to *"run more consultations"* as they *"watch"* in less busy clinics. One trainee explained that being observed would be helpful for their learning, which was highlighted through the VRE process:

> *"I think also there could be an element of enhanced learning in my opinion…is exactly what you did and have someone observing you. Because obviously, usually you got a clinic where you get the room, the consultant gets the room, you see patients independently."* – Trainee F

This comment suggests that trainees would like more observation within clinics. Observation may give the trainee more confidence to develop autonomy, through understanding their competencies and areas where more support is required. This comment is also interesting as the trainee recognised that video ethnography could support these observations, enhancing the feedback provided to trainees within the clinic.

Developing independence was discussed by many participants within the interviews. One consultant explained that some independence *"makes you think and challenge, and…behave like you're an independent practitioner"* (Consultant B). Trainees value supported independence. This allows some autonomy, but with consultant support when needed. The clinics is one place where this can be supported, as the consultants are elsewhere, but close by. However, the balance is difficult. One explained trainees are *"very well supported. A bit too much on occasions, but overall, very well supported"* (Trainee A). Another described a similar sentiment but understood why this might be. They stated that some consultants *"really do micromanage, but the ones I've worked with I think they've had a good feel for at what level a person is out and how much they need to be involved"* (Trainee B). These comments suggest that it is important that clinics remain a place to provide this gradual autonomy, as it is valued by trainees and understood by consultants.

Occasional observation may be one way to address the balance between learning via independence through education. Observation allows bespoke teaching as consultants can address specific learning needs that trainees may have, enabling them supported feedback and development. After one observation where a trainee lacked the knowledge needed for the consultation, the consultant provided *"a bit more didactic teaching"* (Consultant D). This direct teaching can occur when the trainee observes consultant clinics too, which tends to

occur for more junior trainees[3]. One trainee explained that they had *"sat in with [colorectal consultant] and seen a few patients that are constipated with him and had discussions about bowel management"* (Trainee C). This comment demonstrates that trainees can also develop understanding through observing consultants, especially when reviewing patients who are mainly managed on an outpatient basis, such as those with constipation.

In addition to senior discussions providing support, they allow the consultants to impart their clinic-specific knowledge to the trainees. In addition to standard teaching, seniors can share essential information that cannot be learnt through standard practices or specific surgical cases, i.e., the hidden curriculum. Within the clinic, this hidden curriculum is recognised by clinicians as something which is *"not something that's written in books a lot"* (Trainee A). It allows the consultant to provide *"tips or tricks"* on patient care (Trainee E) and discusses topics that are not typically covered within the surgical curriculum. As one consultant explained, *"we also talked about what to do when something's getting better. Very often, this sort of merges into the hidden syllabus [or curriculum]"* (Consultant B). Other examples of the hidden curriculum within clinics may include where to seek specific information, the nuances of letter writing, or an understanding of key phrases which may be used to elicit helpful responses from the patients and their parents. As these skills are required to conduct clinics, it is essential that trainees are given the time and opportunity to develop these.

Traditionally, the skills above, those which traditionally comprise the hidden curriculum, might only be shared with trainees by chance. As no formal assessments were required in clinics, it was difficult for them to understand what skills and information were required to move from the trainee, who manages patients, to the consultant, the overall decision maker (Theme 1). The introduction of CiPs has helped to make these competencies an explicit requirement, which was not the case before their introduction. Following the introduction of clinic-based CiPs in 2021, trainees now need to address these competencies within their portfolio. Therefore, this requires senior discussions, especially when time-limited, to address the trainee's specific needs within clinics and work towards the clinic-specific CiPs before consultancy.

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[3] Although trainees observing consultants only usually happens formally for junior trainees, when trainees go to consultants for senior discussions, they are sometimes called into the room during their consultant's consultation, meaning they informally observe senior consultations while waiting to discuss their patient.

Within the interviews, I did not discuss the CiPs, but participants did occasionally mention assessments within clinics. One consultant explained that within clinics, they would typically pick two or three focused objectives and say, *"this is what I think we should do there"* (Consultant B). These would allow trainees to learn the information needed and to complete assessments for their portfolio. Some of these assessments, such as clinic-based CiPs, are specific to clinics and can only be obtained within the clinic. However, previous assessments such as a Clinical Evaluation Exercise (CEX) and Case Based Discussions (CBDs) can be achieved in all areas of surgical practice. One trainee explained some clinics, due to their specific case mix, allow trainees to achieve evaluations such as *"CBDs and things, which is very good for learning"* (Trainee G). Although trainees often see this progression through their portfolios and assessments, they understand that their main focus is to be good-quality consultants within clinics.

Introduced assessments must complement learning in clinics. One trainee summarised the role of assessments within the process of gaining autonomy. They explained that supporting the trainees to provide good patient care through assessments, support, and teaching would *"prepare [them] to act as a consultant at some point when [they] finish the required things"* (Trainee E).

7.6.5.1 Theme 5 summary

To summarise this theme, paediatric surgery is a unique area of surgical training that generally receives increased support and oversight due to the patient population. Consultants and trainees recognise that the clinics provide a distinct learning area for obtaining specific knowledge, also allowing for gradual senior support. The clinics allow for the development of specific outpatient skills, while also allowing a place for supported independence. The assessments guiding this autonomy have now become more formalised with the introduction of clinic-based CiPs. This theme has considered the factors within the clinic which may support a trainee in developing autonomous practice, but the journey towards trainee independence is discussed further in Theme 1 of the reflexive sessions in the next chapter.

7.7 Chapter summary

The five themes identified from the interview data provide insight into how trainees learn both for and within the clinic. Within the first theme, participants considered the role of trainees as managers of their own patients and time and considered how the consultants and other members of the MDT supported this. In Theme 2, participants reflected on their own learning and discussed the value of the VRE process in prompting reflection on practice. Participants compared their learning in clinics to other clinical areas, hospitals, and even training in other countries. The third theme considered how trainees' learning developed during their surgical training and how the pandemic impacted the outpatient department and the individuals within it. In Theme 4, trainees considered the difficulties of conducting a clinic consultation via the parents and how they could optimise the child's care within clinics, especially via telephone. The final theme considered how clinics allowed for distinct opportunities for learning and gradual trainee autonomy.

The interviews have provided insight into my thesis objectives two and three: considering the trainees' roles in clinics and shared understandings of learning. From the interviews, it was clear that individuals have distinct roles within clinics. The trainee's role is to manage their individual patients in addition to the learning completed before and after the clinics. The consultant's role is to manage the overall clinic, with the patient's care as the primary priority, while also ensuring that trainees are supported to develop skills and confidence to conduct clinics. Since trainees learn similarly to their consultants, consultants are well-suited to support this learning. However, as trainees often consider work and learning separately, they do not always understand the less-visible learning that comes from work and sometimes feel burdens when dedicated time is provided for educational opportunities and discussions. However, it is these which allow the trainees their independence and will support their path to consultancy. I will further discuss these findings and their meanings in Chapter 9, in conjunction with the discussions from the reflexive sessions presented in the next chapter.

Chapter 8. Phase 3: Reflexive sessions

8.1 Chapter introduction

In the previous chapter, I explained how interviews were conducted with 11 research participants. The interviews were made up of consultants and trainees from the surgical team who had participated in the video ethnography stage of the research. They helped address the research questions and determine which clips should be used in the reflexive sessions. The interviews resulted in five themes generated by rTA, which explored trainees' learning within clinics. This chapter discusses the following reflexive sessions, firstly by considering the practicalities of facilitating these sessions during the pandemic and which clips were shared within these. This chapter later considers the resulting themes from the reflexive discussions, focusing on the broader impacts on trainees' learning within the clinic.

8.2 The purpose of the reflexive sessions

Within VRE, the purpose of the reflexive sessions is to show the footage made in the early stages of the VRE process to research participants, which prompt "non-punitive" discussions about their practice (Carroll and Mesman, 2018). As explained in the methods chapter, reflexive sessions allow research participants to *collaborate* and evaluate their own and their team's practice using supporting video clips collected during the video ethnography stage. Within VRE studies, video reflexivity is defined as *"the practice of filming professionals at work and sharing with them the resulting footage with the aim of engendering discussion about their work"* (Iedema et al., 2013, Glossary). These sessions allow participants to become collaborators in the research through one of the VRE's fundamental principles, *exnovation*, making daily (and mundane) processes visible.

For sessions which aim to target a specific research question, such as in this research, the focus is on progressive discussion towards practical solutions or allowing insight into specific phenomena (Iedema et al., 2019). In addition to selecting clips for the reflexive sessions, the purpose of the clip selection interviews was to consider research objectives two and three. These were: understand the trainees' roles within the outpatient clinic and how this has been impacted by COVID, and explore the extent to which trainees and consultants share an understanding of learning in the surgical outpatient clinic.

The reflexive sessions continued to consider objective three in addition to focusing on research objective four, considering learning events and the factors affecting learning at video-reflexive multi-disciplinary meetings. The next chapter will then combine these findings with the clip selection interviews and discuss the final research objective, devising suggestions for how learning in general surgical outpatient clinics may be improved and how the current surgical curriculum may be enhanced.

8.3 Setting up the reflexive sessions

Before considering how to conduct individual reflexive sessions, it was essential to consider the practicalities of setting up reflexive sessions. VRE researchers use various techniques to conduct and analyse reflexive sessions. This range is deemed necessary within VRE as it allows researchers to vary the sessions based on their required output, setting, and participants (Iedema et al., 2019). Here, I discuss the components I considered before running my reflexive sessions.

8.3.1 Online reflexive sessions

Even four years ago, when the primary VRE text was released, there was an expectation that the sessions would be held in person, with its focus being on the seating and camera set-up within the sessions (Iedema et al., 2019). Initially, my study had planned to hold face-to-face reflexive sessions within the department. My departmental contact had suggested the reflexive sessions be held in replacement of some departmental teaching sessions, allowing a dedicated room and time for these. This dedicated time and space were no longer possible as I conducted this research during the pandemic. The Trust halted all face-to-face teaching, and due to staffing changes, teaching no longer took place in a group setting. Therefore, I decided to hold my reflexive sessions online.

Online focus groups, which are comparable to reflexive sessions, are not novel and have been considered a sound method of conducting focus groups for many years. They may provide some benefits over face-to-face focus groups, such as greater participant reach (Turney and Pocknee, 2005). Conversely, despite the considerable reliance on videos within VRE studies, conducting online reflexive sessions was new territory for those using the VRE methodology. During our VREIA monthly meetings, we had the chance to discuss barriers to our projects during the pandemic, including the early feasibility of conducting reflexive sessions online. One PhD researcher completed a pilot VRE study during the

pandemic where participants filmed their own data and held reflexive sessions online; however, the discussion mainly focused on the impact of users filming their own footage rather than the feasibility of online reflexive sessions (Yong, 2021). This researcher discussed their thoughts in the VREIA meetings along with other VRE researchers who were early adopters of online reflexive sessions. Those who attempted online sessions early on were pleased it allowed them to continue research but commented on barriers such as difficulties with communication due to masks and not all participants being familiar with the technology. I explain how online sessions impacted my reflexive sessions later in this chapter.

8.3.2 The reflexive session participants

Having considered how to hold the sessions, I needed to consider who to invite. As VRE has only been utilised within healthcare settings to date, most reflexive sessions typically include clinicians, although some studies only included clinicians involved in the early video ethnography stage (Manojlovich et al., 2019). In contrast, others provided hospital-wide reflexive sessions with clinicians (Collier et al., 2016). Some studies also included patients in their later methods, with one team holding a separate reflexive session for their patient participants (Hung et al., 2018). Unfortunately, although this study included patients within the reflexive sessions, no quotes within their published paper are from the patients, so it is difficult to determine the purpose and outcome of their inclusion. This range in potential participants means that the number of reflexive sessions and participants varies greatly within studies too. McHugh (2020) held reflexive sessions with only one team whose handover process was the focus of the research. Other researchers, including Collier et al. (2016), felt their findings were more generalisable, so they conducted their reflexive sessions hospital-wide and had around 100 participants in one session alone (Collier et al., 2016).

As my reflexive sessions aimed to consider learning events and the factors impacting learning, I thought it important to hold the sessions within the researched department only. I was also keen to explore wider influences, such as other teams and technology, on the learning of trainees within that department. Therefore, I invited all surgical team members, including those who did not participate in the earlier phases of my research. In addition, I invited the team's business managers, secretaries, nurse specialists, research nurses, and clinic nurses, often following a personal chat where possible, to widen the scope of possible factors and contexts in which the trainees learn. I ensured that my information sheet

contained information for all phases, meaning that early clinical participants were aware of this phase and expressed early interest in joining. This clinician information sheet is shared in Appendix 7. Additional participants (both trainees and consultants) offered to sign up for later sessions when taking coffee vouchers to the trainee office for the initial reflexive sessions.

As explained, I completed my data collection during the latter part of the pandemic, when the hospitals had unprecedented levels of patients; therefore, the uptake was not as I had hoped from the wider surgical team. One research nurse attended and provided a valuable and unique perspective on the learning. It was regrettable that the nurse specialists did not participate as they were often quoted as key players in the trainees' learning, and I suspect their input would have been invaluable.

The reflexive sessions were attended by approximately half of the surgical consultants and trainees within the department. I suspect this was due to their investment during the earlier study stages and following discussions held within the team. As with the clip selection interviews, the dedication of the research participants was humbling; one consultant attended from the back of a golf course during their leave, and a trainee attended during maternity leave, holding her baby while at home during the reflexive session. Increased attendance is another benefit of online sessions, as these participants would not have been able to attend if the sessions were in person.

8.4 Conducting reflexive sessions

During the reflexive sessions, I shared two videos (each made up of three clips) and one image with the participants. Like with the interviews, I used some prompts, guided by my research objectives, to help facilitate the conversation. This section explains how the sessions ran, including the visuals (two clips and an image) shared and the practicalities of conducting the sessions online.

8.4.1 The reflexive sessions

I facilitated six reflexive sessions with a total of 18 participants, which were all held in November 2021. Before conducting the reflexive sessions, I sought advice from the VREIA during the monthly meetings, taking tips from those who had conducted sessions previously. Like with the interviews, I had topics for discussion after each visual, which are

shared in the session guide (Appendix 8). The session guide represents some of the more specific questions I asked about each clip. In each session, I introduced the session and verbally reconfirmed consent before starting. Often, participants entered the session a little later than planned, meaning that the time of the sessions was limited. Unfortunately, this meant that I could not delve as deeply into participants' thoughts as I would have liked. With a larger bank of participants, I might have shown each group fewer visuals and considered each in-depth. Here, given the small number of reflexive sessions (and always being unsure if these would be able to take place), I showed every group each visual.

After sharing visuals with participants, I asked participants their thoughts. I added some prompts to facilitate discussions around each. In some sessions, little prompting was required, and the conversation was wide-ranging, with participants sometimes asking others about their practice and asking for advice (and then often apologising before I reminded them that this was the purpose of the session). Conversely, the conversation felt more structured in others, and participants only responded to each question. Throughout the sessions, I tried to encourage the team to think about their own and the team's practice by asking questions such as *"is this something that you do in your practice?"* or *"will anything in your practice change due to today's discussions?"*. I share the results of these discussions later in the chapter.

In addition to considering how to encourage reflexive discussions during the sessions, I needed to be reflexive as a researcher. During each session, I noted reflections in my field notes book and shared the first reflexive session with my supervisor, seeking their advice for improvement. After each session, I considered the guide 'questions for the reflexive researcher' (Iedema et al., 2019, p.129). By considering questions such as, 'when I watch back the footage of the reflexive sessions, how is my facilitation?', I was encouraged to re-watch the sessions and consider my wording and body language as a facilitator. I noticed in an earlier session that I thought a participant had stopped, so I accidentally spoke as they began to speak again; therefore, in later sessions, I allowed a longer pause before speaking. This pause allowed others to 'jump in' with additional thoughts too.

8.4.2 The clips shared

The clips that VRE researchers share in their reflexive sessions depend on the purpose, but it is recommended that no more than four to five (1-3 minute) edited clips are shared in

a one-hour session (Iedema et al., 2019). Different researchers select clips to highlight various practice areas, as explained further in section 7.2. As the reflexive sessions happened shortly after the clip selection interviews, it was essential to decide on appropriate clips promptly; therefore, I chose clips based on the following criteria:

- The clip demonstrates a 'learning event' identified by the participants/researcher.
- The clip clearly demonstrates topics widely discussed during the clip-selection interviews.
- Clips are representative of a range of trainees (and consultants, where appropriate) filmed during the video-ethnography phase.

After the interviews, I considered what topics were representative of the learning events discussed in the clip selection interviews along with my supervisor. Prominent topics included: MDT working, senior interactions, CiPs, organisation of training, and influences of COVID. I re-reviewed the videos obtained during the video ethnography phase and considered which clips demonstrated most of these topics, whilst covering a range of trainees and consultants. Given that the sessions were online, I thought it best to group some clips for ease of time and to facilitate discussion. When I grouped these, I considered how these collective clips were best summarised. These clips resulted in two videos, each made of three clips.

Typically, within VRE studies, videos are the only visuals shown to participants; however, since I was keen to discuss trainee support, I hoped that the session could be facilitated by thinking about the team practice in relation to the new surgical CiPs, particularly the one CiP, 'manages an outpatient clinic'. Therefore, in addition to showing two videos, each containing three clips, I also showed one screenshot containing the details of the clinic CiP descriptors. Although VRE uses videos to encourage discussions, similar methodologies use images to promote conversations with participants, sometimes using photo-elicitation. Within interviews and focus groups, photo-elicitation allows reflection not typically had without visuals by encouraging similar qualities to those pertinent to VRE studies, such as reflexivity and collaboration (Cleland and MacLeod, 2021). Although showing images is not the norm in VRE studies, showing a picture of the CiP guidance wording within my study encouraged discussion relating to assessments which might not have been had otherwise. A complete list of the CiPs was provided in Table 1, in Chapter 2. At the time of introduction, it was not clear when these capabilities should be achieved. An early suggestion (during discussions at conferences and during discussions with the JCST heads) was that ST5

might be an appropriate stage to be at the level of a day-one consultant in the 'manages an outpatient clinic' CiP.

I have summarised the three visuals shown in each reflexive session in

Table 8 (visuals 1 and 2) and **Figure 8-1** (visual 3).

Table 8: Two visuals, (including timings) each including three clips, shown during reflexive sessions

Visual 1: Video clips considering trainees learning and sharing learning (3:07)	Visual 2: Video clips considering sharing decisions and care (3:08)
Clip 1: Trainee giving information and safety netting to family member.	Clip 1: Trainee discussing role of specialist nurses with family
Clip 2: Trainee with notes made on patients prior to clinic. Trainee discussing practicalities of the case with consultant.	Clip 2: Trainee discussing involvement of other teams with consultant
Clip 3: Trainee sharing pandemic-specific information with family.	Clip 3: Discussion about shared care after phone appointment. Consultant sat in with trainee due to room space (and to aid my study).

Shared Capability in Practice 1:

Manages an out-patient clinic

Good Medical Practice Domains 1,2,3,4

Description

Manages all the administrative and clinical tasks required of a consultant surgeon in order that all patients presenting as out-patients in the specialty are cared for safely and appropriately.

Example descriptors:

- Assesses and prioritises GP and inter-departmental referrals and deals correctly with inappropriate referrals
- Assesses new and review patients using a structured history and a focused clinical examination to perform a full clinical assessment, and determines the appropriate plan of action, explains it to the patient and carries out the plan
- Carries out syllabus defined practical investigations or procedures within the out-patient setting
- Adapts approach to accommodate all channels of communication (e.g. interpreter, sign language), communicates using language understandable to the patient, and demonstrates communication skills with particular regard to breaking bad news. Appropriately involves relatives and friends
- Takes co-morbidities into account
- Requests appropriate investigations, does not investigate when not necessary, and interprets results of investigations in context
- Selects patients with urgent conditions who should be admitted from clinic
- Manages potentially difficult or challenging interpersonal situations, including breaking bad news and complaints
- Completes all required documentation
- Makes good use of time
- Uses consultation to emphasise health promotion

Figure 8-1: Visual 3 shown in reflexive session (Intercollegiate Surgical Curriculum Programme, 2021).

Both clips were made up of three clips, lasting approximately one minute each. I decided to include a caption before each clip (as listed above) to orientate the participants, as I was aware that it might distract from the clip if participants were trying to understand the context at the detriment of understanding the meaning. A couple of participants did ask clarifying questions (such as who else was in the room), this was usually those who had not participated in the video-ethnography phase. I have not shared these clips within the thesis due to permission for video use during the ethics and consent process (most participants only consented to share at specific events only, and ethics dictated these can only be kept for a set time).

8.4.3 The practicalities of conducting sessions online

Although online reflexive sessions are somewhat novel, as explained previously, online focus groups have been utilised by social researchers for many years. One study in 2000 explained that online focus groups allowed national participant input and saved on travel times and costs, but recognised that participants were less punctual and that some had problems with connection (Rezabek, 2000). More recently, many medical education researchers have conducted their focus groups online. Some researchers prefer online methods when discussing sensitive topics in groups, recommending that sessions work best with between three and five participants to encourage interactive dialogue (Wettergren et al., 2016). I was pleased that I conducted my sessions online. I think they were attended by more people (both in terms of number and seniority). In this section, I consider some of the practicalities of conducting online sessions after reflecting on my reflexive sessions in my field notes book.

My reflexive sessions were completed online using the online platform, Zoom. I explained my choice of using online platforms in the previous chapter, having used the programme for the clip-selection interviews. Additionally, during the reflexive sessions, Zoom also allowed clear views of every participant due to equal box sizes. I allowed participants to choose whether to have their cameras on or off. Most people kept their cameras on, especially when speaking. There were two instances where two participants were in the same office and attended via one link. I offered participants to use the 'raise hand' facility if they wanted to make a point and had not yet had the opportunity. Only one person used this, but another, familiar with Zoom, physically raised their hand instead while waiting to make a point.

The VREIA group suggested using a second computer screen to allow the clips to be more readily available, which I did and found helpful. The group also suggested having a second person monitor the sessions, which I thought might be beneficial early on. Due to sessions often being arranged at short notice, this was not possible, but it was not to the sessions' detriment. Additionally, having another researcher within the session would have required additional ethical approvals. Given the rapport I had developed with the participants, much of the initial discussions before the sessions were very light-hearted and related to comments made during the video-ethnography stage (such as discussions about wearing ties and swearing), especially when attended by consultants. These helped the flow during

the sessions, which might not have happened if a new researcher had attended the sessions. I explained this in my notes after the first session:

> *"The VRE group mentioned having a second person. I honestly think this might have changed the dynamic if an additional researcher was there, as I have developed a rapport with many of the team members during the video ethnography phase. I worry having an unknown person might have changed the dynamics/trust. I expect it would feel more 'clinical'?"* – Researcher field notes.

Unlike during the individual interviews, many participants wore masks for the reflexive sessions as these tended to be held during working hours to allow maximum participation (whereas the interviewees often elected to have the interviews during their own time). I did not wear a mask as I always interviewed from my own home or a private office at the University. I had been concerned that the participant masks would impact the sound, but I did not find this. Unfortunately, I had my own issues with sound though. In some sessions, the sound of the video clips I shared seemed to conduct less well than in others. Unfortunately, these issues were only in the latter two sessions, which were also held almost back-to-back, meaning that I did not have time to add captioning. Therefore, in retrospect, I would have added captions to the video clips shared in the reflexive sessions.

Given that the reflexive sessions were attended by multiple participants, considering a suitable time was the most difficult challenge. Had the sessions been held face-to-face, a dedicated time would have been allocated for the reflexive sessions, but this was not possible due to the pandemic. Therefore, I used the rota to consider possible times and asked if participants would like to recommend times. Unfortunately, one session with three participants was cancelled. Due to the nature of surgical practice, one participant was still in the theatre when the reflexive session started, and in the other, two participants needed to attend to a sick child; however, all three attended later sessions.

8.4.4 Power dynamics

During reflexive sessions, it is vital to be aware of the power dynamics that might impact participants' comfort and the research results. Iedema et al. (2019) explain that it is important to consider this in advance, even considering the need to stop the session if this

occurs. I considered whether to have different sessions for consultants, trainees, and other members (and even whether to show each different clips). Given the strong team dynamic that I had witnessed during the earlier stage of my research, I believed it would be helpful to hold these discussions jointly to allow for a richer conversation. In six sessions, there was one instance where I felt that the power dynamic impacted the research. A senior trainee commented that it was clear who was junior and senior within the clips and asked whether the junior trainee present in the reflexive session, who happened to be the junior trainee in the clip, agreed with the assessment. After this point, the conversation seemed a little less forthcoming than earlier in the session. I ensured that both participants were asked questions for the rest of the session but probed less than I might have otherwise. Fortunately, this power dynamic was not visible in other sessions. Trainees showed respect to the consultants and called them by their surnames, but in-depth and reflexive conversations occurred, even with respectful challenges of ideas.

8.5 Data analysis

Within VRE studies, researchers use varied methods to analyse their reflexive sessions, including techniques such as team-based theme generation (Gordon et al., 2017; Manojlovich et al., 2019), clinician-generated themes (Hor et al., 2014), adapted framework analysis (McHugh, 2020), and thematic analysis (Gough et al., 2016; Iflaifel et al., 2022). As with the clip selection interviews, I thought the best analysis tool for my reflexive sessions was rTA. I considered whether the interview and reflexive session data should be merged or considered separately. I decided that each should be regarded independently for two reasons: firstly, although there was some overlap, the interviews and reflexive sessions had very different purposes and aimed to address different research objectives; therefore, I generated themes with each of these objectives in mind. Analysing the data separately was valuable for multiple reasons, including consideration of the unprompted responses and self-reflection during the reflexive sessions and enabling me to share the in-depth responses during the conversations and debates between participants. Additionally, some participants were participants in both phases, whereas others were not. Separating the analysis helped to ensure the participants were less identifiable. Although I considered the data separately when generating themes, they will be considered together in the next chapter.

8.6 The findings

In total, I conducted six reflexive sessions with a total of 18 participants. These sessions included one paediatric research nurse, who conducts research on various topics within paediatrics, sometimes working with the paediatric surgery team. One further session was cancelled after session 2 (explained above), although these participants each attended later sessions. The participants in each are summarised in **Table 9**. This table also includes each session's length, based on the recording time. The recording began after I spent time confirming consent and explaining the purpose of the sessions. I needed to be mindful that the sessions were less than one hour due to clinical commitments (and most started late for this reason too).

Table 9: Participants included in each reflexive session.

Session	Participants	Session length*
1	Trainees (2)	35:29
2	Consultant (1), Trainees (2)	49:55
3	Trainees (3)	45:35
4	Consultants (2), Trainees (2)	49:42
5	Trainee (1), Research nurse (1)	48:55
6	Consultants (3), Trainees (1)	55:03

*The session length provided is of recording time, i.e., after introductions and confirmation of consent

8.7 The rTA process used for the reflexive sessions

As with the clip selection interviews analysis, I familiarised myself with the data by producing thought maps and transcript notes, which led to me producing 99 codes. I reviewed each of these while considering research objective four: the learning and the factors impacting this learning.

Through this process, I generated three themes: (1) Supporting trainees' development towards independent outpatient practice, (2) Clinic learning is influenced by wider systems, and (3) Educational interventions make learning visible within outpatient clinics. Each of these themes has further sub-themes. Before each of these themes is shared, I have provided a worked example of theme generation using the rTA process.

I have used a small part of a reflexive session conversation as an example. I explain the process using Braun and Clarke's six phases of rTA (Braun and Clarke, 2021a). Although the phases are represented in a linear progression, I visited and re-visited each phase multiple times when conducting my analysis.

8.7.1 Phase 1: Familiarisation

As I transcribed my data, I listened to each recording many times, which helped me gather my initial thoughts. I read and re-read each transcript multiple times, often considering each participant's voice as I did so. As with the interviews, I created simple doodles as I read the transcript (**Figure 8-2**). As there were more participants within the reflexive sessions (and too many considerations to fit on one page), I added representative quotes and thoughts onto a computer-based document which I kept visible on a second computer screen as I completed the next initial steps.

Figure 8-2: Example of simple familiarisation doodle completed during the reflexive session reflexive thematic analysis process

8.7.2 Phase 2: Coding

I then added comments, sharing my first thoughts when reading the participants' comments to the word document containing the transcript (code labels). This process is shown in **Figure 8-3**. I reviewed this document multiple times before progressing to coding.

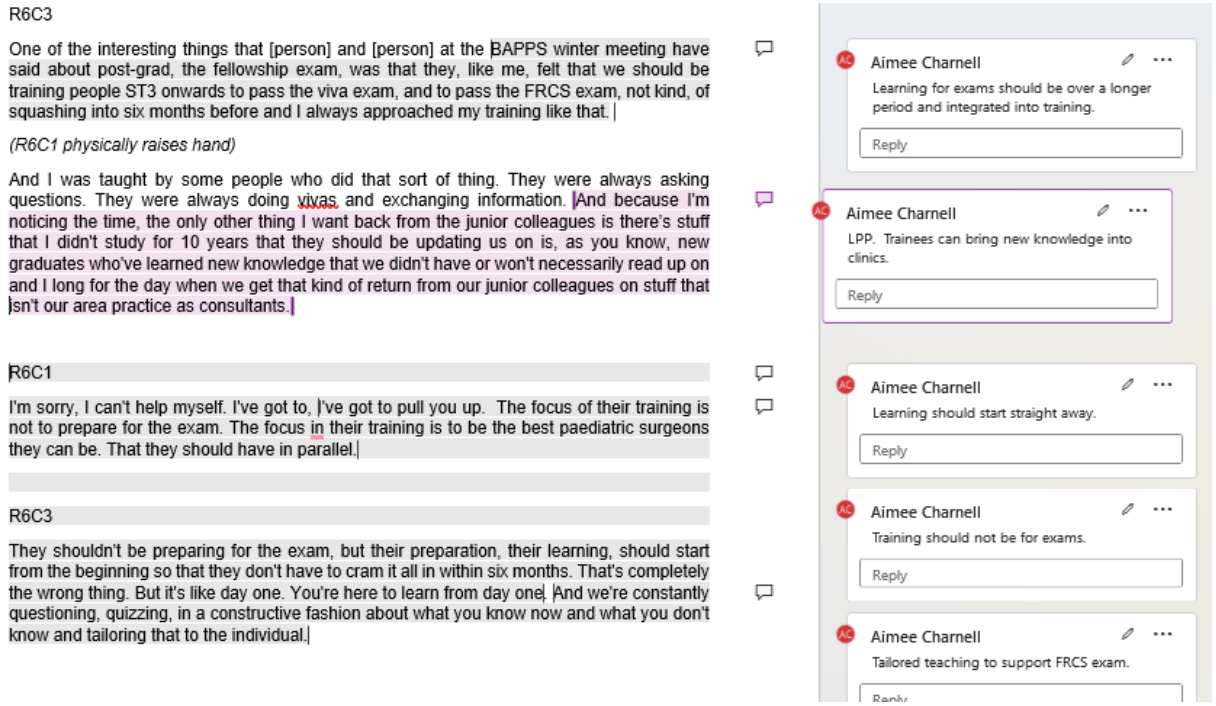

Figure 8-3: Initial notes made during coding of reflexive session

Once I had made initial comments, I then considered potential codes, ensuring that all the associated text was highlighted before writing these codes in a comment box (**Figure 8-4**). Through a combination of hearing the participant's voices as coding and understanding the underpinning literature, my coding tended to sit somewhere between latent and semantic). Again, I visited these multiple times initially and again once I had reviewed the other transcripts.

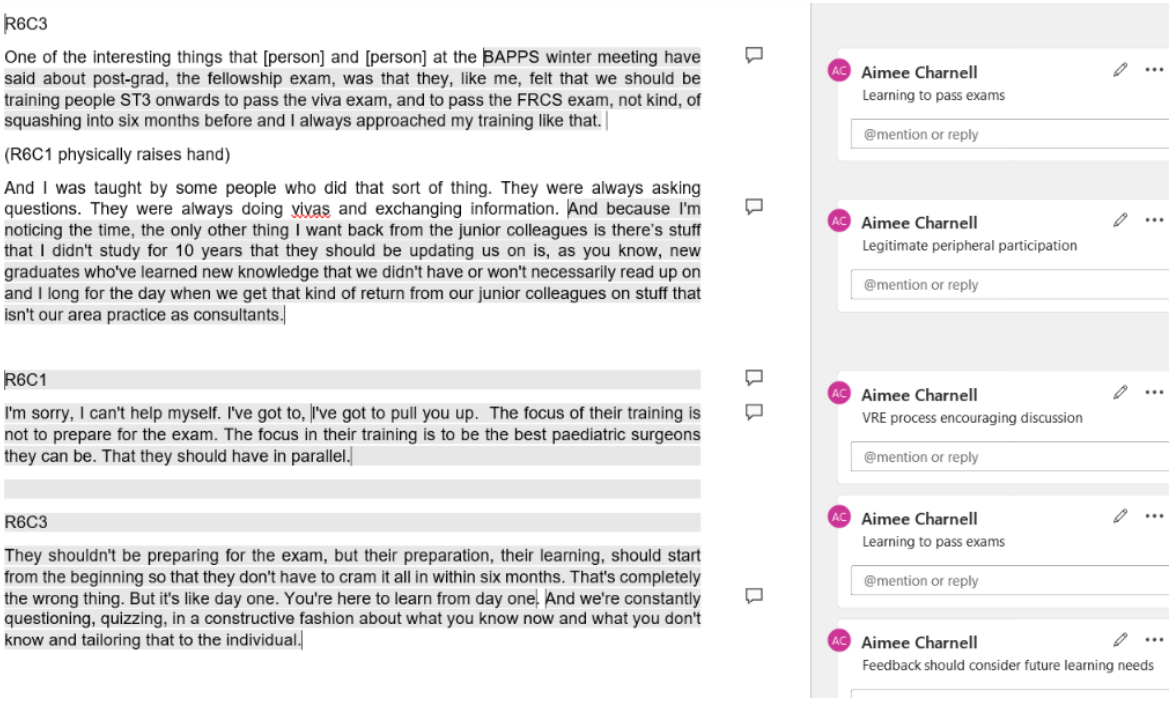

Figure 8-4: Developing codes for reflexive session transcript

I then created a macro allowing me to transport each quote and the corresponding code into a table. I was then able to sort the table to group quotes which seemed related. Occasionally, quotes had two separate codes, which I highlighted within the table by making them grey.

Grouping the codes allowed me to revise them further, ensuring some commonality among the codes. For example, 'VRE process encouraging discussion' later became 'VRE process providing unique discussions'. **Figure 8-5** gives an example of the table demonstrating all these quotes under this code.

R1T1 & R1T2	You would know watching them who was…where they were along the experience curve. I don't know if you'd agree [R1T2] R1T2 Yeah, again, I know everyone in the videos and one of them being me (laughs).	VRE reflexive sessions providing unique discussions
R2C1	You know, they do have their limitations, you know, family, new patients, examining sensitive areas, you know, going and things like that, and limitation.	VRE reflexive sessions providing unique discussions
R3T2	I really liked the first clip was showing about giving safety net advice and trying to reassure patients and giving them information about what to do in certain scenarios. I often think that's a very helpful thing to do.	VRE reflexive sessions providing unique discussions
R6C1 & R6C3	R6C1 I'm sorry, I can't help myself. I've got to, I've got to pull you up. The focus of their training is not to prepare for the exam. The focus in their training is to be the best paediatric surgeons they can be. That they should have in parallel. R6C3 They shouldn't be preparing for the exam, but their preparation, their learning, should start from the beginning so that they don't have to cram it all in within six months. That's completely the wrong thing. But it's like day one. You're here to learn from day one	VRE reflexive sessions providing unique discussions
R6C3	The stuff you've shown me in these kind of clinic videos, again, does show I think people are trying to do the things that are laid out in the capabilities in practice.	VRE reflexive sessions providing unique discussions
R6C3 & R6C1	R6C3 And the more clinically inexperienced you are, I think that's a difficult thing to maybe adapt to, in addition to trying to give the information you're already learning. R6C1 But part of that is checking isn't it? R6C3 Yes. And something safe, sort of if this happens then…. R6C1 And he did. He said, I can't remember what it was, "I wouldn't expect that to happen, but if it does, please do come back to us", and he thought it through.	VRE reflexive sessions providing unique discussions

Figure 8-5: Example of grouped codes and corresponding text from reflexive sessions

8.7.3 Phase 3: Generating initial themes

As with the interviews, I generated initial themes by writing each code on a post-it note and grouping these together on a wall. I reviewed these multiple times and discussed my initial thoughts with my supervisors. A small part of this process in **Figure 8-6** demonstrates a small grouping of similar topics (in the blue oval), including the following code: VRE reflexive sessions providing unique discussions.

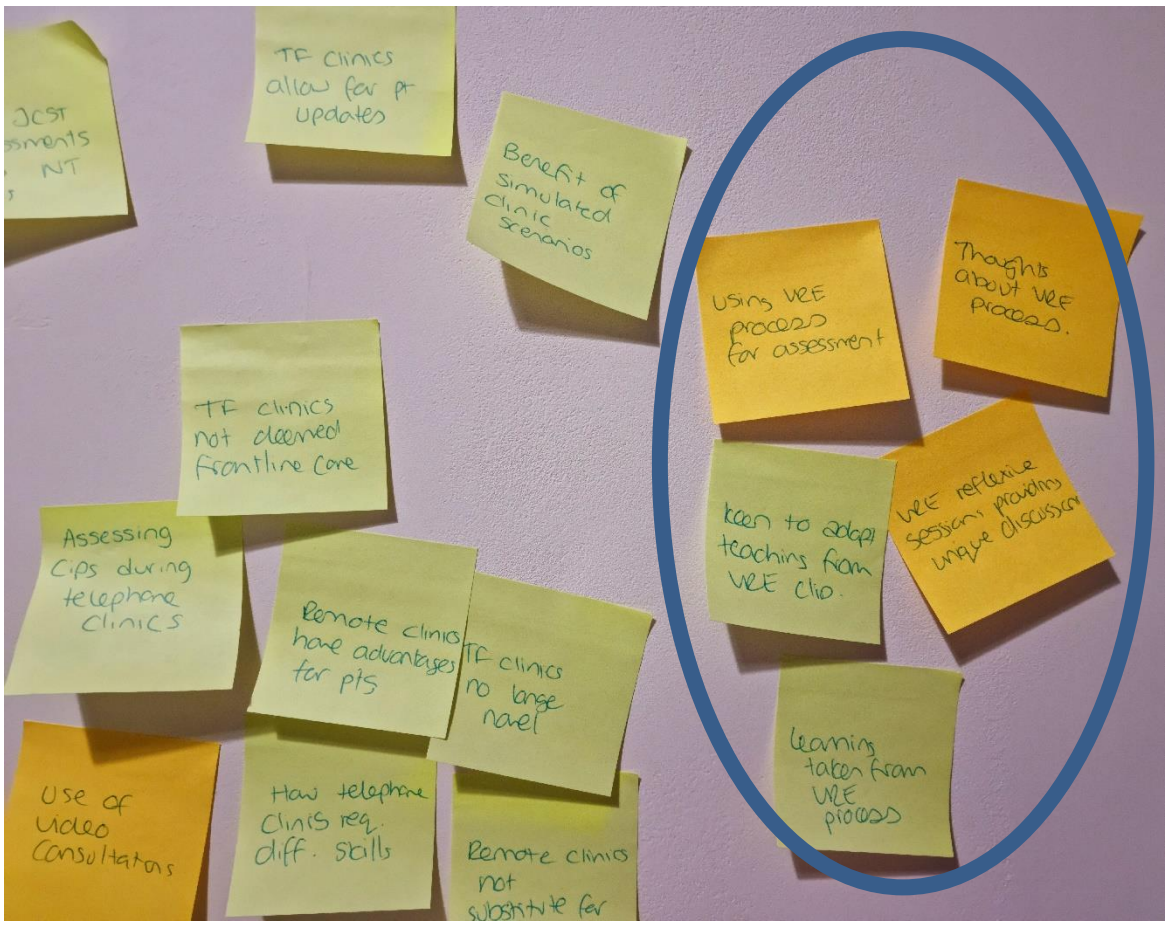

Figure 8-6: Using post it notes to group related codes when developing themes from reflexive sessions

I attempted to consider how this grouping linked with other groupings of codes by considering the anecdotes my participants shared and thinking about the story being formed, all while keeping my research questions in mind. When considering the quotes from this grouping, I realised that VRE had enabled discussions about current learning and thoughts about the process and purpose of learning. Combining these quotes with those from other groupings (including those considering change and CiPs), I started to consider the patterns within the data. The resulting theme became Theme 3 and was made up of this grouping along with multiple other groupings. This theme was initially titled 'Evolving education within clinics: Now and moving forward.'

8.7.4 Phase 4: Developing and reviewing themes

Once I had developed my initial themes, I grouped the initial themes within the table and reviewed the quotes together. When considering the story presented within each theme, multiple revisions were made to the earlier phases. I developed the story within my theme,

using the quotes from participants and considering subthemes. Some quotes highlighted discussions about change, which linked with discussions about CiPs. Deciding the titles of the final themes and subthemes involved visiting the reflexive session transcripts multiple times to ensure that I shared each quote as I believed it was intended. The titles evolved as I considered the relationship between the three themes generated from the reflexive sessions and the overall findings.

Phase 5: Refining, defining, and naming themes and Phase 6: Writing up

Although these are listed as two distinct phases within rTA, separating them would have been impossible. Writing up allowed me to further refine my themes, which were not finalised until I completed the discussion. I wanted to ensure that I clarified my interpretation throughout the analysis and discussion, meaning that the themes needed to be visited multiple times (and for the interviews, too). After each of these phases, some quotes provided above became part of the subtheme 'CiPs as an opportunity for reflection and change' within Theme 3, titled 'Educational interventions make learning visible within outpatient clinics' after multiple revisions.

8.8 The reflexive session themes

Having provided an example of how the rTA process allowed me to generate themes, the three themes (and their subthemes) for the reflexive sessions are presented in the following sections.

8.8.1 Theme 1: Supporting trainees' development towards independent outpatient practice

When analysing the interviews in the previous chapter, I developed a theme that recognised the clinics as a distinct learning area and considered how support might allow trainees to develop autonomy. Within the reflexive sessions, participants talked further about the unique nature of clinics but focused more on the role of the clinic in developing trainees' path to consultancy. Therefore, this theme focuses on recognising the roles and values of the trainee within the clinic hierarchy and how the trainee becomes an independent practitioner within surgical outpatient clinics.

8.8.1.1 Subtheme 1 - Responsibilities for developing the independent trainee in clinics

Within the earlier interviews, much focus was on the consultants' role in making the clinics a place for learning. Reflexive session participants were encouraged to think broader than the individual clinics and recognised that the onus should not just be on the consultants for trainees' development. Part of the trainee's role is identifying their own needs within the clinic, including choosing which consultations to discuss. As within the interviews, trainees in the reflexive sessions stressed that increased independence is afforded with seniority, with one explaining:

> *"The difference is, kind of, how much input the consultants have as we go up the chain. So when I first started seeing patients in clinic I discussed all of the consultations and now I will discuss the complex ones or the ones I'm not sure about. And mostly I'm discussing the complex ones because I feel like I should be."* – (R4C1).

One consultant explained that despite trainees having some freedom in choosing which patients to discuss, they felt it is *"part of the educational contract we [the consultants] have"* to decide which trainees are afforded some choice in which patients are discussed (R6C1). Therefore, some consultants may only allow senior trainees to choose which patients they see. Some consultants give the option of whether trainees discuss patients and others want some trainees to discuss every patient, especially early in their rotation. One consultant assumed that trainees appreciated graded support towards independence, from discussion of every patient to discussion of selected ones, as one of the *"positive things in [their] GMC (General Medical Council) survey was the degree of supervision"* in clinics (R6C3). One trainee expressed that this progression was evident within the reflexive session clips:

> *"I think knowing the trainees in the video the thing that's evident across the three videos is the progression and confidence and proficiency in actually managing the consultation by the individual doctors across the videos, you know. There's very much a spectrum of experience there that is evident from knowing them but I think it's evident from watching the videos."* – R1T1

Gradual support in patient selection and senior discussion may allow trainees to feel safe in their journey towards consultancy. This gradual support is important, as one trainee explained that the skills needed to be a consultant within clinics are vast:

> *"There's a lot more to being a junior consultant other than clinical knowledge or practical knowledge. I think there's an element of problem-solving, communication, and leadership, which something that's junior or trainees need to develop other than just clinical and practical sides."* – R4T1.

Moving on from discussions that reflected those within the interviews, participants recognised that the path to consultancy requires more than consultant support. Trainees recognised that they should also take charge of their own learning in the clinic in order to become increasingly knowledgeable and independent. One trainee explained:

> *"I think as trainees we just have to take responsibility for our own learning because at the end of the day, you know, our career at the end of the day, you're going to be a consultant looking after patients and the resources are there, the people are there, the knowledge is there."* – R3T1

During the reflexive sessions, participants also considered support available beyond self-directed learning and consultant support. Senior trainees seemed more confident with their responses, explaining that they knew whom to seek support from, even outside their team. One trainee explained that as a registrar, *"you understand that all you have to do is just ask, and somebody will provide you with the training and the know-how and give you a little bit of help"* (R3T2). This comment shows that some more senior trainees demonstrate conscious incompetence yet know where to seek support; however, it was clear that some participants perceived some seniority was needed to understand the value of this support.

Conversely, one very junior trainee felt *"the training that [they] get during clinic from either consultants or registrars is already sufficient"; however, t*hey recognised this might not be enough, saying, *"maybe I've missed something…I wouldn't know"* (R6T1). One consultant within the same reflexive session expanded on the reasons for these considerations by explaining that junior trainees may be focused on their immediate next steps, to the exclusion of learning from other professionals:

"Yes, I think you get different healthcare professionals have different skill sets, don't they? And as doctors, we're very focused on our own skill set and where [R6T1] is at in his training his focus is absolutely on acquiring the skill set of being a doctor, which is entirely appropriate." – R6C1

Therefore, while support is available outside of the immediate surgical team, this subtheme suggests a certain level of seniority is needed to understand the availability and importance of other team members. It was fascinating to consider that the path to independence means the ability and confidence to open up new networks and seek broader support, rather than solitary practice meaning the need to tackle problems alone. This certainly reflects what I observed during the ethnographic phase; consultants tend to be the ones who most utilise broader support.

8.8.1.2 Subtheme 2 - Recognising the impact of missed opportunities for developing trainees' outpatient practice

Participants explained that within clinics, surgeons could *"practice actual medicine in a way that you probably don't as a surgeon most of the time, especially in a tertiary speciality, such as paediatric surgery"* (R3T2). I understood this to mean that patients seen within clinics are different to those seen elsewhere, both in terms of their conditions and the need to consider the long-term management of these patients more holistically. During my ethnographic fieldwork and considering my short time spent clinically within the department, I observed that in the clinic, surgeons took patients' other medical conditions much more into account than in the acute setting or even the operating theatre.

During the pandemic, when my fieldwork was due to begin*, "consultants were doing all of the clinics via either video or phone"* (R5T1), which I recognised during my QIP. Trainees did not attend as they felt consultants *"deemed it was not good training"* (R5T1), although there was no consultant within this reflexive session to confirm or deny this assumption. Trainees noticed the exclusion from remote consultations for two reasons: they felt undervalued as members of the surgical team, and, secondly, they felt this impacted their learning. One trainee explained:

> *"It was very much a negative impact, I think, because we lost a huge amount of time. While we were sitting around doing not very much and our consultants are working hard where we could have learned a lot from them, but it did not happen."* – R5T1.

The reflexive sessions did not consider why trainees may not have been involved in phone or video consultations, although I did converse with consultants about this during my QIP. As the consultants were learners within the telephone clinics, they were keen to learn how to conduct telephone clinics themselves before introducing skills to trainees. Additionally, everyone felt this would be a much shorter-term measure than in reality, as many consultants did not enjoy completing telephone clinics at the beginning, so they thought it better to focus on keeping trainees safe and away from clinical areas if possible.

One reflexive session focused particularly on this missed opportunity for learning. The trainee explained it would have been helpful to observe, *"especially with the video consultations"* (R5T1), as it would have allowed observation of the surgeon and patient dynamic in this consultation format. The trainee explained this was not possible as the consultants often did the consultations at home, and trainees did not have access to the video consultation software. The research nurse responded by expressing this was not an appropriate reason:

> *"I know times are really tough, they're really tough for all of us. But, you know, we need to bring people on, we need to bring people up in the long….we need to be really maximising every opportunity to develop trainees and students."* – R5E1

Although the pandemic posed fewer restrictions at the time of writing this thesis, this conversation was very important as it showed that trainees appreciated the learning within clinics and that an opportunity may have been missed for learning. It stresses the importance of including trainees during changes within the clinics. The trainees' perception of 'missed learning' contradicted surgeons' reflections elsewhere about the value placed on trainees and education. One consultant explained, "*if a trainee is with me, then I do try very hard to do things slightly differently…making sure there's an educational element"* (R6C1). Consultants stressed that they would like to involve trainees in clinics more, with one

explaining, *"if we could identify all the people who could just be seen in the reg[istrar] clinic…we could [set these up] with the senior person supervising"* (R4C2).

While this subtheme emphasised the perceived importance of clinics for the trainees' learning and development, it also considered the difficulties posed when including them during the pandemic. These difficulties included the sudden change in practice and generally due to lack of rota availability given the last-minute changes due to sickness. While lessons can be learnt from the pandemic on the importance of trainee inclusion, it is perhaps more important to place a greater emphasis on rota variability and training opportunities where possible. The lack of timetabled clinic sessions and last-minute changes appeared to be a main influence on the trainees' attendance, perhaps given the perceived importance of trainees within clinics.

8.8.1.3 Subtheme 3 - Reassuring trainees of their value in the clinic hierarchy

Although trainees appreciated the clinic's value in learning, they occasionally worried about their impact in being there due to their need for support. One trainee explained that they sometimes feel *"in the way"* (R5T1). Another expressed the same sentiment but explained that their value increases over time:

> *"I feel like when I'm [in] clinic I really enjoy it, it's really great learning opportunity for me, but I think I slow the consultant down and I know that that probably changes throughout the training, you speed up and you know more things"* – R3T3.

On the contrary, consultants did not share the view that trainees were a burden in clinics. No one talked about trainees slowing them down, and all seemed very positive about trainees attending clinics. One consultant commented on one trainee in a clip, stating, *"one of the trainees was outstanding. Paradoxically, it was interesting to see, to watch how an outstanding trainee performs"* (R4C1). They later stressed that consultants do not typically need to observe trainees who are performing well. Another went one step further by explaining they "*really want to have [their] genius registrars around"* (R6C2).

This positive view may have been skewed somewhat by those choosing to attend the reflexive sessions, but I also had the same impression when viewing the full range of consultants during the ethnographic phase. One consultant went one step further, explaining they might learn from trainees too:

> *"I'm noticing the time, the only other thing I want back from the junior colleagues is there's stuff that I didn't study for 10 years that they should be updating us on is, as you know, new graduates who've learned new knowledge that we didn't have or won't necessarily read up on and I long for the day when we get that kind of return from our junior colleagues on stuff that isn't our area practice as consultants."* – R6C3

Trainees' concerns about their contribution to clinics indicate a perceived hierarchy, where junior trainees feel they are burdensome, even if the consultants do not share the same views. During the reflexive sessions, the research nurse recognised a hierarchy and wondered if this was unique to surgery:

> *"Within the MDT…everybody, such as trainees, they're all working together. I'm not saying surgeons don't work together (laughs) but almost like, other teams might be less dictatorial and less hierarchical maybe?"* – R5E1.

However, one trainee was quick to explain that this hierarchy was less apparent within the paediatric surgery team than in others that they had observed:

> *"There's probably more hierarchy in my adult colleagues' teams than there is within paed[iatric] surgery. I think paed[iatric] medicine was quite difficult to know because the two, the consultant and trainee tiers, they seem very, very, separate."* – R5T1

These comments suggest that trainees' concerns about being burdens in clinics are not unique to (paediatric) surgical practice and are perhaps commonplace amongst doctors in training. However, consultants who appreciate trainees and are keen to support their development do not share these thoughts. Although trainees may be slower and require

more support as they commence training, there is a recognition that early support will help to develop them into consultants who will train the next set of trainees with similar patience.

8.8.1.4 Subtheme 4 - Developing trainees as educators in the clinic

Linking on from the previous subtheme, as trainees become independent practitioners, they will need to support the next generation of surgical trainees. As explained within the interview themes, it is the consultant who was perceived to have the overall responsibility for the patients; however, there was recognition that consultancy does not always equate to knowing everything. One trainee explained that *"day one consultants will be talking to their colleagues about tricky patients that they're not sure about"* (R5T1). One consultant explained that *"when you do become a consultant, you finally get tested"* (R6C3).

For new consultants, this testing time often comes with having a trainee and the responsibilities for training. It can be difficult for consultants to combine their new responsibilities as independent practitioners alongside supporting trainees to embrace the clinic culture. One consultant expressed the difficulty this imposes when trying to be a good surgeon in addition to being an educator:

> *"When it comes to the training I'm still junior in my consultant career and clinic for me is getting through the patients in the time you've got, making sure that I don't cock anything up, and making sure that at the end of the clinic, making sure everybody's alright really as opposed to necessarily thinking about training."* – R4C2

Through the interviews and informal conversations during my ethnographic phase, I suspect junior consultancy is the most challenging point of 'training' for surgeons. Although medical careers are considered lifelong learning, I have often experienced an external perception that consultant surgeons are experts in all areas of practice. Within the clinic, being expert clinicians and expert educators for the trainees can be a challenge to fulfil. As demonstrated in the above quote, this is not always possible. Additionally, the previous themes have considered that the role of training within the clinics does not fall exclusively to consultants.

Consultants recognised the role of an educator is crucial within clinics, explaining that training all trainees, including non-surgeons (e.g. GP trainees), is vital for surgeons. They explained this should be further formalised within their appraisal process by stating that teaching a wide variety of trainees should be a *"performance metric"* for trainers (R6C3). Although teaching is not vital to a consultant's appraisal and revalidation process, feedback from supervisory activities is (Royal College of Surgeons of Edinburgh, 2012). Many clinicians do not receive formal training to be educators beyond completing the RCS Train the Trainers course as a junior trainee, despite education being a crucial part of their role.

Therefore, many trainees will have the same formal training in teaching as their junior consultant counterparts. Other elements of learning to be an educator within clinics will be learnt during training and develop their skills as an educator 'on the job'. Trainees recognised the potential opportunity for learning this brings and that this is an opportunity many often enjoy. Furthermore, while they may feel like a burden clinically, they can be helpful to more junior trainees as they develop their knowledge and confidence. Clinics provide a space for trainees to teach, thus empowering trainees to pass on their knowledge to more junior trainees. One trainee explained they would like to teach more within clinics by explaining that they would like to *"try and get more of the [junior trainees' to come sit with [them]".* They explained that junior trainees *"usually sit with the consultants, but it would be nice…to be able to do some training with them too"* (R5T1).

Passing some of the educational responsibility to trainees is helpful for two reasons: firstly, it allows consultant surgeons to focus on the care of patients and secondly, it allows trainees to feel more useful during the clinic, thus feeling a more valued part of the team as they develop a conscious competence, while also continuing their learning. Increasing trainees' responsibilities as educators would require ensuring that trainees are supported as teachers (in addition to being learners) too. Although surgeons only complete the Train the Trainer course during their surgical training, it may be that, like conducting clinics, much of learning how to teach is done 'on the job'.

8.8.1.5 Theme 1 summary

This theme has considered the responsibilities towards supporting a trainee towards independence within clinics. The duties include the senior making the trainee feel welcome and supported within clinics and maximising their current strengths and abilities. In addition,

trainees should take responsibility for aiding and engaging in this process. Trainees felt they missed clinic attendance during the pandemic, suggesting they appreciate clinics' value for learning. Consultants appreciated trainees attending clinics, although this appreciation is not always apparent to trainees who felt like burdens early on and depended on their consultants for support. Additionally, it is not always understood that surgeons at all stages deem themselves learners. The reflexive sessions suggested that junior consultants only just straddle the fence between conscious incompetence and conscious competence. Allowing trainees to play a role in clinics where they feel empowered, perhaps through teaching, may enable them to feel more helpful while also supporting their journey towards independence in outpatient clinics.

8.8.2 Theme 2: Clinic learning is influenced by wider systems

This theme now moves beyond surgeons following the review of the clinic's role towards developing independent surgical practitioners. It considers which other key players and systems influence the clinics, the clinic set-up, and the learning which happens within these. Theme 1 in the interviews considered the role of other individuals in relation to the trainees' learning, which primarily focused on other MDT members within the clinic. This theme expands these ideas while also considering external influences on learning plus the impact of technology.

8.8.2.1 Subtheme 1 - Clinic practice within the overall patient pathway

Although this PhD focuses on trainees within clinics, it is important to remember that the goal of clinics, and therefore their primary purpose, is patient care. The clinic will only be a small part of their journey for many patients. Many systems influence the clinic, and the unifying purpose of each of these broader systems is also patient care. All patients will have seen another clinician before attending the clinic, and many will receive further input in some form following their initial outpatient appointment. Patients and clinicians must understand the role of the clinic and the clinician within their outpatient care pathway. This subtheme considers the doctor-patient relationship within clinics and the importance of introducing the trainee to patients.

When considering the clinic's role in the patient journey, one trainee explained that clinics provide *"different aspects of the whole pathway"* (R3T1). Another stated, "*if you've never been to clinic before, you don't necessarily understand how patients get to the ward in the*

first place" (R2T2). Another posited that since it might take a while before the surgical team reviews the patient, their condition may have changed following their initial referral or previous appointment:

> *"So, there will be a GP who sees a patient first, then somebody in ED or somebody else, or medicine or something else. So it's like a lot of chains a person or loops or hoops that patient has to climb to before they arrived at you, if you're working in hospital only. Whereas if you're working in the clinics, yeah, the GP might have seen something, and might have referred the patient to you, but by the time the patient comes to you, it might be a whole different story altogether."* – R3T2

However, once a patient is in the clinic system, they often stay under the care of one consultant and the clinical nurse specialists. One trainee explained that this results in a *"build-up of relationship between [the consultant] and a patient"*, which often, *"you don't get to see as a trainee"* (R3T2). This care means that the consultants often watch their patients transition from babies to adults, where they hand over their care to adult surgeons if appropriate. One trainee explained that this long-term care of the child is the reason for less trainee independence within paediatric surgery:

> *"I came from adults, where I think consultants felt less precious about the patients. I think in paed[iatric]s we are very precious about patients, and they are chronic patients so everything does get run by consultants."* – R4T1

This consultant oversight means that when trainees review complex patients, consultants *"quite often want to sit in because, you know, it's one of their patients who they know really well"* (R5T1). One consultant reflected on this unique position and explained that they have changed which patients the trainees can review to discourage dependence on just one clinician:

> *"I've started saying that a trainee can see any patient at all as long as there's not a child protection thing or something approaching that. And I found that it's healthy from a parental perspective to recognise that they're looked after by a*

team because there's a bond that's probably unhealthy in both directions." – R4C1

One trainee expanded on this, explaining that chronic patients often *"know the consultant by name, by surname. And, you know, they know how they look"* (R4T2). This means that patients may struggle to develop a good rapport when they see someone new, including a trainee. The trainee explained that when reviewing patients they have not met before, they might "*ask who they've seen. They [the patients] don't even know the name of the person [trainee] although we always introduce ourselves. And, so, I think the relationship is weaker"* (R4T2). However, the research nurse explained that not all doctors introduce themselves by questioning, *"but not everybody introduces themselves, do they? You don't know what level they are, you don't know"* (R5E1). These two comments represent that there may be inconsistencies of views amongst surgeons in relation to the patient-doctor relationship, which I suspect reflects their individual experiences and perspectives. It may also represent that not all aspects of the consultation are remembered, clinicians might not *always* remember to introduce themselves, and patients may not *always* remember when they do. As the trainee above always introduced themselves, they might have thought that others do the same; however, during the ethnographic phase, I heard one very senior trainee refer to themselves as the "paediatric surgeon" without giving their name or trainee level. Trainees should share their names to help develop a rapport and to be an important part of the joint enterprise supporting the patient's journey.

This subtheme considered that the clinic might be a small part of the patient journey; therefore, some might be keen to be seen by the same consultants, but others do not share this concern if their care is discussed if needed. Either way, introductions are important and should be emphasised during consultations in order for the caregiver to understand the role in their child's care. The next subtheme considers who, beyond surgeons, influences the patient journey within clinics and the role each of these has within patient care.

8.8.2.2 Subtheme 2 - Others' influence on clinic practice

Having considered that clinics play a small role in the patient journey, the next subtheme considers the people, teams, and organisations influencing clinics and the trainee learning within them. In the interviews, there was a feeling that service provision and training would sometimes compete. However, from conversations during the video ethnography phase

and my QIP, I never felt this was due to decisions made by consultants within clinics, but was instead due to external influences. Here, I convey the reflexive session participants' thoughts about wider members of the organisation, such as clinic nurses, the MDT, and business managers, and consider their roles as barriers and enablers to trainee learning. I present this subtheme by working outwards from the clinic to other teams who influence clinic practice, including other clinical teams, the non-clinical teams, the organisation, and the Royal Colleges.

Firstly, within the clinics, much of the set-up is organised by clinic nurses. One trainee explained that *"clinic nurses are really good at trying to find spare rooms for us, they're really kind"* (R5T1). They often manage last-minute changes within the clinics, such as the consultant bringing unexpected trainees, with one trainee stating that *"unfortunately, they're well used to it and have happily moved people around for [trainees] in the past"* (R5T1). Another trainee explained that some clinic nurses vary their behaviour depending on the trainee:

> *"The nurses as well, who actually staff the clinic, can make your life very, very easy or a bit more challenging. I find, you know, just by creating a comfortable environment, knowing where the patients are, what they need, not having to march back up to get weights checked, their blood pressure checked, and all that kind of stuff."* – R1T1

This comment suggests that clinic nurses can choose how supportive they are of the trainee within clinics. Some trainees might receive more or less support in clinics and might not always understand why. No one alluded to why this might be within the reflexive sessions. I suspect this displays an aspect of the hidden curriculum within outpatient clinics. Understanding of clinic culture and appropriate communication with other staff (e.g., nurses and front-desk staff within the clinic and secretaries outside of the clinic) may be vital towards accessing this support, which all trainees might not recognise. Additionally, although I observed that the front-desk staff and the healthcare assistants play a significant role in patient care within clinics, they were not discussed during the reflexive sessions. Their lack of inclusion during discussions may suggest they were not deemed to impact trainees' learning experience to the same extent as nurses.

However, there was a sense of MDT learning from external teams within clinics, and trainees did consider interactions with the wider MDT as important to their training and the patient journey. When considering other teams, one trainee explained there was a *"good multidisciplinary vibe"* (R2T2) within clinics. Considering pharmacy, one consultant explained that a *"community prescription"* (R4C1) was difficult to obtain for some medications during the pandemic. However, one trainee explained that they found the *"pharmacists...really helpful in knowing, sort of, what things work best and preparations of stuff",* and when a pandemic medications newsletter was mentioned, they pondered *", I think it comes from pharmacy"* (R3T1). Additionally, many trainees explained they worked closely with the gastroenterology medical team and oncology team. One junior trainee explained that this MDT support begins before the trainees start working within clinics:

> *"I don't have a lot of experience with different specialities in clinics, but I do like seeing them on the wards and stuff and I've rung them for advice and stuff, and I think they're super approachable."* – R3T3

One trainee explained that when multi-speciality clinics do occur, they are often a positive educational experience:

> *"I think being present for the multidisciplinary clinics is quite useful. And probably one of the most educational things that we do in our training. So, like being present in a clinic, with joint between urology and colorectal, or colorectal and gastro[enterology] teams. It's just because usually, we're not needed in these clinics for service provision. So, our presence there is mostly for education."* – R2T1

This is very interesting, especially since the trainee role in these clinics is mostly observational. This suggests that even mid-level trainees can find observation useful for their learning, in this case also due to their limited active participation in the MDT clinics, allowing the focus to be on education. Another trainee explained how the MDT clinics work and how it helped to reinforce the MDT nature of patient care within the clinics:

> *"I have been in one colorectal clinic with [consultant]; we had the bowel nurses as well as the gastroenterology consultants running the clinic simultaneously so*

you, kind of like, got to see what the gastroenterology input was and then what the bowel nursing input was and then how [consultant] gave his input into complex cases. So it was nice to see that and to actually see how everybody can add a different facet of care and can actually help bring things together." – R3T2

In addition to explaining that clinics can be multi-speciality and multi-disciplinary, this quote introduced another key player within patients' outpatient care: the clinical nurse specialists. Within the department, there are clinical nurse specialists in both urology and the colorectal service. Perhaps they are the most important connection between patient care and the trainee learning experience. They were considered within the interviews in relation to the trainee experience. One trainee explained that within clinics, the nurse specialists have *"a continuity of care relationship with patients",* which the trainees might not appreciate, allowing a *"good cop, bad cop"* situation (R1T1). In this, the doctors ask direct questions, and the nurse specialists provide more of a holistic approach. They explained:

"they're approaching it from a nursing point of view in the sense that we will be looking at things very medically, you know, and they will ask a question, like, 'does your child go to the toilet at school?'. And it's, it's a very, very revealing question and the answer, but it's something that you might not think to ask as the doctors seeing the patients" – R1T1

Other team members explained that the clinical nurse specialists *"are so much better, than at least me, to explain data management"* (R6C2), as they are good at *"talking to the patients and like helping them be relaxed"* (R3T3). Additionally, they can *"give a different angle or different perspective"* (R6T1) on patients to the trainee, aiding the trainee's thought process. I witnessed an example of this approach being utilised by the trainee when considering the conversation they had during their interviews and reflexive sessions. Trainee R1T1 explained above that the nurses have a different perspective when asking questions. However, during the interviews, the same trainee indicated they had started to ask patients similar questions to the quote described above. This may suggest that trainees learn from the research nurses and gain more of a holistic approach due to observing their working methods. One trainee explained that the clinical nurse specialists *"really, really help with learning. [The trainee] learnt more from them sometimes than [they] do from…any conversation with a consultant"* (R1T1).

Trainees recognise that most of the training from the clinical nurse specialists is delivered *"informally"* (R5T1), especially at a more senior level. They do provide formal training, where they *"come and speak to [the junior trainees] about different types of gastrostomies quite early on"* (R5T1), which is information that the trainees can later use in clinics, which can also be done at a *"slightly less pressured pace"* (R6C3). One trainee explained they had not yet asked the clinical nurse specialists for educational support. Still, they often referred to the bowel nurses' work and would like to spend more time with them to provide better explanations to patients:

> *"We always say, 'oh, the bowel nurses will be in contact to talk about washouts and peristeen', but I'm like, actually I've never done this. You know, I'd like to know how to do this and they're really, really helpful because they just know so much about the practical things around the ACE (antegrade colonic enema) button, the caecostomies and things, and they'll manage a lot of them before they even come to us."* – R3T1

Considering beyond individual outpatient clinics, other teams within the hospital influence the clinic set-up and, therefore, the learning within them, perhaps much more so than the surgical consultants. One trainee explained that when setting up clinics for training, *"these things are out of [the consultants'] hands"* (R6C1). Firstly, the educational experience within clinics can largely be influenced by the consultants' secretaries, who may have *"booked rooms"* for trainees, but *"quite often that doesn't happen"* (R5T1). Like consultants, the secretaries will only have access to the team rota, meaning they might not know which trainees are on the rota for clinics until only a short time before. Likewise, *"if they know the reg[istrar] is in on the clinic",* the secretaries can consider *"which cases they're putting in. Sometimes there's thought there, so that can influence the trainees as well"* (R1T2). Another explained that the influence of the secretaries on trainees' educational experience is vast. Suppose the secretary is temporary or does not understand clinics. In that case, they could overbook clinics and *"create a situation where the clinic is just one big firefight, and there's very little learning that takes place in this scenario"* (R1T1). These comments suggest that it may not be the nurses, but the secretaries and booking team who play the most significant role in the number and types of patients within the clinic, which will impact the pressure on the clinic and the time for senior input and discussions.

Beyond the secretaries are the team's business managers. These were not directly mentioned by any participants within the reflexive sessions, despite them playing a significant role in overseeing the business set-up. This may be as they are less visible within clinicians' day-to-day work. During my QIP, the business managers were very helpful as they understood the variations in the numbers of patients seen within clinics and any changes to overall clinic management needed to be approved by this team. Although trainees did not consider the business team, they were aware that some decisions were made at a higher level:

> *"I think the way the hospital or training [pathways] can facilitate [learning within clinics] is probably to give you more clinic time, than just focusing on doing more clinic training clinical time rather than just clinic time all the time, where you're actually assessed and given constructive feedback."* – R3T2

Although the external teams might not be the ones to set-up individual clinics, this comment suggests that clinics with extra time factored in for training might be useful for dedicated feedback to support learning which may happen through work conducted by trainees in clinics. Others have previously mentioned that secretaries can place certain patients in particular clinics, which may also be an external factor influencing which clinics are better for trainees' learning. One participant expanded on the need for the whole institution to provide more support for teaching and patient care, stating that as a hospital assigned as a teaching hospital, *"the clue's in the name*" (R5E1). This comment suggests that within a teaching hospital, it is the role of everyone within that institution, and the institution itself, to support teaching and educational opportunities.

Beyond the institution are the Royal Colleges and the JCST, which play a significant role in the surgical training programme. Until recently, clinics did not play a formal part in the assessment requirements for surgical trainees. Although the new introduction of clinic-based CiPs was discussed extensively in relation to the trainees' learning, their considerations led to a large discussion. They will therefore be considered separately within the next theme. Before these CiPs are considered, one further subtheme will conclude this theme, as it is important to consider the role of technology within the system and the impact this plays on trainees' learning.

8.8.2.3 Subtheme 3 - The impact of technology on trainees within outpatient clinics

Here, I consider how access to hospital systems impacted trainees. Although not entirely due to the pandemic, this highlighted the difficulties that trainees have accessing systems vital to their work. One trainee highlighted how the pandemic exacerbated issues with access, as trainees "*lost a huge amount of time"* when many clinics were completed by the consultants *"from home"* (R5T1), using remote systems where trainees did not have access.

Early in the pandemic, some clinics were by telephone and others by video. One conversation highlighted the impact had when the trainees were not able to join remote video consultations:

> *"But could you not dial in separately?"* – R5E1
>
> *"Apparently not."* – R5T1

When asked about the reason for this, the trainee explained:

> *"We don't have access to the computer system that allows us to do it. I have done a few but logged in as a consultant who's been kind of sat in the room or whatever. But yeah, the Trust hasn't given us the facility to do that."* – T5T1
>
> *"Why? Why wouldn't they?"* – R5E1
>
> *"I have no idea."* – R5T1

Access to computer systems plays a large role in all clinics, including those conducted face-to-face. I explain in my vignette in Chapter 1 how lack of access to software caused huge issues within one clinic I had conducted. There are many computer systems which trainees need access to, such as the clinical software used within many departments, including the clinic management portal "*Epro and all the other programmes [trainees] need to be able to dictate [their] letters*" (R5T1). Additionally, as explored further in the next theme, it may also be useful for trainees to access the referral software before the clinics, which currently *"only the consultants have access to"* (R2C1).

One consultant shared their thoughts about lack of access being a barrier to conducting clinics. They explained that *"you could talk about things like IT and trying to get referrals up and things like that"* as untaught elements within clinics, which they thought of as elements of the hidden curriculum, as learning how to use these systems was vital for conducting clinics (R4C1). One trainee explained the barrier that IT access had on their ability to conduct clinics, explaining that when starting in the Trust, their "*logins and permissions were assigned to a medical student with the same name"* (R5T1). They continued to explain that to access software needed for clinics, *"very naughtily, you go and do stuff using your consultants' logins. Just so that you can get stuff done and get learning"* (R5T1). Although this example focuses on the ability to conduct clinics rather than the learning within them, it explains how trainees must learn to overcome this lack of access to complete their work, despite going against Trust IT policies. This example is not unique to this trainee; it is something I view in clinical departments regularly, as it is the only way the trainees can access the systems vital to their work. This long-standing issue needs to be considered if trainees are expected to attend and train within clinics (and elsewhere).

One consultant explained that access to technology is evolving and that previously, *"you'd struggle to set up a telephone conversation"* (R6C3). When I conducted my ethnographic observations, and even early interviews, telephone clinics were novel, resulting from their quick introduction during the pandemic. However, when the reflexive sessions were held a few months later, one consultant explained, *"everybody has had to shift to virtual stuff, and it's probably going to stick"* (R4C1). One trainee stated that they *"feel a lot more comfortable doing [telephone clinics] because that's just become part of practice"* (R3T2). Another consultant posited that within paediatric surgery:

> *"Telephone clinics are here to stay for everyone. It lends itself really well for straightforward things that have just been followed up remotely because you want to check in. I think they're also really good for some of the complex patients where you can mix and match face-to-face reviews with a conversation with a patient you know well and actually a lot of it is self-reported progress."* – R6C3

Although telephone clinics are likely to play a large role moving forward, one trainee explained that trainees should first be competent in face-to-face clinics to conduct them. They explained, *"if you haven't gained a lot of experience with examining patients and knowing the ones that you need to be seeing face-to-face and which ones you don't, I think…there's a scope there for error"* (R1T1). Conversely, although not discussed by participants, it might be considered that trainees have an advantage over their consultant counterparts regarding the introduction of telephone clinics in that much of their training will be based on telephone clinics from an earlier stage. One consultant recognised that a junior trainee new to telephone clinics managed risk well in one clip by eliciting required information by asking appropriate questions to the parent:

> *It was interesting how we've adapted to assessing things like that remotely, and as a trainee that looked like they were not with anyone supervising or consulting. The question, just sort of, the risk about information being given and to what extent you can be sure that what the patient is understanding and returning to you, from what he was saying.* – R6C3

Despite telephone clinics carrying some risks, this comment supports my consideration that trainees appear to have quickly adapted. As trainees have not conducted their whole training solely with face-to-face clinics, they may be less set regarding clinic set-up and more ready to adapt, especially when telephone clinics form part of their early clinic experience. Additionally, this comment demonstrates that consultants have recognised this readiness to adapt when viewing clips during the VRE process. One consultant recognised that the trainee (even while only hearing one side of the conversation during the clip) had quickly adapted to ensure risk was minimised through their safe practice. The rapid integration of telephone clinics and the introduction of trainees into these (albeit a little later than consultants) demonstrates that the system can rapidly adapt when needed. However, this subtheme also highlights the issues that technology can pose, especially without correct access. It highlights the need to ensure trainees are supported to use the systems needed to conduct clinics safely and progress their training.

8.8.2.4 Theme 2 summary

Many people, teams, and technological software systems are involved in clinics. Within the clinics, there is a large MDT, many of whom can support trainees and their learning. Beyond

the clinics, the external influences include secretaries, business managers, institutions and training programmes. Additionally, for trainees to conduct clinics, they require appropriate IT access to relevant systems, which is often problematic. This theme shows that clinics are a much more complex process than immediately apparent, and the trainees are one small part of this complex process. For learning to occur, trainees need the support and appropriate systems access to enable them to perform this role. After considering the systems, the next theme considers the role of assessments and educational assessments in aiding learning and development in clinics.

8.8.3 Theme 3: Educational interventions make learning visible within outpatient clinics

This theme considers how two educational interventions prompted discussions about learning in the clinic, making learning more visible. The first subtheme will consider the influence of the JCST introducing clinic-based core competencies as CiPs throughout the UK, although some findings presented will be specific to this department. Secondly, this theme considers how the VRE process encouraged participants to discuss their own and their team's learning within outpatient clinics.

8.8.3.1 Subtheme 1 - CiPs as an opportunity for reflection and change

During the reflexive sessions, I showed participants an image of the new clinic CiPs, as explained earlier in this chapter. Most were aware that the JCST had introduced these competencies, but many were unaware of the capabilities expected within clinics. Furthermore, I attended a session at the Royal College of Surgeons in Edinburgh before my data collection and discussed the CiPs with the heads of JCST and other conference participants who considered appropriate levels for each CiP to be achieved. It was suggested that ST5 was appropriate to fulfil the clinic-based CiP portfolio requirements for most surgical training programmes. However, paediatric surgery was not explicitly discussed when considering this level. This theme considers the surgical curriculum and how it has evolved to include clinic practice as an assessed component. It questions how these changes might be used as a basis for educational development within the participating department.

Within many areas of surgery, the surgical curriculum helps focus learning, whether through the specification of knowledge descriptors (what surgical trainees should know) or

assessment numbers (the amount of each assessment needed for each yearly appraisal). In many areas of surgery, much of the surgical training programme focuses on this curriculum and prepares trainees for the FRCS exams. One consultant explained that a recent paediatric surgery conference discussed *"that we should be training people ST3 onwards to pass the viva exam, and to pass the FRCS exam"* (R6C3). This led to a discussion between participants. One consultant disagreed:

> *"I've got to pull you up. The focus of their training is not to prepare for the exam. The focus in their training is to be the best paediatric surgeons they can be. That [the exam preparation], they should have in parallel."* – R6C1

Whether the learning occurs for assessments or exams, this conversation suggested that learning happens and is apparent. One trainee explained that *"in theatre, there's much more of a coaching relationship between trainees and trainers"* (R1T1). Another explained, *"you can learn things in theatre, like practical things, and you can learn things about conditions"* (R3T3). It appears that within some areas, such as theatres, it is clear that the consultant surgeon is the trainer and the trainee is the learner. However, the perceptions of roles seem to differ in clinics. Within the interviews, it seemed that trainees saw one of their roles in clinics as a learner, yet a feeling that their main role was service provision still came through, especially in the reflexive sessions. Despite the trainees feeling their main role is service provision, Theme 1 within this chapter suggested they still feel like burdens when in the clinic. One trainee summarised the role of trainees within clinics as follows:

> *"I think there's two roles as a junior trainee: number one, as a trainee yourself. You're there to learn and develop your own skills for the future, as well as a service provider to keep clinics moving on and dealing with patient clinical side of stuff"* – R4T1

Given this focus on service provision, it is understandable that learning is not always apparent to trainees within the clinics; however, trainees understood that learning still occurred. One explained that "*it's mainly a service provision thing, but there is plenty of learning going on"* (R1T2). Another elucidated that although the clinic is *"largely…a service provision focus"*, *"a lot of the learning that happens in clinics happens automatically so long as the trainer is available to the trainee for discussion of cases"* (R1T1).

Until recently, there was no dedicated part of the curriculum guiding learning within outpatient clinics. Although assessments could be completed in clinics, there were no formal assessments which were unique to the clinics, although this learning could be tested in the FRCS exams, which are largely outpatient focused. It is possible that clinic-based learning was less visible to trainees as they did not have any clear way to standardise or standard-set their learning. This may account for trainee participants comparing their clinic training to other areas within both the interviews and reflexive sessions. Within the reflexive sessions, trainees compared their clinic learning to other countries, adult surgical teams, paediatric medicine teams, and other clinical areas.

Other themes highlighted the distinct learning within surgical clinics. Yet, it is only recently that this learning and the required standards of surgical trainees within clinics have been formalised within the UK. During the reflexive sessions, participants thought the individual descriptors within the clinic CiP were very broad. One trainee thought, *"they're far too non-specific. Like, makes good use of time, what does that mean?"* (R1T2). They explained it is hard to understand the required level from the descriptors, stating the following: *"you could argue some of those things I'd expect a fifth-year medical student to do, but at the same time to do them very well you might say, yeah, you're the consultant"* (R1T2). The example that participant R1T2 gave while laughing was *"so, like, makes good use of time"*.

Although trainees were not sure that the descriptors helped to explain what they should do to fulfil these competencies within their portfolios, they expressed concerns about the areas they might be deficient in as they approached the end of training. One explained that their lack of rotation in a sub-speciality would impact their ability to fulfil the needs of particular CiP requirements. They shared, *"because I haven't done urology, for example, there might be some specific investigations for certain things that I might not be that confident to request"* (R3T1). Another explained that the nature of paediatric surgery might make these more difficult to demonstrate:

> *"My experience in paediatric surgery is that it is very much consultant lead. So, to me, it seems unlikely [trainees could achieve the required CiP standard]. Because for all of this to be demonstrated, that means that you should be able*

to manage complex patients with complex needs completely independently." – R2T1

That said, many people did like the introduction of core competencies within clinics, which were introduced as CiPs. One senior trainee explained that the competencies were achievable by consultancy, but only towards the end of surgical training*: "So I think that that all of these are the core competencies of running a clinic. I don't think most ST5s have attained them"* (R1T1). A consultant shared a similar sentiment and explained that *"depending on the level of trainee, there are different degrees of competence which each of these descriptors, but I think it's appropriate for an outpatient department"* (R2C1). Multiple trainees questioned how their training should progress if these CiPs are completed before consultancy. If a trainee achieves the level of day one consultant at ST5, one participant pondered where this meant there should be *"no improvements from ST5 to ST8"* (R2T1). Another asked, *"then why train to ST8"* (R4T2)? These comments are interesting given that previous themes have considered developing independence as an important aspect of learning in the clinic, but these comments suggest that consolidation of this confidence is not deemed necessary if not assessed. These comments may suggest that the trainees believe that fulfilling the CiPs may lead to a focus on assessment completion rather than a focus of becoming competent surgeons.

Other trainees thought that the suggested stages for completing the clinic-based competencies were acceptable. One senior trainee understood that the time after achieving this competence at the highest level allowed trainees to consolidate their learning: *"you can ask an ST5 the same kind of questions about how to manage a case or how to manage a clinic…but you get a better answer from the ST8"* (R1T1). One trainee additionally explained that the lack of standardised time requirements within training to complete CiPs allowed the trainees to be considered individuals. They explained, *"I think with the whole new curriculum I'm a big fan of it because as we said all trainees aren't the same level"* (R4T1).

In addition to the descriptors for each capability, some reflexive session participants looked beyond each skill. In one discussion between a trainee and consultant, the trainee stated that before the introduction of CiPs, *the "so-called non-technical skills"* were not previously examined, despite being *"part of the hidden syllabus"* (R4T2). In response, the consultant explained, *"that's why there's been a syllabus change, though"* (R4C2). Therefore, if used

correctly, these CiPs can be used to assess the non-technical skills of trainees. The CiPs may demonstrate how a trainee is generally performing by having made the overall expectations and requirements more transparent, standardised, and more competency rather than time focused (although there is a clear expectation that these will be completed before CCT).

Generally, when shown the clinic CiP descriptors, participants thought the department was already providing the appropriate training for many of these. One consultant stated, *"the stuff you've shown me in these clinic videos, again, does show I think people are trying to do the things that are laid out in the [CiPs]"* (R6C3); however, there was one area where the team agreed that they needed to evolve their training. In the reflexive sessions, I only asked participants open questions about their general thoughts when showing the 11 separate CiP descriptors. Still, every reflexive session focused on just one competency within the clinic CiP: [trainee] assesses and prioritises GP and inter-departmental referrals and deals correctly with inappropriate referrals. All groups agreed that this was an area not currently being addressed within the department.

Departmental trainees did not undertake the management of referrals at the time of the reflexive sessions, yet it was discussed throughout the reflexive sessions. Other clinic-based CiP competency descriptors were mentioned briefly, but often to explain that this was something done within the trainees' standard practice. For example, one consultant reflected on the clinic-based CiP competency focusing on communication and the utilisation of interpreters:

> *"It was interesting to see that using interpreters and language lines and things like this. It's actually a descriptor in this [the CiPs]. I guess it just highlights how important in our day-to-day practices, but it's nice that it's been recognised, and it's been put down as a descriptor."* – R2C1

Conversely, when participants discussed the CiP competency focusing on prioritisation, this was due to it not being addressed within clinic training within the participating department at the time of the reflexive sessions, as *"every Trust has its own ways. [In the department observed in this project], the consultants do all the triaging of referrals"* (R5T1). As this CiP

requirement adherence varies between institutions, one trainee explained that they had never considered this as a needed skill:

> *"I am aware in my headspace that referrals come in and there must be some sort of gateway that they come through. But I've not been directly involved with that. So I could, I would't ever have thought that that was something that I would be involved in."* – R2T2

Another trainee explained that they had prioritised referrals within their current department but had elsewhere. They explained they deemed it an administrative role and explained they did not find it particularly difficult. That said, the description of the role suggests that whilst prioritisation of referrals may have been deemed straightforward, it does require a good foundation of clinical knowledge and decision-making skills. This need of understanding is since this step would decide the urgency of the following patient review, meaning it was essential to do correctly:

> *"Most of the referrals, you know, just need a clinic appointment. Some need to be directed elsewhere. Some need urgent appointments, some you need to phone the GP and be like 'send them in right to see me right now'"*– R5T1

One consultant emphasised the importance of this responsibility and explained, using an example, why this might be difficult for some trainees:

> *"So prioritisation, you need some degree of experience to understand, you know. How or what sort of priority to give certain conditions. So, for instance, I had a referral for a lesion coming from a child's introitus sitting in the referral pool for quite a while, probably because it's described as a small lesion, but when you see a lesion like that, you have to start thinking, "oh, this can be rhabdo[myolysis]", you know, and then you need to be able to prioritise."* – R2C1

Missing a potentially life-threatening condition could have drastic implications. However, even with these potential consequences, when I asked the earlier trainee how they would feel about being asked to prioritise referrals in this department, their response was simply,

"oh god, more admin" (R5T1). One of the consultants explained similar feelings regarding the process when reflecting on their time as a trainee, explaining one of their roles was scheduling lists. They explained that *"it was a pain in the backside, but actually, you realise why it's a pain in the backside, because it's difficult to do sometimes"* (R4C2).

Although feelings were not always encouraging in relation to trainees assessing referrals, discussion in the context of the new CiPs led participants to recognise it as a needed skill. As such, many participants then began to discuss how referral prioritisation might be implemented into training and practice moving forward. One trainee thought it would be useful if the consultants *gave "a batch of referrals…to the trainees and [said] assign these by clinic priority or wherever you think they should go"* (R1T1). One consultant explained they already had an action plan, stating, *"we're planning on having a session where the trainees sit with me and goes through all the referral letters because that's something I never did as a trainee"* (R6C1).

Although trainees do not formally review GP referral letters within the department, one consultant explained that trainees assess referrals in other ways, including actions if a patient did not attend (DNA)[4] their appointment. The consultant explained, *"so when somebody doesn't attend first appointments, then often the trainee will get an opportunity to decide how soon this needs to be seen"* (R2C1). However, one trainee disagreed and did not think this activity reflected the prioritisation of referrals sent from GPs:

> *"I get the point that [R2C1] has made about DNAs, but that's a very, very limited part of patients who must have, like, a complex issue and also not have attended because most of the DNAs are patients that have either moved on from their problem because it's taken a while for us to see them or have a chronic problem that have been under our follow up for a while and they don't necessarily feel that they want to be seen."* – R2T1

[4] There is an argument that a much better term to use for paediatric patients not attending clinics is 'was not brought' rather than 'did not attend'. This is due to children not typically attending clinics alone, meaning their lack of attendance is usually due to not being brought by their caregivers rather than choosing not to attend. I have used the term DNA within this thesis as it is the terminology used by participants, rather than being reflective of the underlying meaning behind the term.

This trainee continued by explaining that they thought joining the consultants during their triage process would be useful. In response, the consultant explained why this might be difficult:

> *"Unfortunately, we have a system…that only the consultants have access to. So unless we invite you to join us where we're going to try again, the only way is through the DNAs or what [R2T1] just described, which is asking to join us during the triage process."* – R2C1.

Although considering how trainees might assess referrals is difficult, it was recognised within the reflexive sessions as an essential skill for trainees. In addition to using this skill to prioritise patients, consultants thought this skill would help trainees dedicate how long a patient might need within their clinic appointment. One consultant stated trainees could decide *"how long they [the patient] should wait or maybe a range of how long they should wait, [and] how long they're going to need in clinic"* (R4C1). Another consultant agreed, clarifying that the *"appointment time should be five minutes because I'm looking at the testicles versus half an hour because I'm looking at your complex anorectal [presentation]"* (R4C1). The consultant further considered ways that trainees could prioritise, by deciding on the time slots for future follow-up appointments: *"somebody finishes their clinic, you say okay, I'll see you again a set amount of time and it's virtual or face to face"* (R4C1).

Both consultants and trainees agreed prioritisation was an important skill to include in the CiPs, albeit one which not everyone enjoys. Although vital, this skill was not being formally taught nor assessed within the department, although trainees did prioritise referrals during the clinic. At the time of the reflexive sessions, although trainers explained that they were considering how to introduce this more formally, trainee access to the system was again a limiting factor.

CiPs were introduced before the widespread use of telephone clinics, so I asked the participants if they remained relevant given the increased use of virtual consultations. Although I directly asked this question, participants that shared responses explained they believed achieving CiPs by telephone was attainable. *"Okay, you can't do a focus clinical examination necessarily. But the other parts are all appropriately done over the phone. As*

well as in person" (R5T1). They further explained, *"you can't do a focused clinical examination necessarily. But the other parts are all appropriately done over the phone. As well as in person"* (R5T1). Another trainee added that the platform of clinics *"should be a descriptor in itself that you're able to not only do face to face clinic but virtual or telephone"* (R2T2). However, the feeling was generally that this skill is not a different skill but one which can be incorporated into the existing CiPs. One consultant summarised these considerations:

> *"There are a lot of descriptors that you can assess by telephone. And if, you know, telephone clinic is the only opportunity then we have to take it. You know, for instance, makes good use of time, completes required documentation, uses consultation to emphasise health promotion, you know, all those things, can be part of the [interjects with "interprets investigations"]…assessments."* – R2C1

Therefore, the comments suggest that CiPs are achievable using any consultation format. Although the CiPs may serve to make learning more visible, the perception of these was variable. Participants thought that the individual CiP requirements were generally fair and achievable but also commented that they did not always appreciate the constant changes in the curriculum. While the sentiment towards CiPs was positive, with one trainee explaining, *"with the whole new curriculum, I'm a big fan of it because, as we said all trainees aren't the same"* (R4T1), others described the changes as *"reductionist to put these non-technical skills into such a single category"* (R6C3). Participant R6C1 explained they agreed with the term *"reductionist"*, explaining that they did not think it appropriate to set various learning for completion at particular stages in training.

That said, negative feelings focused on the changes outside of the clinic area, such as the introduction of the Multiple Consultant Report and the department's use of grand rounds. The discussion around these led to the whole reflexive session to start laughing, as described above. All participants (consultants and trainees) suddenly laughed when mentioned, as though the perceptions towards them were an inside joke. Conversely, other than concerns with small elements around the CiPs, as described above, people spoke positively about their introduction given they formalised learning in the clinic and made skills such as non-technical skills and components of the hidden curriculum more visible. The consultant above explained that regardless of their personal view on some of the imposed

assessments, surgeons have a mindset which means they will complete these assessments and support trainees to fulfil these:

> *"I think, generally speaking, we are a bunch of professionals who succeed in achieving what he set out in front of us, whatever that may be, and we will continue to produce good doctors and good surgeons, whatever the system that we're asked to use is."* – R6C1

This comment suggests consultants are keen to support trainees in completing their assessments within outpatient clinics and elsewhere. JCST's introduction of CiPs has changed training at team levels, but it is not clear what discussions have been held at an institutional level to support trainees in achieving the CiPs. Institutional support would be invaluable at this stage, whether due to allocated time or trainee access to systems allowing this support.

With participants having discussed that the introduction of CiPs will require some changes within clinics, I will now consider how these changes might be supported through learning from the VRE process.

8.8.3.2 Subtheme 2 - Learning through the VRE process

Firstly, it is important to stress that the VRE process did not just highlight suggestions for improvement but also allowed the team to consider what was being done well. For example, within the reflexive sessions, trainees explained that they had attended teaching scenarios relating to clinics. One trainee explained that the theatre teaching nurse would *"make models for you to practice on things"* (R3T1). Another trainee responded, stating, *"I've attended those [simulated clinic scenarios] as well and found those quite useful"* (R3T3). These comments explain that the team are already providing good learning opportunities for their trainees, which they were keen to share. Many other examples of good practice and support have been shared within the interview and reflexive session themes.

In viewing the videos produced through my research, many trainees and consultants explained that they had seen behaviour during the clinics that they were keen to adopt. Many said that the VRE process had allowed them to recognise good techniques that others

had used for teaching. One trainee explained that when one consultant was with the trainee during the clip, *"he was asking questions, which I really, really like, and I think that really helps. I like that way of training"* (R5E1). This comment related to one clip where the consultant asked the trainee about the case to ascertain their insight before providing information to further that trainee's understanding of the clinical subject. Another trainee, in a different reflexive session, shared a similar thought:

> *"I thought the way [consultant from clip] kind of like, tried to encourage senior trainee that, to think outside the box and try and think of the patient is something yeah, definitely I would we try and think that kind of teaching style to try and make the sort of like, have a back and forward rather than just telling the trainee what to do."* – R3T2.

Others recognised the way that other trainees had approached their conversations and were keen to adopt some of their clinical practices:

> *"I was trying to compare in my head, what would happen in clinic face-to-face and what would happen on telephone, and it just sparked a thought in my head when [trainee in clip] was speaking about…like starting periods and doing medicines and things. I was thinking, oh, hang on, are we routinely making sure that we're engaging the older children like we would do in face-to-face clinics? Because you would naturally do that in face-to-face clinics. So, it's almost sparked a thought in my head to think if I do a telephone clinic, I must do that."* – R2T2

Another trainee, who had not been part of the earlier phases, explained how useful they found learning from others in the reflexive sessions, explaining, *"I think reviewing stuff is brilliant. Because it gives you an insight of how you manage yourself"* (R4T1). One consultant agreed, stating:

> *"The act of being involved in this project and this discussion has made, it's produced a useful set of concepts for me and differentiating between how you best deliver real-life clinics and then the knowledge and actual delivery of the clinical care through clinics."* – R4C1

In addition to the videos encouraging participants to reflect on their own practice, the process allowed them to respectfully challenge their colleagues' beliefs. When these conversations occurred, they seemed to take place due to a genuine curiosity about others' beliefs and as an opportunity to expand one's thoughts, such as with the earlier debate presented earlier in this theme about learning for the FRCS exam.

It seemed that many people found observing others and generating discussion useful for their own learning. Having been in the privileged position of observing a range of trainees and consultants in clinics, I realised many trainees would rarely have, or never, seen another trainee conduct a clinic. Similarly, consultants would not typically have an opportunity to review another consultant's senior discussion. Before my PhD, I had never seen another trainee conduct a surgical outpatient appointment. My thoughts were confirmed by a conversation between consultants in the reflexive sessions:

> *"I've not seen anyone actually explicitly watch someone do a phone consultation and take them through that."* – R6C3

> *"You have now."* - R6C1

After this consideration, participants were keen to understand how my observation of clinics might help them improve as a department, even within the reflexive session. One asked me, *"do you think, Aimee, now that you've done all of this, do you have any preliminary recommendations on how we can improve things"* (R6C1)? In another session, consultants wondered how video might be used to support learning following my study:

> *"I'm wondering, once your PhD is done, and there isn't a Dr Charnell PhD around, I'm wondering whether or not Medical Illustration*[5] *would potentially play that role and whether or not now's the time to show them what you're doing."* – R4C1

[5] Medical Illustration is a team within hospitals who provide visual and multimedia resources for a range of purposes, including patient information, teaching, and research.

Although the team is keen to support learning further, even considering the use of video in future, time is a significant factor, as is support from the institution. One trainee explained that they *"completely understand that needs to be balanced"* but that it is important that there is *"more time put into the way that clinics are structured for training purposes"* (R3T2). Another explained that support is needed from the institution, in conjunction with the consultant, to allow this time:

> *"Perhaps there would be scope for making these certain clinic slots larger so that you can have a valuable [educational experience]. Maybe with the more junior trainees if they're involved, have a clinic where there are slightly fewer patients seen, and you can have a good back and forth rather than be concerned with, sort of, throughput. And then have different clinics where maybe there isn't a trainee there so the consultant could just bottom all through and get more done."* – R2T2

This need for institutional support to implement changes has been considered elsewhere. It seems that allocated training time seems to be important to participants. It might be that the barrier (or driving force) for any fundamental training changes would be support beyond the immediate surgical team.

8.8.3.3 Theme 3 summary

To summarise this theme, CiPs have allowed the participants to recognise which areas of their training already fulfil the capabilities and which require more work. This team mostly focused on the need to support trainees with referral prioritisation. Consultants are keen to support trainees, and simulated training already exists. Many participants have considered discussions within the reflexive sessions and seemed to find these helpful. This is suggested by participants sharing that filmed observations would be useful to aid their learning moving forward. However, as explained in the previous theme, the clinic setup is often beyond the consultants' control and time, plus access to systems, is limited.

8.9 The next chapter

The three themes identified from the reflexive sessions and the insightful conversations held during the reflexive sessions demonstrate that clinics, are a significant part of a surgeon's training and culture despite being a small part of the patient journey. Within the reflexive

sessions, trainee and consultant participants often agreed on the key principles, with the largest difference being that the trainees view themselves as burdens, which differs considerably from the consultants' perception. The reflexive sessions provided some understanding of objectives three and four: considering shared understandings of learning and using clips of identified learning events to determine the factors affecting learning. In the next chapter, I will combine these findings with those from the earlier chapters to fully address each of the previous objectives and also consider the final objective: considering improvements and enhancements for surgical training.

Chapter 9. Discussion

This thesis has focused on the elements influencing trainees' learning in the context of paediatric clinics in a tertiary setting. VRE helps make the mundane visible (Iedema et al., 2019), which was why VRE appealed to me as a methodology to explore this under-researched area. Yet by using VRE, I found that clinics, and the learning within them, were anything but mundane. Using multiple methods allowed me to explore the influences on learning from different perspectives, allowing learning within surgical clinics to be observed and discussed in a way not yet done within the literature. It also allowed me to consider interactions between participants during the video ethnography and generate meaningful discussions through these interactions within the reflexive sessions.

9.1 Addressing the research question

This research aimed to address the question; what elements influence surgical trainees' learning in the surgical outpatient clinic? I hoped to address this research question with the following objectives:

1. Explore the culture of the surgical outpatient clinic using ethnographic methods.
2. Understand the trainees' roles within the outpatient clinic and how this has been impacted by COVID.
3. Explore the extent to which trainees and consultants share an understanding of learning in the surgical outpatient clinic.
4. Consider learning events and the factors affecting learning at video-reflexive multi-disciplinary meetings.
5. Devise suggestions of how learning in general surgical outpatient clinics may be improved and how the current general surgical curriculum may be enhanced.

Initially, I had planned to address each objective separately within this chapter; however, the more I considered my research findings, and what they meant, I realised that separating them at this stage was impossible. Separately evaluating each would negate the importance of utilising VRE as a process rather than using three distinct methods. Instead, I have structured my discussion around the elements that influenced surgical trainees' learning in the surgical outpatient clinic.

9.1.1 The clinic as a Community of Practice

Within the paediatric surgery clinics, there was never a doubt that their primary purpose was to provide outpatient care for the child. During my ethnographic observations, the patient's care was always the clinic's primary focus, from its set-up to the consultations and the senior discussion. However, it was also clear that the clinics were seen as a place to train surgical trainees towards becoming independent practitioners, which was reflected in both the interview and reflexive session themes. The work conducted by this thesis supported my initial thoughts in relation to social learning; the work conducted within the paediatric surgical outpatient clinics may be viewed as a Community of Practice (CoP). Wegner explained that the dimensions of a CoP include mutual engagement (people whose actions negotiate with others), a joint enterprise (group actions with appropriate accountability), and the development of shared repertoire (including routines and a way of doing things) (Wenger, 1999). Within this discussion, I consider how learning is supported within outpatient clinics and the key players making up the culture within clinics. I describe how all key players within the clinic (and those impacting clinics) focus on the patient's shared care, despite having a unique focus of practice.

Through each of my methods, I demonstrated that trainees' learning is often experiential and constructed from those around them. This construct forms within the outpatient clinic, within surgical practice, non-surgical placements, or from learning outside medicine, including learning through their personal lives. When starting this research, I thought that learning was an individual process which reflected each trainee. Still, each of the methods has demonstrated that much of the learning that occurs within and for clinics is a social phenomenon, i.e. as a result of participating within various communities (in this case, surgery) through a cultural perspective (Dudley-Marling, 2012). The next sections consider the elements which support this view before reconsidering the social aspects of learning in clinics in section 9.2.

9.1.2 Clinic learning supported by consultant colleagues

Within the paediatric surgery outpatient clinics, a significant senior presence was reflected in the findings at every stage. During the ethnography chapter, I presented an example case detailing a filmed consultation where the trainee discussed the patient with the consultant, as I found that a senior discussion was typical for most clinics I observed. Only very senior trainees did not discuss patients during the clinic, although even those trainees discussed cases early in their rotations. During the interviews, it was recognised that the

consultant was the overarching decision-maker for both the patients and the trainees within their clinics. It was recognised that this support encouraged trainees to work towards being independent practitioners, thus being able to manage their own patients and trainees. Consultants within the reflexive sessions explained that their input reduces over time and as they develop an understanding of each trainee's abilities.

I recognised during the ethnographic phase that senior discussions varied greatly. This was indicated within filmed consultations, which varied in timing (before, during or after consultations) and duration if undertaken. Additionally, one filmed discussion was held with a senior trainee as the consultant was sick and therefore not working. Typically, trainees conducted senior discussions with their rotation consultants, often the same team of two to three consultants over six months in a sub-speciality rotation. This meant that trainees' clinic-based senior discussions were typically limited to one or two senior clinicians at one time. This finding is site-specific, as some surgical trainees will continue to conduct clinics under multiple consultants during each rotation, but this was not typically the case during my observations. Trainees working with a small number of consultants within clinics in each clinical rotation understood the consultant's management style, although this might differ when they moved elsewhere.

As the consultant oversaw the trainees and the patients, one might consider them to be the *expert* within clinics. However, the term *expert* was not a term that participants used within this study. Rather than the expert of supervision being an assumed role within clinics, Billett explained that only the learner could determine who they perceived to be the expert following observation of successful performance within a CoP (Billett, 1995). As each trainee only worked with one consultant and would not tend to observe their consultations, whether they considered the consultant an expert may arise from viewing the consultant's work elsewhere. Alternatively, it may also result from working within different departments and comparing the consultant to others. As this consideration may guide a trainee's trust towards a consultant, this may explain why trainees placed great emphasis on comparison within the interview themes.

Much of my research demonstrated that the consultants afforded increased trainee independence with the increased trust of the trainee. Yet, there was no demonstrable requirement for the trainee to trust the consultant before working more independently. However, Billett suggests trust must be two-way for a trainee to learn from an expert within

a CoP (Billett, 1995). Although participants in my research did not discuss two-way trust, one consultant did explain the department received positive feedback regarding supervision in the GMC Survey. However, the consultant did explain the survey results stated there was occasionally too much supervision, suggesting that trainees want more independence to develop their identity within outpatient clinics. This emphasises that the consultants decide when the trust is earnt, as trainees explained they received more supervision in this department than elsewhere. This increased supervision may represent the paediatric element of the speciality, where work is much more consultant-led, and independent decision-making often occurs later in training (Taitz et al., 2005). Consultant-led care leads to better patient outcomes, although little is mentioned about the impact this has on paediatric trainees (Royal College of Paediatrics and Child Health, 2021; Hodgson et al., 2021).

Although much of the learning within clinics was influenced by seniors, trainees attended clinics with prior knowledge from elsewhere, which may be used within clinics. Trainees also self-regulated their own learning by consolidating knowledge from within clinics. Within the interviews and reflexive sessions, trainees explained that they learnt clinic-specific knowledge from various settings and resources. These included medical school, other rotations, conversations with allied health professions, courses, textbooks, websites, personal knowledge (e.g., developed through experience as parents themselves), and through experiential learning via discussions with parents. Additionally, it was explained within the reflexive sessions that trainees would need to learn for their surgical exams, which is likely to drive the learning of clinic-specific knowledge. Previous placements and allied health discussions are other ways that a trainee's learning extends beyond the clinic. This self-regulated learning may be supported by wider landscapes of practice, with external educators and clinicians external to the CoP acting as systems conveners: those who provide support through social learning (Wenger-Trayner et al., 2014). This may suggest that as trainees enter a CoP, they act as self-directed brokers to gain entry, bringing their acquired knowledge and skills. Engaging in activity later allows for social learning, emphasising the need for personal input within interdependence in workplace learning (Billett, 2008).

Consultants within the reflexive sessions explained that the senior discussions also allow the consultant to learn as trainees can share their up-to-date knowledge, which may be new information for the consultant if acquired by a trainee's landscape of practice external to the

clinic. Sharing this knowledge with the consultant reflects legitimate peripheral participation (LPP), suggesting that the newcomers can share their previous knowledge even when on the periphery (Lave and Wenger, 1991). Furthermore, within clinics, this LPP is visible and appreciated by surgical consultants, despite being less visible to trainees. This LPP may be optimised when recognised by identifying each individual trainee's skills and pushing them outside their comfort zone when appropriate by utilising and maximising this experience (Kaplan et al., 2017). Conducting the senior discussion as a two-way conversation allows consultants to consider an individual trainee's skills and how to utilise them while supporting the trainee's development of new skills and knowledge.

9.1.3 Key players within the clinic

Throughout my research, I learnt that there were various key players within the clinic, which I consider here. Within each clinic, it was evident during my observations that the senior clinic nurses oversaw the clinics and all the clinicians and patients within them. This position was complex, as the clinic nurse must be familiar with the procedures of various inpatient departments and understand the needs of multiple specialities (Wang et al., 2016). During my ethnography, I observed that the surgical nurses had control over the use of rooms and the patient flow, including collecting information such as weights and urine samples. As explored within the reflexive sessions, the nurses also had great power over the trainee experience within clinics, whether by ensuring the trainees had rooms or that patients had relevant observations listed before review. The clinic nurses were supported by the clinic's healthcare assistants and secretaries to fulfil their tasks, but this was only observed during my ethnography and not considered by the research participants in later phases. While the clinic nurses were the overall clinic managers, the clinician oversaw what happened in the clinic room. The surgical consultant was the manager of the overall individual clinic for that subspecialty, including the trainees and patients. In contrast, the trainee was the manager of what happens in their clinic room, including patient management and choosing when to seek senior support. Within Figure 9-1, I have depicted the purpose of key players in relation to who and what they oversee in clinics.

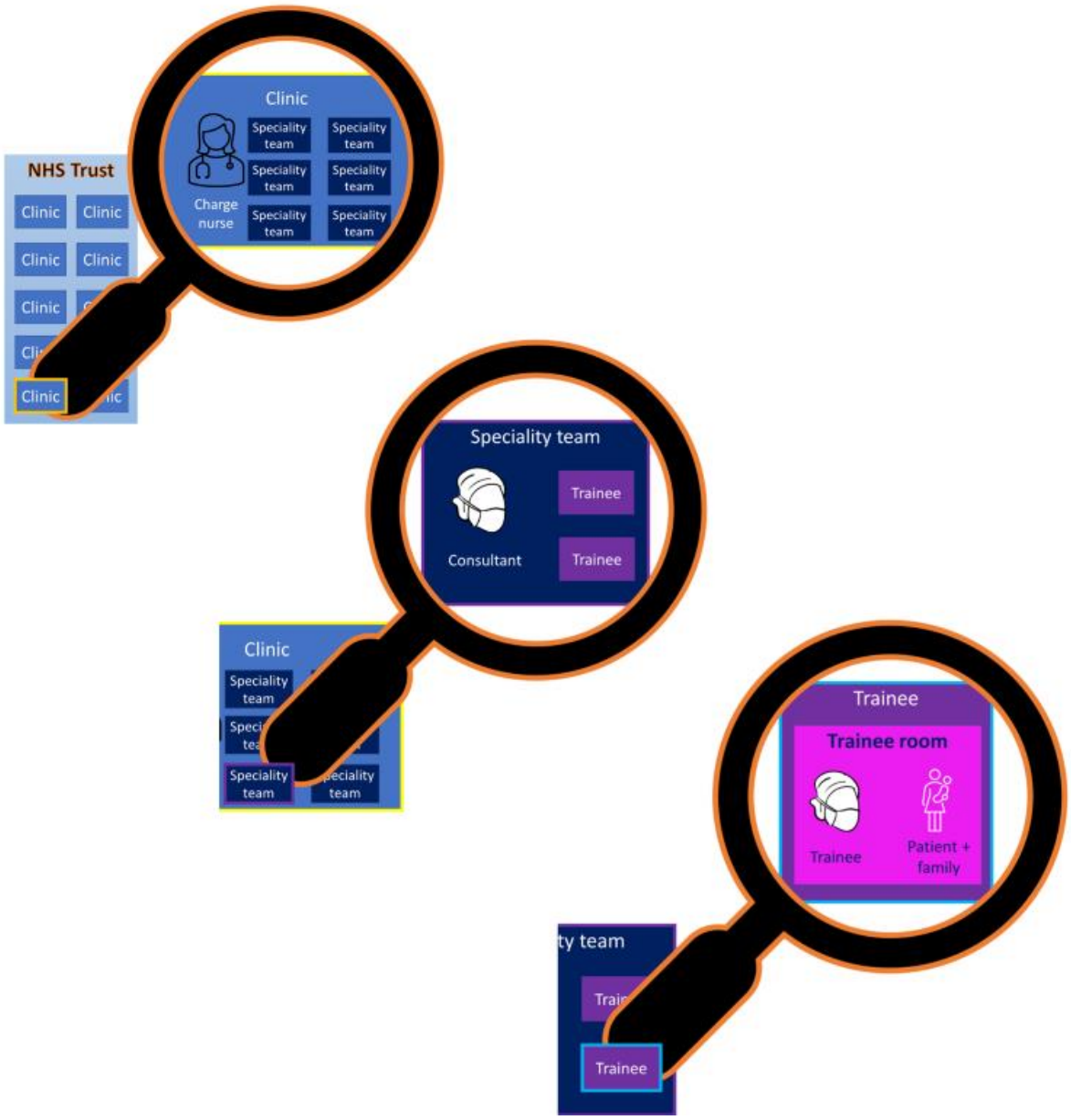

Figure 9-1: Oversight of responsibility within surgical clinics. Note: Patients are present in all boxes (clinical areas), although only depicted within the trainee room for clarity

Although these key players may seem somewhat self-explanatory, they are not typically considered within the literature. One study exploring patient flow in surgical clinics evaluated the role of nurses within the individual patient consultation but did not consider the nurses' or secretaries' role in overseeing the clinics and their flow (Waldhausen et al., 2010). Lindencrona et al. (1996) considered working relationships within surgical clinics. They demonstrated that a lack of understanding of each other's roles in clinics led to conflicts related to viewing the whole clinic and how various professionals may be involved in achieving the clinic's common goal. Within my study, I observed that all clinic members

were working towards a shared goal of patient care and even trainee learning. However, this was less obvious to the trainees, who primarily focused on the activities in their own room.

9.1.4 The caregiver within paediatric surgery clinics is a complex role

The interviews and reflexive sessions allowed me to regard another key player I had considered to a lesser extent within my observations: the caregiver. Many participants highlighted that working with the caregivers was complex, given the need to balance the caregivers' concerns and the clinician's questions. During my observations, I recognised that it tended to be the female caregiver who attended with the child or was listed as the child's key contact. This was reflected in my filmed observations, which were with ten mothers and two foster mothers. This observation was likely to have been somewhat reflective of the times, as only one caregiver could attend face-to-face appointments due to the pandemic (and thus act as the primary contact). However, this may have been a product of the phone numbers that were stored for each child. Given this, it is understandable why many discussions within the interviews shared participant thoughts about conversations had with a 'mum'.

During the interviews, participants described these mothers in various ways, including being sensible and someone who just needed to be listened to. They also explained the mothers' roles, including being someone who shared information about the child and someone to whom information was conveyed (following a senior discussion). Within the reflexive sessions, I noted that the language regarding the caregiver changed. During the reflexive sessions, participants referred to the caregiver as 'parent'. I suspect this was due to reflexive session participants not being sure who was on the other side of the phone call in the clip. Within the reflexive sessions, conversations about caregivers moved towards the complex role of a parent who needs to trust the trainee to seek senior support if required and their need to understand that a large team provides their child's care. Together, these findings suggest that the role of the caregiver is complex, needing to convey information from the child to many professionals and use this varied information to manage their child, all the while having their own needs.

This role of the caregiver reflects Bornstein's work, which describes the relationship between clinicians ("physicians") and caregivers ("parents") as a complex one (Bornstein,

2002). It explained that the caregiver holds three links within the parent-doctor relationship: to the physician, the child, and influential others. This generally aligns with the relationships I observed in my study, although I did not consider additional influences on the caregivers. Many papers consider the role of the child's caregiver and their importance and difficulties in acting as an advocate for their child within healthcare settings (Webb, 2002; Robertson, 2006). Although these express the need for good communication and support, they do not consider the need for the caregiver to act as a two-way advocate between the child and clinician. As discussed during my interviews and reflexive sessions, the caregiver must consider the surgeons' needs and plans while sharing information about the child. Outside of the paediatric surgery clinic, this two-way advocacy has been researched in education (teacher – caregiver – child) (Mendoza et al., 2003) and carers for older people (Travers, 1996). Much of the research exploring learning from the caregiver's perspective is quantitative (Sethuraman and Ahmed, 2010; Rosati et al., 2018) or focused on the overall outpatient clinic rather than individual consultations (Littlejohns and While, 1995). Although the role of the caregiver was briefly considered within this thesis, this was not the focus of the research, and so was discussed more for clarity. However, despite the challenges outlined above, when considering the competencies forming the clinic-based CiPs, none were specific to paediatric surgery. This essential skill of managing the family dynamic is not formally assessed within paediatric surgery training, making it an element of the hidden curriculum within paediatric surgery (and perhaps for caregivers, too).

9.1.5 Culture within surgical clinics

I observed the clinics as a supportive place for learning, reflected by comments made by my participants during the interviews and reflexive sessions. Even with time pressures, clinics seemed to have a much more relaxed atmosphere than in other areas of surgical practice, such as theatre, wards, and acute assessment areas. If I needed to see a participant to check their diary or sign a consent form, I would find them in clinics, despite being comfortable with access to other areas within the department. Clinics allowed time for surgeons to be in one fixed place, and I could often speak to them between patients in their clinic as they did not seem to mind being interrupted, and conversations felt less time-pressured in clinics than elsewhere. Perhaps this atmosphere allowed trainees within the interviews to explain that clinics provided learning opportunities and allowed time for senior discussion, which is not always possible in other aspects of surgery. Within the reflexive sessions, participants described that they are supported towards their consultancy role within clinics.

Within social sciences, culture, in relation to ethnography, is defined as including knowledge, beliefs, art, morals, law, and customs (Tylor, 1871). More recently, within medical education, it is believed that culture is much more difficult to define and instead should reflect the 'bottom line' and act as a guide to change or adapt for success (Watling et al., 2020). When I considered the culture within clinics, I observed culture as a positive construct rather than something that needed improvement. As consultants and trainees were working towards a shared goal, their purpose and required knowledge to do this were clear. Both trainees and consultants generally spoke positively about surgical clinics and the supportive atmosphere within them. That said, when participants spoke about clinics, they did not explicitly discuss culture within clinics. I was surprised that culture did not explicitly form any of the themes generated within this research, although most themes within the interviews and reflexive sessions contribute to the culture within clinics. For example, reflexive session Theme 1, supporting trainees' development toward an independent outpatient practice, highlighted the role of consultants in supporting trainees towards independent practice and additional roles a trainee might hold, including training those junior to them. This cultural practice allows trainees to work towards independence once cultural competence has been achieved within clinics (Shah et al., 2017).

I questioned why elements contributing to culture were generally considered by participants although not explicitly discussed. Perhaps this was because when surgeons thought about clinics, they did not associate them with the same cultural values expressed elsewhere within surgical practice, despite comparison to these different areas being a prominent topic within the interviews. When considering surgical culture in the general sense, it is often portrayed as a negative influence that should be improved. One interview exploring surgical culture started with the sentence, "physician burnout has been called a public health crisis", before talking about the social media tag #physicianburnout (Hainer, 2019). Discrimination, abuse, harassment, and burnout were all discussed within the first sentence of the interview. Literature on surgical culture describes it as something which should be improved (Sacks et al., 2015), where blame is prominent (Dickey et al., 2003), and males dominate (Brown et al., 2013). Fatigue and its management are considered educational necessities (Coverdill et al., 2011). I understand why surgical culture is considered synonymous with these traits, as I experienced or viewed many of these as a surgical trainee. However, I did not appreciate how damaging these could be at the time. Although this negative portrayal of culture may not be unique to surgical practice, it is not universal within healthcare. When considering culture within primary care, conversely to surgery, it is described as a positive

element associated with lower burnout rates (Willard-Grace et al., 2014) and one which strikes a balance of cure and care (Spiers et al., 2016). Consequently, the positive culture observed within surgical clinics is one that this thesis recognises and should be celebrated within surgery, perhaps using surgical clinics as a basis for supportive practice elsewhere within surgical practice.

9.1.6 Trainee access to hospital systems

Technology played a prominent role in each trainee's ability to conduct clinics, meaning it was often a barrier for trainees when it did not work. Although this research was conducted during the pandemic when telephone clinics were introduced for many, telephones did not pose a technological issue, although computer-based technology influencing the clinics did have an impact. Telephone clinics became increasingly normalised throughout the research process as trainees and consultants became more comfortable conducting telephone clinics. One consultant explained during the reflexive sessions that *"telephone clinics are here to stay"*. This section focuses on the technology elements beyond the telephone generally impacting trainees, including access to IT systems.

During the ethnography phase, the only IT issue I recognised was the trainees' inability to find patient telephone numbers. The trainees used the information available on PPM+, the Trust's notes and results system, although the consultants' secretaries had access to systems which sometimes contained alternative numbers. Finding telephone numbers often required around 10 minutes of clinicians' work, the time typically allocated to a follow-up consultation. It seemed peculiar this was not customarily checked when a telephone clinic was arranged directly by the booking team or in the booking letter. The number on the system was often from the patient's last inpatient attendance, which may explain why the telephone number was often outdated. Despite its prominence during ethnographic observations, access to telephone numbers was not discussed during the interviews and reflexive sessions. Again, this may reflect the times since the interviews and reflexive sessions occurred after the video ethnography. Interviews were conducted one to two months after the filming, and the reflexive sessions a few months later. Over this time, the Summary Care Record was being increasingly developed and updated by NHS Digital, meaning there may have been better communication between systems and, therefore, better availability of telephone numbers as more patients updated their data (NHS Digital, 2021). Through personal experience, I have found this issue was not specific to this Trust.

The literature does not discuss the complexity of obtaining phone numbers within clinics, perhaps given its mundane role within the consultation.

Many of the issues regarding access were related to program use, with lack of access impacting the trainees' ability to conduct clinics. This access included clinic-based programmes such as PPM+, Epro, and video consultation software. Although video consultation software was new for most departments during the pandemic, including my participants, the other two programmes (PPM+ and Epro) had been utilised for many years within the Trust and many other hospitals. The programme access was discussed in the interviews and reflexive sessions, where trainees viewed technology as a barrier. Trainees explained that they often have difficulties accessing general clinic software when moving Trusts, thus impacting their ability to conduct clinics. This finding was not unique to this department or Trust; it is a widespread issue for clinicians within healthcare when moving to new places of work (and one I was personally still experiencing over two months into my current rotation). Although this was not something I observed during my ethnography phase, I suspect that this was due to the timing of my ethnography. The ethnography was completed mid-rotation for the trainees, meaning that even the newest trainees would have been in the department for at least two months. Had I conducted my ethnography in October of any year, when most surgical trainees (ST3-ST8) change rotations, I suspect I would have observed these issues first-hand. Inpatient deaths increase during trainee changeover periods; reasons cited include timing of induction, lack of trainees on the wards, and lack of senior support (Jen et al., 2009; Gaskell et al., 2016). Interestingly, access to technology is rarely considered a reason for this increase in patient deaths, despite issues with IT access playing a role in the recent prosecution of a paediatric trainee doctor (Lind, 2019).

When security issues concerning access are discussed within the literature, these tend to be discussions about which groups should be afforded access to online records (Meingast et al., 2006). When concerns about unauthorised access are posed, these are typically considered external cyber-security threats rather than hospital-based access concerns (Langer, 2017). Despite these concerns being about systemic safety issues, this study demonstrated the impact of being meticulous about these concerns on individual doctors and their practice. The circumstances of the trainees in my research were not unique. One study explained that of reported hospital IT incidents, 77% were technological problems,

including clinician access issues (Warm and Edwards, 2012). Interestingly, none of the security issues posed within that study were related to inappropriate access.

Lack of access appeared to be a barrier to trainees' learning and practice in my study. This barrier may explain why trainees in my research used workarounds, such as using their colleagues' and consultants' log-in information when needed. It is understandable why trainees felt the need to do this; this disclosure reflects a well-known phenomenon of password-sharing within healthcare, albeit one not typically discussed within the literature despite its significance within many Trusts (Collins, 2006). It may be argued that this poses a significant security risk, as those conducting unlawful activity would be harder to trace than registered clinicians with unique logins, even if only temporary, as they begin working.

The above demonstrates a clear need for a more straightforward process for clinician access to technological systems when transferring Trusts. This access would be facilitated by better communication between Trusts; I would argue that a trainee being granted access privileges within one Trust should be afforded it in the next. This access would be a much better process than trainees needing to make appointments to show their degree certificate, despite a freely accessed GMC register, which negates this purpose. Consequently, one recommendation from this research is that in order to aid trainee access and patient safety, IT system access should be granted from a trainee's first day within each Trust. Additionally, trainees should not be expected to conduct clinical duties until this access is given.

In addition to the systems available within hospitals, many clinicians supplement available technology with increased technology via home computers and personal smartphones. Within various aspects of medicine, technology can aid trainees' learning; one study describes the applications available on a doctor's smartphone as being as essential as their stethoscope (Dimond et al., 2016), with most doctors having 1-5 medical applications on their phone (Payne et al., 2012). The latter article is over ten years old, so I suspect this value is much higher now. Many textbooks, medical scoring systems, and trainee portfolios are now available via applications in addition to Trust-based communication software, departmental rotas, and payslip applications. Within this study, trainees explained during the interviews that they would sometimes share websites, including ERIC, with caregivers and that they used these to aid their own learning; however, trainees did not talk about the technology available within the Trust, which may support learning. It seemed that trainees

did not consider Trust-based technology as an enabler for their learning within the clinic environment. Instead, they focused on the constraints, with the lack of access as a barrier to conducting work. Billett explained that barriers to conducting work (technology access in this instance) are likely to result in negative and constrained consequences for learners (Billett, 1995). Thus, if trainees are to conduct clinical work safely, appropriate technological access is vital.

9.1.7 Technology emphasises the importance of belonging and surgical identity

The barrier to technological access highlighted an additional element of surgical outpatient learning, which was one of belonging. One timely finding from the interviews and reflexive sessions was trainees' upset about not being given access to video software for clinics, partly reflecting their upset about not being able to attend clinics early in the pandemic. Billett explained that access should be sequential and increasing for trainees to benefit (Billett, 1995); however, without any access to video consultation software, even at a senior level, trainees missed out on the opportunity to conduct a skill expected of junior consultants (during the pandemic). When trainees expressed their concerns about this lack of access and attendance, they conveyed upset not articulated elsewhere, including their inability to support the consultant and being unable to learn. These comments suggested that trainees believed they provided value in the clinics they attended and emphasised that trainees consider the clinic a place for learning.

In Chapter 2, I shared my perception that, unlike some apprenticeships, there were "no rooms" within surgical clinics from which trainees were excluded (Marshall, 1972). Unfortunately, the lack of access to remote consultations became the trainees' forbidden room during the pandemic, thus impacting the trainees' feeling of inclusion, reflected in the interviews and reflexive sessions. Conversely, I perceived inclusion as a positive element in the clinics I viewed during the ethnography element of the PhD. However, this perception may be somewhat biased given I only filmed clinics with trainees present (and, therefore, those which supported trainee learning). Within ethnographic studies, researchers must consider the spatial and temporal boundaries of what they study (Hammersley, 2006); within my study, this was the outpatient clinic. Through my ethnographic observations, my understanding of the clinic culture was mainly limited to what I could see and hear within the surgical clinics. This limitation stresses the value of the later methods used within my study, as they provided an insight into inclusion, which I had not recognised using my ethnographic methods alone.

During the interviews, one consultant explained the inability to participate in remote clinics was de-professionalising for trainees. This comment leads to two inferences: clinics form part of the surgical identity, and denying the trainees opportunities to attend clinics led to a diminished sense of belonging within the surgical community. Within the literature, many studies explore surgical trainee identity, but these often focus on identity formation through trainees' operative skills (Cope et al., 2017; de Montbrun et al., 2018). One scoping review on surgeons' identity formation did not consider the role of clinics within their article despite depicting the role of many key players in developing surgical identities, including patient interactions, seniors, the MDT, and external policies and regulations (Gkiousias, 2021). The key players described within this study align with my findings of those vital to trainees' learning within clinics. Furthermore, one study focusing on surgical trainees' identity during the pandemic did not specifically consider clinics, yet did explain that restructuring during the pandemic needed to be sensitive to surgical trainees' vulnerability within surgery's traditional hierarchy (Daodu et al., 2020). This paper highlights that change can make surgical trainees feel vulnerable, which may represent the feelings posed by the trainees within my study concerning their exclusion during changes within clinics, thus reflecting an already complex time-period.

During the interviews, one trainee explained that this clinic-based identity formation is particularly significant within the UK, where more surgical training is clinic-focused. Therefore, trainees should feel welcome and included within clinics, especially during times of change. In addition to supporting surgical trainees' learning, trainees' belonging may positively impact their wellbeing and strongly influence their thinking about remaining in surgical training (Salles et al., 2019). This further emphasises the importance of ensuring trainees' sense of belonging and inclusion in clinics, especially during times of change, to support their surgical identity.

9.1.8 Visibility of learning and assessments

The wider influences on learning became much more visible during the later stages of my research. I suspect there were multiple reasons for this. First, the video ethnography phase highlighted visual findings, and the broader influences were not always immediately apparent in the clinics. Additionally, I conducted my research within a time of change, during a pandemic and the introduction of CiPs.

Using ethnographic methods allowed me to consider how my participants lived and experienced change within surgical clinics (Berriane et al., 2021). Given the pandemic and the introduction of CiPs, I suspect that change was highlighted during my research. I considered some of the impacts of change in previous sections, such as when access barriers to video consultations demonstrated the role of clinics in surgical identity formation. During the ethnography, most learning influences were those visible to the trainee and myself, such as during the senior discussion. My own experience as a surgical trainee likely influenced my observations. Yet waiting outside some clinic consultations during my ethnographic observations (often due to the inability to socially distance in the clinic room) allowed me to have informal discussions with the clinic nurses and healthcare assistants about their role in managing patients before their clinic consultations.

I have previously stated that trainees focus on activity within their clinic room. This may explain why some trainees thought that their central role within clinics was service provision during the reflexive sessions, despite their recognition of this closely linking to their learning. Furthermore, within the interviews, one consultant stated that clinics do not facilitate learning, but learning is instead a by-product of clinics. Conversely, some trainees did recognise that learning happened within clinics, but this workplace-based learning can be taken for granted and less visible. These comments suggest that learning occurs during clinic practice, although learning is not always visible to trainees and consultants, perhaps given the overlap. Workplace learning theories emphasise how an individual acting within a CoP may support learning; furthermore, work and learning are often so intertwined that learning is not always conscious, given that it relates to work-based goals (Marsick, 2009). The pandemic brought learning through work into sharp focus, as staff were 'all hands on deck' in unfamiliar clinical areas (Cram et al., 2020). Graduating trainees suddenly introduced to service provision during the pandemic suggested that pressured clinical work allowed them to develop a legitimate role within the team, develop skills, and learn from responsibility (Checkley et al., 2021). These articles complement my findings, suggesting that learning does happen within clinics, even when not visible, although events such as the pandemic have highlighted the visibility of learning.

My research was mostly conducted before CiPs were established in multiple areas of surgical practice, including clinics. They were introduced at a similar time to my reflexive sessions. The CiPs helped prompt discussions around learning, thus making this learning

more visible. The CiPs are competency-based assessments, so while this thesis focused on learning, their inclusion was important, as it prompted discussions around how learning could be further supported following their inclusion. Before their introduction, clinic-based assessments were not compulsory within the UK, although some trainees chose to complete assessments during the clinics. I understood when starting my research that CiPs would be introduced, but they were not considered during the video ethnography phase of my study nor during the interviews. This lack of consideration was as these methods focused on learning which was deemed to directly impact trainees' learning in clinics, or consider where learning had occurred, meaning the CiPs did not appear relevant as they had not yet been introduced.

Interestingly, none of the trainees I spoke with had completed a workplace-based assessment (such as a CEX or a CBD) from their filmed consultation, despite them and the consultants re-reviewing this fully. This may reflect that clinics are not traditionally considered a place for formal assessments despite being identified as a place where learning can be evidenced within the portfolio (Aryal et al., 2020). It may also represent a thought that learning and assessments are two different entities, meaning that assessments are not deemed necessary if the required outcomes have already been perceived to be achieved. This view is conveyed in the following quote from a surgeon:

> *"In a competency-based course, teaching and learning is seen in terms of an industrial transaction where what is important is what will conduce to the efficient and cheap delivery of a product. In this view, assessment becomes a simplistic and narrow activity. It places emphasis on visible skills and overlooks (and thus leads to an erosion of) professional values like sensitivity and imagination." -* (Davis and Ponnamperuma, 2007, p.344)

Within this study, this perspective may have been demonstrated through the lack of mention of assessments in relation to learning during the interviews. However, within the reflexive sessions, they were occasionally discussed as drivers of learning, with clinic letter prioritisation as an example.

In contrast to the earlier phases, the reflexive sessions allowed participants to focus on the role of the clinic-based CiPs, partly prompted by my sharing an image of these for

participants. Participants explained that the CiPs generally reflected the work completed within their current practice and used these to explain the work they completed within clinics. Participants were pleased that the CIPs allowed surgeons to consider and assess non-technical skills. They also liked the competency-based approach to evaluating trainees at an appropriate level for their individual practice. Conversely, they disliked the vague nature of statements. Within my study, the CiPs allowed participants to reflect on their own practice, recognising that trainees were currently supported within most CiP requirements, thus providing a platform for this learning to be visible. As surgical CiPs are new to surgery, quality literature on their suitability and acceptability is lacking. However, competency-based workplace assessments have been recognised more as a way to facilitate and evidence feedback within surgery rather than their intended role in evaluation (Fleming, 2021).

Although the acceptance of CiPs have not been evaluated within surgery, they have been within postgraduate medical training, where they were introduced in 2019. Though research to date has been limited, medical CiPs were generally perceived positively depending on the correct completion of forms. They were deemed to rationalise medical trainees' workload, provide a holistic oversight, and are considered more representative of the real-world environment (Quraishi et al., 2019). Although dedicated research is needed regarding the acceptability of CiPs and their role within postgraduate training, this study provides insight into their acceptability within the surgical outpatient environment.

Within my study, discussions around CiPs generally related to how they can be utilised as drivers for learning after I asked open questions to the participants about their thoughts. The CiPs allowed the department to consider where trainee support was lacking; the participants considered elements unique to their department, which led to multiple discussions on the CiP focusing on the prioritisation of referrals, which was discussed in every reflexive session. Some trainees explained they had completed this skill in other Trusts, suggesting this may be a finding particular to this department. Additionally, a limitation to trainees working towards the prioritisation CiP was their lack of access to the system for clinic letter prioritisation. Advice on how CiPs may be achieved, including prioritisation, is lacking. It was suggested that this could be supported within clinics, with trainees suggesting prioritising patients on the clinic lists. One consultant explained they planned to sit with a trainee to go through the referral letters, although this had not been introduced at the time of writing my thesis. As official guidance related to supporting

trainees to complete CiPs is lacking, I suggest setting a small amount of time in some clinics where consultants and trainees can access the system together and jointly review referrals. This would negate the need for trainee access to the system, and trainees could be supported and assessed. Prioritisation may not need to be a focus in every clinic, but this should happen during every clinical rotation, ideally with multiple consultants, to gain varied perspectives. The vagueness of each element within the CiPs may be useful to allow trainers to determine how best to support trainees within each department. As explained by Davis and Ponnamperuma (2007, p.343), *"in outcome-based education what is important is that the trainee achieves the outcomes, not how he or she does this. Different teaching and learning styles may be employed as long as the trainee is facilitated in achieving the outcomes".*

9.1.9 The wider influences on clinic learning

Through my ethnographic observations, my understanding of the clinic culture was limited largely to what I could see and hear within the surgical clinics; therefore, my observations focused on the outpatient clinics and the people within them. Had I not completed my QIP and conversed with business managers, I would not have understood the less visible influences on surgical clinics when conducting my ethnography. Within the reflexive sections, which discussed support outside each outpatient clinic conducted, participants expressed frustration with the department's hospital-based management team, sometimes considering them as a barrier to providing time and space for teaching. This finding aligns with the Get it Right First Time Report, which stated that within UK paediatric general surgery and urology, *"improvements in quality and productivity are needed but achieving these was being stifled by lack of formal lines of communication with management"* (Kenny, 2021, p.117). Unfortunately, this finding is also reflected in a paper considering parent-reported experiences in outpatient clinics. The majority (93%) of comments related to systems, including scheduling, wait time, and facilities, were negative (Espinel et al., 2014). While not all of these areas directly reflect the business managers' work, these articles, in combination with my findings, suggest a need for a clear collaborative link between surgeons and business managers.

I recognised this need to collaborate with the business managers in my research. Within my QIP, I had a good relationship with the business manager, who supported implementing the changes and co-authored the paper. I understood that this relationship allowed the changes to be employed. Consequently, I was keen to include business managers in my

reflexive sessions; however, the previous business manager left, and the current team did not respond to requests to attend. Medical institutions and business managers will, like surgeons, have patient care as their primary goal, albeit with different priorities to reach this goal. Clinicians do not always understand the role of business managers since they are positioned away from clinical practice, and thus they are often deemed as bureaucrats rather than managers of clinical activity (Currie, 2006). Like clinicians, business managers are under constraints, including financial ones, making it difficult to develop areas, including outpatient services (Currie, 1999). Perhaps this is why senior managerial staff are considered to give less priority to training than other clinical commitments (The Royal College of Surgeons of England, 2015). This may be because they did not attend the reflexive sessions either. They may not have understood their importance to the research or how it might impact them. Considering Billett's work on workplace learning, trainees need affordances, including training, to fulfil their role appropriately (Billett, 2004). Given these considerations, I believe their lack of attendance was unfortunate within my research as I believe their perspective on achieving a shared goal of patient care alongside surgical training would have been unique and valuable. I further consider the importance of bridge building between management and clinicians within my recommendations.

9.2 Social learning within clinics

In section 9.1.1, I explained that my findings support the case that the participating team within my research acted as a CoP within their paediatric surgery outpatient clinics. There are, however, many social learning theories which may play a role in explaining trainee learning within outpatient clinics. For example, language and communication play a significant role within the outpatient clinic community, and thus clinics may be viewed as a discourse (Gee, 2016). More specific to trainee learning within the clinic, outpatient departments may be viewed as an activity system with a desired outcome of patient care, with trainees and patients acting as distinct objects within that system (Skipper et al., 2016). Williamson suggested that individual learning theories cannot provide an accurate learning model within surgical outpatient clinics. Given that trainees are joining a community to provide patient care, they should be considered part of a CoP (Williamson, 2012).

Despite multiple educational theories demonstrating relevance to outpatient clinics, it was the CoP educational theory that most resonated with findings from my ethnographic work and informed my generation of themes. Therefore, instead of considering these educational theories as ones which oppose or differ from a CoP, I instead think them as theories which

provide a unique focus on the work and learning conducted within clinics, albeit from a different viewpoint. Suppose one were to conduct research (beyond the scope of this thesis) to consider the complexities of communication within clinic or focus on where tensions may arise between objects (patient and trainee). In that case, these educational theories may have useful input in addition to assuming that every clinic is a successful CoP. In such cases, *plug and play*, i.e. considering how existing approaches may support findings from another learning theory, may be useful to provide additional insight into a CoP rather than to replace it (Farnsworth and Solomon, 2013).

Surgical outpatient clinics have previously been described as a community of practice by educational researchers (Nestel and Burgess, 2014) and surgeons (Mehta and Platt, 2017). Within the outpatient clinics, all members, including the caregivers, worked towards supporting the child's care within the clinic. Within the themes from the interviews, participants recognised various key player roles within clinics as a place for distinct learning with patient care as the focus. Within the reflexive sessions, the focus became considerations of the wider communities and assessments in supporting trainees to become independent practitioners to fulfil this goal, which was made visible by VRE within my research. These findings share CoP characteristics identified by Li et al. (2009), who explained that all CoPs share the following characteristics to different degrees: social interaction, knowledge-sharing, knowledge-creation, and identity-building. Within my study, I explained the importance of corridor conversations to my ethnography which I originally thought were lucky conversations. However, corridor conversations themselves have been described as having a role within the clinic CoP, acting as a place of social communication, knowledge sharing, and even conflict resolution (Perrott, 2013).

Clinics have been conceptualised as CoPs within other health professions. Plack described physical therapy clinics as a CoP where trainees can develop their own professional identity while identifying with other members of the profession through identification and alignment (Lave and Wenger, 1991; Plack, 2006). This identity development within the clinic was also a prominent feature within my findings at each stage. Furthermore, Perrott described multi-disciplinary clinics as CoPs (Perrott, 2013). However, there must be caution when considering outpatient clinics as CoPs, as not all clinics can be described as CoPs. Although clinics (and many clinical teams) are often considered a CoP, it is not always appropriate to apply this theory to all teams working with a shared goal (Lindkvist, 2005). For example, many people consider general practice and the training of clinicians within it

to be a CoP (Clement et al., 2016). However, even within this training scheme, there are cautions. The first was related to the shared goal within communities of practice. Within general practice, *"the patient may be best seen as a person with whom relationships are established within the community of practice, rather than just the object or goal of care"* (Cornford and Carrington, 2006, p.281). The second was related to training. As general practice trainees spend time in hospital-based rotations, they are not seen as peripheral participants within the hospital-based teams but instead marginal to that team (Johnston, 2022). This general practice example explains how not all clinical teams nor training placements may be defined as CoPs, despite having many similarities to the team observed within my study.

Within this study, I believe the observed clinic was a successful CoP. Considering the factors of a CoP by Wenger (1999), the clinic demonstrated each of the unifying components. Firstly, the clinic may be considered as an area of mutual engagement through the shared discussions between the trainee and consultant, along with other key players. Although impacted by the pandemic, trainees generally felt they belonged within the clinics, although emphasis on their value is required. The community within the clinic acted as a joint enterprise by striving to improve patient care. Being asked to conduct research within the department emphasised the team's willingness to learn and improve, while recognising the current achievements. Finally, the team demonstrated a shared repertoire given the shared understandings within the clinic. The team understood their roles and who support may be sought from, although this understanding developed later for the trainee. Although the team have demonstrated areas where support must be given, this further emphasises their ability to act as a CoP.

9.3 The implications and recommendations from my PhD research

There are various groups who I have come to recognise as important stakeholders as the research has progressed. Here, I consider the potential impact and recommendations for each of the following groups, as summarised in

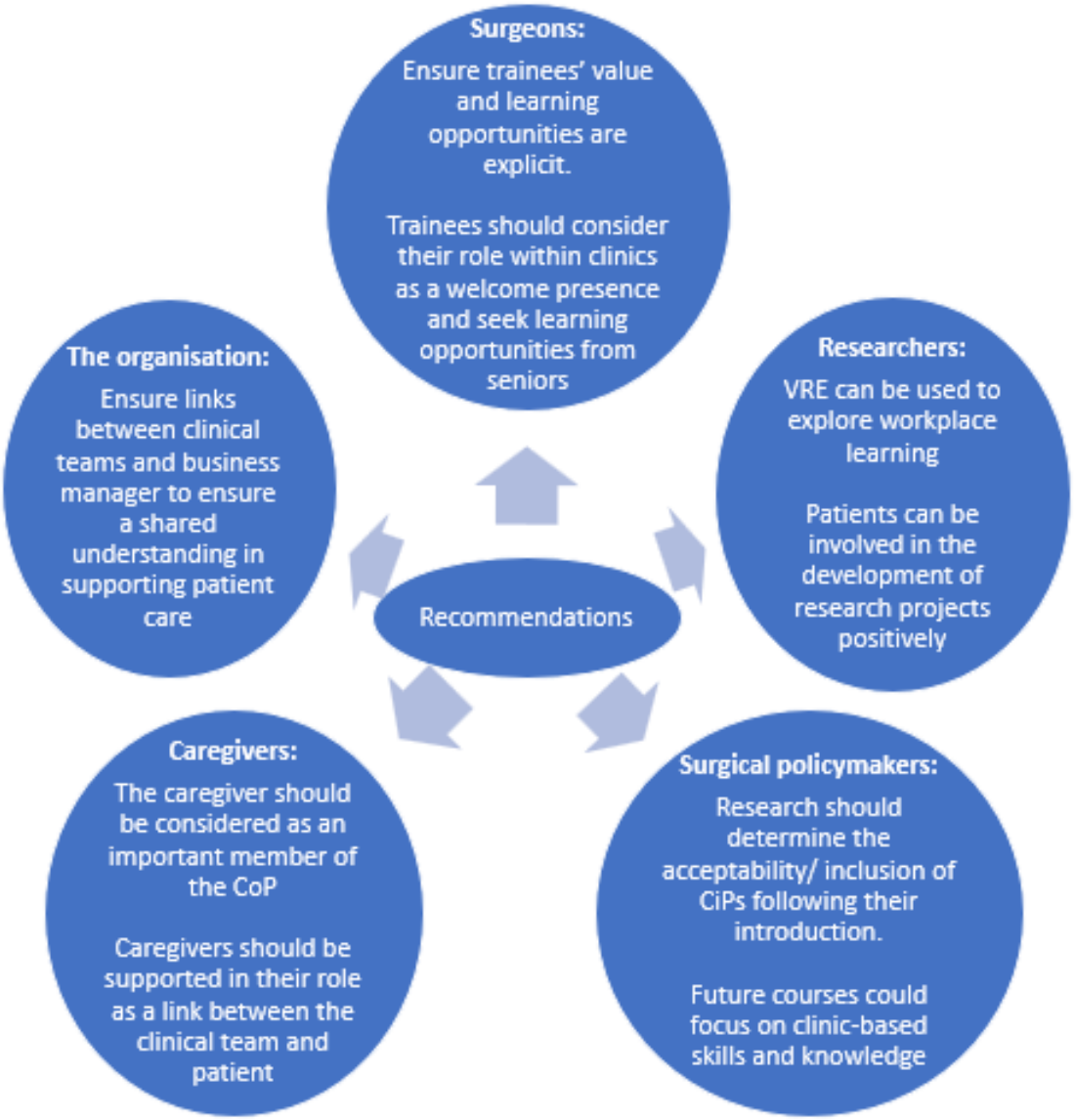

Figure 9-2.

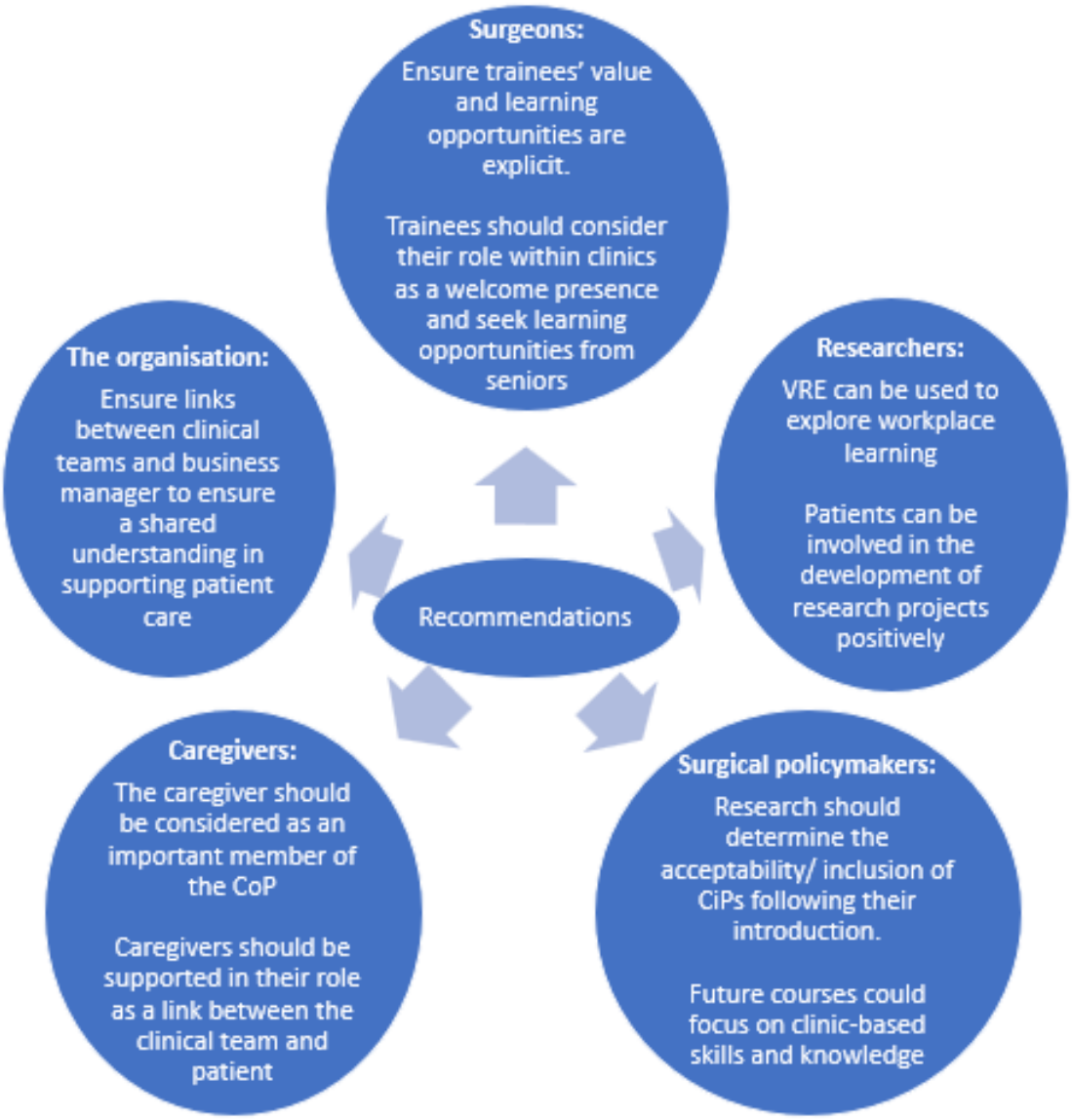

Figure 9-2: Summary of recommendations arising from this research

9.3.1 Surgical trainers and trainees

Within my study, I found that consultants recognised trainees' value within clinics, but the trainee did not always understand this. Although trainees should advocate for their learning, consultants must make the trainee's value more explicit, as they did within the reflexive sessions. This may ensure the trainees feel less of a burden and enable their engagement. Sutton et al. (2018) argued that an enthusiastic and supportive trainer is inspirational and will thus support the recruitment and retention of surgical trainees. The outpatient clinics

are no exception. Within my study, I found that learning and work were not distinct, explaining why trainees do not always recognise learning. Therefore, consultants should make learning explicit, especially for more junior trainees who may not recognise the value of outpatient clinics within their training. Allowing more senior trainees to adopt a supportive role to junior trainees will also help make learning visible to those trainees. My research found that trainees often felt like burdens within the clinic, and their exclusion when conducting video clinics during the pandemic highlighted their wish to belong within clinics. Therefore, I would advise that consultants include patients within all types of clinics and conversations about clinic management (which may consist of discussions with business managers). To trainees, my research found that consultants appreciate your presence and input in clinics, so embrace a wide range of clinics and the learning within them where possible.

CiPs were introduced as I conducted my research, and their acceptability has not yet been researched. However, my research found that the clinic-based CiPs were acceptable among my participants. Their main concern was the vagueness of statements, although this can be seen as an opportunity, allowing surgical trainers to tailor the support to achieve these for each trainee (Davis and Ponnamperuma, 2007). Fleming argued that phronesis (practical wisdom) is a major component of surgical competency-based medical education (Fleming, 2021). The vagueness of the clinic-based CiPs can be used to the team's advantage by allowing consultants to share their knowledge and wisdom and allow trainees to become competent and independent clinic practitioners. However, surgical teams should first consider how the development of clinic-based CiPs are supported within each department and how appropriate learning can be facilitated.

9.3.2 Educationalists and VRE researchers

This thesis employed VRE which is used to make the mundane visible within clinical areas. This PhD project was the first project to explicitly explore the process of learning specifically within postgraduate surgical training. However, another VRE protocol explains how VRE may be used to explore learning in general undergraduate and postgraduate medical training (including surgery) (Noble et al., 2019). That said, considerations around learning play a role in all VRE studies. This study has demonstrated that VRE is an appropriate methodology to explore learning within clinical areas, especially when co-participation with participants is important. Therefore, VRE may be considered a methodology among educational researchers, which may be utilised as an appropriate methodology alongside

other participatory methodologies, such as activity theory or those used to explore workplace activity, such as institutional ethnography and video ethnography.

Within medical education studies, around half state that they involve patients in research, although only one-quarter involve patients within their research design (Moreau et al., 2021). Within VRE studies, patients are often participants in the research but are not typically involved in the initial research design. However, patients have contributed to clip selection with VRE studies (Collier and Wyer, 2016). For this PhD, patients were involved in design at an early stage. Some studies which include patients in the initial design do so without allocating the time needed for meaningful responses or as tokenism (Pandya-Wood et al., 2017). However, including patients in my study led to meaningful design change. These included the Patient and Carer Community, who advised on the positioning of cameras, and the children in the hospital-based children's research group, who gave a helpful perspective on my information sheets which no adults could have, leading to many wording changes. I look forward to sharing my research at one of their meetings soon. I would encourage medical education researchers to involve patients in their research at an early stage and do so with an open mind. If given enough time and consideration, patients can help to develop a project and ensure it is understandable for patient participants.

During the pandemic, most VRE researchers needed to halt their research temporarily, and some projects were completely stopped. Those who conducted research did so in various ways, such as allowing participants to view individualised feedback conveniently (Wyer et al., 2022) or conducting online reflexive sessions with one participant each time (Iflaifel et al., 2022). For my research, I conducted reflexive sessions online, which is not typically done with VRE sessions. During the pandemic, this was not easy. It was hard to arrange sessions which multiple participants could attend. However, like with the interviews, participants seemed to be invested in my research. They worked with me to determine when might be best for those within the department. Although some participants could not attend sessions due to last-minute clinical commitments, they always offered to attend another session. I believe this was due to my close working relationship with the participants, especially when supporting them via the QIP. Working closely with clinical participants around their schedules is vital, especially when organising group sessions. Furthermore, this project demonstrated that reflexive sessions could be conducted online. I had been concerned that the masks might make communication difficult, but as the

participants knew each other and masks were becoming commonplace, this was not an issue where masks were worn.

Conversely, conducting the interviews and reflexive sessions online provided the advantage of more flexibility for clinicians. Therefore, some attended while on annual leave, maternity leave, or during the evenings, which I think might not have been possible if face-to-face. The conversations seemed to flow as well as a face-to-face session may have, which may represent the normalisation of online meetings. Therefore, I would encourage researchers to consider online sessions (whether interviews, focus groups, or reflexive sessions) or a combination of online and face-to-face as an option, even when face-to-face is possible.

9.3.3 Surgical training policy makers

For surgical training bodies, such as JCST and the surgical Royal Colleges, my thesis provides considerations concerning the newly introduced CiPs and the learning versus assessment process. Both consultants and trainees felt these were fair and thought they were possible to achieve within outpatient clinics. Their largest concern was about the stage at which achievement was expected, although the range of thoughts represented that this would differ between trainees. Now that the first panels have been undertaken since the introduction of CiPs, the practicalities of implementation must be reviewed, and guidance must be provided to training providers to support and assess each CiP component. It should also be considered whether initial suggestions around the timing of achievement are appropriate, with review in relation to trainee achievements at their yearly review panels. Increased attention to outpatient communication skills, such as those fostered within primary care, may support trainees to develop effective communication during clinics (Levinson et al., 2013). Therefore, now that clinic-based CiPs are established, Royal Colleges should consider introducing formal outpatient clinic courses for trainees, offering knowledge and skills to support their experiential practice as with other surgical-based courses such as Basic Surgical Skills, CCrISP, and Train the Trainer.

9.3.4 The organisation (practice and policy)

Medical institutions and business managers will, like surgeons, have patient care as their primary goal, albeit with different priorities to reach this goal. Clinicians do not always understand the role of business managers since they are positioned away from clinical practice, and thus, they are often deemed as bureaucrats rather than managers of clinical

activity (Currie, 2006). Like clinicians, business managers are under constraints, including financial, making it difficult to develop areas, including outpatient services (Currie, 1999). Perhaps this is why senior managerial staff are considered to give less priority to training than other clinical commitments (The Royal College of Surgeons of England, 2015). Considering Billett's work on workplace learning, trainees need affordances, including formal training, in order to fulfil their role appropriately (Billett, 2004). Within my research, participants made clear that with early training in clinics, they are afforded more responsibility later in placements and surgical training; this was echoed by consultants who thought it important to have their 'genius registrars' in the clinic. Allowing increased flexibility for supported training in clinics, especially at times of trainee change (October and February each year), will allow increased trainee support early in their placements, allowing focused supported development towards independent practitioners. This flexibility for training might include placing increased generic clinics at this time and allowing increased time and space for patient review and supported patient care. In order to do this, established links must be made between clinicians and business managers to allow knowledge brokering, i.e., sharing difficulties, tactics, and know-hows between two teams (Waring et al., 2013). This link would allow an understanding of the complexities of each role and would allow plans to be formed to maximise training while focusing on the primary goal.

9.3.5 Patients and caregivers

Much outpatient clinic research focuses on patients' experience or clinicians' training. However, my research has shown that learning and patient care are not distinct entities, so they should be considered in unity where appropriate. Given that caregivers are often not considered in research relating to learning, it is understandable that caregivers often feel unsupported in their role as a manager of their child's needs within healthcare (Smith et al., 2015). To ensure the child's needs are met, it is essential to consider caregivers within the CoP. It is crucial for caregivers to act as an advocate for their child while also answering the clinician's questions to determine the next steps within management. From my QIP, I found that caregivers found writing questions before clinics and notes during phone consultations helpful (Charnell et al., 2020). However, this can be difficult, so these communication needs should be considered during the consultation, and remote consultations should be converted to face-to-face appointments if difficulties arise.

9.4 Reflections on the PhD journey: strengths and limitations

In the next section, I consider the decisions and influences which had both positive and negative influences on my study. The journey of undertaking my PhD had many complexities, including my change in thinking from a familiar positivist stance to a constructivist one, and consequently, a change in my thoughts towards the research process in addition to a change in my career. Within my research, things that I thought were important early on, such as collecting patient demographics and wanting to consider quantitative data, including time taken by the trainees to conduct clinics are important. However, I only later appreciated that they are not relevant in a qualitative study conducted from a constructivist perspective with my research aims.

The main strengths of my study have been expressed through the recommendations provided to a wide range of groups. Despite the pandemic and needing to adapt how I conducted my research, I was still able to complete my research with the same aim. I adapted my project to reflect the pandemic through appropriate and safe access, which I believe was only possible due to the QIP I conducted with the department, allowing me access and the development and allowing time and space for trust from the participants.

Many others using VRE, including PhD candidates and researchers, needed to make significant changes to their projects during the pandemic. Many could not complete their research, with one explaining that they needed to return their research funding as a result. Many of those who struggled were those who did not have connections with their departments due to being ethnographic outsiders or not having yet developed a rapport. These made it difficult to adapt methods to those acceptable during the pandemic, such as online interviews and reflexive sessions. One fellow VRE-IA member did complete their project but explained that moving the reflexive sessions online allowed her to conduct these with only one participant at a time, with only seven participants in total (Iflaifel et al., 2022). Although interviews have been conducted online for many years, reflexive sessions are typically conducted face-to-face. I was pleased that I was able to successfully conduct my reflexive sessions online, as discussed in Chapter 8, despite minimal guidance available to follow (although VREIA members' advice was sought).

Using VRE allowed my participants and me to consider the wider impacts of learning, those not typically visible to surgical trainees. These reflexive discussions highlighted that

learning within the clinic is not only influenced by those within the clinic, but that clinic learning is impacted at Trust and Royal College levels. VRE was developed through Iedema's research on complex systems, which led to VRE's four guiding principles which have been discussed throughout this thesis: exnovation, collaboration, reflexivity and care (Olson and Dadich, 2022). When I began my research, I considered the role of complexity theory in creating VRE but did not deem it relevant to my project when considering the theoretical underpinnings. I instead believed clinics aligned closer to VRE's role in making the mundane visible (Iedema et al., 2019); however, VRE highlighted that the process that allows clinics to be conducted, and trainees to learn within them, is not at all mundane. My reflexive sessions highlighted the complexity of clinics to my research participants and me. Other VRE researchers also found that their reflexive sessions highlighted complexity later in their work when this was not regarded as an initial theoretical underpinning (Carroll et al., 2021). Presenting my PhD findings during a VREIA meeting, members suggested that the clips and facilitation encouraged complex considerations from the participants during the reflexive sessions and that VRE allowed an unintentional but fascinating role of supporting the participants' transformation from insiders to outsiders during the reflexive sessions.

This research enabled my participants to provide a unique insight into the complex nature of clinics. These complexities included the many people and teams needed to conduct and oversee clinics alongside the complexity of combining clinical decision-making, oversight, and learning. Despite highlighting the complexity, this does not reflect complexity theory, which is itself complex. Although my findings and complexity theory capture change within a social institution, complexity theory reflects processes that are unknown until they occur (Schneider and Somers, 2006). However, my findings suggest that surgical clinics and learning within them are somewhat standardised within this complexity. By this, I mean that the same complex processes are required every time for a clinic to occur. They are not as unexpected as other areas, such as a resuscitation department, might be. Therefore, while clinics are complex in their nature, they cannot be underpinned by complexity theory.

Within ethnographic studies, researchers must consider the spatial and temporal boundaries of what they study (Hammersley, 2006). The ethical and institutional approval was for my PhD to be conducted within one Trust. I would have liked to conduct a full exploration of the team's central and peripheral clinics, which were sometimes held in different Trusts. However, I was limited to the main hospital and peripheral clinics within the Trust, (i.e. clinics in hospitals within the Trust held in smaller hospitals), where I

recognised the difference in pace and atmosphere. As the consultants completed clinics in external Trusts, sometimes with their trainees, it would have been interesting to have viewed those clinics during my ethnography to consider a broader range of learning. I also did not film in any peripheral clinics, mostly due to rota practicalities. I understand that my considerations and interpretations may be specific to the settings I observed.

Interestingly, none of the participants discussed peripheral clinics and the learning within them at any point during the interviews or reflexive sessions. This lack of discussion may have been because they did not appear to be my focus in filming. Before conducting my research, I understood that my work would not be generalisable to other similar departments within different hospitals (Goodson and Vassar, 2011). However, I think that conducting an ethnography within every clinic conducted by the team would have ensured I had the fullest picture of the department, thus producing findings that were useful to the team when conducting the research. In addition, exploring some peripheral clinics may have provided insight into the system influences during the ethnography stage.

I explained within my study that I viewed the observed team as a CoP. However, identifying a practice as a CoP may allow a team to consider how a goal may be achieved; merely calling a practice a CoP does not encourage, nor even mean that a team will function as one (Ranmuthugala et al., 2011). Therefore, to deem the clinic a CoP, the team must function together to contribute to patient care. This study's use of VRE highlighted how trainee learning can be supported to conduct this function. However, the notable absence of key players within the reflexive sessions perhaps reflects that this CoP must be more inclusive of its participants to be successful.

I explained when considering my sample size that ideally, I would have liked more participants. Still, I needed to be considerate of the sample size available to me within this department and instead focus on information power (Malterud et al., 2016). Although I tried to ensure that I achieved this, one of the significant limitations was time. Many interviews and reflexive sessions started late when the surgeons had other clinical commitments. For this reason, many participants decided to hold the interviews in personal time, but this was not possible during the reflexive sessions. Due to these time limitations, I could not always probe into thoughts as deeply as I would have liked during interviews and reflexive sessions where time was pressured. I felt guilty when reflexive sessions started late (due to some participants arriving late) as I worried it would impact the finish time. I was acutely aware

that attendance at the reflexive sessions meant that participants could not work clinically, especially when the department was short-staffed due to the pandemic. Oakley et al. (2022) explain this researcher guilt can derive from researcher investment, which did apply, yet I think most of this guilt came from recognising my participant investment and wanting to ensure the research outputs reflected their time investment. This participant investment was my main driver to complete the thesis.

9.5 My research journey

When I reflect on some of the thoughts and worries when conducting this research, I realise how much I have developed as a qualitative researcher (and advocate) during my PhD journey. Sometimes, I read papers exploring unfamiliar concepts and realise how much further I must go. At the beginning of this thesis, I explained that I started my PhD journey as a surgical registrar and viewed myself as a natural positivist. As I end the PhD, I realise a lot has changed. Perhaps it is due to five years having passed, having conducted a PhD using qualitative methods (and the privileged insights this allowed into my colleagues' thoughts and struggles), or the COVID-19 pandemic, but I have emerged a different person at the end of this journey. I stepped out of surgical training before my PhD and was then offered a training post to return when writing my thesis. Instead of being excited about my future as a surgeon, I realised I was sad about the things it meant I might not be able to pursue, such as teaching and research. I realised that I really enjoyed the relationship developed with patients in clinics in addition to the longitudinal care, and I am now retraining as a GP.

When I look back, I suspect I was never a true positivist. I think surgeons and military officers like the 'black and white', yet most of their day-to-day work does not reflect this and strength is demonstrated by the ability to adapt and react. I previously worked with seven different consultants who used their knowledge and experience to perform operations such as laparoscopic cholecystectomies in a way they thought best; this led to them conducting these operations in seven very different ways within our department. Within the military, risk is an essential part of our role, and we often need to use our skills to understand what is 'good enough' so that we are not too late to react (Hodgetts, 2020). I suspect there was a reason the constructivist paradigm seemed the obvious way to conduct my qualitative project when it was much more engrained within my culture than I realised.

Starting a new career after this PhD has allowed me to embrace learning opportunities within GP training. I can recognise learning even when it is not immediately visible. Examples include learning from listening to other trainees' debriefing their patients and hearing the duty GP respond to queries while discussing my own patients. Within GP training, some of our consultations are filmed to watch with our supervisors. Moving from being the filming researcher to being the filmed trainee gave me a greater understanding of how this must have felt for the participants and helped me further appreciate the kindness and trust of my fellow trainees when conducting this research.

9.6 Looking forward

This work has made many next steps in my research journey possible. Conducting my research using VRE has provided me with an understanding of multiple methods and transferable skills in relation to data collection and analysis, which may be used within other qualitative educational projects. My immediate priority will be to support clinical and educational teams through filming and reflexivity as part of quality improvement processes. As an army Reservist, I have already started to support the UK military tri-service Medical Emergency Response Team (MERT) course using video reflexivity, filming skills and facilitation techniques developed during this project. I reviewed both learning and assessments and considered that VRE would be useful for supporting assessment delivery as well as learning. The course leads heard about my PhD research and asked if I could support their training and assessment processes. I did this by filming formative scenarios and discussions about assessments, which are being used to create a training package for new course facilitators. This allowed me to consider the use of video-reflexivity in assessments in addition to learning processes and consider that VRE could be used both to explore assessments, and non-clinical situations such as military practice.

VRE has also been used to explore undergraduate clinical examinations during an unpublished master's project by a Dundee student. Within my PhD, discussions on CiPs suggest they may drive learning, along with learning for summative examinations. Considering that learning is a social construct, it would be interesting to explore the community which convenes to examine the clinician as an individual within their postgraduate assessments such as MRCS and FRCS. This may include exploring processes and thoughts on exam set-up, which have already been explored at an undergraduate level using institutional ethnography (Kearney, 2020). To date, VRE has not been used to explore postgraduate surgical examinations (nor any other summative

postgraduate assessments). Qualitative research on postgraduate assessments is lacking in the UK, so this would be a long-term goal of mine, especially considering the examiner's role and simulated patients' roles.

Suppose VRE is used as a quality improvement tool. In that case, we now know that it can be used as an intervention tool, with processes evaluated before and after to determine a quantitative impact. One study used VRE as an intervention to explore reasons for poor vaccine uptake, with uptake levels recorded before and after (Pratt et al., 2021). Measurement may not be appropriate in all studies, including mine, but may be helpful if VRE is used as part of a QIP with an aim for a specific quantitative output. If using video reflexivity as a quality improvement tool, I aim to move towards planned obsolescence, supporting the team to use VRE/video reflexivity, but empowering them to collect and consider their own data and next steps as an ongoing process (Carroll and Mesman, 2018).

My longer-term goals are to use the full VRE process, including periods of ethnography, with other clinical teams in order to support their processes. Although I have left surgery now, I understand that many other learning processes could be supported through *exnovation* (making clinical processes visible). As explained by one participant in Chapter 6, the process of gaining consent and decisions around consent would be a fascinating place to start in many clinical teams, not just surgery.

9.7 Conclusions

Throughout this thesis, I have explored how surgical trainees learn in outpatient clinics using ethnographic methods. This thesis successfully addressed the research aim and objectives posed for this study, despite the challenges faced during the pandemic and the need to consider how it influenced learning and conducting research at a critical time of change. Although I have considered recommendations for various perceived stakeholders impacted by the work conducted within this thesis, I propose the following take-home messages in relation to the original thesis objectives:

1. *Explore the culture of the surgical outpatient clinic using ethnographic methods.* Surgical outpatients have a positive and constructive culture compared with other aspects of surgical practice, which should be optimised as a place where trainees

feel valued and can be supported to provide portfolio evidence demonstrating the development of their clinic-based CiPs.

2. *Understand the trainees' roles within the outpatient clinic and how this has been impacted by COVID.* Trainees have continued to learn through traditional processes both for and within outpatient clinics during the pandemic, although the process of conducting clinics may have evolved within departments due to the increased use of telephone clinics. Rather than changing practice, the pandemic highlighted the trainees' perceived value of clinics in line with the view already held by consultants, which was highlighted through their exclusion at the start of the pandemic. This leads to questions about the role of the surgical clinic within overall surgical culture; further work could consider the influence of various surgical settings (i.e. clinics and the operating theatre) on their positive and negative aspects of culture, including how this impacts learning.

3. *Explore the extent to which trainees and consultants share an understanding of learning in the surgical outpatient clinic.* The initial literature suggested that trainees did not appreciate their attendance in the clinic, although consultants appreciated their value. This led to the consideration of communities of practice and workplace learning theories. Viewing the data with this lens highlighted that learning is not always visible to trainees when deemed as service provision, although these needs should not compete within the clinic. Therefore, senior discussions should include conversations about learning points gained from the clinics, and workplace-based assessments should consider distinct learning elements from each case. In this PhD study, there was a shared understanding of the purpose and goals within surgical clinics. Although the team studied may be viewed as a CoP, more extensive scale work would be required to determine whether this is a distinct feature within clinics.

4. *Consider learning events and the factors affecting learning at video-reflexive multi-disciplinary meetings.* VRE and video-reflexivity are appropriate tools for surgeons to reflect on their practice and consider which elements should be celebrated and developed within their department. VRE provides a methodological tool for this approach, with planned obsolescence allowing for ongoing work. Defining a learning event allowed some focus, but the open and relaxed conversation allowed me to consider elements impacting trainees' learning, which had not been as visible

in earlier stages of the research. In this study, the reflexive meetings emphasised the role of technology in training, often acting as a barrier to learning. These technological barriers are an under-researched area within postgraduate training, and further research could consider the scale of this impact.

5. *Devise suggestions of how learning in general surgical outpatient clinics may be improved and how the current general surgical curriculum may be enhanced.* Surgical departments should consider which clinic-based CiPs they can help their trainees achieve and which are not currently prioritised. Trainers should be mindful of the support given to develop those CiPs, which may be performed outside the clinic, such as prioritisation, when assessing trainees and when preparing trainees for consultancy. As CiPs are newly introduced, research should focus on their suitability and acceptance nationally. Local surgical teams should consider support at a local level, perhaps using quality improvement as a tool to determine how best to support trainees' portfolio completion.

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Appendix 1: Search strategy to explore methods used when researching learning in outpatient clinics

Medline, Embase, Google Scholar, Scopus, and ERIC were searched using the following terms and their relevant truncations.

1) Surgeon* or surgery
2) Outpatient(s), out patient(s), clinic*
3) Train*, educat*, learn*, teach*, resident

The search was limited to English-language articles from any year. The search terms were combined with 'AND', resulting in 935 articles: 309 from Medline, 88 from Embase, 230 from Google Scholar and 164 from ERIC. Removing the duplications resulted in 862 articles. Titles were then considered for relevance, resulting in 149 articles. Abstracts were then reviewed, although five could not be found. This review resulted in 54 full papers. Of these, eight articles could not be retrieved, and 11 were not found. This gave 35 papers, with a further 15 added after the exploration of references and articles from previous searches.

Each of these 50 papers was scrutinised fully to determine whether they discussed their methods of assessing learning in surgical outpatient clinics. Papers were excluded if they were not primary research or if a detailed explanation of methods was missing. This resulted in 14 papers where the methods and methodologies could be explored.

Appendix 2: Initial REC approval letter

Ymchwil Iechyd a Gofal Cymru
Health and Care Research Wales

NHS
Health Research Authority

Dr Alison Ledger
Leeds Institute of Medical Education
10.46 Worsley Building
University of Leeds
LS2 9NL

Email: hra.approval@nhs.net
HCRW.approvals@wales.nhs.uk

06 February 2020

Dear Dr Ledger

HRA and Health and Care Research Wales (HCRW) Approval Letter

Study title:	**How do Surgical Trainees Learn in Outpatient Clinics? A Video-Reflexive Ethnography Study**
IRAS project ID:	**254224**
Protocol number:	**1**
REC reference:	**19/YH/0385**
Sponsor	**University of Leeds**

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.

Please now work with participating NHS organisations to confirm capacity and capability, in line with the instructions provided in the "Information to support study set up" section towards the end of this letter.

How should I work with participating NHS/HSC organisations in Northern Ireland and Scotland?

HRA and HCRW Approval does not apply to NHS/HSC organisations within Northern Ireland and Scotland.

If you indicated in your IRAS form that you do have participating organisations in either of these devolved administrations, the final document set and the study wide governance report (including this letter) have been sent to the coordinating centre of each participating nation. The relevant national coordinating function/s will contact you as appropriate.

Please see IRAS Help for information on working with NHS/HSC organisations in Northern Ireland and Scotland.

How should I work with participating non-NHS organisations?
HRA and HCRW Approval does not apply to non-NHS organisations. You should work with your non-NHS organisations to obtain local agreement in accordance with their procedures.

What are my notification responsibilities during the study?

The standard conditions document "*After Ethical Review – guidance for sponsors and investigators*", issued with your REC favourable opinion, gives detailed guidance on reporting expectations for studies, including:

- Registration of research
- Notifying amendments
- Notifying the end of the study

The HRA website also provides guidance on these topics, and is updated in the light of changes in reporting expectations or procedures.

Who should I contact for further information?
Please do not hesitate to contact me for assistance with this application. My contact details are below.

Your IRAS project ID is **254224**. Please quote this on all correspondence.

Yours sincerely,

Hayley Henderson
Approvals Manager

Email: hra.approval@nhs.net

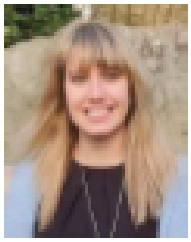
Copy to: *Mrs Clare Skinner, Sponsor Contact*

Appendix 3: Initial information sheet for those aged 12-15

How do Surgical Trainees Learn in Outpatient Clinics?
Information sheet for aged children 12 and above

The study:

My name is Aimee Charnell. I am a surgeon hoping to explore how other surgeons learn in the clinic. I will do this by filming some clinics. The study is about surgeons, but to see how they learn, I need to see how they talk to you in the clinic. **I might ask if I am able to sit in and film your clinic appointment. You can say no if you don't want me to do this.** If you say no, this will not change how you are cared for.



I have spoken to many people to ensure that this study is OK. My teachers at university and important people at the hospital have checked that my project is safe to do.

Filming the clinic:

If you and your parents let me film your clinic appointment, you and your parents will be asked to sign a form to agree that it is OK. **I will only then film your clinic if you see the surgeon that I am filming.** I will only film when the surgeon is reading your notes or is speaking to you or the senior surgeon. I will not film when they are checking you over, such as when they feel your tummy. As I will speak to you before your clinic, you might be at your appointment for a few extra minutes, but after your clinic appointment you can leave the clinic straight away. You won't need to do anything after your clinic. **I will not film at any time other than your clinic.**

Even if you tell me I can film, **you can change your mind at any time**, including after the study. I will give you a red card which you can put up if you want me to stop filming and leave the room. Even later on, you can change your mind. I will give your parents a sheet explaining how to do this.

Who will see the videos?

The videos will be seen by the surgeon that saw you and their consultant (the senior surgeon in this clinic). Some clips will then be seen by other members of the surgical team who will use these to see how they can help the surgeons to do their jobs well. **These videos will not be used to discuss your care.** I will ask you and your parents if I am able to use the videos to explain learning to other doctors, at big meetings (conferences). **If you don't want me to use the videos for other things things, that is OK too.**

The videos will be stored in a safe place at my university. The videos will not contain your name or any personal information. Only I will have access to this information. Your information and videos will all be deleted three years after my study.

How will the data be kept?

The University of Leeds will oversee my study. This means they make sure that I use your videos and information in the way that I've said I will. The data will be kept in password protected files on the university server and may only be accessed by the research team. The University of Leeds will keep identifiable information about you for a maximum of three years following the study.

The research and videos are used for my studies only and will not be made available outside of the research team. 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 visiting https://dataprotection.leeds.ac.uk/wp-content/uploads/sites/48/2019/09/HRA-transparency-wording.pdf

More information:

I will speak to you on the day of the study if you will be seeing the trainee and would like to be part of my study. If you have any questions that you would like to ask before that, please speak to your parents and together you can contact me.

Phone number: 0113 343 4814

Email: A.M.Charnell@Leeds.ac.uk

Thank you.

Appendix 4: REC approval for pandemic amendments

NHS
Health Research Authority
Yorkshire & The Humber - South Yorkshire Research Ethics Committee
NHSBT Newcastle Blood Donor Centre
Holland Drive
Newcastle upon Tyne
NE2 4NQ

Tel: 0207 104 8079

Please note: This is the favourable opinion of the REC only and does not allow the amendment to be implemented at NHS sites in England until the outcome of the HRA assessment has been confirmed.

24 November 2020

Ms Aimee Marie Charnell
9.12 Worsley Building
University of Leeds
Leeds
LS2 9NL

Dear Ms Charnell

Study title:	**How do Surgical Trainees Learn in Outpatient Clinics? A Video-Reflexive Ethnography Study**
REC reference:	**19/YH/0385**
Protocol number:	**1**
Amendment number:	**Amendment 01**
Amendment date:	**15 October 2020**
IRAS project ID:	**254224**

The above amendment was reviewed by the Sub-Committee in correspondence.

Ethical opinion

The members of the Committee taking part in the review gave a favourable ethical opinion of the amendment on the basis described in the notice of amendment form and supporting documentation.

Approved documents

The documents reviewed and approved at the meeting were:

Document	*Version*	*Date*
Completed Amendment Tool [Amendment tool]	1	15 October 2020
Copies of advertisement materials for research participants [Recruitment Email]	2	30 September 2020
Interview schedules or topic guides for participants [Session Steps]	2	10 October 2020

Other [Patient Information Post Study]	2	10 October 2020
Other [Summary of Changes]	1	01 October 2020
Participant consent form [Script Consent]	1.2	19 November 2020
Participant information sheet (PIS) [Team Information Sheet]	2	10 October 2020
Participant information sheet (PIS) [Patient Information Sheet]	2	19 November 2020
Research protocol or project proposal [Protocol]	2	15 October 2020

Membership of the Committee

The members of the Committee who took part in the review are listed on the attached sheet.

Working with NHS Care Organisations

Sponsors should ensure that they notify the R&D office for the relevant NHS care organisation of this amendment in line with the terms detailed in the categorisation email issued by the lead nation for the study.

Amendments related to COVID-19

We will update your research summary for the above study on the research summaries section of our website. During this public health emergency, it is vital that everyone can promptly identify all relevant research related to COVID-19 that is taking place globally. If you have not already done so, please register your study on a public registry as soon as possible and provide the HRA with the registration detail, which will be posted alongside other information relating to your project.

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

HRA Learning

We are pleased to welcome researchers and research staff to our HRA Learning Events and online learning opportunities – see details at: https://www.hra.nhs.uk/planning-and-improving-research/learning/

IRAS Project ID - 254224:	**Please quote this number on all correspondence**

Yours sincerely
Pp

Dr Ian Woollands
Chair

E-mail: southyorks.rec@hra.nhs.uk

Enclosures: *List of names and professions of members who took part in the review*

Appendix 5: Telephone script for trainees when confirming consent

Script for trainees gaining verbal consent.

"Hopefully, you will have received some information to explain that as part of a university study, I am being filmed completing some telephone consultations by another surgical doctor called Aimee who is doing a PhD. The filming is to determine how trainees can be supported in clinics.

Did you receive this information?"
Yes: proceed
No: "In that case, we will not ask you to be part of the study today"

"Do you have any questions about the study?"
No: proceed
Yes: Answer questions, Aimee can help with these.

"Would you be happy for the clinic to be filmed?"

If yes
"Thank you. Aimee would like to know **you/your child's (delete as applicable)** age for her records, is that OK?

She would like to send you a follow-up letter via the secretaries about the study. Would this be OK?"

If no
"Ok, thank you. You won't be asked again, and Aimee won't receive any information about the appointment."

Documentation for the clinical notes (if filmed):
*This consultation was filmed by Aimee Charnell for her PhD research project (IRAS 254224). Verbal consent was received from _____ **(name)**. Verbal consent **was/was not (delete as appropriate)** given for the researcher to be given the child's age. Information **will/will not (delete as appropriate)** be sent out to the family about the research at their request.*

Appendix 6: Letter from key contact

NHS
The Leeds Teaching Hospitals
NHS Trust

Consultant: Mr. J. R. Sutcliffe
Department of Paediatric Surgery, F Floor,
Martin Wing

Leeds General Infirmary
Great George Street
Leeds
LS1 3EX

Tel: (0113) 243 3144

www.leedsth.nhs.uk

Direct Tel: 0113 392 5831
Direct Fax: 0113 392 5827

Date Dictated: 23 Dec 2019
Date Typed: 23 Dec 2019
Our Ref: JRS/PJ

To whom it may concern

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Dear Sir/Madam

Letter in Support of Ethics Application

I am writing to you in your capacity of Chair of the Ethics Committee reviewing an application made by Ms Aimee Charnell and Mr Dermot Burke. Aimee is well known to our department where she has worked in a clinical capacity but has expressed a significant amount of interest in education. We also collaborate very closely with Mr Dermot Burke who I understand is one of the supervisors. There is therefore a good network in place.

I gather that the Committee required a rationale for the reasons for undertaking this study in children. I am happy to try to provide this. Our department is very committed to improving outcomes of our patients and recognise this is clearly linked to enhancing our ability to train our junior doctors, another key focus. When I was lead for education, Aimee mentioned this very important project and I asked if she would keep us in the loop as I wanted to make sure that our patients benefitted from being involved in research such as this. Paradoxically it is quite common for paediatric and paediatric surgical patients to miss out on the benefits of innovation, and 'missing out' carries its own risks. I fully understand and respect the importance of ensuring that any research that involves children is set up appropriately and safely as someone who undertakes a fair amount of research, this would be a priority.

My understanding is that the focus of this research would be on trainees rather than patients themselves but that there may be times when patients or carers will be in the view of the camera. I understand that there will be appropriate information governance around this and it may be the case that as time progresses the protocol is amended accordingly. I am grateful that you flagged this up - if you had any suggestions we'd be interested to know, particularly if this allowed the work to proceed effectively.

We have a very wide breadth of patients given that we cover everything surgical from thoracic work through to upper GI, lower GI, surgical, oncology and hepatobiliary together with

urology. We also have a mixture of complex patients and simple patients, neonatal patients through to adolescent patients and patients from Leeds to a much bigger region. I gather that this interesting mix of patients and conversations would add to the research. As well as enhancing our education, if we were able to enrich output of the research, there would be potential benefit to other groups of patients.

I understand that there has been research using similar methodology in paediatrics specifically for patients with autism who are vulnerable from an ethical perspective. We'd thought that this perhaps suggests that there is a track record that shows that there are not great risks.

I have in the past communicated with all of my consultant colleagues and there was no reservation about trying to help with this project. I would genuinely be very grateful if you would consider allowing this work to be undertaken within our department. My sense is there would be a spin off benefit in further increasing our commitment to research and thinking about techniques. I would be very happy to discuss anything further and please do not hesitate to contact me if so.

Yours faithfully

Electronically signed by
Mr Jonathan Sutcliffe
Consultant Paediatric Surgeon

Distribution:
To whom it may concern — post

Appendix 7: Clinician information sheet

Information sheet to participate in a medical education study

UNIVERSITY OF LEEDS

Leeds Institute of Medical Education (LIME), Leeds School of Medicine

Research title

How do Surgical Trainees Learn in Outpatient Clinics? A Video-Reflexive Ethnography Study

Researcher

Ms Aimee Charnell (Surgical Registrar completing PhD)

Supervisors

Dr Alison Ledger (LIME), Professor Dermot Burke (Colorectal Surgeon) & Professor Trudie Roberts (LIME)

Information sheet members of paediatric surgical team

I am keen to explore how surgical trainees learn in clinics and how this experience may be improved. To do this, I need to gain a full understanding of how trainees conduct clinics and allow other members of the team to see this too. Therefore, my research will be conducted by filming clinics. The aim of this study is to explore learning in paediatric clinics and explore this as a surgical team. It is not designed to critique or embarrass members of the team. Given the COVID-19 restrictions, this study will be completed by observing trainees completing telephone clinics.

This study will adopt video-reflexive ethnography (VRE). This methodology focuses on recording of activities, selecting relevant parts to show to the paediatric surgery department in "video-reflexive sessions". The aim is to then interpret and discuss these, providing further data and so provide practical recommendations for development (Carol & Mesman 2018). VRE comprises of three distinct, but related phases as described below:

1) *Video ethnography*

Ethnography is observation and understanding of a culture. In this case, I will explore the learning that trainees undertake in clinics. This will be done firstly through videoing surgical outpatient clinics completed by telephone, attended by trainees. Small cameras will be placed to oversee the clinic appointments where consent has been given. When discussions are had with the consultant, I will video these using a small, handheld camera.

2) **Clip selection**

I will meet separately with trainees and consultants to discuss learning points, whilst showing the video, either face-to-face or via zoom. Example questions are: what do they perceive as a learning event? Are these skills gained from clinics or elsewhere? Can these skills be used elsewhere? Is this a typical case? How might this case have differed to other cases? These conversations will be recorded using an audio recorder/audio recording on zoom.

3) *Video-reflexive sessions*

Identified learning events will be shown to other consultants and trainees asking the above questions and while exploring the barriers and enablers to learning in the surgical clinic. The aim of this is to determine the culture of learning in surgical clinics, the factors that influence these, and whether further support is needed

/ may be implemented for trainees. The video-reflexive sessions will be offered remotely via zoom, or if face-to-face will be recorded using small cameras.

You can volunteer to participate in different parts of the study depending on your clinical role:

You do not need to take part in this study if you do not want to.

As a surgical consultant, you may allow us to video your trainee in clinic. If you enter the consultation, you too will be filmed. A few days after the clinic, at a time convenient to you, I will show you the clip of the trainee in clinic and ask you to identify learning events, which we can then discuss further in the video-reflexive sessions. The clip selection will be remote and recorded (but you do not need to be on camera). The maximum number of individual appointments that I will film for patients under your care is **FIVE**, but you can allow as few as one. This may provide information which can be used to complete assessments for trainees if you wish. You can be part of these video-reflexive sessions also, or you may only want to attend these.

As a surgical trainee you may allow us to video your consultations in clinic. The focus will be on communication. A few days after the clinic, at a time convenient to you, I will show you the clip of your in clinic and ask you to identify learning events, which we can then discuss further in the video-reflexive sessions. The clip selection will be remote and recorded (but you do not need to be on camera). The maximum number of individual appointments that I will film for patients under your care is **THREE**, but you can consent to as few as one. We hope to film 12-15 clinical appointments and we aim to recruit between around eight paediatric surgery trainees from the department. As the consultants will also see these clips, they may provide information which can be used to complete assessments if you wish. You can be part of these video-reflexive sessions also, or you may only want to attend these. In the unlikely event that I see what I consider to be unsafe practice, I will discuss this with you in the first instance. If a risk of harm is identified, I am under obligation to break confidentiality and report this risk to the consultant.

All members of the paediatric surgical team may attend the video-reflexive sessions, these are not just for surgeons/doctors, and I would hope that input can be provided from multiple members within the multi-disciplinary team. These sessions may be face-to-face or delivered remotely via zoom and these will be recorded. If they are held on zoom, you do not need to show your face. A £5 coffee voucher will be given to attendees.

How will my data be used?

In order to explain the research at conferences, we may wish to use certain clips, both from the clinics and video-reflexive sessions to visually explain the research. However, you may be part of the research without consenting for these videos to be used outside of the paediatric surgery department.

Participation is completely voluntary. We hope that you will be part of our study, by letting us video your consultations or by being part of the video-reflexive sessions. However, non-participation will not affect you or your rights. You can withdraw your consent at ANY TIME, even after the clinic, without prejudice or negative consequences for your training. At the end of the research (in around two years), I would be happy to send you a summary of our work.

How will the data be kept?

The University of Leeds 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. The University of Leeds will keep identifiable information about you for a maximum of three years following the study, unless consent has been

given to use clips following the study. This data, including the videos/voice recordings will be kept in password protected files on the university server and may only be accessed by the research team.

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 and we can remove any information and videos we have from you. To safeguard your rights, we will use the minimum personally-identifiable information possible.

How will we use information about you?

We will need to use information from you for this research project. This information will include your name, your role, plus your email (if you allow so that we can contact you at a later date). People will use this information to do the research or to check your records to make sure that the research is being done properly. We will keep all information about you safe and secure. Once we have finished the study, we will keep some of the data so we can check the results. We will write our reports in a way that no-one can work out that you took part in the study.

What are your choices about how your information is used?

You can stop being part of the study at any time, without giving a reason, but we will keep information about you that we already have. We need to manage your records in specific ways for the research to be reliable. This means that we won't be able to let you see or change the data we hold about you. The recordings will be used for academic purposes only and neither staff nor patients outside of the research team will have access to copies of the recording. I have a sheet explaining this further which I can provide if you wish.

Where can you find out more about how your information is used?

You can find out more about how we use your information by

- https://dataprotection.leeds.ac.uk/wp-content/uploads/sites/48/2019/02/Research-Privacy-Notice.pdf
- our leaflet available by asking one of the research team
- sending an email to the Data Protection Officer at dpo@leeds.ac.uk
- ringing Aimee Charnell on 0113 343 4814.

Certain individuals from Leeds Teaching Hospitals and regulatory organisations may look at your research records to check the accuracy of the research study. Leeds Teaching Hospitals will only receive information without any identifying information. The people who analyse the information outside of the research team will not be able to identify you and will not be able to find out your name or contact details.

Further information

This study is part of a PhD project at The University of Leeds. Ethical approval has been received from the Research Ethics Committee (IRAS 254224) and the study has been approved by Leeds Teaching Hospitals Trust (PA18/113666)

If you have any questions or would like to withdraw consent, please speak to the local contact Mr Sutcliffe, or contact Aimee Charnell: A.M.Charnell@Leeds.ac.uk / 0113 343 4814 or my supervisor Alison Ledger: A.Ledger@Leeds.ac.uk.

If you would have any concerns or would like to make a complaint about the ethical aspects of this research, please contact the Research Office via leedsth-tr.lthtresearch@nhs.net.

Thank you, Aimee Charnell

Appendix 8: Reflexive session guide to support my facilitation, including possible prompts

Intro, chest consent, ground rules

1. **Thank people for attending**
2. **Check consent**
3. **Can have videos off or on**
4. **Please use hands up icon**
5. **Might direct questions**
6. **Please don't use it to critique – only being shown small clips. Try to refer to them as trainee or consultant**
7. **Any questions?**
8. **Turn on camera**

Show clips to trainees learning or sharing their learning in clinics

- What is the role of the trainee in clinic?
- What do trainees gain from attending clinics?

Show clips about shared decisions and shared care

- How might people outside of the surgical team support how trainees learn in clinics?
- Should all clinics be dedicated to trainees learning?

Show Capabilities in Practice sheet. Explain level 4 (early consultant) normally demonstrated at ST5

- What are your thoughts on this?
- How does learning in paediatric surgery clinics compare with other surgical clinics?
- How can the consultant support trainees to fulfil these CIPs?
- What is the role of telephone clinics here?

Any final points?

Finish up. Turn off camera. Thank participants and explain the next steps.